

**The Effect of Service Quality on Customer Satisfaction in Jimma
University: *The Case of Registrar Services***

*A Thesis Submitted to the School of Graduate Studies of Jimma University
in Partial Fulfillment of the Requirements for the Award of the Degree of
Master of Public Management (MPM)*

BY:

BEHAILU CHIMDESSA



**JIMMA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
MPM PROGRAM**

NOVEMBER, 2021

JIMMA, ETHIOPIA

**The Effect of Service Quality on Customer Satisfaction in Jimma
University: *The Case of Registrar Services***

BY:

BEHAILU CHIMDESSA CHALA

Under The Guidance of

Main Advisor: Kedir Abraham (Ass. Professor.)

And

Co-Advisor: Selamawit Melaku (MBA)



*A Thesis Submitted to the School of Graduate Studies of Jimma University
in Partial Fulfillment of the Requirements for the Award of the Degree of
Master of Public Management (MPM)*

JIMMA UNIVERSITY

MPM PROGRAM

NOVEMBER, 2021

JIMMA, ETHIOPIA

CERTIFICATE

This is to certify that the thesis entitles “*The Effect of Service Quality on Customer Satisfaction in Jimma University: The Case of Registrar Services*”, submitted to Jimma University for the award of the Degree of Master of Public Management (MPM) and is a record of confide research work carried out by Mr. *Behailu Chimdessa Chala*, under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree or diploma.

Main Advisor’s Name

Date

Signature

Co-Advisor’s Name

Date

Signature

JIMMA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
MPM PROGRAM

Board of Thesis Examination

Approval Sheet

Members of the Board of Examiners

External Examiner	Signature	Date
<u>Dr. Habtamu D</u>	_____	_____
Internal Examiner	Signature	Date
<u>Dr. Zerihun A</u>	_____	_____
Main Advisor	Signature	Date
<u>Mr. Kedir A</u>	_____	_____
Co-Advisor	Signature	Date
<u>Miss. Selamawit M</u>	_____	_____

DECLARATION

I hereby declare that this thesis entitled “*The Effect of Service Quality on Customer Satisfaction in Jimma University: the Case of Registrar Services*”, has been carried out by me under the guidance and supervision of Mr.Kedir Abraham and Miss Selamawit Melaku

The thesis is original and has not been submitted for the award of any degree or diploma to any university or institutions.

Researcher’s Name

Date

Signature

Behailu Chimdessa Chala

Abstract

Recently higher institutions are widely expanding in Ethiopia to contribute towards the holistic development of the country. Office of the registrar of higher institution is the initial entrance to the services provided by the institution in the teaching-learning processes. The services that the office of registrar provides to the students and the employees need to be to the standard acceptable to service takers. The main purpose of the study is to investigate the effect of service quality on customer satisfaction in Jimma University the case of registrar services. Hence, cross sectional study was conducted and a stratified simple random sampling technique was employed to enable select the respondents from the eight strata (College) of Jimma University. Close ended questionnaire were used to collect data from respondents selected from students, and from academic staffs. Three hundred and fifty nine 359, participants were selected through convenience sampling technique. The SPSS statistical packages were used to analyze data. Multiple linear regression models were used to determine how well the service quality, dimensions such as the tangibility, reliability, responsiveness, assurance and empathy significantly predict the variance in the CSa of the registrar. The assumptions for linear regression model analysis were met. The finding of this study also indicates that customers were most satisfied with the assurance dimensions of service quality. On the contrary, customers were less satisfied with tangibility dimensions of service quality. The study concluded that, the correlation between the CSa and the dimensions were positive and statistically significant. Based on the results of this study, it is recommended that the Office of the Registrar should prioritize the SQ dimensions to provide quality service on customer satisfaction.

Keywords: *Customer Satisfaction; SQ dimensions; SERVQUAL; Registrar; Jimma University.*

Acknowledgments

It is the grace and mercy of God, the Father, that made me achieve this success and to go through all the difficult time and give me this opportunity to develop my career and faithfully helped me throughout the course of the study.

I take this opportunity to express my deepest gratitude, respect and appreciation for my advisor Mr. Kedir Abraham (Assistant Professor) with true respect for learning, for this his proper guidance and encouragement for this study up to this stage of my study.

My deepest appreciation goes to my Co-advisor Miss. Selamawit Melaku (MBA) for her continuous guidance and encouragement throughout this thesis writing.

Finally, my greatest gratitude goes to my beloved families, Dr Eng Fikadu Fufa (Associate Professor) and Mr. Begna Abera (MA) for their unreserved support and encouragement throughout the research development. Thank you very much and God bless you all!!

Table of Contents

CONTENTS	PAGE
CERTIFICATE.....	i
DECLARATION	iii
Abstract.....	iv
Acknowledgments	v
Table of Contents.....	vi
List of Tables	ix
List of Figures.....	x
ACRONYMS/ABRIVATIONS.....	xi
CHAPTER ONE.....	1
1. INTRODUCTION	1
1.1 Background of the Study.....	1
1.2 Statement of the Problem	3
1.3 Objectives.....	5
1.3.1 General objective.....	5
1.3.2 Specific objectives	5
1.4 Hypothesis of the study.....	5
1.5 Significance of the Study	6
1.6 Scope of the study	6
1.7 Limitation of the study	7
1.8 Organization of the study	7
CHAPTER TWO.....	8
2. THE LITERATURE REVIEW	8
2.1 Theoretical Review	8
2.1.1 Definition of Service	8
2.1.2 The concept of service.....	8
2.1.3 The concept of quality.....	10
2.1.4 Service Quality and Customer Satisfaction.....	12
2.1.5 Services Marketing.....	14
2.1.6 Quality of Service Dimensions.....	15

2.1.7 Measuring Service Quality	16
2.1.8 The SERVQUAL.....	18
2.1.9 Measuring Service Quality Gaps	19
2.2 Empirical review	20
2.3 Conceptual Framework	22
CHAPTER THREE	24
3. RESEARCH METHODOLOGY	24
3.1 Research Design.....	24
3.2 Target population	24
3.3 Research Approach	25
3.4 Sampling Techniques and sample size.....	26
3.5 Data Sources.....	27
3.6 Data Collection Instrument	27
3.7 Model Specification and Description of Study Variables.....	27
3.8 Data Analysis	28
3.9 Validity Test.....	29
3.10 Reliability	29
3.10. Ethical Consideration	30
CHAPTER FOUR.....	31
4. RESULTS AND DISCUSSION.....	31
4.1 Respondents of Demography and Service Quality perception.....	31
4.2 Response Rate	34
4.3 Descriptive Statistics of Service Quality Dimension and Customer Satisfaction.	35
4.4 Perception towards Overall Service Quality Dimensions	39
4.5 Assumptions of Multiple Linear Regressions	40
4.5.1 Correlation	40
4.5.2 Multicollinearity	41
4.5.3 Test for the Independence of the residuals	42

4.5.4 Linearity.....	42
4.5.5 Homogeneity of error variance and Normality.....	43
4.6 MLR Model for SQ Dimensions Predicting the CSa of the Registrar Office.....	44
4.7 Hypothesis Test Result.....	47
4.8. Discussion of Results	50
CHAPTER FIVE	53
5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	53
5.1. Summary	53
5.2. Conclusions	54
5.3. Recommendations	55
5.4. Future Research Direction.....	56
REFERENCES	57
APPENDICES	64
APPENDIX–A: Assumptions Test of Multiple Linear Regressions	64
APPENDIX –B: Questionnaires	67

List of Tables

Table 1. Sample of Target population.....	25
Table 2. Summary of Dependent and independent variables.....	28
Table 3. Reliability statistics of Cronbach’s Alpha	30
Table 4. Demography.....	32
Table 5. Service Quality Perception	34
Table 6. Response rate	34
Table 7: Perception towards items of Tangibility	35
Table 8. Perception towards items of Reliability	36
Table 9. Perception towards items of Responsiveness.....	37
Table 10. Perception towards items of Assurance	37
Table 11. Perception towards items of Empathy	38
Table 12. Perception towards items of Customer Satisfaction	39
Table 13. Descriptive statistics (mean and standard deviation) for SQ dimensions and CSa.....	40
Table 14. Intercorrelations for CSa of the registrar office and SQ dimensions	40
Table 15. Collinearity statistics, the tolerance and the VIFs of the MLR model of the SQ dimensions ($R^2 = .656$; $N = 328$).....	42
Table 16. Durbin-Watson statistic of the regression.....	42
Table 17 . Model summary for SQ dimensions predicting the CSa of the registrar office ($N = 328$)	46
Table 18. The ANOVA of the MLR model of the SQ dimensions predicting the CSa of the registrar ($N = 328$).....	46
Table 19. Regression coefficients for TAN, REL, RES, ASU and EMP predicting the CSa of Jimma University Registrar Office ($N = 328$).....	47

List of Figures

Figure 1 conceptual framework	23
Figure 2. Matrix plot of TAN, REL, RES, ASU, EMP, CSa (P < .001; DV = dependent variable which is CSa; IVs = independent variables (SQ dimensions)).....	64
Figure 3. Plot of observed cumulative probability and expected cumulative probability of the model (DV is CSa).....	64
Figure 4. Scatter plot of regression standard residual and standardized predicted values (DV is CSa)	65
Figure 5. Histogram of regression standardized residuals (dependent variable is CSa).....	65
Figure 6. Probability plot of the regression standardized residual (dependent variable is CSa).....	66

ACRONYMS/ABRIVATIONS

SPSS	Statistical Package for Social Sciences
TAN	Tangibility
REL	Reliability
RES	Responsibility
ASU	Assurance
EMP	Empathy
CSa	Customer Satisfaction
SERVQUAL	Service Quality
MLR	Multiple Linear Regressions
VIF	Variance Inflation Factor

CHAPTER ONE

1. INTRODUCTION

This unit deal with background of the study, statement of the problem, objective of the study, hypothesis of the study, significance of the study, scope of the study, limitation of the study, and organization of the paper are the major areas are discussed in this chapter.

1.1 Background of the Study

In the current business world, the quality of customer service is becoming the concern of both customers and organizations. And in most industries providing quality service is very important for their longer survival. In service industries, globally, the subject of service quality remains critical as businesses strive to maintain a comparative advantage in the marketplace (Zeithaml and Bitner, 2003).

Customer Satisfaction is when a consumer/customer is contented with either the product or services it is termed satisfaction. Satisfaction can also be a person's feelings of pleasure or dissatisfaction that result from comparing a product's perceived performance or consequence with their expectations (Kotler & Keller, 2009).

Customers' strength to service providers expecting to get a quality service and the level of expectation among each individual varies. Finding out what customers expect is essential in providing a quality service. This can be done through advertising research focusing on issues such as what features are important to customers, what levels of these features customers expect, and what customers think the company can and should do when problems occur in service delivery (Miles, 2013).

In point of fact, satisfaction could be the pleasure derived by someone from the consumption of goods or services offered by another person or group of people; or it can be the state of being happy with a situation. Satisfaction varies from one person to another because it is utility. "One man's meal is another man's poison," an old adage stated describing utility; thus highlighting the fact that it is sometimes very difficult to satisfy everybody or to determine satisfaction among a group of individuals. This is the general concept of the business need to increase the service of the company (Kotler & Keller, 2009).

To remain competitive, service providers must deliver quality service to their customers. Moreover, understanding and meeting customers' hope and later being different from competitors are important in order to survive in the today world of globalization. Nowadays, the provision of quality services has become one of the most important rights of citizens, and is the key to assuring the continuous operation of organizations, how to provide good service quality is an important topic, and how Organizational culture impacts that is the target of this study. An organization is a planned social unit deliberately structured for the purpose of attaining specific goals (Parsons, 1960). An organization's capacity is its potential to perform, its ability to successfully apply its skills and resources to accomplish its goals and satisfy its stakeholders' expectations.

The evaluation of customer satisfaction is a primary goal for any service organization that would like to survive in this increasingly competitive market. The quality-of-life index is based on the measuring of the quality of government performance. As it relates to good public administration and the provision of better services to citizens, Service industries, have been, and were continue to be, largely responsible for much of the domestic and international economic growth (Sara, 2013).

Currently, the understanding of customers' wants desires and trying to meet the level of customer satisfaction. To make customers loyal are important to maintain the customer for longer than mere considering each visit of the customers (Reich held, 2000).

Higher education institutions are rapidly increasing since recently in Ethiopia. The primary and first point of contact of the universities with their customers, mainly the students, is the registrar's office. It is here where the newly enrolled students start to receive service from their respective universities. The registrar closely and persistently provides services to the students until the students complete their studies. Besides, this office provides service to the graduated students as well to the university academic instructors at different times with different services.

The quality of the services provided by the university registrar offices determines the level of the satisfaction of the customers: the students and the Academic Staff. Assessing the factors that can be used as indices of the quality of the service provided by the office could be of importance to identify the gaps that need to be addressed by the university to satisfy its customers. Service quality is a key differentiator between the competing scenarios. It is especially very critical in a highly competitive environment such as that of the higher institution operating environment service quality on customer satisfaction improvement is the key issue that determines the very survival of the

institution itself. Assessing the quality of the services provided on customer satisfaction at the offices of the registrars of the higher institutions can be important to indicate the gaps in the provision of quality services (Sureshchandar et al., 2002).

Therefore, the main purpose of this study to investigate the effect of service quality dimensions on customer satisfaction. The study is backed by five predictor dimensions those are regarding to physical facilities, the ability to perform the promised service dependably and accurately, willingness to help customers and provide prompt service, knowledge and courtesy of employees and their ability to inspire trust and confidence and caring individualized attention the registrar provides to customer satisfactions.

1.2 Statement of the Problem

Institutions of higher education have gone through such reforms for improving the service they deliver to the customers, mainly the students and the Academic Staff. One of the parts of the university that mainly gives services is the registrar's office at different colleges and institutions. The effectiveness of the reforms that the university has implemented requires to be assessed in terms of the provision of quality service delivers (Longanecker and Blanco, 2003).

As students are the main stakeholders of higher education, service quality in the context of higher education has relied on the service experience of students as provided by HEIs (Jancey and Burns, 2013). Further, the satisfaction of students is substantially influenced by their perception of service quality (Alves and Raposo, 2010).

In addition, Satendra (2011) and Mesay (2012) have recognized that satisfying customers is the first major mission and purpose of any organization. When customers are satisfied, organizations achieve higher mission, objectives, and goal. Customer satisfaction also leads organizations to gain loyalty and achieve the desired objectives (Lymperopoulous et al., 2006).

In this regard, Jimma University is one of the higher educations in Ethiopia with a mission to ensure training high-quality national and international professionals, undertaking quality and problem-solving trainers. So, within these to attain its mission and future goal the service quality delivery by the organization is vital for the success and growth of the institutional sector activities. In this regard, the service quality on customer satisfaction is one of the key areas of the institution. Since the registrar has a lot of complaints on the emerging area of the service quality especially, regarding

practical customer handling and lack of on-time delivery service to customer's document and information quality service is critical in order to satisfy customers which imply a sustainable advantage.

In addition, the graduating 2021 class students of Jimma University and the academic staff of the university have been complaining regarding the quality of service rendering in the University Office of Registrar. Consequently, the effects of quality of services on customer satisfaction that the Office of registrar provides to the customers were investigated to obtain insight into the level and quality of the service has been provided by the Jimma University registrar office.

In relation of this research topic some researchers were conducted various studies in different areas, Bikila Debela (2015) conducted in the title "Assessment of service quality and customer satisfaction in case of some selected branches of 'co-operative bank of Oromia' in Addis Ababa." The past research has emphasized that service quality and customer satisfaction on bank organization. Here, the current study focused on the outcome of service quality on customer satisfaction on the services being offered in Jimma University.

The other study done by Mohammed Hussien (2017) is service quality on customer retention in hotel sector (a case of 5 selected hotels in Gambella town, Ethiopia). An important gap still exists in the empirical literature to indicate service quality delivery and customer satisfaction specifically related to rendering service quality on customer satisfaction.

Most of the studies related to service quality and customer satisfaction were done on bank and hotel, such as, a study doing by Belay (2010) the impact of service quality on customer satisfaction of private and commercial banks, using Five dimensions of service quality (tangibility, reliability, responsiveness, assurance and empathy the result implied that, The three service quality dimensions (assurance, empathy, and responsiveness) have positive and insignificant effect on customer satisfaction. Tangibility has a positive and significant impact on customer satisfaction. However, reliability has a negative and insignificant effect on customer satisfaction.

Therefore, the study tried to fill the gaps shown between the previous and current study. In past studies the area of research focused on private sectors such as banks and hotel. However, the current study has emphasized on the outcome of service quality on customer satisfaction being offered in public sector case in Jimma University. And also, most of the study conducted by using descriptive research

design. However, the present study was conducted by using both descriptive as well as inferential research design.

