

**ST. MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**



**THE EFFECT OF SERVICE QUALITY ON CUSTOMER  
SATISFACTION: THE CASE OF GEOSYNTHETICS  
INDUSTRIAL WORKS PLC**

**By: ABEBA DEJENE**  
**ID No: SGS/ 0138/2012A**  
**Advisor: Ephrem Assefa (Ph.D)**

**ST. MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**

**THE EFFECT OF SERVICE QUALITY ON CUSTOMER  
SATISFACTION: THE CASE OF GEOSYNTHETIC INDUSTRIA  
WORKS PLC**

**By: ABEBA DEJENE**  
**ID No: SGS/ 0138/2012A**  
**Advisor: Ephrem Assefa (Ph.D)**

**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY,  
SCHOOL OF GRADUATE STUDIES IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD  
OF A MASTERS DEGREE IN BUSINESS MANGEMENT**

**ST. MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**

**THE EFFECT OF SERVICE QUALITY ON CUSTOMER  
SATISFACTION: THE CASE OF GEOSYNTHETIC INDUSTRIA  
WORKS PLC**

**BY: Abeba Dejene**

**APPROVAL BY BOARDS OF EXAMINER**

-----  
**Dean, School of business**

-----  
**Signature**

-----  
**Advisor**

-----  
**Signature**

-----  
**External Examiner**

-----  
**Signature**

-----  
**Internal Examiner**

-----  
**Signature**

## **DECLARATION**

I, the undersigned, declare that this thesis entitled "*The effect of service quality on customer satisfaction: the case of Geosynthetic Industrial Works PLC*" is my original work, prepared under the guidance of Dr. Ephrem Assefa. All sources of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Abeba Dejene\_\_\_\_\_

Name

Signature

St. Mary's University Addis Ababa

May 2021

## **ENDORSEMENT**

This thesis entitled “*The effect of service quality on customer satisfaction: the case of Geosynthetic Industrial Works PLC*” has been submitted to St. Mary’s University School of Graduate Studies for examination with my approval as a University advisor.

Dr. Ephrem Assefa

Name

**St. Mary's University, Addis Ababa**



Signature

**June 2021**

## **Table of Contents**

DECLARATION .....	i
ENDORSEMENT .....	ii
Acknowledgement .....	vi
ABBRIATIONS .....	vii
Abstract .....	x
CHAPTER ONE .....	1
1. INTRODUCTION .....	1
1.1 Background of the study .....	1
1.2 Background of the Organization .....	2
1.3 Statement of the Problem .....	3
1.5 Research Objective .....	4
1.5.1 The General objective .....	4
1.5.2. Specific objectives: .....	4
1.6. Significance of the study .....	5
1.7. Scope of the study .....	5
1.8. Limitations of the study .....	5
1.9. Definition of Key Terms .....	6
1.10. Organization of the study .....	6
CHAPTER TWO .....	7
2. LITRATURE REVIEW .....	7
2.1 The Concept of Service and Service Quality .....	7
2.2. Models of Service Quality .....	8
2.2.1. SERVQUAL Model .....	8
2.2.2. The Gap Analysis Model .....	9
2.2.3. Critical incident model .....	10
2.3. Customer Satisfaction .....	10
2.3.1. The concept of customer satisfaction .....	10
2.3.2. Customer Satisfaction models .....	13
2.3.2.1. Macro model of customer satisfaction .....	14

2.3.2.2. Micro-models of customer satisfaction .....	16
1)Expectations Disconfirmation Model: .....	16
2)Perceived Performance Model:- .....	16
3) Models: .....	17
4) Multiple Process Models: .....	17
5)Attribution Models: .....	17
6) Equity Models: .....	17
1)Positive disconfirmation .....	18
2)Negative disconfirmation: .....	18
3)Zero disconfirmation: .....	18
2.3.3. Customer Expectation.....	18
3.3.4) Customer Expectation vs Customer Perception .....	19
2.4. Factors Influencing Customer Expectations .....	20
2.4.1. Previous Customer Experience .....	20
2.4.2. <i>Customer Communications</i> .....	20
2.4.3. Reviews and Word of Mouth.....	20
2.4.4. Previous Experience with Other Companies .....	21
2.5. Review of empirical Studies .....	21
2.6. Conceptual framework of the study .....	23
2.7. Research Hypotheses .....	23
CHAPTER THREE .....	25
3. RESEARCH METHODOLOGY.....	25
3.1 Research approach .....	25
3.2. Research Design.....	25
3.3Data type and Sources.....	25
3.4Instruments and Procedures of Data Collection.....	25
3.5. Population, Sample size and sample technique .....	26
3.5.1. Target Population.....	26
3.5.2. Sampling technique.....	26
3.5.3. Sample size.....	27
3.6. Sources of Data .....	28
3.6.1. Primary data source .....	28

3.6.2. Secondary data source.....	28
3.7. Validity and reliability of data collection instruments .....	28
3.7.1Reliability.....	28
3.7.2 Validity.....	29
3.8 Data analysis methods .....	29
3.9. Ethical consideration .....	30
CHAPTER FOUR.....	31
DATAPRESENTATIONANALYSISANDINTERPRETATION .....	31
4.2. Descriptive statistics for service quality at G.I.W. ....	33
4.2 Descriptive statistics for Tangibility dimension of service quality .....	34
4.3 Descriptive statistics for Reliability dimension of service quality .....	35
4.4 Descriptive statistics for Responsiveness dimension of service quality .....	36
4.5 Descriptive statistics for assurance dimension of service quality. ....	37
4.6 Descriptive statistics for empathy dimension of service quality. ....	37
4.7 Descriptive statistics for customer satisfaction at G.I.W .....	38
4.8 Correlation between Service quality and customer satisfaction .....	39
4.9Multiple Regression Analysis .....	40
4.10 Discussion of Results .....	48
CHAPTER FIVE .....	50
5.1 SUMMARY, CONCLUSION AND RCOMMENDATION.....	50
5.1. Summary .....	50
5.2. Conclusion .....	50
Reference:.....	52



## **Acknowledgement**

First and for most, I would like to praise the almighty God for his forgiveness, charity and strength he has given to me. Secondly, I would very happy to express my heartfelt deepest gratefulness to my advisors Ephrem Assefa (Ph.D) for his priceless and unreserved support throughout the study period.

## **ABBREVATIONS**

G.I.W ----- Geosynthetics Industrial Works.

SERVQUAL----- Service Quality

SPSS ----- Statistical Package for Social Science

CRM ----- Customer Relationship Management

TQM----- Total Quality Management

ICT----- Information Communication Technology

**List of Figures**

**Page No:**

- Kano Model -----16
- Conceptual framework of the Study-----25
- Normality graph-----43
- Histogram-----44
- Scatter plot graph-----46

**List of Tables**

**Page No**

Table 3.1 Reliability test of the study -----29

Table 4.1 Characteristic of respondents -----32

Table 4.2 Respondents attitude on the service quality dimension related to Tangibility-----35

Table 4.3 Respondents attitude on the service quality dimension related to Reliability-----36

Table 4.4 Respondents view on the service quality dimension related to Responsiveness-----37

Table4.5 Respondents view on the service quality dimension related to Assurance -----38

Table 4.6 Respondents attitude on the service quality dimension related to Empathy-----39

Table 4.7 Respondents level of satisfaction on the organization service quality-----39

Table 4.9 Model summary of multiple regressions -----41

Table 4.11 Coefficient value of multiple regression analysis-----43

## **Abstract**

This study endeavors to investigate the effect of service quality on customer satisfaction in Geosynthetics Industrial Works PLC using five dimensions of service quality (SERVQUAL) namely tangibility, reliability, responsiveness, empathy, and assurance are considered as the base for this study. To achieve the overall objective of the study, questionnaire was used to collect data from customers of the organization; accordingly, 183 respondents were participated in the study chosen using a propulsive sampling technique. The data were processed using SPSS version 20.1 and analyzed through both descriptive and inferential statistics methods. The results of descriptive statistics reveal that the overall mean value for service quality and customer satisfaction was low. Moreover, the regression analysis result indicated that service quality dimensions (reliability, assurance and empathy) positively and significantly affected customer satisfaction in the organization but responsiveness and tangibility less effect on customer satisfaction. Based on this, it can be concluded that, reliability, assurance and empathy remains the most significant determinants customer satisfaction in the study area. Furthermore, multiple regressions identify the relative contribution of each variable and determine the best predictor variables among a set of variables. Accordingly, reliability dimension has the highest effect customer satisfaction among the independents variables ( $\beta = .528$ ). Based on the findings the study recommends that management bodies of the organization should improve its service quality particularly on tangibility and responsiveness to increase the level of customer satisfaction.

**Key words: service quality, tangibility, responsiveness, assurance, reliability, empathy and**

**Customer satisfaction**

# **CHAPTER ONE**

## **1. INTRODUCTION**

This chapter deals with introduction to the study and contains background of the study, background of the organization, problem statement, research questions, and objective of the study, significance of the study, scope and limitations of the study, definition of key terms and organization of the study.

### **Background of the study**

The current dynamic business world is forced firms to become more competitive and flexible than ever. It is clear that, the main objective of firms to generate and maximize profit as well as to enhance efficiency through cost minimization. One of the factors that help firms to increase sales is customer satisfaction by providing quality service.

Service quality is defined as a comparison of customer expectation with service performance. Good service quality brings into customer satisfaction and therefore, makes the firm more competitive in the market. High service quality can be obtained by sorting out problems in service and define measures for service performance and outcomes as well as level of customer satisfaction. In different service industries the relationship between customer satisfaction and service attributes have been difficult to identify because service nature is intangible (Hong, Goo et.al, 2004, Nguyen& Leblanc, 2002)

Service quality has been documented as a major matter in the tourism and hospitality industry (Cheng et al., 2012). In a progressively competitive market, providing extraordinary quality service is viewed as a critical factor for the triumph of tourism and hospitality businesses (Tsaur et al., 2014). Therefore, organizations concentrated on customers' expectations and attempts to satisfy them by delivering superior quality of service that is a central issue to retain satisfied and loyal customers (Lim, 2014). Marketers have recently begun to consider and advance strategies to manage and measure service excellence to their personal advantage (Zaibaf, et al., 2013).

What are the qualities of these services provided to customers? Are the customers satisfied with these services? Thus, this research originated from the fact that customer/consumer is the key to business. In fact, their satisfaction is the most important tool that helps to increase sales

and generate profits in the business environment. Furthermore, the importance of customer satisfaction and service quality has been proven relevant to help pick up the overall performance of organizations (Magi & Julander, 1996).

Customers are always aiming to get maximum satisfaction from the products or services that they buy. Winning in today's marketplace entails the need to build customer relationship and not just building the products; building customer relationship means delivering better value over competitors to the target customers (Kotler et al., 2002, p. 391). Whether an organization provides quality services or not will depend on the customers' comment on the satisfaction they get from consuming the products, since higher levels of quality lead to higher levels of customer happiness (Kotler & Keller. 2009).

As organizations are increasingly becoming customer focused and is driven by customer demands it is becoming equally challenging to satisfy and retain customer loyalty. Research by Oliver (2009) suggests that both service quality and customer satisfaction are two separate but related constructs. It is particularly true for the services firms where increased level of customer satisfaction results in profit maximization.

Scholars often argue that customer satisfaction should be the fundamental principle of all the service firms as it is the key indicator of firm's performance. As said by Sakthivel et al., (2005), customer loyalty and satisfaction is proved to be the key determinant for long term survival and financial performance of the company (Jones and Sasser, 1995) and customers are considered as final judges to judge the quality level of product and services offered. Therefore, this study is conducted to test the effect of service quality on customer satisfaction in the case of Geosynthetic Industrial Works PLC.

## **1.2 Background of the Organization**

Geosynthetics Industrial Works PLC (GIW) was founded in 2005 as a joint venture company between Water Works Construction Enterprise and Golden Trade Co. It is located in Addis Ababa, Akaki Kality Sub-City, and Kebele 10. The factory covers 4800<sup>m</sup><sup>2</sup> area and 1800<sup>m</sup><sup>2</sup> office building with ample space for expansion. All machinery is 'state of art' and will produce products to international standards.

The company was designed to facilitate correct and economic utilization of water resource incorporating the concept of water conservation, elimination of wastage in distribution and to fill void in the Ethiopian market for a supplier of high quality products such as plastic pipes, plastic sheer and various other products known as “Geosynthetics” which is used for the production, collection, delivery, containment of water resource and soil protection.

Having local manufacturer for Geosynthetic products enable Ethiopian to move forward quality in its efforts’ to provide water services to agriculture, industry and utility services at the same providing expertise and employment for more than 250 Ethiopian managers, engineers, marketing and sales representatives, office supports personnel and manufacturing plant workers, provide high level of expertise and customer satisfaction by producing and supplying with quality Geosynthetics products (G.I.W Administration Manuel, 2008)

Through awareness and understanding of ever changing market and the varying needs of its clients has adapted and evolved so that it continue to have the capability to carry out the full spectrum of its products in a wider variety of sectors. Its staffs continue to provide the foundation on which the company can move forward and the management believes that investment on its staff in the form of training and career progression is paramount to its continuous success. GIWs personnel will be available to provide technical advice for installation questions and will in the future also be able to provide turnkey installation service as well.

