



**The Effect of After sales service quality on customer satisfaction in the Ethiopian Automotive industry: The case of MOENCO, Nyala Motors and Yang Fan Motors**

**Addis Ababa University**  
**College Of Business and Economics**  
**School Of Commerce**  
**Department Of Marketing Management**  
**Graduate Program Unit**

**BY**

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**June 2017**

**Addis Ababa**  
**Ethiopia**

**The Effect of After sales service quality on customer satisfaction in the Ethiopian Automotive industry: The case of MOENCO, Nyala Motors and Yang Fan Motors**

**Addis Ababa University College of Business and Economics  
School of Commerce Marketing  
Management Graduate Program Unit**

**A Thesis Submitted To the School Of Graduate Studies of Addis Ababa University School of Commerce in Partial Fulfillment for the Award of Masters of Arts degree in Marketing Management**

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This is to certify that the thesis is prepared by TegbarTsegaye, entitled; The Effect of After sales service quality on customer satisfaction in the Ethiopian Automotive industry: The case of MOENCO, Nyala Motors and Yang Fan Motors: In partial fulfillment of the requirements for the award of the Degree of Master of Arts in Marketing Management with the regulation of the University and the accepted standards with respect to originality.

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## **Declaration**

I, TegbarTsegaye, hereby declare that this research paper entitled “The Effect of After sales service quality on customer satisfaction in the Ethiopian Automotive industry: The case of MOENCO, Nyala Motors and Yang Fan Motors is my original work and has not been used by others for any other requirements in any other university and all sources of information in the study have been appropriately acknowledged.

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## **Letter of Certification**

This is to certify that TegbarTsegaye has carried out her thesis on the topic entitled: The Effect of After sales service quality on customer satisfaction in the Ethiopian Automotive industry: The case of MOENCO,Nyala Motors and Yang Fan Motors. This work is original in nature and suitable for the award of Masters of Arts (MA) in Marketing Management.

**Mulugeta G/Medhen(Ph.D.)**

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**22<sup>th</sup>June 2017**

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## **List of Acronyms**

ANOVA	Analysis of Variance
SPSS	Statistical Packages for Social Science
$\alpha, \beta$	Coefficients of an Equation
MOENCO	Motor and engineering corporation Ethiopia
VIF	variance inflator factor

## **Abstract**

*The objective of this study was to examine the effect of after sales service quality on customer satisfaction in the Ethiopian automotive industry. SERVPERF model by Cronin and Taylor's (1992) was used to examine the effect of after sales service quality on customer satisfaction. A sample size of 166 was taken conveniently from MOENCO, Nyala Motors and Yang fan motors service outlets at Addis Ababa. Quantitative method of data collection was employed to collect the data through questionnaire. Descriptive as well as inferential analysis has been done. The result of this study shows that all the dimensions of SERVPERF have a positive correlation with the dependent variable. Out of five dimensions four of the dimensions (Tangibility, reliability, empathy and assurance) have a positive and significant impact on customer satisfaction, and one of the dimension responsiveness was found to have insignificant effect on customer satisfaction. Based on the findings empathy is found to be the dominant SERVPERF dimension with the highest beta value and assurance is the least with its effect on customer satisfaction. Furthermore, 60.8% of the variations in customer satisfaction are explained by service performance dimensions in the Ethiopian Automotive industry Based on the findings of the study, the researcher forwarded some recommendations to the management of after sales service department.*

**Key words: After sales Service, Customer Satisfaction, SERVPERF, Service Quality**

# **CHAPTER ONE**

## **INTRODUCTION**

This chapter presents the background of the study, statement of the problem, research questions, objective of the study, significance of the study, scope of study, limitations of the study, organization of the research report and definitions of key terms

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

Omotuyi and Zairi's (1996) defined after sales service as "all activities geared towards maintaining the quality and reliability of the car carried out after the customer has taken delivery with the goal of ensuring customer satisfaction".

After sale service involves a continuous interaction between the service provider and the customer throughout the post purchase product life cycle. At the time the product is sold to the customer, this interaction is formalized by a mutually agreed warranty or service contract. The exact terms of the warranty or service contract, the characteristics of the customer base, and nature of the sold product influence the after sales service provider (Cohen et al., 2006; Oliva and Kallenberg, 2003) as cited in (Muhammed, et al (2011)).