1.3 Objectives

1.3.1 General objective

The general objective of this study is to examine the effects of service quality on customer Satisfaction in Jimma University, the Case of Registrar Services.

1.3.2 Specific objectives

The specific objectives of the study are

- ✚ To identify the effects of tangibility on customer's satisfaction of the Registrar;
- ✚ To identify the effects of reliability on customer's satisfaction of the Registrar;
- ✚ To identify the effects of responsiveness on customer's satisfaction of the Registrar;
- ✚ To identify the effects of assurance on customer's satisfaction of the Registrar; and
- ✚ To identify the effect of empathy on customer's satisfaction of the Registrar.

1.4 Hypothesis of the study

A hypothesis is a logical estimated relationship between two or more variables expressed in the form of testable statements. The result of empirical studies universal indicates different outcome while using the same variables to investigate the effect of service quality on customer satisfaction in Jimma University the case of registrar services. With the purpose of achieve the study objectives and to answer the following hypotheses are developed:

- ✚ *Ho1: Tangibility will not have a positive and significant effect on customer satisfaction in Jimma University registrar.*
- ✚ *Ho2: Reliability will not have a positive and significant effect on customer satisfaction in Jimma University registrar.*
- ✚ *Ho3: Responsiveness will not have a positive and significant effect on customer satisfaction in Jimma University registrar.*
- ✚ *Ho4: Assurance will not have a positive and significant effect on customer satisfaction in Jimma University registrar.*
- ✚ *Ho5: Empathy will not have a positive and significant effect on customer satisfaction in Jimma University registrar.*

1.5 Significance of the Study

This study examined the service provided by the office of the registrar at Jimma University and its impact on customer satisfaction. The study has the following significant:

- ✚ It identified the strengths and weaknesses of the service delivered by the registrar's office and its effect on customer satisfaction.
- ✚ It might give information on the service the registrar is currently providing and help it to identify areas that need improvement and plan towards it, so that its customers enjoy quality service.
- ✚ This study may help the university management to direct their attention to this highly essential function of the service area.
- ✚ The findings of this research might help the University's office registrar to understand the role of good customer service on customer satisfaction,
- ✚ It can provides what level of service quality of the registrar office under customer service quality,
- ✚ It can allows the stakeholders to have clue on where the registrar stands in the eyes of its customers and the findings can be a stepping stone for future researches in registrar office and other service sectors.

1.6 Scope of the study

This study was delimited to:

Conceptually; this study was focused on the relationship between service quality dimensions (tangibility, responsiveness, reliability, empathy, and assurance) and customer satisfaction in relative term. The study was also limited to the study area.

Geographically; the study was conducted or limited to only in Jimma university main campus, Jimma Institute of technology (JIT), Jimma University College of Agriculture and Veterinary Medicine (JUCAVM) of all Colleges' Registrars and Institutions.

Methodologically; this study was conducted based on cross sectional survey research design and also convenience sampling techniques. Additionally, the main tool used to collect data from customers is questionnaires. This study was also conducted based on SERVQUAL tools.

1.7 Limitation of the study

The current study employed five elements as independent variables under the effective service quality on customer satisfaction in Jimma University the case of registrar services and dependent variable customer satisfaction. This implies that other variables relating to service quality were not considered. In addition, due to certain limitations, this study was limited to Jimma University, which is one of the monsters among government universities. It is, therefore, not known to what extent one can generalize the findings from this study to other state universities or even for private universities across the country. Another limitation was this study employed only multiple linear regressions to analyze the effect service quality on customer satisfaction and used only quantitative analysis. This study did not use logic regression and qualitative analysis.

1.8 Organization of the study

The thesis was organized into five chapters: Chapter One, Chapter Two, Chapter Three, Chapter Four, and Chapter Five. The first chapter is for the introduction of the study which consists of the background of the study, the background of the organization, statement of the problem, objectives of the study, scope of the study, limitation of the study, and organization of the paper. Chapter Two also contains different literatures on the area which discusses various theories and concepts on service Quality. Then, Chapter Three represents the research methodology. Furthermore, Chapter Four presents results and discussion, and the final chapter; Chapter Five is the summary, conclusion, recommendation of the thesis, and future research direction.

CHAPTER TWO

2. THE LITERATURE REVIEW

This chapter deals with the review of the relevant works of literature to establish the study background. It contained the theoretical foundation of the subject, empirical review of recent pieces of literature, and the conceptual frameworks with various subsections.

2.1 Theoretical Review

2.1.1 Definition of Service

One of the major trends of recent years has been the phenomenal growth of services. This shift towards a service economy is largely attributed to rising affluence, more leisure time, and the growing complexity of products that require servicing. Moreover, as companies find it harder to differentiate their physical products, they increasingly turn to service differentiation, seeking to win and retain customers through delivering superior services. Many developed countries have seen a dramatic increase in the importance of services to national economies and to the individual consumer. In the major European countries, the US and in Japan, more people are employed in services than in all other sectors of the economy put together. Both public and private sector services in these countries account for between 60 and 75 percent of gross domestic output. (K. Rama Mohana Rao, 2005).

In some countries, service occupations have been forecast to contribute to all net job growth in the next five years (Kotler, 2005). Because of their diversity, services have traditionally been difficult to define. The way in which services are created and delivered to customers is often hard to grasp since many inputs and outputs are intangible. Most people have little difficulty defining manufacturing or agriculture, but defining service can elude them (Lovelock & wright, 1999). Some of the definitions of service are the following service is an act or performance offered by one party to another. Although the process may be tied to a physical product, the performance is essentially intangible and does not normally result in ownership of any of the factors of production (Lovelock & wright, 1999).

2.1.2 The concept of service

According to Gilmore (2003), the important growth of services industries highlights the contribution to world economies. From the evolution of the services marketing literature, many

definitions of the concept of service came across; there have been arguments about the extent to which services should be considered. On one hand, some have argued that despite the fact services are performances, still have characteristics similar to goods in terms of how they are produced, consumed, and evaluated. On the other hand, many have argued that the differences that exist between goods and services highlight the limitations of traditional marketing principles when applied to the marketing of services. By their very nature, services are diverse and therefore have often been difficult to define, services should be defined in their own right, not in relation to goods because of the distinctive characteristics among them.

According to Lovelock (2011) express that services are economic activities offered by one party to another. Often time-based, performances bring about desired results, objects, or other assets for which the organization have the responsibility”. This definition emphasizes that the customer expects “value” in exchange for money, time, and effort. However, despite the scope of the service and the understanding of its meaning, services have a number of distinctive and unique characteristics, which separates services from goods often described as intangibility, heterogeneity, inseparability, and perishability. These are defined in the next section.

2.1.2.1 Intangibility

According to Palmer (2011), a pure service cannot be measured using any of the physical senses, services are performances or actions rather than objects, they cannot be seen, felt, tasted, or touched in the same manner as tangible goods. Additionally, Zeithaml, Bitner, and Gremier (2009) states that intangibility presents several marketing challenges, precise manufacturing specifications concerning uniform quality can rarely be set, but when what is being sold is purely a performance, the criteria customers’ use it may be complex and difficult to capture precisely. However, Grönroos (2007) says that in order to develop a service management and marketing models for the business, it is important to understand what customer is really looking for and what they evaluate.

2.1.2.2 Heterogeneity

Services are performances produced by humans; no two services will be precisely alike. In addition, is important to point out that the characteristics of customers may differ as well; each had had unique demands or experience the service in a unique way. Therefore Zeithaml, Bitner, and Gremier (2009) explain that because services are heterogeneous across time, organizations, and people, ensuring consistent service quality is challenging. Quality depends on many factors such as

the ability of the customer to articulate his or her needs, the ability and willingness of the personnel to satisfy those needs, the presence (or absence) of other customers, and the level of demand for the service.

2.1.2.3 Inseparability

Services that are a series of processes, where production and consumption cannot be totally separated, and where the customer often actively participate in the production process are bound to be perceived as extremely complex (Grönroos, 2007). In this regard Zeithaml, Bitner and Gremler (2009), explains that because services are often produced and consumed at the same time, mass production is difficult. The quality of the services and customer satisfaction will be highly dependent on what happens in “real time” including the actions of employees and the interaction with the customer. This all leads to consumers having higher levels of perceived risk (Gilmore, 2003).

2.1.2.4 Perishability

The perishability of services is a key concept in services market and refers to the fact that services cannot be saved, stored, resold, or returned. In contrast to goods, they cannot be stored in inventory or even returned if the customer is unhappy. Creating a primary issue for marketers face in relation to service perishability, demand, predicting and creative planning for capacity utilization are therefore important and challenging decision areas according to Zeithaml, Bitner and Gremier (2009). It must be emphasized that both manufactured goods and service products contribute to the quality experience, but this research is concerned primarily with the service delivery process.

According to Zeithaml, Bitner and Gremier (2009), customers not only influence their own service outcomes, but they can influence other customers as well. The three elements of the marketing mix mentioned before are an important tool that addresses the uniqueness of services, keeping the customer at the center what Grönroos (2007) called “functional quality”. How to define quality is the next topic of interest.

2.1.3 The concept of quality

Once the argument of services has been agreed out, is important to turn the discussion on how quality can be defined, thus, this concept has been researched by several authors through decades making it necessary to understand the various definitions and approaches that exist in the marketing environment. Kasper, Helsdingen, and Gabbot (2006) argue that the application of quality in services is a relatively recent phenomenon and according to Schneider (2004) Quality is an

ambiguous term and perhaps the most important and complex component of the business strategy. However, in the existing literature was explained that is challenging to try to establish a single and universal definition for quality, nevertheless, there are several different ways to approach the definition of it.

The concept of quality usually has been seen to be a production concern with the extent to which a product conforms to technical standards (Kasper, 2002). Although is only suited for quality in mass-production goods and its measurement. Among the definitions available in the literature, it was noticeable the fact that the definitions are changing with a common factor such as customer centered.

For example, the research carried out by Battini (2012) points out that the concept of quality can be approached from: the productive point of view, where can be defined as “ the fraction of goods that are produced correctly” and the customer-satisfaction point of view: in which the quality of the product is determined by the customers’ perception. The limitation of this approach is subjective; due to every customer can have an individual perception of quality with freedom of variation. As Gummesson (1991) expresses, strong disapproval on the belief of the subjective approach arguing that the evaluation process should involve the subjective and objective aspects. Bearing this in mind, the two points of view should be considered when it refers to quality, such as Wicks (2009) explain in their publication for the “Journal of business and Economic studies”.

They argue that even though the quality definition is often described by just one approach as Battini (2012) states in their research mentioned previously. In contrast, these scholars explain that in order to reach quality in services both approaches should be considered as a common factor. In order for the organization to compete in the world-class business environment is crucial to refer to the user-based definition because is more important to the customer and the process-based definition because is more important for the business, although there is no such thing as a universal definition for quality, the organization should seek for balance in their strategy.

Additionally, Garvin's (1988) technical approach may be suitable for the measurement of the overall process, in other words, the final result of what was delivered in the process; while the user approach is appropriate in the manner of evaluating how the delivery process was. Nevertheless, the customer-based approach is more relevant to discuss in this research because the study focuses on

the customer perceptions and expectations of the service provided by the launderette, and identify the gap in between (If it exists) exploring the literature based on the perspective of (Parasuraman & Berry, 1985).

According to Radomir (2010), under this approach, the quality evaluations based on the customer perceptions, are therefore completely different from those that considered the technical approach. Because of the role customers have in the delivery process, the service marketing literature adopts this perspective. However, these authors explain as well that the research quality in present times should refer to all perspectives without the need to find the superiority of one perspective over another adapting the definition of quality according to the business necessities.

2.1.4 Service Quality and Customer Satisfaction

According to Sunayma (2013), quality can be view as the level of service qualities needed to make the service acceptable and profitable for the organization in the marketplace; this is from the organization point of view, in contrast, the customer point of view focus only in satisfying their own desires and needs. The reason why Parasuraman & Berry (1988) underpinned the need to understand service quality, studying services separately from goods, but today, the subject of service quality has acquired an important amount of research attention among businesses and the marketing environment. For any organization the quality of their service costs money, research is necessary for the organization to know where to allocate the resources to make the best impact.

Based on the discussion about the own characteristics of services as a concept, is essential to narrow the scope, and focus on the definition of service quality, that according to Zeithaml, Parasuraman & Berry (1985) can be defined as “the difference between customers’ expectations of service and their perceptions of the actual service performance”. The obvious absence of tangible manifestations in services creates a great challenge to measure it, quality service ensures that customers are satisfied with what they have in exchange for money, time, and effort. What can be perceived as outstanding service to one customer, maybe average for others, but is crucial for the services industry to measure positive and negative experiences in order to identify the causes of service quality shortfalls and the design and implement corrective actions on the management strategy.

The actual research in the literature shows some discussion on the potential benefits for the implementation of quality. Such as the competitive advantage that the organization can create by isolating its customer from the competitors, called as well customer inertia Kasper, Helsdingen and Gabbot (2006); the positive word of mouth from existing customers that are satisfied reduces the costs of the organization's marketing approach on attracting new customers. The natural financial improvement related with customer loyalty and the impact on the internal marketing of the organization by a decreasing the staff turnover although this last point has been only limited empirical support. According to Kasper, Helsdingen, and Gabbot (2006) quality is something an organization is responsible for, and satisfaction is in the customer domain, because the interrelatedness of quality and satisfaction should not be taken as individual approaches.

In the literature the existence in some evidence that suggests that satisfaction is a prerequisite of perceived service quality? In more detail, the goal of the service science is to provide to the organization a noticeable increase in efficiency and sustainability of the same (Baron, 2013).

2.1.4.1 Customer Satisfaction

Several authors have defined customer satisfaction in various ways: According to Kotler (2000), satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectation.

Gaither (1994) defines customer satisfaction as the determination of customer requirements and demonstrated success in meeting them.

Kotler (2006) again defined customer satisfaction by giving details on the attributes of a highly satisfied customer. According to him, a highly satisfied customer stays loyal longer, and buys more as the company introduces new products and upgrades existing products; talks favorably about the company and its products, pays less attention to competing brands and is less sensitive to price, offers a service or product ideas to the company and costs less to serve him than new customers because transactions are routine.

Kotler and Armstrong (2001), in their Principles of Marketing, define customer satisfaction as the extent to which a product's perceived performance matches a buyer's expectations. They continued that, if the product's performance falls short of expectations, the buyer would be dissatisfied but if performance matches or exceeds expectation, the customer will be satisfied or highly satisfied. In

service quality literature, customer expectations are understood as desires or want of consumers Zeithaml, & Parasuraman (1993) or “what they feel the service provider should offer rather than would offer.” Customer perceptions are defined as “the customer’s judgment of the service organization’s performance” (Davidow and Uttal, 2009).

Customer satisfaction is a “psychological concept that involves the feeling of wellbeing and pleasure that results from obtaining what one hopes for and expects from an appealing product and/or service” (World truism organization, 1985);

As the literature in marketing indicates, customer satisfaction is the ultimate goal for the organization's success Hoffman (2006) Thus, in this century customer satisfaction defines a clear sense in today’s economic activities highlighting the link between financial business performance and customer satisfaction. In addition, Solomon (2006) describes that the satisfaction of the customer will be determined by the overall feelings or attitudes the customer has towards the service that has been delivered.

2.1.5 Services Marketing

“Services are going to move in this decade to being the front edge of the industry” quote from, Gerstner (2003), in this context Baron (2013) identified the expansion in the scope of contemporary development in the service sectors, which have accounted for an increasing proportion of global economic activity. Services can be defined as processes and performances provided or coproduced by one entity or person for another entity or person. Zeithaml, and Gremier (2009) virtually all organizations compete to some degree on the basis of service; it is difficult to name even one industry for which service matters are unimportant.

Services are so much a part of what it’s produced, consumed, and exported, the reason why there has a need to concern about quality Zeithaml, & Berry (1985). In addition, Baron (2013) have described and discussed that by the creation of the service culture among organizations, the nature of the customer relationship will change, moving from the customer relationship management (CRM) to the consideration of customer engagement, justifying this change with the sales growth and superior competitive advantage of the business. The usual marketing framework is based on the characteristics of manufacturing goods. Service marketing involves the approach that modifies the standard theory of the “4Ps” of the marketing mix McCarthy, (1960). Thus, the nature of services

poses distinct marketing challenges research has shown the need to extend the marketing mix by adding the “Ps” related to services: process, the physical environment, and people, called the “7Ps” of the marketing mix (Doyle, 1994).