### **1.3 Statement of the Problem**

As Diane and Eduardo (2006) stated, while many factors are important in improving service quality, customer perception of the quality of service is strongly influenced by the social interactions they experience with employees. The behaviors of frontline service employees are critical to customer evaluation of the service encounter (Hartline, Maxham & McKee, 2000). Moreover, Amy (2004) pointed out that contact employee plays an important role in the delivery of service quality as well as the formation of customer satisfaction.

According to Rashid Al Karim(2014) the combination of tangibility, reliability, responsiveness, assurance and empathy together has significant effect on customer satisfaction. In addition to this, Zeithaml and Bitner (2008:85), Service quality is a focus evaluation that reflects the customers’ perceptions of specific dimensions of quality: reliability, responsiveness, assurance,



empathy and tangible. It is a conceptual construct which centers on perceived quality defined as a customers' judgment about an entity's overall excellence or superiority (Zeithaml 1987).

Other scholars like Lewis and Mitchell (1990), Dotchin and Oakland (1994), and Asubonteng et al (1996), explained service quality as the degree to which a service meets customers' needs and expectations. Since the problem was actual happened in the company and it makes problems the researcher study in the case of G.I.W.

Geosynthetics Industrial Works Plc (G.I.W.) is one of the leading plastic industries in Ethiopian. The sales representative and marketing research employees in the organization have play an important role in delivering quality service and that meet customer satisfaction. In addition to this, efforts have been undertaken by the company to improve the service quality of its points of sales. However, recent times most potential customers leaving the company and move to competitors. According to the organization commercial department customer feedback report (2019/20), customers are not satisfied mostly due to late delivery time. Due to this reason, the organization has failed to win the open bids participated throughout the year as well as lost potential customer and its performance has declined .The organization's customer satisfaction survey shows that only 38% of customers are satisfied with the service provided.

Therefore, this study is conducted to determine the effect of quality on customer satisfaction in Geosynthetics Industrial works PLC. Even though prior scholars have studied the issue in different sectors, the issue remains unresearched in the case of Geosynthetics Industrial Works P.L.C.

## **1.5 Research Objective**

### **1.5.1 The General objective**

The general objective of the study is to investigate the effect of service quality on customer satisfaction in the case of Geosynthetics Industrial Works PLC.

### **1.5.2. Specific objectives:**

- To assess the effect of service quality on customer satisfaction in Geosynthetics Industrial Works PLC

- To determine the effect of tangibility dimension of service quality on customer satisfaction in the case of Geosynthetics Industrial Works PLC
- To examine the effect of reliability dimension of service quality on customer satisfaction in the case of Geosynthetics Industrial Works PLC
- To test the effect of responsiveness dimension of service quality on customer satisfaction in the case of Geosynthetics Industrial Works PLC?
- To investigate the effect of assurance dimension of service quality on customer satisfaction in the case of Geosynthetics Industrial Works PLC?
- To test the effect of empathy dimension of service quality on customer satisfaction in the case of Geosynthetics Industrial Works PLC?

### **1.6. Significance of the study**

This study contributes additional knowledge to be acquired on service quality and customer satisfaction level, the relationship between service dimensions, service quality and customer satisfaction in G.I.W marketing department. The findings of the study will provide relevant ingredient to the management of G.I.W to sort out of the existing strength and weakness of to service quality delivery. Furthermore, this study will help the company to on the most important service quality dimensions and to work on it. Moreover, this study will serve as a launching pad for those researchers who would like to conduct related studies in the area.

### **1.7. Scope of the study**

The scope of the study can be discussed in terms of the issue under investigation, geographical area and the methodology adopted. The study will cover main potential customer of the organization i.e. G.I.W. In geographical terms, the study will be conducted in one organization called Geosynthetics Industrial Works PLC located in Addis Ababa, Ethiopia. In terms of methodology, pertinent data for the study will be gathered through questionnaires.

### **1.8. Limitations of the study**

The purposive selected potential customers of the organization were taken as part of the study. The study conducted only in a limited area only ( Addis Abeba). The other limitation of the

study was poor co-operation and reluctance of respondents to fill in the questionnaire and give detail information.

## **1.9. Definition of Key Terms**

- **Customer-** the person or the business that actually buys a product or a service, will determine whether a business succeeds or fails.(Philip Kotler,2013)
- **Customer satisfaction:** refers to the overall individual feeling of pleasure or disappointment resulting from comparing a product's perceived performance( or outcome) in relation to his or her expectation(Brady and Robertson; 2001, Lovelock pattern and Walker:2001).
- **Customer expectation-**it about what constitutes good service varies from one business to another. It may also vary from one industry reputation and past experience to one another and from country to country (Lovelock and Wright, 2001).
- **Service quality:** -means confirmation or disconfirmation of the expectation a customer has. Customer base research upon the disconfirmation paradigm which stresses that is connected to the direction and size of the disconfirmation on the other hand is related to a person's primary expectations (Smith and Houston, 1982).

## **1.10. Organization of the study**

This thesis is organized into five chapters. The first chapter deals with introduction to the study and includes background of the study, statement of the problem, objective of the study, basic research questions, significance of the study and scope and limitations of the study. The second chapter deals with review of theoretical and empirical literature gathered from different sources. The third chapter is about research methodology and includes research approach & design; data source and data collection method; population, sample size and sample procedure; reliability and validity of data collection instruments; method of data analyses; and ethical considerations. The fourth chapter deals with data presentation, analysis and interpretation. The fifth chapter presents summary, conclusion and recommendation based on the findings of the study.

## **CHAPTER TWO**

### **2. LITRATURE REVIEW**

This chapter covers the literature reviewed of theories and models and conceptual framework which serves as evidence of the Variables of the study - Definitions of service quality, Model of service quality, customer satisfaction, the concept of service and service quality, customer expectation and perception, and the relationship between service quality and customer satisfaction briefly interpreted.

#### **2.1 The Concept of Service and Service Quality**

The service quality concept has gained much attention from scholars and practitioners. In dynamic business environment, the role of customer is changing. The changing paradigm of business has made the provision of quality of services as top priority for organizations. In the early 20th century it has been noted consideration of process in measuring the quality practice. Juran (1988) argue that Walter Shewart, who was a statistician, introduced a mechanism for control that is a chart which can help in evaluation and controlling quality, by making quality relevant for both the finished product and the processes that created it. W.E Demining mentioned using statistical quality control procedure, in the Japanese economy contributed a lot in the improvements after the Second World War. The other important contributor for quality was Feigenbaum (1999) the publisher of Total quality control hand book.

Service quality means the ability of a service provider to satisfy customer in an efficient manner through which he can better the performance of business. In the service sector too” quality” is an important element for the success of business. It is because of the realization of its positive link with profit, increased market share and customer (Dr C.VilayVishunu Kumar, Peer review Journal, February 2019)

Previous studies such as Abdias’s Gemachu (2019) as well as Osman Mohamad, et.al (2010) suggest that service quality is an important indicator of customer satisfaction. In addition to this, Zeithaml.et.al (2008) customer satisfaction is a broad concept, whereas service quality focuses specifically on the dimensions of service and therefore, perceived service quality is a component of customer satisfaction. Service quality is important to all organizations as it is “regarded as a driver of corporate marketing and financial performance” (Buttle, 1996,). It has

also been put forward as a critical determinant of competitiveness (Lewis, 1989), and a source of lasting competitive advantage through service differentiation (Moore, 1987). More particularly, service quality affects the re-purchase intentions of customers (Ghobadian et al., 1994). Most people hear about poor customer service experience than good customer service, and negative word of mouth can have a devastating effect on an organization's efforts to attract new customers. Customers who have experienced poor service will reveal their experience to other people, and therefore this is likely to lead to a reduction in potential customers (Horovitz, 1990).

## **2.2. Models of Service Quality**

Different measurement criteria are required for different concepts such as service quality, customer satisfaction, customer perceptions, expectations and loyalty. While assessing these concepts, they will need to use different measuring scales, scope of opinions, attitudes and behavior. Some of the current methods of measuring customer expectations and customer perceptions are SERVQUAL, SERVPERF, Critical Incidents Technique, observation studies, focus group discussions and in-depth interviews and evaluate these methods in terms of their relevance and appropriateness for services marketing in different contexts.

### **2.2.1. SERVQUAL Model**

The SERVQUAL model of measuring service quality is based on the pioneering work of Parasuraman, Zeithaml and Berry (1985). The model talks about the way a customer distinguishes the service quality by comparing the expected service with the perceived service. The SERVQUAL instrument is used to obtain customer expectations and perception scores on these five dimensions of service.

1. **Tangibles** involve the appearance of physical facilities, including the equipment, personnel, and communication materials.
2. **Reliability** involves the ability to perform the promised service dependably and accurately.
3. **Responsiveness** involves the willingness to help customers.
4. **Assurance** involves the knowledge and courtesy of employees and their ability to convey trust and confidence. This assurance includes competence, courtesy, credibility and security.

5. **Empathy** involves the provision of caring, individualized attention to customers. This empathy includes access, communication, and understanding the customer. Most customers prefer good service to lower prices. Think about all the situations where you are prepared to pay a little extra to get a better or more efficient service. Companies that give these added service benefits are likely to be winners. They have a competitive advantage over rivals. Customers are requiring and demanding better services and the goals of all organization must be to make the customers feel special. This will lead to customer's perceptions exceeding their expectations and greater customer satisfaction.

### **2.2.2. The Gap Analysis Model**

Parasuraman, Zeithaml and Berry (1985) have developed a model of service quality, which claims that the customer evaluates the quality of service experience as the outcome of the difference (gap) between expected and perceived quality.

Consumer perceptions are the difference between what consumers expect from the service and what they actually perceive of it. The need for managers to access customers' expectations and their perceptions of the quality provided should be emphasized here. This assessment should be constant or, at least, periodic. It should encompass the totality of the service offering, i.e. including every moment of truth, and it should be done for each of the strategic quality dimensions.

- Gap 1 is the distance between what customers expect and what managers think they expect.
- Gap 2 is between management perception and the actual specification of the customer experience – Managers need to make sure the organization is defining the level of service they believe is needed.
- Gap 3 is from the experience specification to the delivery of the experience – Managers need to audit the customer experience that their organization currently delivers in order to make sure it lives up to the expectation.
- Gap 4 is the gap between the delivery of the customer experience and what is communicated to customers – All too often organizations exaggerate what will be provided to customers, or discuss the best case rather than the likely case, raising customer expectations and harming customer perceptions.

- Finally, Gap 5 is the gap between a customer's perception of the experience and the customer's expectation of the service – Customers' expectations have been shaped by word of mouth, their personal needs and their own past experiences. Routine transactional surveys after delivering the customer experience are important for an organization to measure customer perceptions of service.

### **2.2.3. Critical incident model**

Critical incident as described by Lovelock, Patterson and Walker, is a technique designed to elicit details about services that “particularly dissatisfy or delight customers”. The information can either be collected by in-house comment cards as found in hotels or through one to one interviews.

The information and comments which are obtained from the interviews identify the common problems or the praises showered on the company. Unlike other qualitative methods of collecting feedback, customers are not forced to give answers to predetermined potential problems. Infact, customers are asked to jot down the more memorable incidents from the service. According to Hope and Muhlemann(2004) the technique is useful in a number of respects: It facilitates the identification (if specific attributes of service which have a significant impact upon customers). This can be used to re-design the service delivery system around the more important customer-perceived quality attributes.

## **2.3. Customer Satisfaction**

### **2.3.1. The concept of customer satisfaction**

According to Zaire (2000), the feeling of accomplishment of inner desires is called satisfaction. Customer satisfaction has direct effect on customer patronage. If product or service fulfills the needs and demand of customer he will become satisfied and will be converted to customer patronage and thus will add in customer equity of company. Company profitability is not only depicted in its balance sheet but it is also measured on basis of its sound customer base and life time value that customers deliver to company.

Oliver (1999) suggested that customer satisfaction is the core philosophy of marketing strategy of any organization and plays a key role in an organization success. In fact customer satisfaction

is the core principle of the modern tool of CRM (customer relationship management) being used by marketers to attract and retain customers' patronage.

Giese and Cote (2000) clearly stated that there is no generic definition of customer satisfaction and after carrying a study on various definitions on satisfaction they came up with the following definition, "customer satisfaction is identified by a response (cognitive or affective) that pertains to a particular focus (i.e. a purchase experience and/or the associated product) and occurs at a certain time (i.e. post- purchase, post consumption)" From this definition, it is clear that the consumer's/customer satisfaction is determined by his/her contact experience with the service provider and this is supported by Cicerone et al., (2009) and Sureshchander et al., (2002), who believe customers' level of satisfaction is determined by their cumulative experiences at all of their points of contact with a supplier organization.