2.1.6 Quality of Service Dimensions

Service quality dimensions mean the tangibility and included the material utilities and equipment also the officials and the credibility which means the capabilities to promising service performance in reliability and accurate way, as for the response means the readiness to assist customers and presenting fast service, and the sympathy implies individual care and attention providing by the organization for the customers Agbor (2011), the service quality is measured via four dimensions which are the tangibility refers to the material utility and the equipment and the officials' appearance, the credibility refers to the origination capabilities to perform the anticipated service in reliability and accurate way, as for the response means the desire to assist customers and presenting the service quickly, sympathy means individual care and attention of the organization for the customers Bhiwajee & Naidoo, (2010) as follows:

A. Response: it means the official's readiness to render the service in time and in a suitable way Yarimoglu (2014) and the response is defined as the organization desire to assist the customer and rendering service to him quickly, and the capabilities to render service at one to the customers' requests service and lessening the waiting period, also the officials' readiness to render the service Al-Azzam Abdel Fattah Mahmoud (2015) associated with the officials' readiness for rendering the service in time and ensure that the customer's service passes via successful criteria and rendering the service immediately to the customer (Irene, &Darko ,2014).

B. Credibility(reliability) it depends on dealing with customers' service, and implementation the service properly from the first instance and clear from errors and in the specified time, credibility represented by maintenance the customers' desires, inaccurate registers, and the service is implemented by within the instructions, laws, and criteria Al-Azzam Abdel Fattah Mahmoud (2015). The credibility lays in the integrity of the organization's activities and it is an essential matter to achieve rendering high-quality service and implementing it properly from the first instance (Irene, & Darko, 2014).

C. Understanding is defined as the individual care and attention presented by the organization for its customers and this requires an understanding of the officials to know their customers' demands

and the necessities within hours of work, also means welcoming the customers by the employees Al-Azzam Abdel Fattah Mahmoud (2015). To put the customers' interest at the core of their work, subsequently understanding their special demands and providing individual care for their customers and response their questions (Irene, &Darko ,2014).

2.1.7 Measuring Service Quality

According to Hoffman (2006), the process of service quality can be surveyed in terms of gaps between expectations and perceptions on the part of the management, in other words, they explained that the expectations communicated to the customer are marketer-controlled (organization or business). The main goal for the measurement of quality in services is to close the “service gap” or at least to try to narrow the differences as much as possible. In this regard, Zeithaml, and Gremier (2009) points out that closing this gap is critical to delivering quality service; effective services marketing is a complex undertaking that involves many different strategies, skills, and tasks; viewing services in a structured, integrated way called the gaps model of service quality. These three authors have been explored the gap model basis, gaps that can occur within the organization providing the service and it can occur in any of these gaps and include:

Gap 1: The listening gap

Providing services that customers perceive as excellent requires that the business knowledge of what customers expect. This gap may occur when the organization supervises or underestimate the need to fully understand customer’s expectations; when this happens, companies provide services that do not match customer’s expectations: important structures are left out and the levels of performance on features that are provided are “inadequate”. Bearing this in mind, the suggestions for the closure of this gap according to the last publication of Hoffman (2006) the detailed knowledge of the customer desires is essential in order to build a response in the service operating system. Several tasks on behalf of the organization can include: adequate marketing research orientation, the interaction between the management and customers, market segmentation, and the ability of the service to recovery after a failure.

Gap 2: The standards gap

The standards that have been set for service delivery, the entire process, such as, time and the behavior of the personnel in the service interaction may open this gap between the management perceptions of customer expectations. In many cases, the strategy selected by the management can be directed to enhance resources that only concern to other organizational goals such as sales,

profits, or market share. This approach can be cited as misguidance priority as Hoffman (2006) point out as an impediment for the organization progress in delivering quality services. According to the recent literature the action that should be undertaken in order to close this gap, is to have customer-driven service standards, focusing on customer requirement instead of short-term profits.

Gap 3: The service performance

Organizations offering services that are highly interactive, labor-intensive, and performed in multiple locations are especially vulnerable to Gap 3. That can occur when the employees are unwilling or unable to perform a service at the level required Zeithaml, and Berry, (1990). In addition, tends more into the employees' behavior in the real-time delivery process, where the inadequate support received from the management leads to poor employee productivity, unsatisfied customers, and a noticeable increase in the size of the delivery gap. Hoffman (2006) and Zeithaml, and Gremier (2009) state that the closure of this gap is related to the recruitment and training process.

Gap 4: The communication

Appropriate and accurate communication about services is the responsibility of both marketing and operations. Zeithaml, and Gremier (2009) add that effective coordination of the actual service delivery with the external communication, therefore, narrows the communications gap and favorably affects the customer gap as well; companies must also manage all communications to customers so that inflated promises do not lead to higher expectations. In other words, this gap can be affected by two basic factors: (1) to overpromise and (2) the flow of internal communication. Where the balance between these two should exist in order to avoid an awkward position when a customer requests the services promises and the provider has no idea what the customer is talking about. According to the existing literature, the gaps mentioned before are essential to creating gap 5; the closure of this gap may support the organization to achieve good service quality and met or exceed the customer expectation, keeping the judgment of the customer on the real perspectives. The gap that is the focus for this research, where through the SERVQUAL it was exploring the wideness of this gap, between what customer expects and what was perceived from the service interaction. And so, the researcher will focus just on the interaction with the customer putting aside the gaps that focus on the organization, given to the organization's need to focus on the customer and to use the knowledge to drive the business strategy. In order to understand this gap, the expectations and perceptions were fully explained later on in this chapter.

2.1.8 The SERVQUAL

Parasuraman & Berry (1985) developed the SERVQUAL instrument for the measurement of service quality. They have made a serious improvement to the model in 1988, 1991 and again in 1994. SERVQUAL has become one of the most renowned in the service quality domain. This model conceptualizes the gap between what the customer expects by way of service quality from the service providers and their evaluations of the performance of a particular service provider. Service quality is presented as a multidimensional construct.

In their original formulation, Parasuraman& Berry (1985) identified ten dimensions of service quality which are reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, and tangibles. In their 1988 work, these components were condensed into five dimensions (Buttle, 1996).

Since mid-1980s, the researchers Grönroos (1984) and state that the existing quality standards in the goods sector were not extendable to the services sector. Zeithaml, and Gremier (2009) made a study with the purpose to understand and improve service quality; exploring the factor that influences customer's in the evaluation process. They determined the common dimension among three different service sectors.

Based on various aspects of service quality it was developed a research instrument named SERVQUAL, with the premise to explore the differences between expectations and perceptions, arguing that only customers can judge quality, all other judgments should be considered as irrelevant. The SERVQUAL instrument consists of two sections: a 20-item section that was referred to the customer expectations of excellent firms in a specific service sector and a second 20 item section responsible to measure consumer perceptions of a particular organization in that service sector.

The results from these two sections are relevant to compare and obtain the “gap scores” designed to fulfill the five service quality dimensions that are summarized as it follows: Tangibles: Appealing appearance of the physical facilities, equipment, and employees that are involved during the service deliverance, Reliability: The ability to perform accurately and dependably what the organization promised to deliver the service maintaining error-free records, Responsiveness: The willingness of the organization to provide help, information and prompt service to customers, Assurance: The ability of the organization to display trust and confidence, having the knowledge and necessary

skills to deliver a service as promised, Empathy: The individual attention and the understanding of customers' problems, resolving them with a caring approach (Zeithaml and Berry, 2009). The SERVQUAL model was first published in 1988, but since then numerous improvements have been applied.

2.1.9 Measuring Service Quality Gaps

As it is known that what can be measured are the differences between the abstractions. So if we can measure the difference between expectations and perceptions, which was defined as perceived quality, we can therefore determine the level of satisfaction. This concept was quite similar to the conceptual model of service quality suggested by Zeithaml and Berry (2009), which applied the expectancy disconfirmation theory. These authors had identified that there were five key discrepancies that can influence customer evaluations of service quality:

- Gap 1 was the gap between customer expectations and management's perceptions of those expectations. Gap 2 was the gap between management's perception of what the customer wants and specifications of service quality. Gap 3 was the gap between service quality specifications and delivery of the service. Gap 4 was the gap between service delivery and what the company promises to the customer through external communication. Gap 5 was the gap between customers' service expectations and their perceptions of service performance. Berry (2009) stated that in order to manage service quality, it was important to manage the gaps between expectations and perceptions on the part of management, employers and customers.

The most important gap (Gap 5) was that between customers' expectations of service and their perceptions of the service actually delivered. So by referring to the gap model, it was noted that a service marketer must lessen the customer gap (Gap 5). In order to do so, the service provider must first try to lessen the other four gaps (Gap 1, 2, 3, and 4) within the organization that inhibit delivery of quality service, as each of these elements contribute towards the expectations and perceptions of customers. Subsequent to the gap model, Parasuraman, & Berry, (1988) designed 18 the SERVQUAL instrument to identify and measure the gaps between customers' expectations and perceptions of service quality. The instrument suggested service quality as the gap between customer's expectations (E) and their perception of the service provider's performance (P). Hence the service quality scores (Q) can be measured by subtracting the customer's perception score from the customer's expectations score. The SERVQUAL is popularly used by many studies of service

quality. It is a multiple-item scale developed to measure service quality by computing the differences between consumers' desired expectations and their perceptions of a firm's performance. The instrument has been designed to be applicable across a broad spectrum of services.

2.2 Empirical review

The empirical literature survey helps the development of the theoretical framework and hypothesis for testing. There have been a lot of studies conducted in the field of service quality and customer satisfaction in various service industries on both the national and international levels. Some of the previous related research studies from an international and national perspective have been reviewed as follows. Internationally a lot of studies were conducted on the issues of service quality. Let summarizes some of them chronologically:

As Mohammad and Alhamadani (2011) have undertaken the research on five dimensions of Service quality (tangibility, reliability, responsiveness, assurance, and empathy. The researcher came up with the result that the five service quality dimensions (tangibility, reliability, responsiveness, assurance, and empathy) have a positive and significant effect on customer satisfaction.

According to Tibebe (2012), states that the impact of five service quality dimensions on customer satisfaction was significant in all factors of service quality. More specifically, customers indicated high satisfaction with the five service quality dimensions examined in the study (Reliability, Responsiveness, Empathy, Assurance, and Tangibles). The researcher used to quantitative methods and a self-completion with a closed questionnaire was conducted.

From a few studies conducted on service quality and customer satisfaction in Ethiopia, Asfaw (2014) tried to assess service delivery and customer satisfaction of ESLS (Ethiopian Shipping & Logistics Services Enterprise) focusing on the logistics transport sector by identifying gaps, potentials, and constraints for the development of effective and efficient transport service. To make this research effective, the researcher used probability-sampling techniques to select from customer employees and management office.

A questionnaire and interviews were used to gather relevant information. Statistical tools like percentages, tables, and pie charts are used to analyze the data. The findings of this study indicate that most customers were not satisfied based on the feedback of the majority level of customer satisfaction and dimensions of service quality.

Girma (2015) has undertaken the research on the assessment of service quality and its influence on customer satisfaction in the case of Oromia International Bank S.C. SERVQUAL method was used to determine customers' expectation and perception of service quality.

The researcher selected 40 branches using simple random sampling and 365 customers from these branches using a systematic simple random sampling technique. 365 questionnaires were distributed to the selected customers and 211 duly filled questionnaires were collected and used to undertake the research. The study applied a quantitative research method and descriptive and explanatory research design.

The result of the study revealed that the average perception and expectation gap for all service quality dimensions (tangibility, reliability, responsiveness, assurance, and empathy) was a negative disconfirmation score of 1.53. The highest mean score was for tangibility followed by reliability and assurance and the lowest mean score was for empathy and responsiveness. There was a significant and positive relationship between the five service quality dimensions and customer satisfaction. The highest correlation was between assurance and customer satisfaction followed by responsiveness and customer satisfaction and empathy and customer satisfaction. The least correlation was between tangibility and customer satisfaction and reliability and customer satisfaction.

The analysis also indicated that the service quality dimensions have a positive and statistically significant influence on customer satisfaction except for reliability. 77.3 % of the variation in customer satisfaction was explained by the service quality dimensions.

The researcher recommended the development of the skill and knowledge of employees and prioritizing investment outlay for physical elements of the service like equipment, physical facilities, and communication materials.

Al-Azzam (2015) has undertaken research on the impact of service quality dimensions on customer satisfaction on Arab banks in Irbid city, Jordan. The study used a simple random sampling technique to select 400 respondents from four banks sited in Irbid city. Primary data was collected using a questionnaire. The questionnaire measured the quality of services by implementing the five dimensions SERVQUAL instruments (tangibility, reliability, responsiveness, empathy, and

security), and the 5-point Lickert scale was used for all responses. The research has applied a quantitative research approach and analyzed using SPSS version 19.25.

The researcher came up with the result that customer satisfaction in Jordanian banking services is significantly affected by tangibility, reliability, responsiveness, empathy, and security. It also demonstrated that customers' perception is the highest in reliability area.

2.3 Conceptual Framework

The conceptual framework indicates the crucial process, which is useful to show the direction of the study. The conceptual frame below shows how the relationship between the five service qualities dimensions (reliability, responsiveness, assurance, empathy, and tangible) in customer satisfaction. According to Parasuraman et al., 1988, the independent variable quality of service consisting of five sub-dimensions (Response, Reliability, Assurance, Tangibility, and Empathy) and the dependent variable is Customer Satisfaction.

Tangibles: The appearance of physical facilities (working rooms, and staff rooms), tools and equipment's (computers, internet, etc.) used to provide the service, appearance of personnel and communication materials.

Reliability: The ability of the administrative staffs to perform the promised service dependably and accurately. And, their ability to discharge duties consistently, and dependably.

Responsiveness: The willingness and/ or readiness of the registrar employees to help students and academic staffs in preparing ID Cards, clearance and documents, promptly.

Assurance: The knowledge and courtesy of the administrative staffs of registrar and their ability to convey trust and confidence: competence (possession of the required skills and knowledge to perform the service)

Empathy: The provision of caring, individualized attention to students and academic staffs: informing the customers about the expectation of their performance, Understanding customers specific needs, and providing individualized attention. It also according to researchers scales Irene, A. & Darko (2014). Basing on the research problem and its objectives, the researchers have developed a conceptual framework.

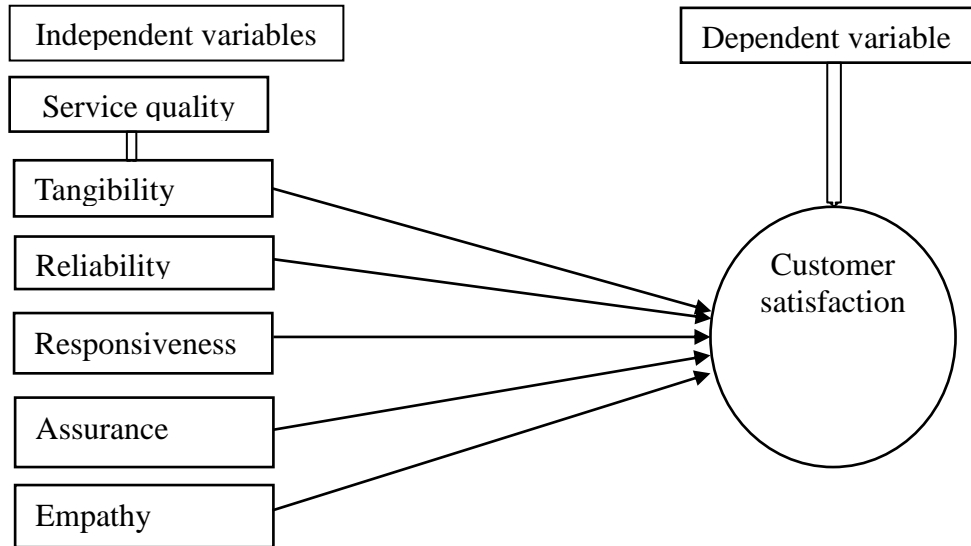


Figure 1 conceptual framework

Source: Adopted by the researcher from Parasuraman 1988.

CHAPTER THREE

3. RESEARCH METHODOLOGY

This chapter describes the methods that were used in this study. It stated and justified the research design, population, sampling methods, and data collection technique, and data analysis.

3.1 Research Design

This study employed both descriptive and explanatory survey designs which used quantitative method.

Isaac (1997) explains that the assessment research method was used to answer questions that have been raised, to solve problems that have been created, to assess needs and set goals, to determine whether or not specific objectives have been met, to establish baselines against which future comparisons can be made, to analyze trends across time, and generally, to describe what exists, in what amount, and in what context.

Both descriptive and explanatory study design and quantitative methods were used to analyze the data collected through questionnaire from students and academic staffs. The reason to use descriptive method was that the study was intended to describe the existing situation under study and the service quality dimensions that lead to customer satisfaction. Quantitative method was used for answering the hypothesis test which designed with close-ended in the form of that the five-point Likert-type scale. Therefore, the study used quantitative methods because the hypothesis test and the corresponding specific objectives required quantitative data.

3.2 Target population

The target populations of the study were graduating class regular students in 2021 academic year, and academic teaching staffs. The total numbers of graduating class are 4194 students and 1285 academic staffs.

Therefore, the total number of graduating students and academic staffs was 5479. The researcher used stratified simple random sampling technique to select respondents for the quantitative survey of the total population. Accordingly, the sample size was 359 both graduating students and academic staffs as indicated in table 1 below:

According to Kothari (2004), a population is a well-defined set of people, services, elements, and events, groups of things, or households that are being investigated. Surveys are more representative because everyone has an equal chance to be included in the final sample that is drawn by Mugenda (2003) and Taro Yamane (1967) proportionate simple sampling.

According to Ross (1987), stratified sampling is an appropriate methodology to make proportionate (take part of the whole) and meaningful in the population. In this study, to draw a sample proportion for each college and institution, a proportionate stratified sampling design was used.

The sample determined from colleges and institutes by the Eq. (1)

$$n_i = (n/N) N_i \quad (1)$$

n =the total number of sample= N =the total number of the target population, N_i =the total number of the target population, n_i = the proportional sample.

Table 1. Sample of Target population

Name of Colleges	Students	Academic staff	Target population	stratified sampling	Sample size
Institute of Technology	1000	274	1274	$n_1=359*1274/5479=8$	83
Institute of Health Sciences	850	128	978	$n_2=359*978/5479=64$	64
Social S. and Humanities	718	216	934	$n_3=359*934/5479=61$	61
Business and economics	409	144	553	$n_4=359*553/5479=36$	36
Natural Sciences	492	232	724	$n_5=359*724/5479=48$	48
Law and Governance	137	56	193	$n_6=359*193/5479=13$	13
JUCAVM	483	187	670	$n_7=359*670/5479=44$	44
Educ. and Behavioral	105	48	153	$n_8=359*153/5479=10$	10
Total	4194	1285	5479		359

3.3 Research Approach

According to Saunders et al. (2009), there are two main research approaches: qualitative and quantitative approaches. From quantitative theories are developed and a research strategy designed to test the hypothesis. Under the quantitative research method of data collection, a standard questionnaire with modifications to fit the context of the study was used to collect data for this study. The researcher used the measure with numbers and then analyses the data with statistics

techniques by using SPSS software. In this study, the quantitative approach was used to quantify the hypothesized relationship between the dependent variable (customer satisfaction) and the independent variables (service quality dimensions).

3.4 Sampling Techniques and sample size

The statistical population of this research is among 5479 customers of Jimma university registrar which is graduating class of 2021. These were: 275 Students, 84 Academic staffs were selected 359 customers using convenience sampling technique within 6 colleges and 2 Institutes of Jimma university which means all regular graduate class of the year 2021 in the University was included. The reason for using convenience sampling is because the population is too large and it is impossible to include every individual and because of their inconvenient accessibility and proximity to the researcher. The sample was determined using Eq. (2):

$$n = \frac{Z^2 pq}{d^2} \tag{2}$$

Where: n = the desired sample size (if target population is greater than 10,000); Z = the standard normal deviate at the required confidence level; p = the proportion in the target population estimated to have characteristic being measured; q = 1-p; and d = the level of statistical significance set.

Assuming 50% of the population has the characteristics being measured; q = 1-0.5; assuming the desire accuracy at 0.05 level; and the Z-statistic is 1.96 at this level. Then,

$$n = (1.96)^2 * (0.5) * (0.5) / (0.05)^2 = 384$$

Because the population is less than 10,000, (Mugenda, 2003) adjusted sample size is computed using Eq. (3).

$$nf = n = 1 + \frac{n}{N} \tag{3}$$

Where, nf = the desired sample size when population is less than 10,000; n = the desired sample size when population more than 10,000; and N = the estimate of the population size. Then,

$$n = 1 + (384/5479) = 384 \div 1.07008 = 358.87 = 359$$

3.5 Data Sources

In order to address the objective of this study and to provide a wide range of information on the study area data was collected from different sources. The primary sources are the customers (Students, and Academic Staff). Primary data was collected from customers through a selected sample list by using questionnaires. In addition, a discussion with key informants had been carried out to understand the service quality and to get information about the overall condition of service provision by using a close-ended questionnaire. To get concrete information and in order to support the data obtained from primary sources, secondary data was also included. Secondary data sources were used for this study was reported and some documentation regarding the customer.

3.6 Data Collection Instrument

The SERVQUAL model (Tangibles, Reliability, Responsiveness, Assurance, and Empathy) was used in this study. Therefore, the respondents were the customers. Accordingly, close-ended questionnaires with 34 questions for each were distributed. The data collection was scheduled by the Gantt chart technique, on five different days, with small groups of ten each day. These were assessed the proper amount of time for each group, which was provided more control on the issues that may arise. Therefore, the method of implementation was face-to-face.

3.7 Model Specification and Description of Study Variables

The researcher conducted multiple linear regression analysis by considering the form of relationship and the number of independent and dependent variables. Multiple linear regression Analysis is used to show the relationship between the dependent and the independent variable (Kothari, 2004).

Model:

Gujarati (1995) defines a regression functions as follows: Multiple linear regression model formula is given in Eq. (4).

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon \quad (4)$$

Where, β_0 is constant, $\beta_1, \beta_2 \dots \beta_n$ are coefficients of the model; X_1, X_2, X_n are predictor variables; and Y is response variable. ε is error term.

$$CSa = \beta_0 + \beta_1TAN + \beta_2REL + \beta_3RES + \beta_4ASU + \beta_5EMP + \varepsilon$$

CSa= customer satisfaction

TAN = tangibility

REL = reliability

RES = responsiveness

ASU = assurance

EMP = empathy

β_0 = constant

β_n = coefficient

ϵ = error term

Table 2. Summary of Dependent and independent variables

Variables	Proxies
Independent	Tangibility: physical facilities, equipment, and appearance of personnel Reliability: ability to perform the promised service dependably and accurately Responsiveness: willingness to help customers and provide prompt service Assurance: knowledge and courtesy of employees and their ability to inspire trust and confidence Empathy: caring individualized attention the registrar provides to its customers
Dependent	Customer satisfaction: generally refers to a customer's comparison of service quality to customer satisfaction expectation as it relates to a registrar office performance.

3.8 Data Analysis

The study required quantitative techniques of data analysis. Thus, the quantitative data was analyzed using the Statistical package for the Social Science (SPSS) version 20.0 software program to calculate mean in order to describe the target population. One sample t-test and Mean score were used to compare if there was a significant difference in service quality attitude between target populations.

After data cleaning which entailed checking for errors in entry, both descriptive and inferential statistical tools were employed to analyze the collected data. Such as frequencies, percentages mean

scores, and standard deviations. Additionally, correlation and regression were estimated for all the quantitative variables and information presented in form of tables and using modeling of multiple linear regressions.

Pearson correlation presented by figure and table. The quantitative data from the closed-ended questions were analyzed using conceptual content analysis and present in wording. Inferential data analysis did use multiple regression analysis.

Multiple regression analysis was used to establish the relations between the independent and dependent variables. Multiple regressions were used because it was the procedure that uses two or more independent variables to predict a dependent variable. And present Multicollinearity to see independent variables each other.

3.9 Validity Test

The validity is that the measuring instrument measures the property it is supposed to evaluate. The objective of assessing validity is to see how accurate the relationship between the measure and the underlying trait it is trying to measure (Gara, 2007). The validity of the questionnaires was checked with the advisors, experts of the field, and based on the test the relationship between the measure and the underlying trait. Table 3 is a summary of the reliability test based on the Cronbach alpha coefficient for the five scale items in the data collection instrument.

3.10 Reliability

To measure the reliability of the questionnaire particularly standardize questionnaires were used. To carry out the reliability analysis, Cronbach's Alpha was used. Cronbach's Alpha is a measure of internal consistency of questions within the questionnaire and checks if the questions of the questionnaire are understood and if the data are reliable for analysis (Travakol & Dennick, 2011). Cronbach's Alpha reliability test is run on the data collected to determine the reliability of the data. Results showed that all the values were above 0.757 indicating acceptable reliable. Nunally (1978) suggested that the minimum of 0.70 is acceptable. This implies that there is a higher level of consistency in the questionnaire in measuring all the variables of the study.

Table 3. **Reliability statistics of Cronbach's Alpha**

Sr. No.	Service quality dimensions	Cronbach's alpha	Number of items
1	Tangibility	0.757	4
2	Reliability	0.823	4
3	Responsiveness	0.822	4
4	Assurance	0.823	4
5	Empathy	0.876	4
6	Customer Satisfaction	0.761	5

Source: Data output from SPSS, 2021

3.10. Ethical Consideration

Ethical issues related to the study were addressed by maintaining high-level confidentiality of the information volunteered by the respondents and not using the information for purposes other than drawing the conclusion of the study. The names of the respondents were not required and if known to the researcher was not disclosed to protect their identities. All personal details are limited to general information. Permission is sought from the colleges and institutions managing directorate to collect data from the respondents and a letter of introduction to respondents is attached to each questionnaires.

CHAPTER FOUR

4. RESULTS AND DISCUSSION

In this chapter, the analysis outputs and discussion of the descriptive statistics, a correlation analysis, and a multiple regression analysis of the study variables are presented. The chapter has five sections. The first section: demography of respondents and service quality perception. The second section: response rates for respondents. The third section: descriptive statistics which summarizes the main features of the study variable such as mean and standard deviation. The fourth section: overall perception towards service quality dimension. The fifth section: of the chapter are Multicollinearity, correlation, homoscedasticity, linearity, normality, multiple linear regressions, and MLR model for predicting CSa was employed to examine the effect of service quality on customer satisfaction. Out of the 359 Questionnaires distributed to customers of the Registrars: students and academic staffs 328 questionnaires were collected. The data was analyzed using SPSS version 20.0.

4.1 Respondents of Demography and Service Quality perception

To find out the general background of Academic Staff, and Students the respondents were answered their Gender, Age, Educational Status, and length of relationship with the Registrars. The results obtained from the structured questionnaires are represented in the table 4 below.

Table 4 indicates that the Majority of the surveyed respondents are male representing 62% of the sample while females constitute 38%. The combination of male to females' respondents indicated that the gender combination of the sample was fair which was helpful to incorporate the opinion of both sex in the study.

Concerning the age group majority of respondents, 40.9% were between the age group of 18–25 followed by the age group of 26 – 35 which is 40.9% almost the same and age groups belong 36 – 45 which is 16.1%. However, there were only 1.2% respondents 46–55 and 0.9 respondents above 56 age groups. Regarding the age group of the respondents, it can be analyzed that, most of the respondents are very young.

Concerning to educational level of respondents was educated as well as students and holder of degree and above degree educational level. So that they have contributed in the study, similarly, respondents whose educational level belongs to degree holder 1.84%, second degree holder 8.53%

were relatively small. However, the majorities of the respondents were students of third degree and above holder 10.67% and students of first degree and above 78.96% regarding respondents' educational status can be said that, most of the service takers were found in a good educational level.

With related to respondents the working experience of Academic staff, the majority of the respondents taking service for 8–10 years 43.4% , 4–7 years 25%, less than 1–3 years 18.3% and as well as and finally greater than 11 years 13.3% working in Jimma university. The result implied that the experiences' of academic staffs were well educated and known the service area of registrar.

Table 4. Demography

Profile of Academic Staff and Students				
No.	Gender Profile	Frequency	Percent	Cumulative percent
1.	Male	204	62	62
2.	Female	124	38	100
	Total	328	100	
No.	Age profile	Frequency	Percent	Cumulative percent
1.	18 – 25	134	40.9	40.9
2.	26 – 35	134	40.9	81.8
3.	36 – 45	53	16.1	97.9
4.	46 – 55	4	1.2	99.1
5.	Above 56	3	0.9	100
	Total	328	100	
Educational Background				
No.	Educational status	Frequency	percent	Cumulative percent
1.	1 st Degree holder	6	1.84	1.84
2.	2 nd Degree holder	28	8.53	10.37
3.	3 rd Degree and above holder	35	10.67	21.04
4.	Students of 1 st Degree and above	259	78.96	100
	Total	328	100	
Working experience of Academic Staffs				
No.	Length of relationship	Frequency	percent	Cumulative percent
1.	Less than 1 year – 3 year	36	18.3	18.3
2.	4 – 7 years	49	25	43.3

3.	8 – 10 years	85	43.4	86.7
4.	Greater than 11 years	26	13.3	100
	Total	196	100	

Source: Data output from SPSS.2021

Table 5 shows that concerning of among perception of services that the respondents' services they took from Jimma university registrars. All services 33.6%, all services means: like Official transcript, Student copy, Original students documents, and including other services. Other services 29.5% other service means: Identification card, Clearance, SRS (students' record system), Data encoder, ICT services, Alumni services, English proficiency letter, Authentication service, etc. Official transcript 16.4%, Student copy 13.4% and Original students' documents 7.1%. As stated above the office of the registrar that services have been given from Jimma University registrars were mostly other services and all services. As well as specially, at main registrar office: official transcript, English proficiency letter, Authentication service, students copy and original students' documents were served their customers at Jimma university.

Concerning of among perception of services the respondents got the services from Jimma university registrars consumed time to get the services they need took: - more than one hour 49.7 %, 10 - 30 minutes 25.9%, and half an hour to one hour 12.5% and less than 10 minutes 11.9%. As stated above the office of registrars those who were working at different colleges and institutes preparing more time those services have been given from Jimma University. From the registrar Office had been taken time is more than one hour to deliver the service customers need. Some of the offices of registrars working at colleges and institutes of Jimma University less time gave services their customers they need.

Concerning according to customers opinion the extent of efficient service delivery and quality service is important for customer' satisfaction the degree of extremely important is 57%, important is 28%, fairly important is 9% and the last one is, not important is 46%. As stated in the above the effective and efficient service is very important and to kept the service quality for Jimma University registrars' services.

Table 5. Service Quality Perception

Which services are took by you?				
No.	Registrar services	Frequency	Percent	C. Percent
1.	Official transcript	54	16.4	16.4
2.	Student copy	44	13.4	29.8
3.	Original students documents	23	7.1	36.9
4.	Other services	97	29.5	66.4
5.	All services	110	33.6	100.0
	Total	328	100.0	
No.	Duration	Frequency	Percent	C. Percent
1.	< 10 minutes	39	11.9	11.9
2.	10 - 30 minutes	85	25.9	37.8
3.	half an hour to one hour	41	12.5	50.3
4.	more than one hour	163	49.7	100.0
	Total	328	100.0	
No.	Efficient of service delivery	Frequency	Percent	C. Percent
1.	Extremely important	187	57	57
2.	Important	91	28	85
3.	Fairly importance	30	9	94
4.	Not important	20	6	100.0
	Total	328	100.0	

Source: Data output from SPSS.2021

4.2 Response Rate

Three hundred and fifty-nine questionnaires were distributed to respondents. Among this, 275 questionnaires were distributed to students, 84 were distributed to Academic Staff. The response rate from students was 89%, and from Academic Staff 99%. The total rate of response was 91.4% in table 6. Therefore, the rate of response is within the acceptable range.

Table 6. Response rate

Questionnaires Categories	Respondents			In percentile
	Students	Academic Staff	Total	
Distributed	275	84	359	100
Returned	245	83	328	91.4
Not returned	30	1	31	8.6

4.3 Descriptive Statistics of Service Quality Dimension and Customer Satisfaction.

NB: in the context of this study’s analyses and discussions: agree, strongly agree and neutral are treated as one, so as disagree and strongly disagrees. Hence, all the findings that follow subsequently will be treated as such. However, the tables would display them separately.

As table 7 shows from items listed under tangibility dimension, The Registrar office building is located at a suitable location to its customers, it shows the highest mean score (3.85) and 87.8% agree, whereas 12.2% disagree. This means the office of the registrar is located at a suitable location for its customers, also the facilities of the Registrar Office are visually attractive shows with the lowest mean (3.52) and 82.1% agree, whereas 18% disagree. This means the facilities of the registrar were not visually attractive under the tangibility dimension. So the registrar office building is located at a suitable location is very important to have speedy service quality to deliver for customers at the right time and the right place. So more emphasis on modern equipment and having potential front line employees helps to create loyal retained customers. This is supported by Abraham, (2015).

Table 7: Perception towards items of Tangibility

Tangibility	Acronym	N	Mean	SD
The registrar has modern equipment	ME	328	3.57	1.061
The facilities of the Registrar Office are visually attractive	VA	328	3.52	1.037
The Registrar Office building is located at suitable location to its customers	SL	328	3.85	1.003
The front line workers of the Registrar Office are well dressed and neat	WN	328	3.57	1.084

Source: Data output from SPSS.2021

As table 8 shows from items listed under the reliability dimension, The registrar's office keeps customers' profiles or records correctly., it shows the highest mean score (3.76) and 85.1% agree, whereas 14.9% disagree. This means the office the registrar records profiles of its customers correctly, and it has an influence on service quality to support the customer satisfied their desire of to get quick service. Also the university registrar office has a quality internet network to deliver quick service shows with the lowest mean (3.57) and 78.6% agree, whereas 21.3% disagree. This means the university registrar office has a poor quality internet network to deliver quick service under the reliability dimension. This means the university registrar office has a poor quality internet

network to deliver quick service under the reliability dimension. Reliability is to provide promised, dependable, accurate and consistent services to the customers. However, reliability depends on handling customer service issues, performs the services right the first time; offers services on time, and maintain a record of error-free (Khan and Fasih, 2014).