Fornell (1992) clearly defines customer satisfaction as an overall post-purchase evaluation by the consumer and this is similar to that of Tse and Wilton, (1988) who defined customer satisfaction as the consumer's response to the evaluation of the perceived discrepancy between prior expectations and the actual performance of the product or service as perceived after its consumption. These definitions consider satisfaction as a post purchase response and in the case of call center experience is important in evaluating customer satisfaction

The service management literature argues that customer satisfaction is the result of a customer's perception of the value received in a transaction or relationship –where value equals perceived service quality relative to price and customer acquisition costs (see Blanchard and Galloway, 1994; Heskett et al., 1990) –relative to the value expected from transactions or relationships with competing vendors (Zeithaml et al., 1990). Loyalty behaviors, including relationship continuance, increased scale or scope of relationship, and recommendation (word of mouth advertising) result from customers' beliefs that the quantity of value received from one supplier is greater than that available from other suppliers. Loyalty, in one or more of the forms noted above, creates increased profit through enhanced revenues, reduced costs to acquire customers, lower customer-price sensitivity, and decreased costs to serve customers familiar with a firm's service delivery system (Reicheld and Sasser, 1990).

Lim (2010) argued that customer's final pleasure may have significant affect connected with atmosphere. Bodily environment are useful to produce graphic within the mind connected with



customer in order to affect their own behavior. Oliver (1981) expressed in which pleasure shortly decays directly into one's total mindset "Satisfaction can be regarded as a broad principle; support good quality is a component of satisfaction". Client satisfaction is usually defined through conditions: that it's this consumer's fulfillment result. It's a ruling that a products or services feature, or this products or services per se, comes with a pleasurable level of intake linked fulfillment. In other words, it does not take total level of well-being that has a service /product knowledge resulting from the application of some sort of products or services.

However, the product and its features, functions, reliability, sales activity and customer support are the most important topics required to meet or exceed the satisfaction of the customers. Satisfied customers usually rebound and buy more. Besides buying more they also work as a network to reach other potential customers by sharing experiences (Hague & Hague 2016.) The value of keeping a customer is only one-tenth of winning a new one. Therefore, when the organization wins a customer it should continue to build up a good relationship with the client. Providing the quality of goods and services in the 20th century is not only to satisfy the customers but also to have a safe position (Rebekah & Sharyn, 2004).

Customers usually look for a value in the total service which requires internal integration among the department that is responsible for different elements of the offering, such as the core product (goods or services) delivering the product, product documentation, etc. In addition to this, from profitability and productivity aspects only activities that produce value for customers should be carried out. Hence, organizations have to get to know their customers much better than has normally been. However, the organization should be able to build trust with the customer so it is simple to have the feedback from the customer. This is how customer focused product or service could be developed (Hill, Brierley & MacDougall 2003).

Cardozo (1965) suggested satisfaction happen when consumers either authorize their pre-purchase opportunities for an obtained service. Howard and Seth (1969) explained it as the purchaser's cognitive form of being sufficiently or inadequately pleased for the detriments he or she has suffered. Engel and Blackwell (1982) assured as estimation that the chosen alternative is dependable with prior beliefs with consideration of alternative.

In a similar manner, Pizam and Ellis (1999) suggested that customer satisfaction a psychological concept that includes the feeling of pleasure results from gaining what one hopes

for and expects from unpleasing product and/or service. Moreover, Oliver (1993) explained that the swift psychological state subsequent when the sentiment adjacent disconfirmed anticipation is joined with the user's prior 12 sensation about the consumption experience. Schiffman and Kanuk (2004) identified customer satisfaction as the individual's awareness of the performance of a product or service in relation to his or her expectations. Therefore, clients can have numerous levels of satisfaction for the similar service grounded on their pre-determined notions. Increased customer satisfaction can bring organization benefits like customer loyalty, extending the life cycle of a customer, expanding the life of merchandise the customer purchase and increases customers positive word of mouth communication. When the customer is satisfied with the product or service of the company, it can make the customer to purchase frequently and to recommend products or services to potential customers. It is impossible for a business organization to grow up in case the company ignores or disregards the needs of customers (Tao 2014).

### **2.3.2. Customer Satisfaction models**

Models of customer satisfaction come from a vast literature from the marketing research discipline. This pool of research includes models that integrate the concept of customer satisfaction in a network of related concepts, such as value, quality, complaining behavior, and loyalty. In this thesis, we will categorize these kinds of models as "macro-models." Macro-models have special importance for the policy-level implications of an organization's research in customer satisfaction. Macro-models give the researcher the strategic context of the design and of the results for a study of customer satisfaction. The marketing research literature extensively covers the elements that make up the concept of customer satisfaction, such as disconfirmation of expectations, equity, attribution, affect, and regret. We will consider these kinds of models as "micro-models." Micro-models enable an analyst to properly operationalize measurements of customer satisfaction, thus helping her/him to achieve construct validity in the eventually satisfaction (HomWillard (2000)).

Hayes Bob (2011) suggests that micro model approach describes the customer relationship for a specific customer. In this approach, the organization sort out customers who are disloyal and intervenes to address the specific customer's concerns. This approach addresses special causes of disloyalty (those that fall outside of normal variations) and reflects a short-term solution to customer concerns. Rather than focusing on improving the business process that resulted in this

customer to become at-risk, the company's main goal is address this at-risk customer's concerns. Generally, improvements are targeted at disloyal customers to immediately address their specific needs.

In this approach, timely handling of dissatisfied, disloyal customers is key to ensuring their attitudes regarding the organization do not mainly result in disloyal behaviors (e.g., defection, discontinue buying). Web-based data collection methods like social media, surveys are an important ingredient in the micro approach to handling disloyal customers.

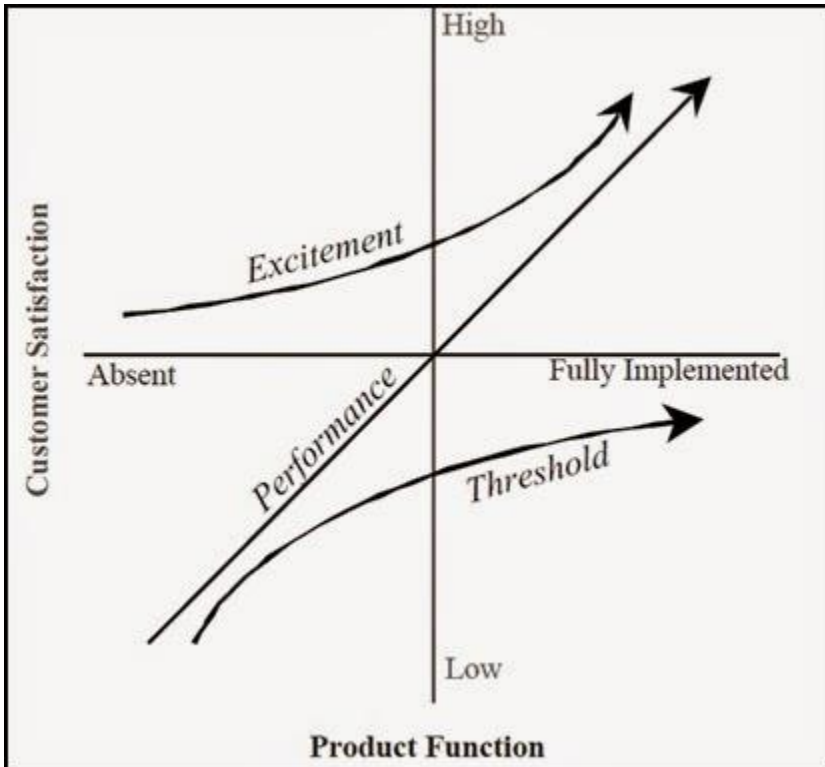
The macro approach investigates the customer relationship across all the customers (or large customer segment) in which data are analyzed as a whole. In doing so, organization tried to identify systemic reasons causing loyalty/disloyalty. As such, the macro approach to customer experience management addresses common causes of disloyalty and focuses on improving systemic issues brings for the disloyalty. In opposite to the micro approach to customer experience management that focuses on a resolving a customer's unique concerns, while the macro approach reflects organizational improvements targeted across a large group of customers and are focused at improving systemic problems. Systemic progress to business processes are designed to have a long-term influence on customer loyalty (Hayes bob, 2011).

### **2.3.2.1. Macro model of customer satisfaction**

#### **The Kano Model of Customer (Consumer) Satisfaction**

The Kano Model of Customer Satisfaction classifies product attributes based on how they are perceived by customers and their effect on customer satisfaction. These classifications are useful for guiding design decisions in that they indicate when good is good enough, and when more is better. The Kano Model is also known as "Kano Analysis" was created by Japan's Noriaki Kano in 1984 and to this day it remains to be a useful tool in Product and Service Development. The model brings out the nonlinear relationship between the product performance and customer satisfaction. The model divides product attributes into four categories: threshold, performance, excitement and indifferent (Figure 1)

**Figure 1 Kano's model**



**Threshold Features:** These are the features that are expected by the customers and the preliminary condition of a product or service. These are the points of parity and do not provide an opportunity for product differentiation. Improving the performance of these attributes do not guarantee increased customer satisfaction and may only add to the cost of product. What is important is the absence these features would could bring high customer dissatisfaction. The basic needs will get the organization to enter into the market. Example for a threshold features can be four wheels in a car.(Kano model, 1978)

**Performance Features:** Performance features are those for which more is merrier. The better fulfillment brings to linear increment of customer satisfaction and lack of these features will decline the customer satisfaction. Data from Voice of the Customer (VOC) will reflect these features. The price for which customer is willing to pay for a product is closely associated

to customer need. For example, customers would be willing to pay more for a car that provides them with better fuel economy. (Kano model, 1978)

**Excitement Features:** These performances are total beyond the expectation of the customers. The presence of these features makes the customer happy and brings in high satisfaction. The lack of these performances however does not cause dissatisfaction. The excitement features are seen to meet the latent needs of the customers. The marketers can build on these features to makes the customers happy and gain competitive advantage. This stage will help the firm to be the leader and increase market share. An example could be power steering in a car(Kano model(1978).

**Indifferent Features:** There are some features of products that do not fulfill into any of the above three categories .This is because of their little or no importance to the customer. They do influence the decision making. Take the example of a plate listing part numbers which can be found under the hood on many vehicles for use by repairpersons. Similar feature are considered as ‘Indifferent features. An ideal product should have all the basic features attributes, maximize the performance features and incorporate as many “excitement” features as possible at a price that is affordable (Kano model, 1978).

### **2.3.2.2. Micro-models of customer satisfaction**

Erevelles & Leavitt (1992) provide a best summary of micro-models. Below are the six types of models they review in their article, and a briefly introduction on each type:-

- 1) **Expectations Disconfirmation Model:** - has been the dominant model in satisfaction research. The model has consumers using pre-consumption expectations in a comparison with post-consumption experiences of a product/service to form an attitude of satisfaction or dissatisfaction toward the product/service. In this model, expectations originate from beliefs about the level of performance that a product/service will provide. This is the predictive meaning of the expectations concept (Erevelles& Leavitt, 1992).
- 2) **Perceived Performance Model:**-deviates from the model #1 above in that expectations play a less significant role in satisfaction formation. The model performs especially well in situations where a product/service performs so positively that the

consumer's expectations get discounted in her/his post-consumption reaction to the product/service.

**3) Models:** resemble the Expectations Disconfirmation Model in that the consumer compares perceived performance with some standard for performance. In this case, however, the standard is not a predictive expectation. Rather than considering what will happen in the consumption experience, the consumer uses what should happen as the comparison standard. This is the normative meaning of "should" rather than its occasional chronological connotation in the English language (Erevelles & Leavitt, 1992).

**4) Multiple Process Models:** characterize the satisfaction formation process as multidimensional. That is, consumers use more than one standard of comparison in forming a (dis-)confirmation judgment about an experience with a product/service (Erevelles & Leavitt, 1992).

**5) Attribution Models:** integrate the concept of perceived causality for a product/service performance into the satisfaction process. Consumers use three factors to determine attribution's effect in satisfaction. These are locus of causality, stability, and controllability. The locus of causality can be external (that is, the service provider gets the credit or blame) or internal (that is, the consumer is responsible for the product/service performance). (Erevelles & Leavitt, 1992) Affective Models differ from previous models in that it goes beyond rational processes. In these models, emotion, liking, and mood influence (dis)satisfaction feelings following the consumption experience (Erevelles & Leavitt, 1992).

**6) Equity Models:** emphasize the consumer's attitude about fair treatment in the consumption process. Fair treatment can use the concept of the equity ratio (that is, the amount of her/his return for her/his effort made) or the concept of social comparison (that is, the perceived, relative level of product/service performance that other consumers experience). Oliver (1997) breaks equity down further into three categories, procedural fairness; interactional fairness; and distributional fairness (Erevelles & Leavitt, 1992).

### 2.3.3.3 .Dis-confirmation Model:

According to Oliver (1980), the customer satisfaction model explains that when the customers compare their perceptions of actual products or services performance with the expectations, then the feelings of satisfaction have arisen. Any discrepancies between the expectations and the performance create the dis-confirmation. Dis-confirmation theory argues that 'satisfaction is related to the size and direction of the disconfirmation experience that occurs as a result of comparing service performance against expectations. Szymanski and Henard (2001) found in the meta-analysis that the disconfirmation paradigm is the best of customer satisfaction. Oliver (1980) identified three (3) types of disconfirmation. And they are:-

- 1) **Positive disconfirmation:** This occurs when product or service performance exceeds performance. In this case, the customers are highly satisfied.
- 2) **Negative disconfirmation:** This on the other hand occurs when products or service performance is less than expectations. In this case, the customers are highly dissatisfied.
- 3) **Zero disconfirmation:** it occurs when product or service performance is equal to expectations. In this case, customers are neither well satisfied nor less satisfied. They feel 'ok' by the turn of events.