Table 8. Perception towards items of Reliability

Reliability	Acronym	N	Mean	SD
The university Registrar Office has quality internet network to deliver quick service	QI	328	3.57	1.086
The Registrar Office keeps customers' profiles or records correctly.	CP	328	3.76	1.003
The Registrar Office delivers quality services at the designed and promised time	DP	328	3.64	1.021
The registrar informs its customers any failure of service delivery ahead of time.	FI	328	3.70	1.002

Source: Data output from SPSS.2021

As table 9 shows from items listed under the responsiveness dimension, the registrar provides diversified services to customers, it shows the highest mean score (3.77) and 88.5% agree, whereas 11.5% disagree. This means the office provides diversified services to its customers, also the university registrar office gives quick responses to customers' requests shows with the lowest mean (3.58) and 79% agree, whereas 21% disagree. This means the office provides low expanded services to its customers under the responsiveness dimension. So, jimma university registrar provides diversified services to its customers to save their time accurately and satisfied that having further services in one area to keep service quality on customer satisfaction.

Table 9. Perception towards items of Responsiveness

Responsiveness	Acronym	N	Mean	SD
The Registrar Office employees are happy and willing to service their customers.	HW	328	3.64	1.032
The registrar provides diversified services to customers	DS	328	3.77	.949
The registrar gives quick services	QS	328	3.59	1.044
The registrar gives quick responses to customers' requests	QR	328	3.58	1.068

Source: Data output from SPSS.2021

As table 10 shows from items listed under the assurance dimension, the employees have the knowledge to answer customers' questions. It shows the highest mean score (3.81) and 86.9% agree, whereas 13.1% disagree. This means the office the registrar employees have the knowledge to answer customers' questions, also the employees make customers feel safe in the service provider shows with the lowest mean (3.70) and 83.5% agree, whereas 16.5% disagree. This means the university registrar's office has low made customers feel safe in the service provider under the assurance dimension. So, on the perception towards assurance employees has the knowledge to answer customers' questions shows that the service providers are educated and responsible for their works. And it has an important value to keep service quality to satisfied customers. So, Assurance indicates the employees' knowledge, good manners and their ability to express trust and confidence. Parasuraman et al. (1988) remarked that assurance is a necessary measurement of service quality to know customers level of satisfaction.

Table 10. Perception towards items of Assurance

Assurance	Acronym	N	Mean	SD
The personal behavior of the registrar staffs are excellent that the customers can trust.	CT	328	3.71	.909
The employees have sufficient knowledge of service information the registrar delivers.	SK	328	3.74	.913
The employees make customers feel safe in the service provide	CF	328	3.70	1.023
The employees have the knowledge to answer customers' questions	KQ	328	3.81	.983

Source: Data output from SPSS.2021

As table 11 shows from items listed under the empathy dimension, the employees understand the specific needs of their customers. It shows the highest mean score (3.80) and 90.2% agree, whereas 9.8% disagree. This means the office the registrar employees understand the specific needs of their customers, also the Registrar Office workers know what the customers' show with the lowest needs mean (3.70) and 80.8% agree, whereas 19.2% disagree. This means the university registrar's office hasn't know what the customers' needs are under the assurance dimension. As shown table 11 the perception towards the items of empathy dimension, the employees understand the specific needs of their customers are very important for service quality to run quick service to save their time and using their time wisely and properly. Therefore, the empathy dimension service quality customers are satisfied.

Table 11. Perception towards items of Empathy

Empathy	Acronym	N	Mean	SD
The Registrar Office workers know what the needs of their customers	CN	328	3.55	1.024
The workers of the registrar give required attention to individual customer.	GA	328	3.65	1.058
The Registrar has suitable working hours to all its customers.	SW	328	3.71	.928
The employees understand the specific needs of their customers	SN	328	3.80	.958

Source: Data output from SPSS.2021

As table 12 shows the items listed under customer satisfaction, the level of satisfaction on handling compliant questions, and the effectiveness of the services of the registrar, which shows the highest mean score (3.98) and 90.9% high level, whereas 9.1% low level. This means the office of the registrar high level of satisfaction on handling compliant questions and the effectiveness of the services. Also, the level of satisfaction on the performance of the registrar staff shows that the lowest mean (3.70) and 76.2% high, whereas 23.8% low. This means a low level of satisfaction on the performance of the registrar staff under the customer satisfaction. So the perception towards items of customer satisfaction level is on handling compliant questions and the effectiveness of services of the registrar is very critical area, which is to have satisfaction and answer the complaint questions to answer their desire, and high level of customers satisfied and having the service to keep service quality. Therefore, from the result we can conclude that the overall customer

satisfaction level fall between high and very high about the service provided by the jimma university registrar office.

Table 12. Perception towards items of Customer Satisfaction

Customer Satisfaction	N	Mean	SD
Your level of satisfaction having the modern equipment and provide speedy service to its customer.	328	3.97	1.005
Your level of satisfaction on giving individual attention to customers of the registrar staffs.	328	3.58	1.080
Your level of satisfaction on the communicative ability of the employees of the registrar.	328	3.86	.926
Your level of satisfaction on the performance of the registrar staffs.	328	3.50	1.066
Your level of satisfaction on handling compliant questions of effectiveness of the services of the registrar.	328	3.98	.989

Source: Data output from SPSS.2021

4.4 Perception towards Overall Service Quality Dimensions

This output shows for each of the six variables, the number (N) of participants with no missing data on that variables. Table 13 also shows that the mean (\bar{x}) and standard deviation (σ) of the variable. The Std. Deviation score on assurance variables are high which constitute ($\bar{x} = 14.94, \sigma = 2.76$) followed by empathy constitute ($\bar{x} = 14.79, \sigma = 2.91$).The mean score on reliability and responsibility almost similar which were ($\bar{x} = 14.71, \sigma = 2.83$) and ($\bar{x} = 14.67, \sigma = 2.89$) respectively. The lowest mean score which constitutes ($\bar{x} = 14.51, \sigma = 2.45$) was for tangibility variables. The mean score of customer satisfaction constituted ($\bar{x} = 15.06, \sigma = 2.83$) which indicates almost the entire customers are satisfied. So, the effective of service quality on customer satisfaction in jimma university registrar; the Perception towards Overall Service Quality Dimensions the highest mean and standard deviation among from service quality dimensions Assurance had the highest and from among service quality dimensions tangibility had the least mean and standard deviation. That means Customers were almost satisfied in jimma university registrar services.

Table 13. Descriptive statistics (mean and standard deviation) for SQ dimensions and CSa.

Variables	Descriptive statistics		
	N	Mean	SD
TAN	328	14.52	2.45
REL	328	14.71	2.83
RES	328	14.67	2.90
ASU	328	14.95	2.76
EMP	328	14.80	2.91
CSa	328	15.06	2.83

Source: Data output from SPSS, 2021

4.5 Assumptions of Multiple Linear Regressions

4.5.1 Correlation

The scatter plot matrix of the dependent variable CSa and the SQ dimensions show that the TAN, REL, RES, ASU, and EMP which are SQ dimensions were generally linearly related to CSa of the registrar office, the response variable, meeting linearity assumption to conduct the MLR model analysis. The dots form a straight line between any of the variables relative. The points fitted relatively well a straight line. The SQ dimensions were statistically significantly correlated to the CSa of the registrar's office ($P < .001$). In addition, the correlations between the SQ dimensions were less than 0.80 and the correlation between the SQ dimensions and the CSa of the registrars was greater than 0.30 Table 14. The dots forming the straight lines and the correlation value between the SQ dimensions being less than 0.70 as well the values for the correlation between the CSa and SQ dimensions meet the presence of linearity and the absence of multicollinearity assumptions to conduct the MLR model analysis.

Table 14. Intercorrelations for CSa of the registrar office and SQ dimensions

	TAN	REL	RES	ASU	EMP
REL	0.551	1			
RES	0.469	0.643	1		
ASU	0.515	0.605	0.660	1	
EMP	0.496	0.588	0.709	0.689	1
CSa	0.536	0.644	0.710	0.714	0.693

Source: Data output from SPSS, 2021

4.5.2 Multicollinearity

Multicollinearity, the linear relationship between the predictor variables, severely limits the multiple correlation coefficients, makes it difficult to identify the effect of a given explanatory variable, and causes an increase in the variance of the coefficients of the regression model. Therefore, checking for multicollinearity is important (Belsley, Kuh, and Welsh, 1980). The widely used technique to check for multicollinearity is examining the tolerance and variance inflation, VIF, values Table 15. The VIF of the independent variable measures the inflation of the variance of the regression coefficient of the variables relative to a regression where all the explanatory variables are independent. Tolerance value and VIF are inversely related. VIFs below 1 and above 10 are considered as the existence of multicollinearity. In the case the tolerance statistics value is greater than $1-R^2$; there is no multicollinearity between the explanatory variables (Landau and Everitt, 2004).

The Multicollinearity involving the SQ dimensions explained by TAN, REL, RES, ASU, and EMP, were assessed from the collinearity statistics. From the collinearity diagnosis of this study, the value of $1-R^2$ is equal to .344. The tolerance values range from .398 to .632 and are well greater than .344. Therefore no Multicollinearity between the SQ dimensions the explanatory variables. The VIFs between 1 and 10 indicate the absence of a multicollinearity relationship between the explanatory variables. For this study the observed VIFs range from 1.582 to 2.523, indicating the absence of multicollinearity between SQ dimensions, TAN, REL, RES, ASU, and EMP. The intercorrelations between the SQ dimensions also show the absence of Multicollinearity among the variables under investigation. In general, none of the collinearity statistics, the tolerance values, and VIFs, indicate the reason for the concern of Multicollinearity between the SQ dimensions. Hence, multiple linear regression condition is met concerning Multicollinearity.

Table 15. Collinearity statistics, the tolerance and the VIFs of the MLR model of the SQ dimensions ($R^2 = .656$; $N = 328$)

Predicator variables	Tolerance	VIF	$1 - R^2$
TAN	.632	1.582	0.344
REL	.478	2.094	
RES	.396	2.523	
ASU	.428	2.337	
EMP	.398	2.515	

Source: Data output from SPSS, 2021

4.5.3 Test for the Independence of the residuals

The assumption is that the values of the regression residuals are uncorrelated or independent. In this case, the value of the Durbin-Watson, DW, statistic, in the regression model summary table is evaluated to assess the independence of the residuals of the MLR model for the SQ dimensions predicting the variation on the CSa of the registrar office. The DW statistic can vary from 0 to 4. For the assumption that the residuals are uncorrelated to be met, value of the DW to be close to 2. The DW values below 1 and above 3 are cause for concern as may render the MLR model analysis may be invalid. For the MLR model of the SQ dimensions' predicting the CSa of the registrar the DW value is 1.689 Table 16, which is close to 2, so the assumptions of the regression model residuals are uncorrelated is met. Hence, the MLR model analysis for the prediction of the CSa of the registrar using SQ dimensions as an explanatory variable is valid.

Table 16. Durbin-Watson statistic of the regression

Model	R	R^2	R^2_{adj}	SEE	Durbin-Watson
MLR	.810	.656	.651	1.675	1.689

a. Predictors: (Constant), EMP, TAN, REL, ASU, RES

b. Dependent Variable: CSa; SEE: Standard Error of the Estimate; R: correlation coefficient

4.5.4 Linearity

The plot of observed cumulative probability versus the expected cumulative probability of the data informs the dependence of the variation of the CSa on the variation in the independent variables, TAN, REL, RES, ASU, and EMP of the SQ dimensions. The almost linear plot of the observed cumulative probability and the expected cumulative probability of the model indicates that the

change in the CSa of the Office of the Registrar had a linear relationship with the SQ dimensions parameters Figure 3. Thus, the plot indicates a linear relationship between the two commutative probabilities. This assumption was met to conduct an MLR model analysis. Transformation of the data or the use of other modeling was not required as the assumption of linearity was met to use MLR model to predict the variation in CSa of the Registrar Office of Jimma University from the variation in the SQ dimensions such as TAN, REL, RES, ASU, and EMP.(See Appendix A)

To do the linear regression analysis the assumption that the relationship between the response variable and the predictors is linear must be met. To examine if this assumption is violated or not, testing the linearity relationship between the response variable, the CSa, and the explanatory variables, the five SQ dimensions, before the MLR model was conducted by examining the scatter plot of the regression standardized residuals and the regression standardized predicted values. Here the primary target is to check if there exists a linear relationship between residual values by fitting a non-linear best fit line known as the Loess Curve through the scatterplot of the regression standardized residuals and the regression standardized predicted values to observe any nonlinearity is detected. From the scatter plot and the Loess curve fit the blue line, it is suggested that the relationship of regression standardized predicted to regression standardized residuals was almost linear around as the regression residuals scattered randomly around zero Figure 5. Thus, it can be concluded that the relationship between the CSa data and the five SQ dimensions. (See Appendix A)

4.5.5 Homogeneity of error variance and Normality

For linear regression assumption to meet the variance of the residuals is homogenous across all levels of the predicted response variable values. The homogeneity of the variance is known as homoscedasticity. In another express, if the variance of the residual is non-constant through all levels of the predicted response variable values it is said to be heteroscedastic. In such a case, the assumption of ordinary least square regression is not met.

The homoscedasticity assumption was checked by assessing the plot of the residuals versus the fitted, just similar to examining the linearity assumption. If the MLR model of the CSa and SQ dimensions is fitted, there should be no pattern of the residuals plotted versus the fitted CSa values Figure 4. (See Appendix A)

The P-P plot of the observed cumulative probability versus the predicted cumulative probability for testing the normality of the residuals and not predictors is linear for this MLR model. So the assumption of normality of the residuals of the CSa data met to conduct MLR model analysis Figure 6. The normality of the regression standardize residual plot is indicated by the histogram plot of the regression standardized residual values Figure 5. The normal distribution of the standardized residual is also assessed using Minitab 19 by plotting the regression standardized residual values versus the frequency of the residuals. The probability plot of the residual with the $p = 0.774$, which is greater than the critical value of 0.05, and Anderson-Darling, AD, value of 0.240 indicates that the regression standardized residual values are normally distributed.

4.6 MLR Model for SQ Dimensions Predicting the CSa of the Registrar Office

Multiple regression analysis was conducted to investigate how well SQ dimensions, TAN, REL, RES, ASU and EMP, predict the CSa of the Office of the Registrar of Jimma University. The assumptions of normally distributed errors, uncorrelated errors, and linearity were checked and these multiple regression conditions were met figure 3. Homoscedasticity was also checked and no homoscedasticity.

The resulting SPSS output consist the model fit coefficients and the ANOVA table is given in Table 18. For each of the SQ dimensions four factors were considered. The regression equation was statistically significant ($F(5, 322) = 122.784, p < .001$) with an $R^2 = .656$ and $R^2_{adj} = .651$. All the five SQ dimensions were significant predictors of the CSa of the Registrar Office of the university.

The coefficient of determination, R^2 , will increase when further explanatory variables are added to the MLR model. However, the addition of further terms to the model does not explain variability. The adjusted R^2 , R^2_{adj} , improves the estimation of R^2 in the population. The R^2_{adj} is adjusted down to compensate for the increases in R^2 , with bigger adjustments for larger sets of independent variables (Der and Everitt, 2001). Use of this adjusted R^2 leads to a revised estimate that the variability in the CSa of the registrar office that is explained in this study by the five explanatory variables, the TAN, the REL, the RES, the ASU and the EMP of the SQ dimensions. Accordingly, from the model fit diagnosis the $R^2_{adj} = .651$ means 65.1% of the variation in the CSa of the registrar was explained by the variation in the five SQ dimensions, the TAN, the REL, the RES, the ASU and the EMP.

The coefficient Table provides the information to construct the MLR model equation Table 19. For the registrar office CSa data, the estimated value of regression coefficient is 0.623, with an estimated standard error of 1.675. The average distance that the observed values of the CSa fall away from the fitted regression line obtained using the SQ dimensions, as the explanatory variables, was estimated by examining the standard error of the estimate of the regression which is also called the standard error of the regression. The amount of the value of the standard error of the regression depicts how wrong the MLR model is on average using the units of the CSa of the registrar office, which is the response variable. The smaller value of the standard error of the regression is the better because it indicates that the observed CSa is closer to the fitted regression line. In this regards, the value of the standard error of the estimate of the MLR model is 1.675 with the correlation coefficient, R, value of 0.810. This value of R indicates good correlation between the observed and expected CSa of the registrar office of the university. The coefficients from the ANOVA Table 18 of the MLR model for the TAN, the REL, the RES, the ASU and the EMP for predicting the change in the CSa of the registrar were used to develop the MLR equation presented in Eq. (5).

$$\text{CSa} = 0.623 + 0.116 \text{ TAN} + 0.150 \text{ REL} + 0.248 \text{ RES} + 0.285 \text{ ASU} + 0.179 \text{ EMP} \quad (5)$$

The correlation between the observed SQ and the predicted CSa of the registrar office of Jimma University is predicted from the multiple correlation coefficients, R, value. The R = .810 indicates that there is a strong correlation between the observed SQ and those CSa predicted by the regression model.