### 2.3.3. Customer Expectation

There are many reviews on "customer expectation" to figure out what customers truly require, so that business operation can quickly offer the product and service that can take care of customer need and demand. Previous research said expectation as "desires or needs of customers which are what they feel a service provider ought to offer instead would offer" (Parasuraman, Zeithaml, & Berry, 1988); as the customers' past experience will probably influence their future expectation (Zeithaml, Berry, & Parasuraman, 1993). In this manner, their past experience will, in somehow, impact their future expectation; moreover, the expectation-satisfaction relationship" likewise impacts the customers' decision making whether to use or not to use the service once more, contingent upon their positive or negative past understanding. At the end of the day, customers' expectations influence the arrangement of their satisfaction inside discriminative circumstances and furthermore the expectation is some of the time more significant just when they are unambiguous (Nyer 1996).

After customer experienced great service, they would inform other regarding the service quality of the supplier. Thus, if service providers comprehend their customer`s preference along service quality estimations and staying to give some quality of service which will precisely diminish the gaps in service quality between customers and satisfied by the service providers words from the customer`s preference on service quality will acquire unwaveringness from the other service users (Manjunatha&Shivalingaiah, 2004).

Customer expectations should be positively related to perceived quality and, consequently, to perceived value. Customer knowledge should be such that expectations accurately mirror current quality. Hence, we expect served market to have expectations that are largely rational and that reflect customers' ability to learn from experience and predict the levels of quality and value they receive (Howard 1977).

### **3.3.4) Customer Expectation vs Customer Perception**

The key difference between customer expectation and customer perception lies in the customer aspirations and mindset; Customer expectation is an assumption in deciding the purchase whereas customer perception is an interpretation of collective information after purchase. Both concepts are important in delivering a superior offering to the customer and to making them satisfied. The variables in confirming the customer satisfaction are expectation and performance. The gap between the two variables decides whether the customer is satisfied or disappointed. This gap is known as Customer Gap (Parasuraman, et al, 1985).

Moreover, as explained by Parasuraman et al. (1990) the expected service quality may not be answered because of constraints, thus, the perceived service for customers can be resource constraints, market conditions, and/or management indifference may result in discrepancy between management perceptions of consumer expectations and the actual specifications established for a service. This discrepancy is predicted to affect quality perceptions of customers.

Customer expectation is a “belief that something will happen because it is likely to happen “(wehmeier, 2000). Expectation can be created before or at the delivery of service .Customer perceptions is “the process by which a person selects, organizes and interprets information



inputs to have a meaningful picture of the world. Perceptions of a service are a complex series of judgments created during or at the end of the experience (Williams and Buswell, 2003).

Zeithaml and Bitner (1996) states customer perceptions as the subjective assessments of actual service received and whether they are happy with the quality of the service. When customers evaluate whether the quality of service fulfill their expectations, they usually assume their service perceptions relative to expectations.

## **2.4. Factors Influencing Customer Expectations**

Customer expectations are influenced by a multitude of factors but there are a few key elements which are recognized as important influences on customer expectations.

### **2.4.1. Previous Customer Experience**

One of the most significant factors influencing customer expectations is their prior experience with your organization. If they are highly satisfied existing customers then this sets a high level of expectation which must be maintained. But if their previous experience has been suboptimal then they may lack confidence in your business and their expectations may be quite low (MarkCope man, 2018).

### **2.4.2. Customer Communications**

Every piece of outbound communication from your business may have influenced your customer expectations. Blog posts, tweets, web pages, emails, print advertising, radio and TV advertising all contribute to the expectations that your customers will have. It is essential that your communications are all honest, consistent, clear and unambiguous (Mark Cope man, 2018).

### **2.4.3. Reviews and Word of Mouth**

The internet is a magnificent research tool so you can expect your customer's to have carried out research before making their purchase. They will have read reviews of your product or service and they will have potentially read reviews of your business. They may also have read what people are saying in forums and on social media. What they derive from these sources will influence their expectations so you need to be aware of what's being said (Mark Copeman, 2018).

#### **2.4.4. Previous Experience with Other Companies**

People's experiences with other companies and organizations greatly influence their expectations. Regardless of whether other companies are in the same niche as yours, these days customers expect the same high levels of great customer service from all businesses and organizations (Mark Copeman, 2018).

#### **2.5. Review of empirical Studies**

Different studies have been conducted in relation to service quality and customer satisfaction. A study conducted by Lidya Siyoum (2017) attempted to assess the perception of service quality and customer satisfaction with Ethio-telecom call center. It used both primary and secondary data. The finding of the study indicate that the firm can improve its service by focusing on all service quality dimensions and at the same time it can increase customer satisfaction by focusing on overall service quality and important dimensions.

Another study by Jesse S. Karlayon (2018) analyzed how service quality affects customer satisfaction and to fulfill the objective an inductive qualitative research method was employed. The study concluded that responsiveness empathy and assurance are influential to customer satisfaction. Price of service is the most influential variable on customer satisfaction.

Moreover, Tibebe Zeleke (2012) analyzed whether perceived customer service directly related to customer satisfaction in the case of NALF (National Alcohol and Liquors Factory) customers in Addis Ababa. Pertinent data were gathered from primary source. The findings of the study indicate service quality perception judged by customer will create a comparative advantage in the alcoholic beverage industry.

A study conducted by Asyraf Asthanorhan and Zandinin (2016) assessed the effect of service quality on customer satisfaction. The main objective of this paper was to know service quality dimensions that satisfy customer demand and to observe quality service impact of customer satisfaction. The research methodology is applied questionnaires thought random sample. The study suggested that quality of service had a significant impact on customer satisfaction. Among the service quality dimensions, library environment and general service were considered as strong performance index.

With regard to quality service, a study conducted by Yeshitila (2018) found that all service quality dimensions have positive and significant relation with the level of customer satisfaction. Customer satisfaction had strong relationship with empathy and reliability. The overall service quality correlation with customer satisfaction is very strong and significant ( $r=0.89$ ). In conclusion, focusing on tangible and responsiveness is a necessary to fill the gap.

Sinha & Ghosha (1999) have posited in their study that there is hardly any difference between manufacturing and service industries with the increasing competition of the marketplace since services have become integral part of products making all business is to be service-oriented and aimed at satisfying growing customer needs. Most of the companies are adding capacities by adapting to advanced technology and reducing cheap material imports. Gaining competitive advantage remains in providing superior value to the customer through excellent customer service with the product at a lower delivery cost. The study concluded that customer service is important factor to retain and acquire customers in competitive markets.

Successful implementation of service quality can be drawn from a case study carried out by Longneck & Scazero (2000). In their research, workers from two different organizations with similar systems, techniques and infrastructure were surveyed for company's quality program, however only one was considered as successful from quality point of view. The study also revealed that better attention is on human aspects were seen in successful organization which includes improved management support for quality, better communication in organization, implementation of corrective actions and better follow up of problems in quality.

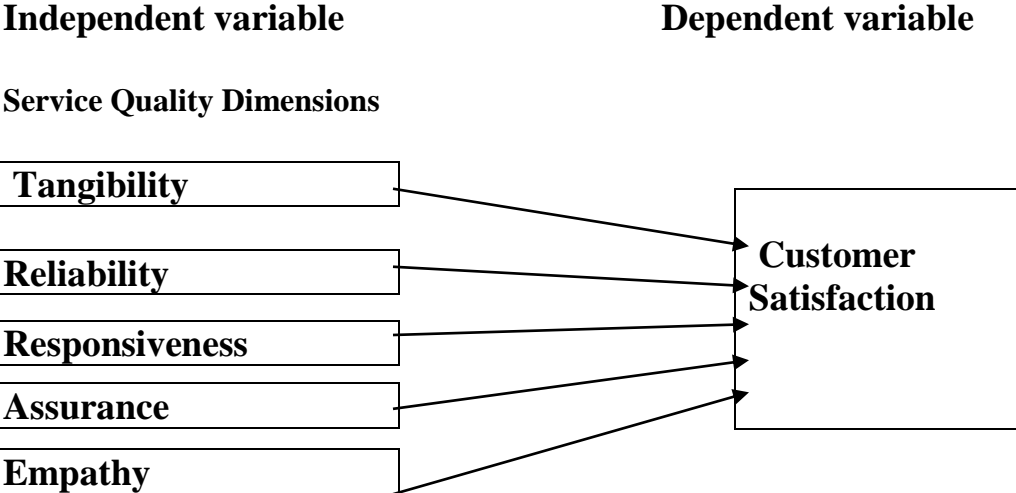
Parizeau & McDaniel (1997) in their study about business schools have mentioned that Total Quality Management (TQM) improves quality while reducing costs but since it involves fact-based continuous improvement, data need to be assessed for level of student and faculty satisfaction. SERVQUAL is used to assess both the quality and importance of each of the dimensions: assurance, reliability, empathy, responsiveness and tangibles, to tests agreement between the views of faculty (providers) and students (consumers). It has strongly established that SERVQUAL may be used as for benchmarking performance in order to improve service quality.

Dwayne et al (1997) conducted study and examined service quality expectation differences among three stakeholder groups involved in the interaction of tourists, employees and

management of service providers to degree to which service climate may explain these differences. It revealed that very few management barriers have considerable impact on managers' perceptions of tourists' expectations and most of employee barriers drastically impacted frontline employee's perceptions of visitor's expectations.

**2.6. Conceptual framework of the study**

Conceptual framework is the main process which determines the relationship between direct and indirect variables. This study shows the relationship between service quality dimensions (**Tangibility, Reliability, Responsiveness, Assurance and Empathy**) and customer satisfaction.



**Figure one 1: Conceptual framework of the study**

Source: Adapted (Umesh, Gunarathne W.H.D.P, 2014)

**2.7. Research Hypotheses**

- H<sub>1</sub>: There is a positive relationship between service quality and customer satisfaction.
- H<sub>2</sub>: There is a positive relationship between tangibility dimensions of service quality and customer satisfaction.
- H<sub>3</sub>: There is a positive relationship between reliability dimensions of service quality and customer satisfaction.
- H<sub>4</sub>: There is a positive relationship between responsiveness dimensions of service quality and customer satisfaction.

H<sub>5</sub>: There is a positive relationship between assurance dimensions of service quality and customer satisfaction.

H<sub>6</sub>: There is a positive relationship between empathy dimensions of service quality and customer satisfaction.

## **CHAPTER THREE**

### **3. RESEARCH METHODOLOGY**

This chapter presents the research methodology used in carrying out the study. It consists of research approach and design; data sources and data collection methods; population, sample size and sampling technique; validity and reliability of data collection instruments; data collection procedures; method of data analysis, and ethical considerations.

#### **3.1 Research approach**

The research approach is deductive because it is not developing theories rather theory testing. The study is conducted as a quantitative research; a research that focuses primarily on the construction of the quantitative data. Thus, the study applied a quantitative research approach.

#### **3.2. Research Design**

The student researcher used explanatory causal research design to conduct the study. This is because, it is helpful when a researcher wants to look into a phenomenon or a process in its natural contexts in order to get its overall picture instead of taking one or some of its aspects and manipulating it in an artificial setting. In addition, it is used to understand the condition or relationship that exist, opinion that are held process that are going on, effects that are evident(Aregay and Dires, 2004).

#### **3.3Data type and Sources**

In this study, the researcher used primary data sources. Primary data were obtained from commercial department and market research employees of Geosynthetics Industrial PLC.

#### **3.4Instruments and Procedures of Data Collection**

Self-completed questionnaires were developed for survey respondents. Questionnaire is used to gather relevant data for the purpose of the study. According to Yount (2006, pp.356), the standardized wording and structured questions of the questionnaire provide a higher reliability in the data than is practically able to be obtained by interview and is completed at the subjects' convenience. Questionnaire has an advantage over some other types of surveys in that this is cheap, do not require as much effort from the respondent and often has standardized answers that make it simple to compile data (Yount, 2006).

The questionnaire includes close-ended questions in order to get the desired information. It consists of three parts and the first parts describe about personal information about survey respondents such as age, sex, location, education level and number years with the organization and others. The second part includes perceptual questions related to service quality dimension namely reliability, responsiveness, assurance, empathy and tangibility. The third part consists of perceptual questions about customer satisfaction and consist the three P (price, place, product quality) and delivery. Each parameter is having one question for each. Accordingly to (HamedTaherdoost, 2020), Likert scale is simple to construct and to produce a highly reliable scale. Moreover, from the respondent point of view, it is easy to read and complete. Participant in the survey are requested to describe their level of agreement with those include five systematic and balanced points. Likert scale is the best response technical scale for survey and questioner design.

All items were measured by five point linear Likert scale were measured 1= strongly disagree/ very dissatisfied, 5= strongly agree/ very satisfied

### **3.5. Population, Sample size and sample technique**

#### **3.5.1. Target Population**

The student researcher used the target respondents, the major customer of Geosynthetics Industrial Works PLC in Addis Ababa who has access to use the company products. The total population of the study is 400 customers categorized like Construction, Water supply and irrigation, Building material and Agriculture.