The regression coefficient represents the mean change in the CSa of the registrar given a unit change in the SQ dimensions. The Unstandardized Coefficients, B, describes the amount by which a response variable changes if an explanatory variable changes by a unit keeping other predictor variables constant. In line with this established concept, the Coefficient table of the MLR model shows that CSa of the registrar increases by 0.285 if the ASU increases by one unit keeping other SQ dimensions, the REL, the RES, the ASU and the EMP, constant. In the same manner the table presents by what amount the CSa of the registrar increases with respect to the change in the other SQ dimensions when using the MLR model used in this study.

The Standardized Coefficients Beta, β , is the coefficients that are standardized to measure the variation in the response variable in units of its standard deviation when the independent variables increase by one standard deviation. The β coefficients are used to compare the relative effects

across the independent variables (Cohen, 1988; Everitt, 2001b). The β coefficients measured the change in the CSa of the registrar in units of its standard deviation when the TAN, the REL, the RES, the ASU and the EMP, the SQ dimensions, increase by one standard deviation.

Accordingly, the β weights of the present study indicate that the ASU had relatively the largest effect and the TAN had the least importance on the change in the CSa of the registrar with β coefficients of .277 and .100, respectively. The β value 0.277 of ASU indicates that a change of one standard deviation in the ASU results in a 0.277 standard deviations increase in the CSa of the registrar. Thus, according to the results of the MLR model analysis, ASU (customers trust to workers, having sufficient knowledge of the workers, make customers feel safe and having knowledge to answer the questions) contributed most to predicting CSa of the office of the registrar and TAN (having modern equipment, visual attractiveness, suitability of location and well dressed and neat of the workers) contributed the least to predicting the CSa of the office of the registrar. The possible predictors can be ranked using the β coefficients, indicated in a bracket in the order indicated. Thus, the rank of the SQ dimensions, the predictor variables, in the order of decreasing effects on the CSa of the registrar office is: *ASU (0.277) > RES (0.253) > EMP (0.184) > REL (0.150) > TAN (0.100)*.

Table 17 . Model summary for SQ dimensions predicting the CSa of the registrar office (N = 328)

Model	R	R ²	R ² _{adj}	SEE
MLR	.810 ^a	.656	.651	1.675

a. Predictors: (Constant), EMP, TAN, REL, ASU, RES; SEE: the standard error of the estimate

Table 18. The ANOVA of the MLR model of the SQ dimensions predicting the CSa of the registrar (N = 328)

Model		SS	Df	MS	F	P
MLR	Regression	1721.886	5	344.377	122.784	.000
	Residual	903.126	322	2.805		
	Total	2625.012	327			

Dependent Variable: CSa; Predictors: (Constant), EMP, TAN, REL, ASU, RES; SS: Sum of Squares; MS: Mean Square

Table 19. Regression coefficients for TAN, REL, RES, ASU and EMP predicting the CSa of Jimma University Registrar Office (N = 328)

Model		Unstandardized Coefficients		Standardized Coefficients	t	P	95.0% CI for B	
		B	SE	B			LB	UB
MLR	CSa	.623	.629		.990	.323	.615	1.861
	TAN	.116	.047	.100	2.434	.015	.022	.209
	REL	.150	.047	.150	3.174	.002	.057	.243
	RES	.248	.051	.253	4.878	.000	.148	.348
	ASU	.285	.051	.277	5.552	.000	.184	.386
	EMP	.179	.050	.184	3.555	.000	.080	.279

Dependent Variable: CSa

SE: Standard Error; CI: Confidence Interval; LB: Lower Bound; UB: Upper Bound

The Mathematical Model of multiple regressions below can be used to determine the quantitative association between the variables;

$$CSa = \beta_0 + \beta_1TAN + \beta_2REL + \beta_3RES + \beta_4ASU + \beta_5EMP + \epsilon$$

$$CSa = .623 + .116X1 + .150X2 + .248X3 + .285X4 + .179X5$$

4.7 Hypothesis Test Result

Five hypotheses have been tested to answer the research questions based on the research problem and objectives. The hypotheses address each service quality dimension such as; tangibles, reliability, responsiveness, assurance and empathy impacts on customer satisfaction. The hypothesis test results were presented as follows.

Hypothesis 1

Hol: Tangibility will not have a positive and significant effect on customer satisfaction.

Ha1: Tangibility will have a positive and significant effect on customer satisfaction.

From the regression analysis, as presented in table 19, we can see that there is a positive statistical relationship between tangibility (the independent variable) and customer satisfaction (the dependent variable). The R-square answers the question, “of all of the reasons why the outcome variable can vary, what percent of those reasons can be accounted for by the predictor(s) variables”. In this case, as table 17 the coefficient of determination (R-square) indicates the proportionate amount of variation in the response variable (customer satisfaction) explained by the independent variable

(tangibility) in the linear regression model. Thus, the combination of the five dimensions explains approximately 65.1% ($R^2=.651$) of the variation on customer satisfaction of the registrar. As presented in table 19 the regression coefficient is the value that represents the rate of change of one variable (dependent variable) as a function of changes in the other variable (independent variable). It represents the mean change in the response variable for one unit of change in the predictor variable while holding other predictors in the model constant. This statistical control that regression provides is important because it isolates the role of one variable from all of the others in the model. From the following coefficient table, B value which measures how strongly each independent variable influences the dependent variable. Thus, a unit increase in tangibility leads to .116 increases in customer satisfaction, other things remain constant. Therefore, the researcher may reject the null hypothesis and it is accepted that, tangibility has a positive and significant effect on customer satisfaction.

This finding is reliable with the previous study by Hawary *et al.* (2011), Mohammad and Alhamadani (2011), Tizazu (2012), Akalu (2015), and Hirut (2015); who reported tangibility positively and significantly influenced the level of customer satisfaction. But, it is contrary to the research study by Endalkachew (2013) who found that no significant influence of tangibility on customer satisfaction.

Hypothesis 2

Ho2: Reliability will not have a positive and significant effect on customer satisfaction.

Ha2: Reliability will have a positive and significant effect on customer satisfaction.

From the regression analysis, as presented in table 19 .we can see that there is a positive statistical relationship between reliability (the independent variable) and customer satisfaction (the dependent variable). As observed from the following table 17, the combination of the five dimensions explains approximately 65.1% ($R^2=.651$) of the variation on customer satisfaction of the registrar.

As presented in table 19 from the following coefficient table, B value which measures how strongly reliability, the independent variable, influences the customer satisfaction, the dependent variable. Thus, a unit increase in reliability leads to .150 increases in customer satisfaction, other things remain constant. Therefore, the researcher may reject the null hypothesis and it is accepted that, reliability has a positive and significant effect on customer satisfaction.

This finding is consistent with the previous study by Dijale (2011), Mesay (2012), Akalu (2015) and Dawit (2015) who reported that reliability positively and significantly influenced the level of customer satisfaction. But, it is contrary to the study by Gupta (2012) who found insignificant influence of reliability in customer satisfaction.

Hypothesis 3

Ho3: Responsiveness will not have a positive and significant effect on customer satisfaction.

Ha3: Responsiveness will have a positive and significant effect on customer satisfaction.

From table 19, we can see that there is a positive statistical relationship between the independent variable-responsiveness and the dependent variable-customer satisfaction. Thus, as table 19 the combination of the five dimensions explains approximately 65.1% ($R^2=.651$) of the variation on customer satisfaction of the registrar.

On table 19, B value which measures how strongly responsiveness, the independent variable, influences the customer satisfaction, the dependent variable. Accordingly, a unit increase in responsiveness leads to .248 increases in customer satisfaction, other things remain constant.

Therefore, the researcher may reject the null hypothesis and responsiveness has a positive and significant effect on customer satisfaction.

This finding is similar to the previous research work conducted by Akalu (2015), Dijale (2011), and Dawit (2015), which reported that responsiveness positively and significantly influence the level of customer satisfaction. But, it is contrary to the study by Endalkachew (2012) who found there is no significant influence of reliability on customer satisfaction.

Hypothesis 4

Ho4: Assurance will not have a positive and significant effect on customer satisfaction.

Ha4: Assurance will have a positive and significant effect on customer satisfaction.

From table 19, we can infer that there is a positive statistical relationship between the independent variable-assurance and the dependent variable-customer satisfaction. Thus, from the table 17 the combination of the five dimensions explains approximately 65.1% ($R^2=.665$) of the variation on customer satisfaction of the registrar.

On table 19, B value which measures how strongly assurance, the independent variable, influences the customer satisfaction, the dependent variable. Accordingly, a unit increase in assurance leads to .285 increases in customer satisfaction, other things remain constant. Therefore, the researcher may

reject the null hypothesis and assurance has a positive and significant effect on customer satisfaction.

This finding is consistent with the previous study by Akalu (2015), Meron (2015), and Dawit (2015) who reported that assurance has positive and significant effect on customer satisfaction.

Hypothesis 5

Ho5: Empathy will not have a positive and significant effect on customer satisfaction.

Ha5: Empathy will have a positive and significant effect on customer satisfaction.

From table 19, we can infer that there is a positive statistical relationship between the independent variable-empathy and the dependent variable-customer satisfaction. Thus, as table 17 the combination of the five dimensions explains approximately 65.1% ($R^2=.665$) of the variation on customer satisfaction of the registrar.

From table 19, how strongly the independent variable - empathy influences the dependent variable - customer satisfaction. Accordingly, a unit increase in empathy leads to .179 increases in customer satisfaction, other things remain constant. Therefore, the researcher may reject the null hypothesis and empathy has a positive and significant effect on customer satisfaction.

This finding is consistent with the previous study by Dijale (2011), and Akalu (2015) who reported that customer satisfaction was directly and significantly affected by empathy; but, it is contrary to the study by Al-Hawary *et al.* (2011) who found insignificant influence of empathy in customer satisfaction.

Moreover, from the findings of this study, researchers found out all of the service quality dimensions have positive effects on customer satisfaction. Out of the five service quality dimensions four dimensions (tangibility, reliability, responsiveness, and empathy) have positive and significant effects on customer satisfaction. Assurance is the most influential service quality dimension in customer satisfaction. The second service quality dimension which has the highest effect in customer satisfaction is responsiveness, empathy, and reliability, have equivalent impact in customer satisfaction and tangibility is the last service quality dimension that has relatively least effect on customer satisfaction.

4.8. Discussion of Results

To examine the effects of service quality on customer Satisfaction, the five dimensions of service quality were used. Among the five dimensions, the Jimma University registrars were found to be

superior in providing appealing service environment. This section discusses the findings of the statistical analysis in relation to the previous research and literature.

The result of this study indicates that tangibility has a positive and significant effect on customer satisfaction. This finding is supported by Munusamy, (2010), found that tangibility has a positive and significant effect on customer satisfaction. This finding is also supported by Al-Hawary, (2011) reported that tangibility has a positive and significant effect on customer satisfaction. On the contrary, (Malik et al., 2011) reported that tangibility has no contribution to customer satisfaction.

The finding of this study also indicates that reliability has a positive and significant effect on customer satisfaction. This finding is supported by Al-Hawary, (2011) reported that reliability has a positive and significant effect on customer satisfaction. This result also supported by (Malik, 2011), found that reliability has a significant and positive effect on customer satisfaction. On the other hand, Munusamy, (2010) reported that reliability has a negative and insignificant effect on customer satisfaction. However, the finding of this study indicates that responsiveness has a positive and significant effect on customer satisfaction. This result is supported by Mohammad and Alhamadani, (2011); found that responsiveness has a positive and insignificant effect on customer satisfaction. And also Al-Hawary, (2011) reported that responsiveness has a positive and significant effect on customer satisfaction. Moreover, the result of this study also indicates that assurance has a positive and significant effect on customer satisfaction. In line this finding is supported by Malik et al., (2011), he reported that assurance has a positive and significant effect on customer satisfaction. Also (Al-Hawary, 2011) found that assurance has a positive and significant effect on customer satisfaction.

The finding of this study further indicates that empathy has a positive and significant effect on customer satisfaction. This finding is supported by Mohammad and Alhamadani, (2011), reported that empathy has a positive and significant effect on customer satisfaction. On the contrary, Munusamy, (2010) found that empathy has a negative effect on customer satisfaction. In overall, the results revealed that all independent variables accounted for 65.1% of the variance in customers satisfaction ($R^2 = .651$). Thus, 65.1% of the variation of customer's satisfaction can be explained by the five service quality dimensions questions. Furthermore, from the findings of this study, researcher found out that all of the service quality dimensions have positive effects on customer satisfaction. Out of the five service quality dimensions tangibility is the least

positive and significant effect on customer satisfaction. Whereas, the results of this study further indicate that assurance is the most important factor to have a positive and significant effect on customer satisfaction.

The positive significant coefficient for service quality and customer satisfaction relationship suggests higher service quality on registrar service and the higher the satisfaction of customers towards the registrar. Thus, satisfied customer is important in developing a loyal customer. Therefore, organizations should always strive to ensure that their customers are very satisfied. Customer satisfaction is potentially one of the most powerful weapons that institutions of can employ in their fight to gain a strategic advantage and survive in today's ever-increasing competitive environment.

CHAPTER FIVE

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter is deal summary, conclusion and recommendations. In the summary section, the researcher has summarized the introduction, the statement of the problem, the literature, the methodology and the findings of the present study. Conclusions drawn from the result of the study are presented next to the summary. Based on the study result, some follow up actions are suggested in the recommendation section.

5.1. Summary

The study was intended to investigate the effect of service quality on customer satisfaction in Jimma University: the case of registrar services. Based on the questionnaire, consisting of 359 convenience technique sampling selected customers. The results of the descriptive statistical analysis also indicated that, customers were most satisfied with assurance the dimensions of service quality followed by responsiveness, empathy, and reliability. However, customers were less satisfied with Tangibility dimensions of service quality.

Moreover, in terms of the stated research hypotheses the following findings emerged from the multiple linier regression analysis investigation: The five service quality dimensions which are tangibility, reliability, assurance, responsiveness and empathy have a positive and significant effect on customer satisfaction in jimma university registrar services in the study area.

The correlation result show that there was a positive and significant relationship between tangibility and customer satisfaction, reliability and customer satisfaction, responsiveness and customer satisfaction, assurance and customer satisfaction, and empathy and customer satisfaction.

The finding also indicates that the highest relationship was found between assurance and customer satisfaction, while the lowest relationship was found between tangibility and customer satisfaction. Furthermore, the multiple regression results showed that the five service quality dimensions (tangibility, reliability, responsiveness, assurance and empathy) have positive and significant effect on customer satisfaction. Overall Regression Analysis 65.1% ($R^2=.651$) of the variation on customer satisfaction is explained by the independent variable.

5.2. Conclusions

This study investigates the effect of service quality on customer satisfaction provided by the Offices of the Registrar of Jimma University. In this study, the five service quality dimensions, tangibility, reliability, responsiveness, assurance and empathy are the predictor variables whereas service quality is the response variable. Multiple linear regression models were employed to measure the effects of the predictor variables on the quality of the services of the Office of the Registrar of the university. Thus, based on the major findings of the study the following conclusions are drawn.

- ✚ Tangibility dimension, TAN, which is described in this study with modern equipment, visual attractiveness of the registrar facilities, suitability of the location of the building of the registrar, and the neatness and well dressing of the forefront registrar works, is the factor statistically significantly ($p < 0.001$) affecting the CSa of the registrar. The TAN SQ dimension is statistically significantly correlated with CSa ($p < 0.001$). It is the factor that least predicts the variance in CSa of the Registrar Office.
- ✚ Responsiveness dimension, RES, which is described in this study with employees are happy and willing to give service, provide diversified services to customers, gives quick services, and the registrar gives quick responses to customers' requests is the factor statistically significantly ($p < 0.001$) affecting the CSa of the registrar. The RES SQ dimension is statistically significantly correlated with CSa ($p < 0.001$). It is the factor that neutral predicts the variance in CSa of the Registrar Office.
- ✚ For this study, assurance, ASU, is described with personal behavior of the registrar workers, the knowledge of registrar workers of the service provided, the employees making the customers feel safe, and the workers of the registrar knowledge to answer the requests of the customers, is the factor that statistically significantly ($p < 0.001$) predicts the variance in CSa of the registrar. It is the factor that mostly predicts the variance in CSa of the registrar office.
- ✚ In a summary, from the coefficient values the predictor variables, the order of the effects of the SQ dimensions from smallest to the largest effect is: TAN > REL > EMP > RES > ASU. The contribution of each of the SQ dimension to predict the variance in the CSa of the registrar is also decrease in the order presented.
- ✚ The MLR model information shows that the combination of the predictor variables, TAN, RES, REL, ASU and EMP statistically significantly ($p < .001$) predicts the dependent variable,

the quality of the service provided by the Offices of the Registrar. The combination of the five dimensions also explains approximately 65.1% of the variance in the CSA of the registrar.

✚ Generally, the study identified, on many service quality dimensions (Tangibility, reliability, responsiveness, assurance and empathy) majority of the respondents responded that they were very satisfied and expresses their agreement with service provided by the office. This evaluation of respondents indicates that on good performance indicators in the branches customers did meet their expectation.

5.3. Recommendations

Based on the results of the study the following recommendations are:

The researcher recommends that the university registrars needs to give more emphasis to improve customer satisfying power for tangibility's. Because currently this variable has relatively low mean and effect values. The university registrars need to concentrate on tangibles as it has the least mean score. Continuous improvements and follow ups might enhance future customer satisfaction levels with respect to this variable. The university registrars in particular can conduct further customer opinion services regarding the status of customer views on the tangible nature of the office.

In this study Assurance is the dominant service quality dimension which has a highest effect on customer satisfaction therefore the office of registrar is recommended work on the indicators of this dimension i.e. the office need to invest on trainings to enhance its employees, how to handle their customers.

The study revealed that the variation on service quality is explained by tangibility, reliability, responsiveness, assurance and empathy. Therefore, the office of the registrars is advisable to give due attention to all the components of these service quality dimensions in their priority influence.

The rank of the SQ dimensions in the decreasing order of their effects on the CSA of the registrar office was: Assurance, Responsibility, Empathy, Reliability, and Tangibility.

Based on the results of this study, it is recommended that the Office of the Registrar to prioritize the SQ dimensions to provide quality services to its various customers.

Moreover, assessing the service quality on customer satisfaction of the office of the registrar on a regular basis can persistently improve the quality of the service and maintain the level of customer satisfaction one step ahead.

5.4. Future Research Direction

The researcher encourages further research to extend the results of this study and improve the results by minimizing the limitation of the study. Therefore, the researcher suggests the following future research areas:

- ✚ Even though there are basically five different service quality gaps this study focuses only on gap five, so the researcher recommends for future researcher might be examine considering the remaining service quality gaps.
- ✚ Even if the researcher use only quantitative method to examine the service quality in jimma university registrars. For the future the researcher recommends that by using qualitative method by adding Interview to minimize the gap of service quality in jimma university registrars.
- ✚ Jimma university registrar delivers different kinds of services for large number of customers. To achieve the objective of the study, the researcher limited to asking customers of those selected areas like Students and Academic Staffs. So the researcher recommends for future researcher might be examined including the remaining Administrative staffs that are not considered in this study.
- ✚ Though the researcher concentrated only in service quality dimensions in Jimma university registrars, so for the future the researcher pay close attention to on service quality within customer satisfaction on human resource management offices in Jimma University.

REFERENCES

- Abraham G/ Egziabher (2015). Service Quality and customer satisfaction: *a case of 3 star hotels*
M. A. thesis AAU.
- Agbor, J. M. (2011). The Relationship between Customer Satisfaction and Service Quality: *A Study of Three Service Sectors in Umeå; Umeå University, Faculty of Social Sciences: Umeå, Sweden.*
- Akalu. (2015). The effect of service quality on customer Satisfaction in selected insurance companies in Addis Ababa. *12-44.*
- Alves, H. and Raposo, M. (2010), “The influence of university image on student behaviour”, *International Journal of Educational Management, Vol. 24 No. 1, pp. 73-85.*
- Al-Azzam (2015) has undertaken a research on the impact of service quality dimensions on customer satisfaction on Arab banks in Irbid city, *Jordan.*
- Al-Azzam Abdel Fattah Mahmoud. (2015).The Impact Of Service Quality Dimensions On Customer Satisfaction: A Field Study Of Arab Registrar In Irbid City. *European Journal Of Business And Management ,Faculty Of Economics and Administrative Sciences, Zarqa University, Jordan.*
- Al-Hawary, S.I.S, Alhamali, M.R. and Alghanim, A.S. (2011), Banking service quality provided by commercial banks and customer satisfaction, *American Journal of Scientific Research,27(2011): 68-83.*
- Armstrong, M. (2014). Handbook of Human Resource Management Practice: . *Open University Thirteenth edition*
- AsfawTay, (2014). Assessment on service delivery and customer satisfaction at Ethiopian shipping and logistics service enterprise, s.l.: *St Mary’s University.*
- Baron, S., Warnaby, G. and Hunter-Jones, p. (2013). Services Marketing Research: Developments and directions. Business Source Complete, EBSCOhost, viewed. *International Journal of Management Reviews, Pp150-171.*
- Battini, D., Faccio, M., Persona, A. and Sgarbossa, F. (2012). Design of an integrated quality assurance strategy in production systems. *International Journal of production research.*
- Belsley, D.A., Kuh, E., and Welsh, R.E., (1980), Regression Diagnostics: Identifying Influential Data and Sources of Collinearity, *John Wiley, New York.*
- Bikila Debela, (2015). Assessment of service quality and customer satisfaction in case of some selected branches of “co-operative bank of Oromia” *In Addis Ababa.*

- Buttle, F. (1996). SERVQUAL: review, critique, research agenda. *European Journal of Marketing*, 42(3/4), Vol. 30 No. 1, pp. 8-32.
- C. Lympelopoulou, I. E. Chaniotakis and M. Soureli. (2006). The importance of service quality in bank selection for mortgage loans. *Managing Service Quality*, vol. 16, no. 4, 365-379.
- Cohen, J. (1988). Statistical power and analysis for the behavioral sciences (2nd Ed.). *Hillsdale, NJ: Lawrence Erlbaum*.
- Davidow, S. and Uttal, F. (2009, October 25). The ultimate weapon harper Encyclopedia nations. Retrieved 1989, from Total Customer Service: <http://www.Nationsencyclopedia.com/economies/Africa/Ethiopia.htm>.
- Der, G. and Everitt, B. S. (2001) A Handbook of Statistical Analysis Using SAS (2nd ed). *Boca Raton, FL: Chapman and Hall/CRC*.
- Djalalie. (2011). Perception of service quality and loyalty among customers of insurance companies: *comparative analysis of Nile, Nyala and Awash insurance*.
- Doyle, P. (1994). Marketing Management and Strategy, *Prentice Hall*.
- Endalkachew A. (2013): Assessing the impact of Core Banking and service quality on Customer Satisfaction in Commercial Bank of Ethiopia (A case of Bishofftu Branch. research project submitted Hawasa University).
- Gaither, N. (1994). Production and operations management. (pp.544 – 550, 927). *New Jersey: The Dryden Press*.
- Gara, R. (2007). Talent management in Egypt. *Presentation at the Global Talent Management Centre*.
- Garvin, D. A. (1988). Managing quality: *New York: Free Press*.
- Gerstner, L. V., Jr. (2003). Who Says Elephants Can't Dance? Leading a Great Enterprise through Dramatic Change.: *New York: Harper Business*.
- Gilmore, A. (2003). Services Marketing and Management. *London*.
- Girma Bersisa; (2015), Assessment of Service Quality and Its Influence on Customer Satisfaction: *the Case of Oromia International Bank S.C*.
- Grönroos, C. (2007). Service Management and Marketing: Customer Management in Service Competition. *Third Edition. England. John Wiley & Sons, Ltd*.
- Grönroos, C. A. (1984). Service Quality Model and its Marketing Implications. *European Journal of Marketing*, Vol. 18(4), 36-44.

- Grönroos., C. (2007). Service Management and Marketing - *Customer Management in Service Competition*.
- Gummesson, E. (1991). Marketing-orientation Revisited: The Crucial Role of the Part-time Marketer. *European Journal of Marketing, Volume 25*(Number 2), pp. 60-75.
- Gupta, M. K. (2012). A Study Of Customer Satisfaction In Special Reference To Services Provided By Banks And Post-Offices In N.C.R. *International Journal Of Multidisciplinary Research Vol.2 Issue 2*, 222-238.
- Gujarati, D.N. (1995) Econometrics. 3rd Edition, McGraw-Hill, Inc., *New York*.
- Hoffman D. K. a. B., J. E. (2006). Essentials Services quality: concepts, strategies and cases. (*Second Edition ed.*). *Ohio. Thomson Learning*.
- Hoffman, D. K. a. B., J.E. (2006). Essentials Services quality: concepts, strategies and cases. Second Edition. *Ohio. Thomson Learning*.
- Irene, A. & Ahmed, M. &Darko, A. E. (2014). Assessing The Role Of Quality Service Delivery In Client Choice For Healthcare: *A Case Study Of Bechem Government Hospital And Green Hill Hospital European Journal Of Logistics Purchasing And Supply Chain Management*,
- Isaac, S., & Michael, W. B. (1997). Handbook in research and evaluation: A collection of principles, methods, and strategies useful in planning, design, and evaluation of studies in education and the behavioral sciences (3rd ed ed.): *San Diego: Educational and Industrial Testing Services*.
- Jancey, J. and Burns, S. (2013), “Institutional factors and the postgraduate student experience”, *Quality Assurance in Education, Vol. 21 No. 3, pp. 311-322*.
- Kasper (2002). Culture and leadership in market-oriented service organisations. *European Journal of Marketing, 36*(10), pp. 1047-1057.
- Kasper, H., Helsdingen, P.V. and Gabbot, M. . (2006). Services Marketing Management. *Second edition. Wiley*.
- Kasper. (2002). Culture and leadership in market-oriented service organisation. *European Journal of Marketing, 36*(10), pp. 1047-1057.
- Khan, M, M. and Fasih, M. (2014). Impact of Service Quality on Customer Satisfaction and Customer Loyalty: Evidence from Banking Sector. *Pakistan Journal of Commerce and Social Sciences, 8* (2), pp. 331- 354

- Kothari, C. R. (2004). *Research methodology: Techniques and Methods*. New Delhi: New Age International (P) Limited Publishers.
- Kotler, P.(2000), *Marketing Management*. 10th edn., New Jersey, Prentice-Hall.
- Kotler, P. & Armstrong, G. (2001). *Principles of marketing*. (pp. 9 – 11). New Jersey: Prentice Hall
- Kotler, P., and Keller K. . (2006). *Marketing Management* 12th edition. Prentice Hall of India, New Delhi.
- Kotler, P. and Keller, K. L. (2009). *Marketing management, (13th Ed)*. New Jersey: Pearson Education Inc., Upper Saddle River. p. 789
- Kotler, P., Wong, V., Saunders, J., Armstrong, G. (2005). *Principles of Marketing*. Essex: Pearson Education Limited.
- Kotler, P. and Keller, K. L.(2009). *Marketing management,(13th Ed)*. New Jersey: Pearson Education Inc., Upper Saddle River.
- K. Rama Mohana Rao, ‘Services marketing’, Pearson Education, New Delhi, 2005. 204
- Landau S and Everitt (2004) *A Handbook of Statistical Analyses using SPSS*. CRC Press LLC, New York.
- Longanecker, D. A., & Blanco, C. D. (2003). Public policy implications of changing student attendance patterns. *New Directions for Higher Education*, 2003(121), 51–68. doi: 10.1002/he.101
- Lovelock & wright. (1999). *Principles of Service Marketing and Management*. Prentice hall.
- Lovelock C., J. W. (2011). *Services Marketing: People, Technology, Strategy*. 7th ed., Prentice Hall, Upper Saddle River, New Jersey.
- Malik et al., (2011) *Marketing*”, *Journal of Marketing*, 49, 33 - 46.
- Malik, E. M, Naeem B. and Arif, Z. (2011), How do service quality perceptions contribute in satisfying banking customers?, *Interdisciplinary Journal of contemporary Research in Business*, Vol. 3(8): 646- 653.
- McCarthy, E. J. (1960). *Basic Marketing: A Managerial Approach*. Homewood (Illinois): R. D. Irwin.
- Meron. (2015). *Impact of Service Quality on Customer Satisfaction: the Case of Bank of Abyssinia S.C*.

- Mesay Sata, (2012). Bank Service Quality, Customer Satisfaction and Loyalty in Ethiopian Banking Sector: *Journal of Business Administration and Management Sciences Research Vol. 1no.(1), pp. 001-009.*
- Miles, P.C (2013), ‘Competitive strategy: the Link b/n Service Characteristics and Customer Satisfaction ‘ *International Journal of Quality and Service Sciences, Vol .5 No.4, PP.395-414.*
- Mohammed Hussien (2017). Effect of service quality on customer retention in hotel sector, *a case of 5 selected hotels in gambella town, ethiopia.*
- Mohammad, S.A.A. and Alhamadani, M.Y.S. (2011), Service quality perspectives and customer satisfaction in commercial banks working in Jordan, *14 (2011): 61- 72.*
- Mugenda, M. (2003). Research Methods: Quantitative and Qualitative Approaches Nairobi: *African Centre for Technology Studies.*
- Mugenda, O. M. a. M., A.G. (2003). Research Methods, Quantitative and Qualitative Approaches. *Nairobi: ACT, .*
- MunhurunPrabhaRamseook&SoolakshnaLukea-Bhiwajee&PerunjodiNaidoo. (2010). Service Quality In The Public Service. *International Journal Of Management And Marketing Research , UniversityOf Technology, Mauritius.*
- Munusamy, J., Chelliah, S. and Mun, W. H. (2010), Service quality delivery and its impact on customer satisfaction in the banking sector in Malaysia, *International Journal of Innovation, Management and Technology, Vol. 1(4): 398 – 404.*
- Nunnally, J. C. (1978). Psychometric theory (2nd ed.). *New York: McGraw-Hill.*
- Pallant, J. (2007). SPSS Survival Manual. 3rd ed., *Sydney: Ligare Book Publisher*
- Palmer, A. (2011). Principles of service Marketing. Sixth edition. NY. *McGraw Hill.*
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64,12 - 40.*
- Parasuraman, A. Z., V.A., & Berry, L.LA (1985). Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing Management ,49(4) 41- 50. doi: 10.2307/1251430*
- Parsons, T. (1960). Structure and Process in Modern Societies. *American Journal of Sociology. 66.*

- Radomir. (2010). Improving Registrar quality dimensions to increase customer satisfaction. *Vol. 1* (No. 1), Pp. 126-148.
- Reich held, F. F. (2000). Loyalty and Relationship for competitive advantage *Winning and Keeping customers* (pp. 232–247). Oxford, UK: *Butterworth-Heinemann*.
- Ross, K. N. (1987). Sample design. *International Journal of Educational Research*, *11*(1), 57-75.
- Sara, Q. (2013). Service Quality & Customer Satisfaction A case study in Registraring Sector. *University of Gravle*.
- Satendra Thakur And A. P Singh,. (2011). Service Quality And Customer Satisfaction: A Study With Special Reference To Public Sector Banking Industries In India. *International Journal Of Management Research And Review*, *Vol. 1, Issue 1*, 24-38.
- Schneider, B. a. W., S. (2004). Service quality: research perspective. Londo. *Sage Publications*.
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2009). Research Methods for Business Students. (5. ed.) *Harlow: Pearson Educated. pp, 106-135, 210 255*.
- Solomon, M., Bamossy, G., Aske gaard, S. and Hogg, M.K. . (2006). *Consumer behavior: An European perspective. New Jersey. Prentice Hall*.
- Sunayma, S. (2013). Service quality versus customer satisfaction in Registraring sector: A literature review. *IUP Journal of Marketing Management*. , *Business Source Complete, EBSCOhost*, viewed P65-78.
- Sureshchandar, G.S., Chandrasekharan, R. and Anantharaman, R.N. (2002) The relationship between service quality and customer satisfaction – a factor specific approach, *Journal of Services Marketing*, *16*(4), p. 363-379.
- Tibebe Zeleke (2012). Impact of service quality on customer satisfaction at the public owned *National Alcohol and Liquor Factory. Master's thesis, Addis Ababa*
- Tavakol, M., & Dennick, R. (2011). *Making Sense of Cronbach's Alpha*.
- UNDP. (2015). Global Centre for Public Service Excellence: Achieving Sustainable Development and Promoting Development Cooperation. *United Nations*.
- WTO, (1985). Identification and evaluation of those components of tourism services which have a bearing on tourist satisfaction and which can be regulated and state measures to ensure adequate quality of tourism services. *World Tourism Organization, Madrid*.
- Wicks, A. a. R., C. (2009). A satisfaction-based definition of quality. *Journal of business and economic studies. Business Source Complete, EBSCO host*, viewed 04 April 2015.