#### **3.5.2. Sampling technique**

Stratified random sampling method, which is a type of probabilistic sampling technique, was applied to choose respondents from the population. This method was used because it ensures each subgroup within the population receives proper representation within the sample. The researcher grouped the major customer into three parts based on the level of sales volume to the company. These are very critical, medium and less critical customers then applied the stratified random sampling formula which is as follows  $\text{Sample size of the strata} = \frac{\text{Sample size}}{\text{population size}} \times \text{layer size}$ .

### 3.5.3. Sample size

In principle, accurate information about given population could be obtained only from census study. However, due to time and cost constraint, in many cases, a complete coverage of population is not possible; thus sampling is one of the methods, which allow the researcher to study relatively small number of units representing the whole population (Sartnakos, 1998). Out of 400major customers, 200 of them will be selected. In determining the sample the researcher used sample size determination formula as shows below

$$N = \frac{N}{1 + Ne^2}$$

Where n= stands for sample size

N= population size

e= margin of error (0.05%) or maximum tolerable error.

Even if, the total population is 400 customers and come up with 200 samples survey by using the above statistical formula.

**Table 3.1 Sample taken from customers**

S.N	Customer category	Population (1)	Proportion (1)/400	Sample size
1.	Construction	186	46.50	93
2	Water Supply and irrigation	122	30.50	61
3	Building material	52	13.00	26
4	Agriculture	18	4.50	9
5	Other	22	5.5	11
	<b>Total</b>	<b>400</b>	<b>100</b>	<b>200</b>

Even though, the survey questions distributed to 200 sample respondents only 183 respondents completed and returned. Hence, the final data collected and analyzed were from 183 sample respondents.



### **3.6. Sources of Data**

For the sake of achieving the purpose of this study, the relevant data were gathered from primary and secondary sources.

#### **3.6.1. Primary data source**

It is clear that data obtained from primary source is very important for the reliability of research output because it help a researcher to generate a clear and more detailed understanding of problem at hand. Primary data were obtained through administering questionnaires.

#### **3.6.2. Secondary data source**

It is suggested that most business research should be started by using secondary source of data because it provide good background information about the issues related to business activities. But, for more reliability of secondary data must be combined with primary data. Secondary data were gathered from bulletins, brochures, marketing log-book and customer feedback, and survey of the company. As well as the data were gathered from books, journals articles, conference proceedings, periodicals or theses.

### **3.7. Validity and reliability of data collection instruments**

#### **3.7.1 Reliability**

Reliability is the consistency of a set of measurements or measuring instrument, often used to describe a test. There are several different reliability coefficients. One of the most commonly used is called Cronbach's Alpha.

Accordingly to George and Mallery (2003) a Cronbach's alpha coefficient greater than 0.9 indicates excellent, greater than 0.8 is good, greater than 0.7 acceptable, greater than 0.6 is questionable, greater than 0.5 is poor and less than 0.5 is unacceptable. Furthermore, accordingly Syed mohammed, Sajj.A.D, (2015) measurement scale with a value 0.80 and 0.95 considered very good reliability, 0.70 and 0.80 good reliability, 0.60 and 0.70 fair reliability, below 0.60 poor reliability.

The study used Cronbach's Alpha to test the reliability of data. As shown in table 3.2, the Cronbach's Alpha result for all service quality dimension measurement was above 0.70 which

indicates that the items are internally consistent. Lack of reliability is a serious drawback of an outcome measure as it indicates errors in measurements (Powell, 1999). The detail Cronbach's Alpha analysis result is found in the appendix section.

Table 3.2 Reliability Test for the study variable.

<b>Independent Variable</b>	<b>Cronbach's alpha</b>	<b>Number of items</b>	<b>Number of respondents</b>
Reliability	.751	3	30
Responsiveness	.872	6	30
Assurance	.860	4	30
Empathy	.831	4	30
Tangibility	.914	7	30
Customer satisfaction	.770	5	30

**Source: own survey, 2021**

### **3.7.2 Validity**

Validity refers to the extent to which data collection method or methods accurately measure what they were intended to measure (Sounders et. al, 2003). To assure the validity of the dimensions whether they can measure the predefined dependent variables or not, different theories and empirical studies were assessed. External validity is related to generalization (Bryman and Bell, 2003.). In this study the target population was the major customers of the company in Addis Ababa and the sample is enough to generalize for the whole population of Geosynthetics potential customers. So, external validity is strong and can be generalized.

### **3.8 Data analysis methods**

After the relevant data is collected, it is processed using Statistical Package for Social Sciences (SPSS). Each research questions is answered accordingly and output of the analysis is presented in tables and finally their implications are explained. Descriptive statistics like frequency, mean and correlation analysis techniques were applied to analyze respondents' perception on service quality and satisfaction. The relationship between service quality dimensions, overall service quality and customer satisfaction were analyzed through correlation and regression analyses.

### **3.9. Ethical consideration**

There is a growing emphasis on overcoming the ethical issues in business research because of the increased involvement of social responsibility and consumer's wellbeing (Ghauri and Gronhaug, 2005). All the information treated and kept secretly with high confidentiality without disclosure of the respondents' identity. No information is changed or modified, hence the information is presented as collected and the same with the literatures collected for the purpose of this study. There is no any intention to use unfair means to influence the participants to obtain information. The identity of response will remain anonymous and high level of confidentiality is considered.

## CHAPTER FOUR

### **DATAPRESENTATIONANALYSISANDINTERPRETATION**

This chapter deals with the presentation, analysis and discussion of data collected from customers of Geosynthetics Industrial Works PLC. As indicated in the methodology part, the study is conducted basically by using questionnaires filled by respondents. The study totally distribute 200 questionnaires, out of which, the analysis were done based 183 (91.50%). The remaining 17 questioners were not filled (not voluntary) and excluded from the study.

#### **4.1 Background of respondents**

*Table 4.1 Characteristics of respondents*

<b>Description of respondents</b>	<b>Response</b>	
	<b>Frequency</b>	<b>Percent (%)</b>
<b>A. Gender</b>		
Male	126	68.90
Female	57	31.10
<b>Total</b>	<b>183</b>	<b>100</b>
<b>B. Educational level</b>		
Uneducated	-	-
High school level	16	8.70
Diploma/TVET	45	24.60
First Degree	92	50.30
Masters degree and Above	30	16.67
<b>Total</b>	<b>183</b>	<b>100</b>
<b>C. Location of respondents</b>		
Bole Sub-city	50	27.30
Yeka Sub-city	41	22.40
Kolefa Sub-city	44	24.00
Arada Sub-city	23	12.60
Other	25	13.70
<b>Total</b>	<b>183</b>	<b>100</b>

<b>D.Business Category of customers</b>		
Agriculture	8	4.40
Construction	85	46.40
Water supply and Irrigation	55	30.10
Building material supplier	23	12.60
Other	12	6.60
<b>Total</b>	<b>183</b>	<b>100</b>
<b>E. Duration of relationship with G.I.W</b>		
1-3 years	<b>19</b>	<b>10.40</b>
3-5 years	<b>68</b>	<b>37.20</b>
5-7 years	<b>22</b>	<b>12.00</b>
7-9 years	<b>40</b>	<b>21.90</b>
10 years and above	<b>34</b>	<b>18.60</b>
<b>Total</b>	<b>183</b>	<b>100</b>

**Source: own survey (2021)**

The above table indicates the demographic characteristics of the respondents. Accordingly; the majority of the surveyed customers were male representing 68.90% of the sample while women constitute 31.10 %.The combination of male to female of respondents showed that the gender combination of the sample was helpful to incorporate the opinion of both sex in the study.

Concerning to educational level of respondents, there were no grade eight and below respondents so that they do not have contribution in the study, however respondents whose educational level belongs to Highschool(8.70%) were relatively small. In contrary to this, majority of the respondents hold bachelor degree (50.30%) and the remaining (24.60%)and(16.40%) holds diploma and masters degree, respectively. It shows that most of the organization customers who participated in this study were found in a good educational level.

With regards to location, 27.30% of respondents located in Bole Sub-City, 24%and 22.4% located in Kolefa and Yeka sub city, respectively. In addition to this, the rest 12.60% located in Arada sub –city. The 13.70%customers come from different corners of the city.

With related to respondents category of business sector, majority of the respondents accounted for 46.40% belongs to the construction business sector, followed by Water supply and irrigation Company (30.10%) and Building material supplier (12.60%). Similarly 4.40% of respondents

involve in agricultural sector and the remaining (6.60%) were from various sectors. This indicates that the organization's customers were mainly dominated by construction business runners.

Regarding survey respondents' service year within the organization the largest portions 68(37.20%) of the respondents have 3-5 service year experience with the organization. Also, the next largest respondent group 40 (21.90 %) have 7 to 9 years of service. In addition to this, 34(18.60%) and 22(12.00) have 10 years above and 5 to 7 years, respectively. The remaining 19 (10.40%) respondents are customer of the organization for 1 -3 years. So, based this we can infer that customers were familiar with service practice of their organization.

#### **4.2. Descriptive statistics for service quality at G.I.W.**

In line with the objectives articulated under chapter three, here effort was made to analyze the perception of survey respondents towards the quality of service offered by the organization. Customers feedbacks were captured along the 29 Likert scale items corresponding to the five dimensions of service quality as well as the relationship among service quality and customer satisfaction that were introduced to measure the study area under each of the SERVQUAL dimensions namely tangibility, responsiveness, reliability, assurance, empathy and customer satisfaction. In this regard, the descriptive parts of this study were analyzed based on using a descriptive statistics of mean and standard deviation. Accordingly, the composite mean value shows the average of all respondents' perceptions on a certain dimensional questions. While, standard deviation shows how diverse are the perceptions of respondents for a given dimensional questions.

According to Zaidation and Bagher(2009), the calculated composite mean value that range below 3.39 was considered as low, the mean value range from 3.40 to 3.79 was considered as moderate and mean value above 3.8 was considered as high representing respondents' perceptions. Therefore, composite scores of mean and standard deviation were calculated for each of the variables as follow.

## 4.2 Descriptive statistics for Tangibility dimension of service quality

Tangibles involve in the firms’ representatives, physical facilities, materials, and equipment as well as communication materials. Tangible materials have their own impact in determining customer satisfaction service level in manufacturing industry like G.I.W. The study made an attempt to develop a five scale Likert types of questions and customers were invited to indicate their views for each of the questions. Table 4.2 presents descriptive statistics for tangibility dimension,. Survey respondents were asked to measure their perception towards the tangibility dimension of service quality.

Table4.2 Respondents view on the tangibility dimension of service quality

Related questions	N	Mean	Std. Deviation
G.I.W has modern machine for production	183	2.9231	1.13440
G.I.W sales office is attractive for customers.	183	3.1713	1.16352
G.I.W sales employees are neat and passionate.	183	3.2431	1.05752
G.I.W sales formats are understandable	183	3.5110	1.08092
G.I.W office lay-out is good for customers.	183	3.0824	1.13158
The company has applied latest I.C.T technology	183	2.7634	1.01601
The company location is convenient to customers	183	3.0934	1.18324
<b>Aggregate Value</b>		3.1125	1.20233

*Source: own survey data (2021)*

As indicated on the above table the questions were provided to assess whether the organization’s service quality regarding tangibility is well performed or not. Accordingly, respondents gave their respective view for each of the related questions.

From the above illustrated aggregate value of respondents towards tangibility dimension was 3.112 implying that they have low level of perception towards it. Items like having modern machinery, sales offices attractiveness, office lay-out, format understandable, having latest I.C.T technology, employee’s neatness and company location of Geosynthetics Industrial Works PLC has least perceptions.

Generally, the result of the respondents regarding tangibility implied that, even if the Company tried to reduce challenges of service quality however; still there are challenges of service quality in terms of tangibility.

### 4.3 Descriptive statistics for Reliability dimension of service quality

Reliability refers to the capability of delivering the promised service dependably and accurately a consist manner. The service provider gives accurate information to the customers. The company should give high attention on genuine to solve the customer problem, fulfill sufficient manpower and avoid the service intervention to deliver what customer need within due date. Moreover, reliability is the most significant factor in conventional service. With regards to this concept the study has assessed customers of G.I.W service quality regarding with employee reliability through five Likert scale question similar with the above discussion of tangibility. Table 4.3 presents descriptive statistics for the responsiveness dimension of service quality.

*Table 4.3 Respondents view on the reliability of the service quality*

<b>Related questions</b>	<b>N</b>	<b>Mean</b>	<b>Std.Deviation</b>
The company provides products as promised time	183	3.2295	1.12015
The company employees resolve problem when you have complained.	183	3.3825	1.00882
G.I.W offered reasonable price.	183	2.9011	1.13269
<b>Aggregate value</b>	183	3.17103	1.08727

*Source: own survey data (2021)*

As illustrated on the above table, the study tried assess the perception of customers towards on the reliability of the service quality at Geosynthetic Industrial Works PLC. Accordingly, respondents have forwarded their view on the provided question as follow:

Regarding the above aggregate value of respondents towards reliability items such as provide as promised time, how the company handle complaint and set reasonable price of Geosynthetics Industrial Works PLC has least perceptions with a mean score of 3.17103 and a standard deviation of 1.08727.



In similar manner the general result of the respondents regarding reliability implied that, the company should try to reduce challenges of service quality dimension related to reliability.

#### 4.4 Descriptive statistics for Responsiveness dimension of service quality

Responsiveness is the willingness to help customers and provide prompt service. Furthermore, it is responsiveness such as speed and timeliness of service delivery. This consists of processing speed and service capabilities to respond promptly to customer service requests, and wait a short and queuing time. More specifically, responsiveness related to the study area the willingness or readiness of employees to provide services. Employee responsiveness can affect customer satisfaction. With regards to this concept the study has assessed customers of G.I.W service quality regarding with employee responsiveness through five Likert scale question similar with the above discussion of tangibility and reliability. Table 4.4 presents descriptive statistics for the responsiveness dimension of service quality.

*Table 4.4 Respondents view on the responsiveness of Geosynthetics Industrial Works PLC.*

<b>Related questions</b>	<b>N</b>	<b>Mean</b>	<b>Std.Deviation</b>
You are satisfied the service provide by G.I.W.	183	3.3187	1.09119
The company employees are willing to service you.	183	3.3825	1.0082
G.I.W employees always ready to clarify your requirement.	183	3.3022	1.03095
The company management is responsive to customers.	183	3.2473	1.04681
You receive prompt service from G.I.W employee.	183	3.2912	1.03413
G.I.W has adequate service to response your need.	183	3.2857	.99486
<b>Aggregate value</b>	183	3.3046	1.03436

*Source: own survey data (2021)*

From the illustrated table 4.4, the mean value for the perception of respondents towards the responsiveness dimension of service quality was calculated to be 3.3046. Although this mean value is more than the mean for other dimensions of service quality, it is still considered to be low.

#### 4.5 Descriptive statistics for assurance dimension of service quality.

Assurance is knowledge and good manners or courtesy of employees. Further, it the capacity of employees with the help of the knowledge possessed to inspire trust and confidence will strongly strike the level of customer satisfaction. In the study services provided to the customer, assurance means providing assistance in a polite and friendly manner, ease in accessibility details, comfort or convenience inside the organization. Based on the above concept the study attempted to assess the service quality of the organization in terms of assurances and the result of the respondents presented in table 4.5.

Table 4.5 Respondents view on the service quality related to assurance

Related questions	N	Mean	Std. Dev.
Employees of G.I.W makes customer feel safe in their transaction.	183	3.2418	1.07035
G.I.W employees have knowledge to answer a question.	183	3.4121	1.06188
G.I.W employees are transparent and worked integrate with customers.	183	3.2857	1.06461
G.I.W employees have technical knowledge to answer a question.	183	3.3571	1.13650
<b>Aggregate value</b>	183	3.32418	1.09334

*Source: own survey data (2021)*

As shown in table 4.5, respondents were asked about their perception towards the assurance dimension of service quality. In this regard, respondents (customers) were asked whether employees make them feel safe in their transaction, employees have the required skill, transparent and have sufficient technical knowledge. The results indicate that the aggregate mean for assurance was calculated to be 3.32418. This implies that customers have still low level of perception towards this service quality dimension.

#### 4.6 Descriptive statistics for empathy dimension of service quality.

Empathy is caring and individualized attention to customers to make them feel they are receiving better services and individualized attention. Service empathy characterizes both the service provider's willingness and capability to respond to individual customer desires. Based on this, Survey respondents were asked questions about their perception towards the empathy dimension of the service quality and the result of descriptive statistics is presented in table 6.4 below.

*Table 4.6 Respondents view on the service quality related with Empathy*

<b>Related questions</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
The company fulfills your need and expectation.	183	3.0714	1.10266
G.I.W operating hours are convenient to you.	183	3.1868	1.10160
G.I.W employees are customer focus.	183	3.2747	1.03599
G.I.W employees care about the customers.	183	3.1099	1.09696
<b>Aggregate value</b>	183	3.1609	1.08430

*Source: own survey data (2021)*

As illustrated in table 6.6, the aggregate mean for the empathy dimension of service quality was 3.16. This implies that like the other dimensions of service quality, respondents also have low level of perception towards the empathy dimension of service quality.

#### **4.7 Descriptive statistics for customer satisfaction at G.I.W**

Customer satisfaction requires full meeting customer expectations of services. When performance matches or exceeds customer expectations for service, they are satisfied. If not, they are not satisfied. In line to this the study tried to analyze customer’s level of satisfaction on the service provided by the organization using a Likert scale. Table 4.7 presents descriptive statistics for the level of customer satisfaction.

*Table 4.7 Respondents level of satisfaction on the organization service equality*

<b>Related questions</b>	<b>N</b>	<b>Mean</b>	<b>Std.Dev.</b>
How satisfied are you with G.I.W product quality	183	3.5934	1.21663
How satisfied are you with delivery time and commitment of G.I.W.	183	2.9286	1.16598
How satisfied are you with the price offered by G.I.W.	183	2.6813	1.15991
The company location is comfortable to you.	183	2.8077	1.24437
How do you feel about G.I.W	183	3.2747	1.14251
<b>Aggregate value</b>	183	3.0571	1.33023

*Source: own survey data (2021)*

As can be seen from the above table, the aggregate mean values and the standard deviations measurement indicated survey respondents 'low level of satisfaction on the service quality provided by the company. Therefore, from the results majority of the respondent dissatisfied by the service provided in the organization.

### **Correlation between Service quality and customer satisfaction**

To find out the relationship between service quality dimensions and customer satisfaction, Pearson's correlation coefficient ( $r$ ) which measures the strength and direction of a linear relationship between two variables is used. Values of Pearson's correlation coefficient are always between -1 and +1. A correlation coefficient of +1 indicates that two variables are perfectly related in a positive sense; a correlation coefficient of -1 indicates that two variables are perfectly related in a negative sense, and a correlation coefficient of 0 indicates that there is no linear relationship between the two variables. A low correlation coefficient; 0.1 - 0.29 suggests that the relationship between two items is weak or non-existent. If it is between 0.3 and 0.49 the relationship is moderate. A high correlation coefficient i.e.  $>0.5$  indicates a strong relationship between variables. The direction of the dependent variable's change depends on the sign of the coefficient. If the coefficient is a positive number, then the dependent variable will move in the same direction as the independent variable; if the coefficient is negative, then the dependent variable will move in the opposite direction of the independent variable (meet Jim, 2013).

Hence in this study both the direction and the level of relationship between the dimensions of service quality and customer satisfaction are conducted using the Pearson's correlation coefficient. The table below presents the result of the correlation analysis made using bivariate correlation.

**Table 4.8. The relationship between service quality dimensions and customer satisfaction**

		<b>Satisfaction</b>
Tangibility	PearsonCorrelationSig.( 2-tailed) N	.505** .000 183
Reliability	PearsonCorrelationSig.( 2-tailed) N	.772** .000 183
Responsiveness	PearsonCorrelationSig.( 2-tailed) N	.641** .000 183
Assurance	PearsonCorrelationSig.( 2-tailed) N	.662** .000 183
Empathy	PearsonCorrelationSig.( 2-tailed) N	.680** .000 183

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

The result correlation analysis implied that, all of the independent variables positively correlated with customer satisfaction. When the study compares the relative correlation between the service quality dimensions and customer satisfaction, reliability was highly correlated with customer satisfaction ( $r = .772$ ,  $p = 0.01$ ) followed by empathy ( $r = .680$ ,  $p = 0.01$ ), assurance ( $r = .662$ ,  $p = 0.01$ ), responsiveness ( $r = .641$ ,  $p = 0.01$ ) and tangibility ( $r = .505$ ,  $p = 0.01$ ). When we look at the inter correlation between the service quality dimensions we can see that there is a positive and significant relationship between all independent variables with the dependent one, which implies that a change made in one of the service quality dimensions will positively motivate the other service quality dimension in turn increase customer satisfaction.

### **Multiple Regression Analysis**

Multiple regression analysis was employed to examine the effect service quality rendered in G.I.W on the level of customer satisfaction. The result also helps us to understand which variables among the five independent variables highly affected customer's level of satisfaction. The findings further indicate model summary result, ANOVA and coefficient of multiple

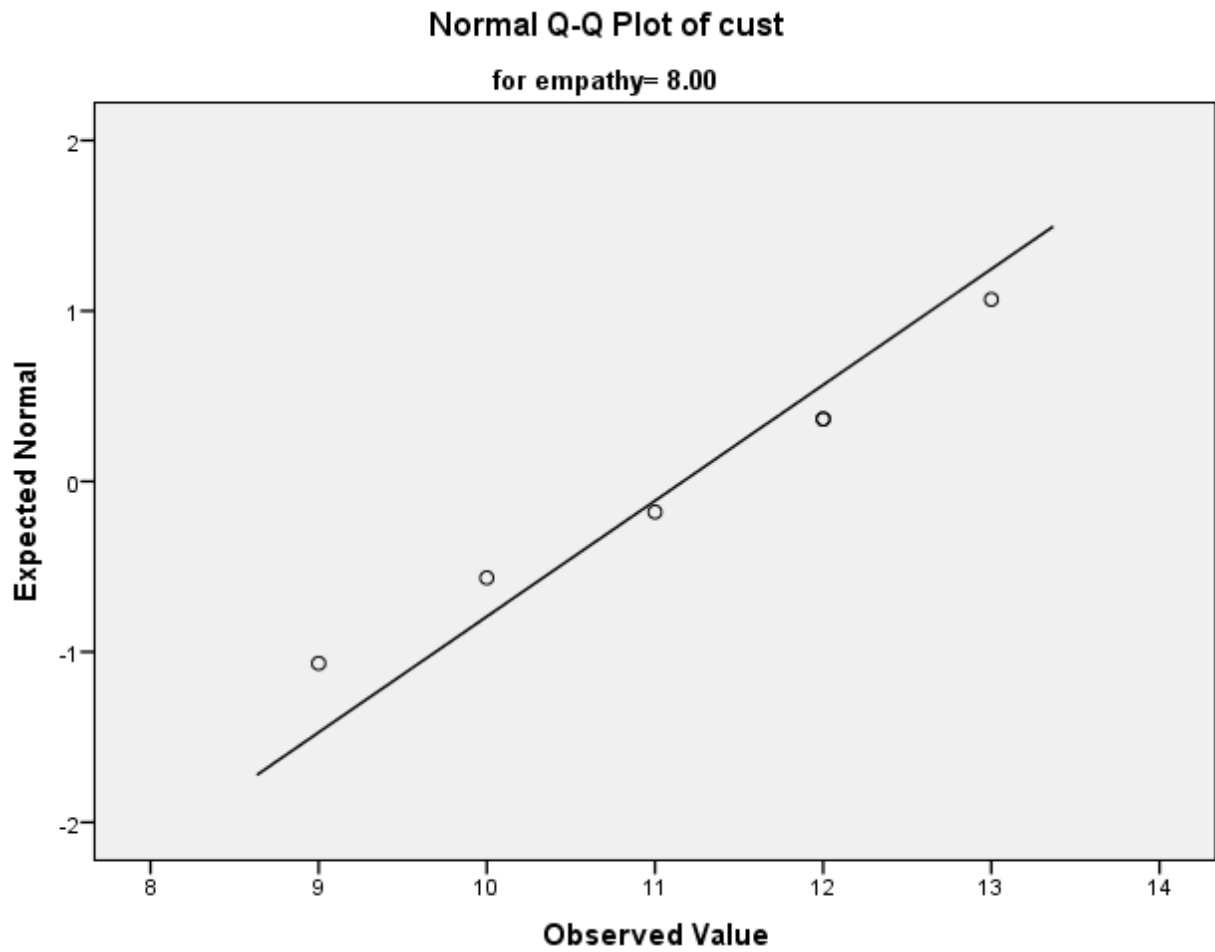
regressions. Before that, it is important to test the basic assumptions of regression analysis namely normality, linearity, multicollinearity, homoscedasticity and autocorrelation assumptions.