- Yamane, Taro. 1967. *Statistics, An Introductory Analysis*, 2nd Ed., *New York: Harper and Row*.
- Yarimoglu, E. K. (2014). A Review on Dimensions of Service Quality Models. *Department of Business Administration, Faculty of Economics and Administrative Sciences, Yasar University*.
- Zeithaml, V. & Bitner, M.J. (2003), *Service Marketing: Integrating customer Focus across the Firm*, (3rd ed.) *McGraw-hill, New York, NY*.
- Zeithaml, P. B. (2009). A conceptual model of service quality and its implications for future research. *Journal of marketing*(49), 41 - 50. .
- Zeithaml, V., Bitner, M., and Gremler, D. (2009). *Services Marketing: "Integrating Customer focus across the firm."* International Edition. NY. *McGraw-Hill*.
- Zeithaml, V., Bitner, M., and Gremler, D. (2009). "Services Marketing: Integrating Customer focus across the firm". International Edition. NY. *McGraw-Hill*, pp 4.
- Zeithaml VA, Berry LL, Parasuraman A (1993), Five imperatives for improving service quality. *Sloan Manage Rev*, 31(4): 29-38.
- Zeithaml, V.A., Parasuraman, A., & Berry, L.L. (1990). Delivering quality service: Balancing customer perceptions and expectations, *The Free Press, New York, NY*.
- Zeithaml, V. A., Parasuraman, A. & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of marketing*, 12(49), 41 - 50.

APPENDICES

APPENDIX–A: Assumptions Test of Multiple Linear Regressions

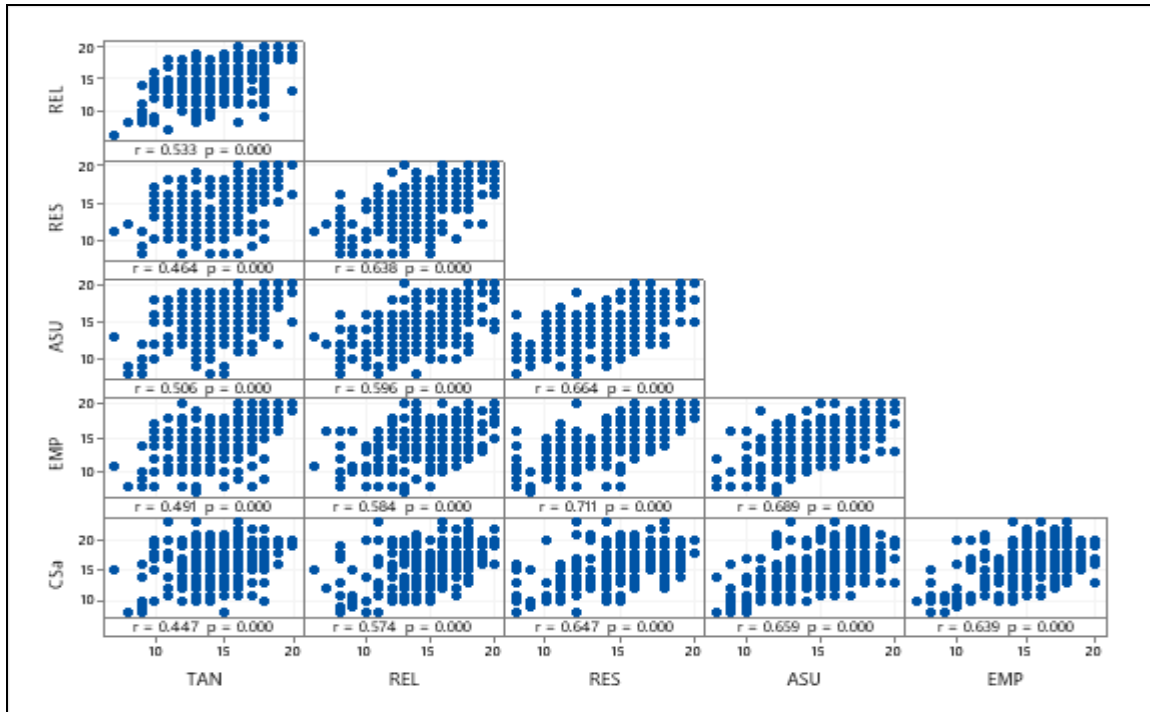


Figure 2. Matrix plot of TAN, REL, RES, ASU, EMP, CSa ($P < .001$; DV = dependent variable which is CSa; IVs = independent variables (SQ dimensions))

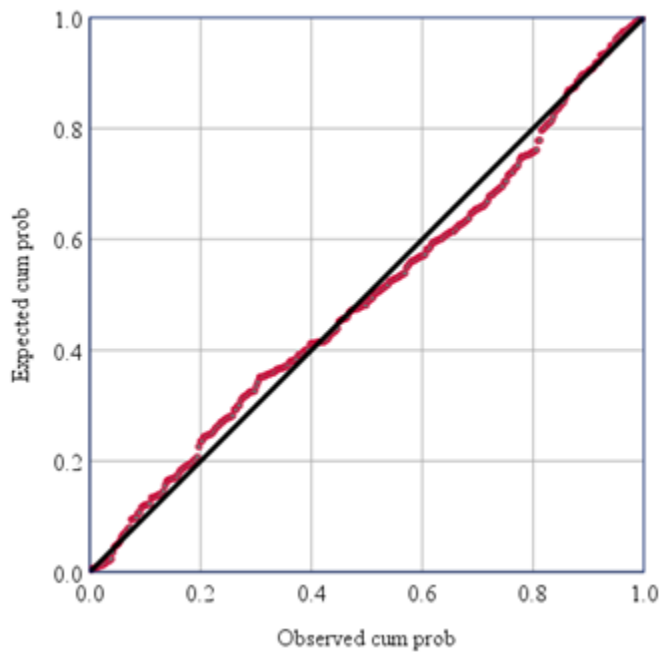


Figure 3. Plot of observed cumulative probability and expected cumulative probability of the model (DV is CSa)

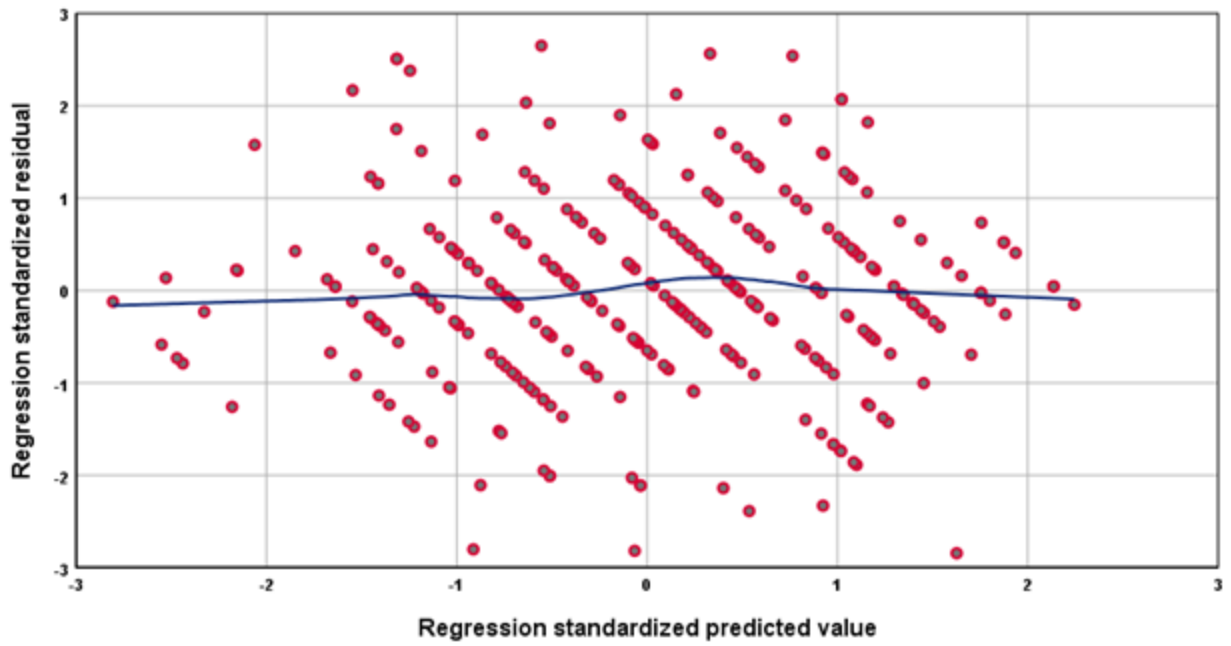


Figure 4. Scatter plot of regression standard residual and standardized predicted values (DV is CSa)

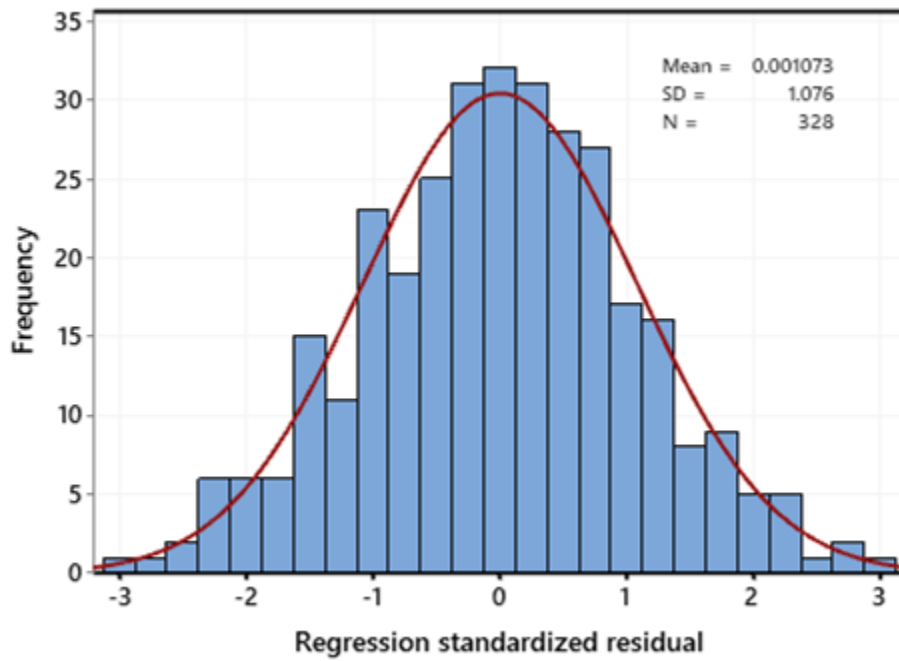


Figure 5. Histogram of regression standardized residuals (dependent variable is CSa)

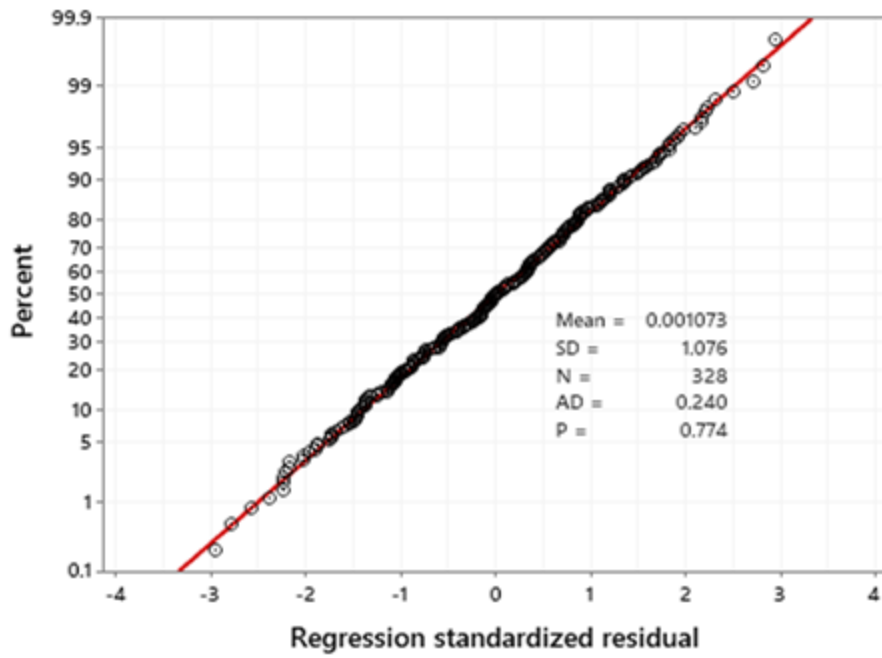


Figure 6. Probability plot of the regression standardized residual (dependent variable is CSa)

APPENDIX –B: Questionnaires

Jimma University

College of Business and Economics, Department of Management

MPM Program

(Questionnaires for Academic Staff and Students)

Dear Sir/Madam, First I would like to thank you for your time. My name is Behailu Chimdessa and I am a graduate student at Jimma University College of Business and Economics. I am conducting this study for the completion of my Master’s Degree in Public Management. The purpose of the study is measure the Effective of Service Quality on Customer Satisfaction in Jimma University Registrar Services. Your kind cooperation will help me to find reliable data and will be used only for this study. Please try to answer all stated questions and I would like to thank you for your time again. Please mark your response with “√” If you have any question, please contact me through bechimd@gmail.com

Part I.PERSONAL INFORMATION

1. Gender 1. Male 2. Female
2. Age 1. 18 – 25 2. 26 – 35 3. 36 – 45
4. 46 – 55 5. > 56
3. I am__ 1. A student 2. an academic staff
(If you are a student, you are kindly requested to proceed to Question No. 4. If you are an academic staff, you are kindly requested to proceed to Question No. 5)
4. I am ___student.
1. BSc 2. BA 3. MSc 4. MA 5. MD 6. LLB PhD
5. Your academic rank is and you are kindly requested to proceed question number 6.
1. BSc 2. BA 3. MSc 4. MA 5. MD 6. LLB 7. PhD
8. Professor

Part II. Perception towards service quality dimensions.

6. How many years have you been working in Jimma University?

1. Less than 1yr- 3 yrs 2. 4 yrs-7 yrs

3. 8 yrs - 10 yrs 4. >11

7. From services provided by Jimma University Registrar which service do you use?

1. Official transcript

2. Student copy

3. Original student document

4. Other service

5. All services

8. How long it took to get the above-mentioned service starting from your first arrival at the registrar?

1. Less than ten minutes

2. Ten to thirty minutes

3. Thirty-one minutes to one Hour

4. More than one hour

9. According to your opinion to what extent efficient service delivery and service quality is important for customer satisfaction?

1. Extremely important

2. Important

3. Fairly important

4. Not important

Part III: SERVICE QUALITY ON CUSTOMER SATISFACTION QUESTIONNAIRE

Instructions: Please tick the number that you feel most appropriate, using the scale from 1 to 5 (Where 1 = strongly disagree, 2 = disagree, 3 = neutral 4 = agree and 5 = strongly agree).

No.	Statement	Score Values				
		Strongly Disagree(1)	Disagree(2)	Neutral(3)	Agree(4)	Strongly
	Questions Related to Tangibility	1	2	3	4	5
10.	Jimma University Registrar has required and modern equipment to provide quick and quality service delivery					
11.	Jimma University Registrar employees have required knowledge and skills to deliver quality and speedy services to its customers.					
12.	Room is clean and provides adequate of space					
13.	Employees' uniforms are attractive					
	Questions Related to Reliability					
14.	Jimma University Registrar provides its services at promised times.					
15.	Employees are consistently polite.					
16.	The employees handled customer's complaints effectively					
17.	Employees provide accurate information to customers.					
	Questions Related to Responsiveness					
18.	Employees are happy and willing to serve the customers.					
19.	Jimma University Registrar provides diversified service to					
20.	Jimma University Registrar gives quality quick service					
21.	Jimma University Registrar gives quick response to customer					
	Questions Related to Assurance					
22.	The employee has the required skills to provide services.					
23.	The employees have sufficient knowledge of service information					
24.	The employees make customers feel safe while providing services					
25.	Employees have required knowledge to answer customers'					
	Questions Related with Empathy					
26.	Employees always treat customers in a friendly manner.					
27.	Employees treat customers with great respect.					
28.	Employees give individual attention to customers.					
29.	The employees understand the specific needs of their customers.					

PART IV, CUSTOMER SATISFACTION QUESTIONARRIES

Instructions: Please tick the number that you feel most appropriate, using the scale from 1 to 5 (Where 1 = Very low, 2 = low, 3 = moderate, 4 = high, and 5 = very high).

	Statements	Score Values				
		Very low	low	moderate	high	Very high
	Questions Related to Customer Satisfaction	1	2	3	4	5
30.	Your level of satisfaction having the modern equipment and provide speedy service to its customer.					
31.	Your level of satisfaction on giving individual attention to customers of the registrar staffs.					
32.	Your level of satisfaction on the communicative ability of the employees of the registrar.					
33.	Your level of satisfaction on the performance of the registrar staffs.					
34.	Your level of satisfaction on handling compliant questions of effectiveness of the services of the registrar.					

Thank you!!!