## **The basic assumptions of regression analysis**

### **4.4.1 Test of Normality**

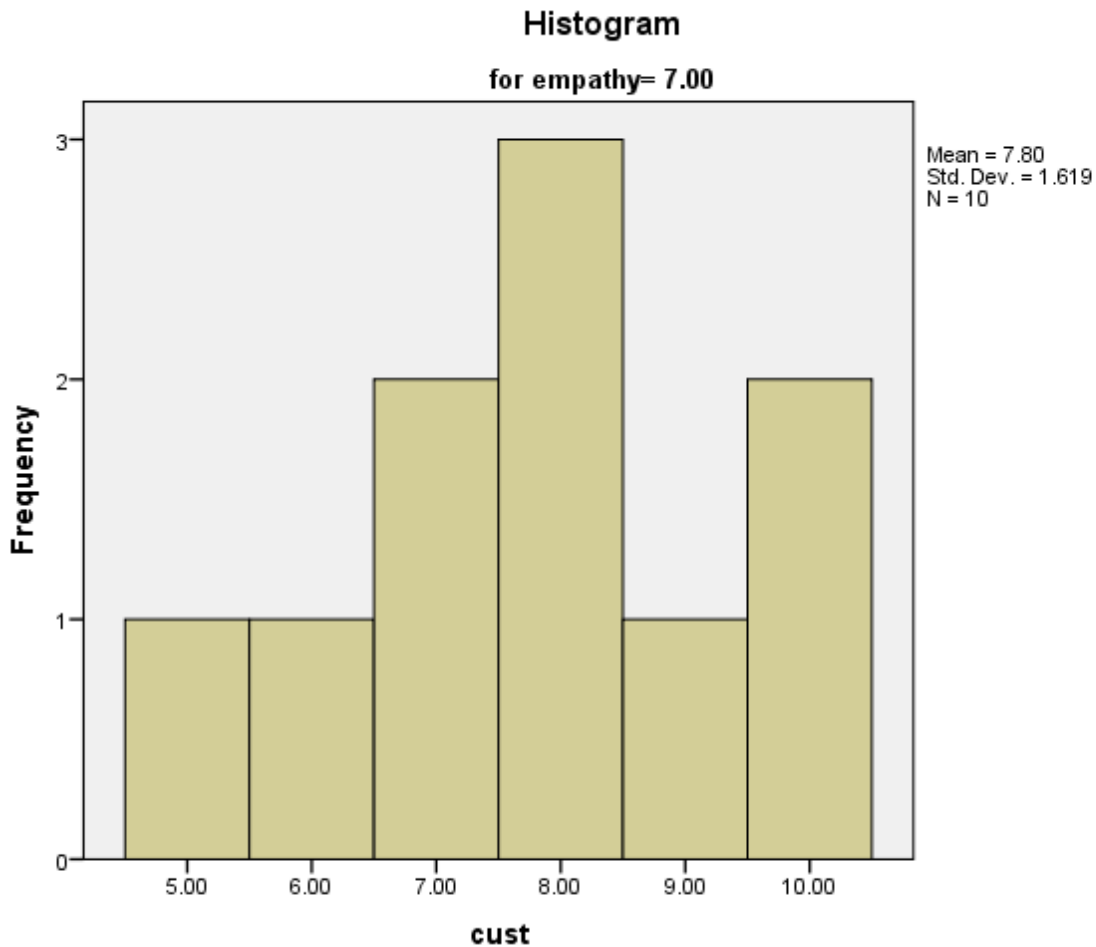
Normality test is used to determine whether the sample data drawn from the normal distributed population or not. Simply it indicates the population distribution is normally distributed or not. The study applied both methods of assessing normality. This can be checked by histogram and Normal Probability Plot graph. In the Normal Probability Plot it will be hoped that points will lie in a reasonably straight diagonal line from bottom left to top right. This would suggest that there is a normal population distribution. And also Histogram should be approximately normal or it must be bell shaped distribution (<http://www.statisticssolutions.com>). The following figure 4.4 1a shows that the population distribution was normally distributed. Because all plotted points lie near to the straight diagonal line from middle and top some missed points available left to top right. And also figure 4. 4.1b shows similarly the distribution of population was normal. Because the curve is bell curve and the histogram shows that the population is near normally distributed. Figure 4.4. 1a, Probability Plot (P-P) graph shows the normal distribution of population.

**Figure 4.4.1a graph show the normal distribution of population.**



**Source: Survey data, 2021**

**Figure 4.4.1b Histogram show that the normal distribution of population.**



#### 4.4.2. Linearity

Linearity is the relationship between the dependent and independent variable should be linear with respect to their parameter, this can be checked by the scatter plot of dependent variable versus standardize predicted. In other word, Linearity means that the predictor variables in the regression have a straight-line relationship with the outcome variable. If the residuals are normally distributed and homoscedastic, we will don't have to worry about linearity (<http://www.statisticssolutions.com>)

#### 4.4.3. Multicollinearity Test

While computing a multiple regression, testing Multicollinearty between the independent variables is necessary. Multicollinearty test is to measure the closely correlation of independent variables each other. Multicollinearty of the variables is test by using the tolerance statistics and



variance inflation factor (VIF). If the tolerance statistics is below 0.1(10%), there will be multicollinearity problem. And also the value of VIF of variables are more than 10, there will be multicollinearity problem. Regarding to the following table 4.4.3, all variables VIF was below 10 and the tolerance statistics was more than 0.1 (10%). So, there is no a multicollinearity problem or there is no closely correlation among the predictors.

**Table 4.4.4**

Model	Co linearity Statics	
	Tolerance	VIF
(Constant)		
Reliability	.458	2.183
Responsiveness	.320	3.123
Assurance	.415	2.409
Empathy	.351	2.850
Tangibility	.450	2.223

a. Dependent Variable: Customer satisfaction

**Source: Survey, 2021**

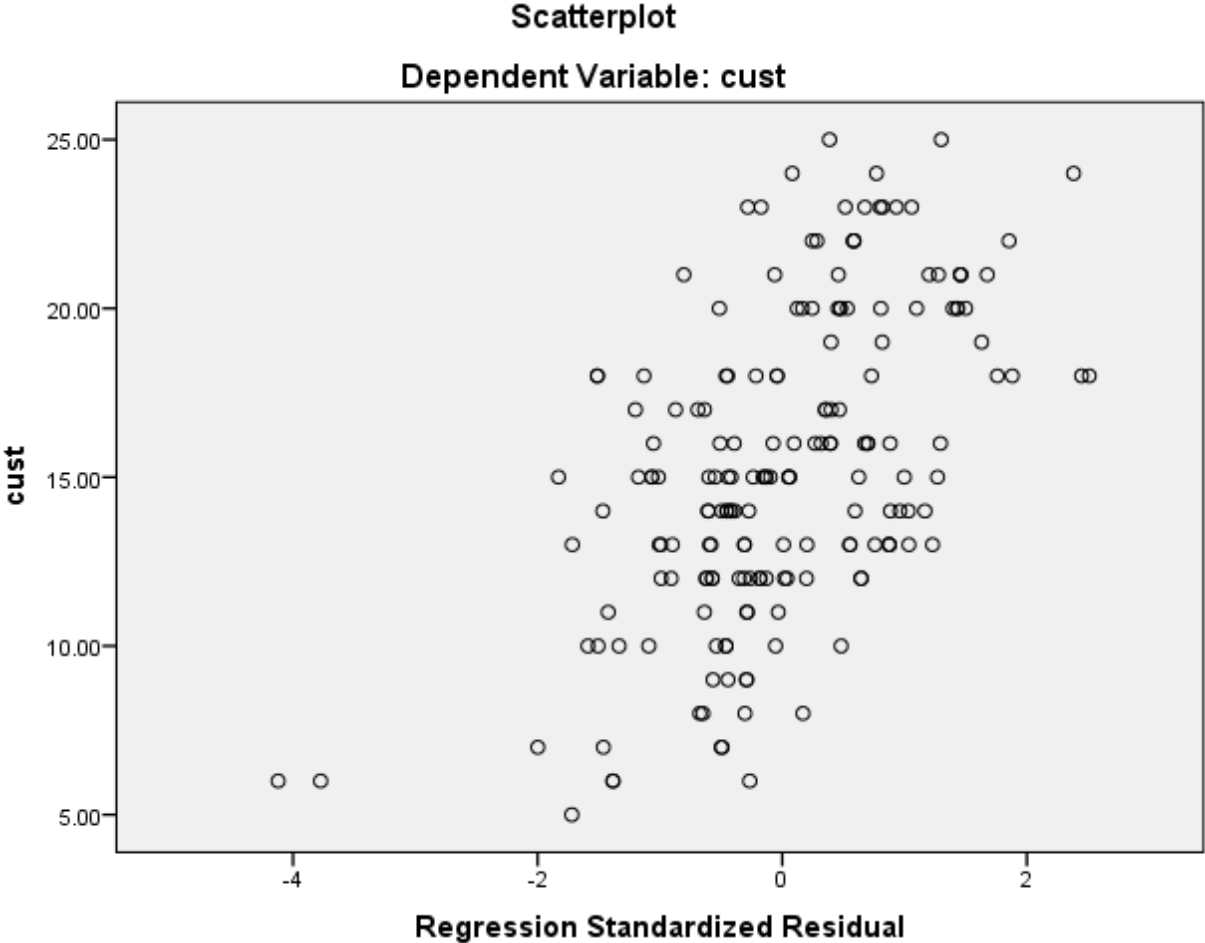
As per the above illustrated table the tolerance statistics is more than 0.1(10%) and all variable VIF was below 10 so it implies that there is no a multicollinearity problem or there is no closely correlation among the predictors.

**4.4.4. Homoscedasticity**

Homoscedasticity is an assumption of regression analysis used to test whether residuals are equally distributed, or whether they tend to bunch together at some values, and at other values, spread far apart. In the context of t-tests and ANOVAs, you may hear this same concept referred to as equality of variances or homogeneity of variances. Your data is homoscedastic if it looks somewhat like a shotgun blast of randomly distributed data. The opposite of homoscedasticity is heteroscedasticity, where you might find a cone or fan shape in your data. You check this

assumption by plotting the predicted values and residuals on a scatter plot. Accordingly, the graph seems to be homoscedasticity distributed.

**Fig 4.4.4, Scatter plot that shows the normal distribution of population**



Source: Survey data, 2021

**4.4.5. Auto correlation**

It is a characteristic of data which the extent of similarity between the value of the same variable over consecutive time interval. The existence of auto correlation in the residuals of a model is a sign that the model may be unsound. It can be tested using the Durbin Waston test. If the D.W value is equal two (D.W=2) it implies no autocorrelation, if the D.W value greater than two (D.W value >2) which means negative autocorrelation and if the D.W value less than two (D.W value < 2) positive auto correlation (Dubrin Water).

**Model Summary<sup>b</sup>**

Model	Durbin-Watson
2	1.993 <sup>a</sup>

- a. Predictors: (Constant), reliability, tangibility, assurance, empathy, responsiveness
- b. Dependent Variable: customer satisfaction.

Based on the above assumption the overall D.W value is equal two so we conclude that there is no autocorrelation.

*Table 4.9 Model Summary of multiplier regression*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.828 <sup>a</sup>	.686	.677	2.59384

*A. Predictors: (Constant), Tangibility, responsiveness, reliability assurance and empathy*

As it can be depicted from table 4.9 all independent variables accounted for 68.6% of the variance in customers satisfaction ( $R^2 = 0.686$ ). Thus, 68.6 % of the variation in customer satisfaction can be explained by the five service quality dimensions. The other unexplored variable explains the variation in customer satisfaction is accounted for 31.4%.

*Table 4.10 ANOVA analysis*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2581.012	5	516.202	76.724	.000 <sup>b</sup>
	Residual	1184.131	176	6.728		
	Total	3765.143	181			

*a. Dependent Variable: Customer satisfaction*

*b. Predictors: (Constant), Tangibility, responsiveness, reliability assurance and empathy*

The result in the ANOVA table confirmed the significance of the overall model by p-value of 0.000 which is below the alpha level, i.e. 0.05. This indicates that the independent variables taken together have statistically significant relationship with the dependent variable under study.

Table 4.11 Coefficient value of multiple regression analysis

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.105	.929		-113	.910
Tangibility	.009	.051	-.012	-184	.854
Reliability	.920	.109	.528	8.456	.000
Responsiveness	.066	.075	-.066	-880	.380
Assurance	-.274	.089	.203	3.094	.002
Empathy	.356	.091	.281	3.935	.000

*Dependent Variable customer satisfaction.*

In the table-4.9, unstandardized coefficients indicated how much the dependent variable varies with an independent variable, when all other independent variables are held constant. The beta coefficients indicated that how and to what extent the independent variables influence the dependent variable. Accordingly the result coefficient value of multiple regression analysis indicated that, reliability (beta= .528, t=8.456, p= <.000), empathy (beta = .281, t =3.935, p = .000) and assurance service quality dimensions (beta =.203, t=3.094, p<.000) have the highest influence of significant positive effect on customer satisfaction. However, responsiveness (beta. = -.066, t=-.880, p=0.380) and tangibility (beta=-.012, t=- 184, p=0.854) dimensions do not have a statistically significant effect on customer satisfaction.

In general, the findings of multiple regression analysis indicate out of the five service quality dimensions three dimensions (reliability, assurance, and empathy) have positive and significant effects on customer satisfaction. On the other hand, responsiveness and tangibility service quality dimensions have less and insignificant effect on customer satisfaction.

## Mathematical Valuation

$$Y_i = \beta_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$$

Where Y is the dependent variable- customer satisfaction

**X2, X3, X4, X5, and X6** are the explanatory variables (or the regressors)

**$\beta_1$**  is the intercept term- it gives the mean or average effect on Y of all the variables excluded from the equation, although its mechanical interpretation is the average value of Y when the stated independent variables are set equal to zero.

**$\beta_2, \beta_3, \beta_4, \beta_5,$  and  $\beta_6$**  refer to the coefficient of their respective independent variable which measures the change in the mean value of Y, per unit change in their respective independent variables.

$$= - .105 + .009X_2 + .920X_3 + .006X_4 + -.274X_5 + .356X_6$$

**X2: represent represents Tangibility**

**X3: represents Reliability**

**X4: represents Responsiveness**

**X5 represents Assurance**

**X6 represents Empathy**

## Discussion of Results

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 negative and insignificant effect on customer satisfaction. In contrary, this finding is not supported by (Munusamy, 2010), found that tangibility has a positive and significant effect on customer satisfaction. This finding is not also supported by (Al-Hawary, 2011) reported that tangibility has a positive and significant effect on customer satisfaction. On the other hand, (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) who reported has a positive and significant effect on customer satisfaction. This result also supported by Malik (2011) who 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 negative and insignificant effect on customer satisfaction. Contrary to this finding, Mohammad and Alhamadani (2011) found that responsiveness has a positive and significant effect on customer satisfaction. Moreover, 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 as a positive and significant effect on customer satisfaction. In line to this finding, Malik et al., (2011) have reported that assurance has a positive and significant effect on customer satisfaction. Likewise, 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), and reported that empathy has a positive and significant effect on customer satisfaction. In contrary to this, Munusamy (2010) found that empathy has a negative effect on customer satisfaction.

Overall, the results revealed that all independent variables accounted for 68.60% of the variance in customer satisfaction ( $R^2=0.686$ ). Thus, 68.60% of the variation in customer satisfaction was explained by the five service quality dimensions and other unexplored variables may explain the variation in customer satisfaction is accounted 31.40%.

Furthermore, from the findings of this study, researcher found out that not all of the service quality dimensions have positive effects on customer satisfaction. Out of the five service quality dimensions three dimensions (reliability, assurance, and empathy) have positive and significant effects on customer satisfaction. On the other hand, responsiveness and tangibility have a negative and insignificant effect on customer satisfaction. The results of this study further indicate that reliability is the most important factor to have a positive and significant effect on customer satisfaction.

## **CHAPTER FIVE**

### **5.1 SUMMARY, CONCLUSION AND RCOMMENDATION**

#### **5.1. Summary**

The study was intended to examine the effect of service quality on customer satisfaction in the case of Geosynthetics Industrial Works PLC. Primary data were collected through questionnaire from 183 respondents randomly selected from the company customers. Quantitative data gathered through questionnaire were processed with computer software called SPSS 20.1.

The results of background information of respondents indicated that majority of respondents (68.90%) were male, degree holders (50.30%), and engage in construction companies (46.40%).

The results of the descriptive statistical analysis indicated, the aggregate mean values for service quality and customer satisfaction were found to be low. The correlation result shows that there is a positive and significant relationship between independent variable and customer satisfaction. Reliability has the highest correlation coefficient followed by empathy, assurance, responsiveness and tangibility.

The R square value of 0.686, demonstrates that 68.60% of variation in customer satisfaction can be accounted by the five service quality dimensions. The other unexplored variable explains the variation in customer satisfaction is accounted or 31.4%.

The findings of this study also indicated that reliability is the most important factor to have positive customer satisfaction. Furthermore, the multiple regression results showed that except responsiveness and tangibility, the three service quality dimensions (reliability, empathy and assurance) have positive and significant effect on customer satisfaction.

#### **5.2. Conclusion**

The research was intended to take an assessment on service quality and its impact on customer satisfaction, in Geosyntheticus Industrial Works PLC. To conduct the study 200 potential customers were randomly selected from various sectors. Based on the analysis of the data obtained, the main conclusions and recommendations are summarized as follows.

According to results, this study examined the effect of service quality on customer satisfaction in the case of G.I.W PLC. The findings of the research indicate that customer satisfaction was

significantly and positively influenced by three of service quality dimensions namely reliability, assurance and empathy.

The finding sort out that there was a problem in the organization to meet the expected customers service with regard to reliability. It shows that a lot of customers of the organization not get their products as per the promised due date, the company employees not in a position to resolve problem at a time when customer have complaint, the most and major factor which customers not satisfied was the price offered by the organization. Therefore, it is possible to conclude that reliability to assist customer significantly affect customer satisfaction of Geosynthetic Industrial Works PLC.

On top of this, the researcher revealed that not the entire service quality dimension have positive effect on customer satisfaction. Among the five service quality dimension, reliability, assurance and empathy have positive influence on customer satisfaction. In contrary to this, responsiveness and tangibility have negative influence and insignificant effect on customer satisfaction.

### **5.3. Recommendation**

As indicated in the conclusion section, reliability is the major service quality dimension highly level of customer satisfaction. Therefore, the company should take basic remedial action associated to the above mentioned service quality dimension through availing the necessary training to employees how to handle customer complaint as well as setting competitive price and resolving problems related to delivery time in order to retain and attract new customers as well as to have continues improvement.

The researcher recommends that the organization needs to give more emphasis to improve customer satisfaction with regard to tangibility. Currently, this service quality dimension has a insignificant negative effect on customer satisfaction. It implied that majority of respondents unsatisfied by G.I.W. office lay-out and for I.C.T technology thus, the company should give attention to use latest technology and create convenient office lay-out to facilitate daily office transaction. To fulfill customer need as well as expectation and to clarify customer requirement, the organization should give greater awareness on enhancing communication with its customers, by developing effective training program me for employees in order to empower their competence based on their skill gap analyses.



## **Reference:**

1. Albertu Caruana (2002) *The effect of service quality and the mediating role of customer Satisfaction*, European Journal of marketing, ISSN:0309-0566,p 30- 58
2. Anderson, J.C, Naru, J.A and Rassum, W.V (2006) *Customer value propositions in about business markets*,p36-49
3. Dr Ankur Saxena (2017) *,literature review on customer satisfaction*, International Journal of advanced research in engineering and management: ISSN 2456-2033, p20-26
4. Bonacorsi, Steven. “*Kano Model and Critical To Quality Tree.*” Six Sigma and Lean Resources
5. Brady, M.K and Cronin,J.J (2001). *Some new thoughts on conceptual perceived service quality*, journal of marketing p 34-49
6. Cronin, J.J & Taylor,S.A(1992) *Measuring service quality, a re-examination and extension*, Journal of marketing, p 56-68
7. HomWillard (2000) *An overview of customer satisfaction models*, p 3-11.
8. *Monthly peer, reviewed and indexed international on line journal, February 2019 volume 4,Issue:2,*
9. Kotler, T and Keller (2012) *Marketing 14e Global ed*, Pearson Education.
10. Dr Leaksmy Chnay, Choun Chankey (2002) *Customer Satisfaction & quality service in the marketing practice: study on the literature Review*
11. Dr Sachine Borgave and Profess Sameer Koranne (Janury 2012) *Literature review on service quality management.*
12. Parasuraman, A., Zenithal, V.A. and Berry, L.L. (1985), *A conceptual model of service ) quality and its implication*,Journal of Marketing, Vol. 49 (Fall), pp. 41-50.
13. Kotler and Armstrong (2002); “*Principles of Marketing*”, Pearson Education Asia, Ninth, Edition,
14. Dr Rohaizatbahaurun and Setareh Feiz, ( June 2012)*2<sup>nd</sup> international Conference on Management review of service quality models*, Page 10-13
15. Wusu.John (Nov, 2015) *A case study examining the effect of service quality on Customer satisfaction in the Ghanaian Bank*, p 75-78

16. Kabu Khadka and Sonyia Maharjan (Nov, 2017) *A case study examining the effect of service quality on customer satisfaction in the Ghanaian Bank*, p 5-7
17. Kettinger, William J.; Lee, Choong C.; Lee, Sunro, "Global Measures of Information Service Quality: A Cross-National Study", *Decision Sciences*, 1995, 26, , 569-570
18. Kettinger, William J.; Lee, Choong C.; Lee, Sunro, "Global Measures of Information Service Quality: A Cross-National Study", *Decision Sciences*, 1995, 26, , 569-570.
19. Hayes Bob (Nov, 2011), *Maximizing the value of your Customer Management Data*, P1.2
20. Ladhari, R. (2008). *Alternative Measure of Service Quality: A Review Journal of Managing Service Quality*. 18, 65-86.

# **ST. MARY'S UNIVERSITY**

## **QUESTIONNAIRE**

### **MASTER OF BUSINESS ADMINISTRATION IN GENERAL MANAGEMENT**

#### **TO BE FILLED BY OF CUSTOMERS OF GEOSYNTHETICS INDUSTRIAL PLC**

This study is carried out in partial fulfillment for Masters of Business Administration (MBA) at St. Mary's University It is conducted with an aim to test on the effect of service quality on customer satisfaction on Geosynthetics Industrial PLC. Your genuine information is very important for this research. Thus, I politely request you to spare 15 minutes from your precious time to fill up this questionnaire genuinely. I would like to thank you in advance for your kind cooperation. The information you will provide will be used only for the study purpose. Hence, your idea will remain confidential. The findings of the study will be generalized for the study community and will not reflect anything particular of individual person.

#### **Section I– Background information**

Please indicate your choice by putting a tick mark (√).

1. Sex:
  - a) Male
  - b) Female
2. What is your educational qualification?
  - a) Grade 8 and below
  - b) High school completed
  - c) Diploma/TVET
  - d) Bachelor degree
  - e) Master's degree and above
3. Where is the location of your company/business?
  - a) Bole sub-city
  - b) Yeka sub-city
  - c) Kolfe sub-city
  - d) Arada sub-city
  - e) If others, please specify \_\_\_\_\_

4. Could you please specify the sector your company operates?
- a) Agriculture
  - b) Construction
  - c) Water supply & Irrigation
  - d) Building material
  - e) If other, please specify \_\_\_\_\_

5. How long have you been a customer of G.I.W?

- a) 1-3 years
- b) 3-5 years
- c) 5-7 years
- d) 7-9 years
- e) 10 years and above

1.1

### Section II: Service Quality

**This part of the survey is aimed to measure your perception towards the level of services offered by GIW. Hence, indicate the extent to which you agree on the statements by using five point Likert scale (1=strongly disagree, 5=strongly agree). Put a tick (√) on the item that suits you as best alternative.**

**1= strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= strongly agree**

No	Reliability	1	2	3	4	5
1	G.I.W provides products as promised time?					
2	The company employees resolve problem when you have complained?					
3	G.I.W offered reasonable price?					
Responsiveness		1	2	3	4	5
4	You are satisfied the service provide by G.I.W?					
5	The company employees are willing to service you?					

6	G.I. W employees always ready to clarify your requirement?					
7	G.I,W management is responsive to customers?					
8	You receive prompt service from G.I.W Employee?					
9	G.I.W have adequate service to response your need?					
<b>Assurance</b>		1	2	3	4	5
10	Employee of G.IW makes customer feel safe in their transaction?					
11	GIW employee have a knowledge to answer a question?					
12	GIW employees are transparent and worked integrate with customers?					
13	GIW employees have technical knowhow to answer a question					
<b>Empathy</b>		1	2	3	4	5
14	G.I.W fulfills your need & expectation?					
15	GI.W operating hours are convenient to you?					
16	G.I.W employees are customer focus?					
17	G.I.W employees care about the customers?					
<b>Tangibility</b>		1	2	3	4	5
18	G.I.W has modern machines for production?					
19	G.I.W sales office is attractive for customers?					
20	G.I.W sales employees are neat and passionate?					
21	G.I.W sales formats are understandable?					
22	GIW office lay out is good for customers?					

23	The company has applied latest I.C.T technology?					
24	The company location is convenient to customers					

**Part III: Customer Satisfaction**

**This part of the survey is aimed to measure your level of satisfaction on the services offered by GIW. Hence, indicate the extent to which you are satisfied by using five point Likert scale (1=very dissatisfied, 2 = dissatisfied, 3= Neutral, 4= satisfied5=very satisfied).Put a tick (✓) on the item that suits you as best alternative.**

No	Product Quality	1	2	3	4	5
1	How satisfied are you with G.I.W product quality?					
<b>Delivery</b>		1	2	3	4	5
2	How satisfied are you with delivery time and commitment of G.I.W?					
<b>Price</b>		1	2	3	4	5
3	How satisfied are you with the price offered by G.I.W?					
<b>Place(Location)</b>		1	2	3	4	5
4	The company location is comfortable to customer?					
<b>General overview of G.I.W</b>		1	2	3	4	5
5	How do you feel about G.I.W?					

**Thank you**

**Appendix**  
**Reliability out put**

**Reliability**

**Reliability Statistics**

Cronbach's Alpha <b>Reliability</b>	Cronbach's Alpha Based on Standardized Items	N of Items
.770	.772	5

**Reliability Statistics**

Cronbach's Alpha <b>Responsiveness</b>	Cronbach's Alpha Based on Standardized Items	N of Items
.872	.874	6

**Reliability Statistics**

Cronbach's Alpha <b>Assurance</b>	Cronbach's Alpha Based on Standardized Items	N of Items
.860	.862	4

**Reliability Statistics**

Cronbach's Alpha <b>Empathy</b>	Cronbach's Alpha Based on Standardized Items	N of Items
.831	.832	4

**Reliability Statistics**

Cronbach's Alpha <b>Tangibility</b>	Cronbach's Alpha Based on Standardized Items	N of Items
.914	.916	7

**Reliability Statistics**

Cronbach's Alpha <b>Customer satisfaction</b>	Cronbach's Alpha Based on Standardized Items	N of Items
.770	.772	5