Many car dealerships in various markets have observed how small the profit margin is if they only rely on the vehicles sale (Senter& Flynn, 2010). Therefore, they started to include the after-sales activities, such as maintenance and part sales, to improve their profit and revenue (Senter& Flynn, 2010). Some authors estimate that the revenue generated from after-sales and spare parts maintenance services go up to five times the initial purchase (Bundschuh & Dezvane, 2003; Saccani et al., 2007).

After sales service quality has major influence on customer satisfaction as customers buy products or services and on whether they continue to do so. Preserving their long term customer relationships requires that these businesses both measure and appropriately adjust the quality of their customer's service. As a result measurement and improvement in the current service quality level are of interest to companies whose revenues in whole or part from service delivery Rajnish K (2010).

It is well known that the margin from after-sales service is much larger than that from the product. That is, aftersales service is considered a key revenue generator in certain categories (Cohen et al., 2006; Cohen and Whang, 1997). Hence, on one hand, offering a large number of extra after-sales service plans to consumers, leads to higher profitability on the other hand recent marketing management focuses on lifetime value of a customer and maintaining long-term relationships with customers (Gupta and Lehmann, 2007).

Logically, it can be determined that the better the after-sale service quality an organization provides, the better the organization's profit; plus, valuable long-term relationships can be built. There is a strong correlation between the willingness of customers to pay an increased price and gaining an attractive warranty program with trustworthy after-sales service.

But the case in Ethiopia is different most of the time the transaction process will end up as soon as the purchase process is over. We can't return the purchased product once we make the payment and received the product, Even if it is clearly stated in the proclamation no 685/2010 about trade practice and consumer protection.

According to the proclamation:

*“Without prejudice to warranties on goods or legal or contractual provisions more advantageous to the consumer, where the consumer finds defect in*

*the good, he may demand the replacement of the good or a refund with in fifteen days from the date of purchase of the goods.”*

But the ground reality is totally different in most of the business organizations except in a few electronics shops, some automobile companies that has after sales service station and Ethio telecom which has post sale service for mobile, internet and fixed line telephone services.

Automobile sellers provide after sale service for their customers as the nature of the product requires continuous follow up and inspection, because vehicles are vulnerable to technical and mechanical problems as a result of long time service. As a result, automotive suppliers provides after sale services for their customers in order to satisfy those customers and to make them loyal (Kindye, 2011). Though after sale service is not a familiar word in most of the case in Ethiopian market, only a few number of researches were made in the field.

The automotive industry is from those few sectors which gives after sale service, and it is one of the competitive variable as the competition is getting stiff in the car market, companies must give a quality after sales service, so the researcher will try to assess the effect of after sale service quality on the customer satisfaction in MOENCO, NYALA MOTORS and Yang Fan Motors using SERVPERF model.

## **1.2. Background of the Organization**

### **1.2.1. MOENCO**

In the heart of Addis Ababa, around the area commonly known as Mexico, a small garage with a capital of 200, 000 Ethiopian birr was founded by Mr. Y. D. Lappine on January 1959 in a small rented house. His far sighted vision became reality with the help of other resourceful

people, such as Ato Menasseh Lemma, the then Governor of the National Bank of Ethiopia, and the boss of Imperial Insurance Company.

Nine years later, MOENCO took over the TOYOTA franchise business for Ethiopia when Inchcape, a London based international organization, became a major shareholder and injected a considerable amount of capital. This was a milestone moment in the firm's journey to become the MOENCO of today. In addition to the TOYOTA business, at different times MOENCO used to represent General Motors for various types of American vehicles and trucks; Ingersoll-Rand; WABCO, Pettibow; Universal; Dupont; General Tire; Frigidaire; Zanussi; and Thomas De La Rue & Co. of England.

All the experience we have gained from working with our partners, has allowed MOENCO to focus on people, service and innovation over the past five decades. The strength we have acquired in these years has also endowed MOENCO with the resilience to survive during the many difficult times.

In 2009, it is the largest automotive company in the country, representing over 20 brands. MOENCO has grown both in terms of size and in terms of the modernization of its service shops and parts distribution centers, which display a passion for creating the ultimate customer experience.

### **1.2.2. YANGFAN MOTORS PLC**

Founded in 1992, LIFAN Industry (Group) Co. Ltd (here in after called LIFAN Group) with more than 13,653 employees is one of the biggest private-owned enterprises in China. Over the past 18 years, specializing in research and development, manufacturing and marketing (including international trade) of automobile, motorcycle and engine, LIFAN Group has rapidly matured into a prestigious enterprise with the integration of

financial sector, real estate and football industry. In 2009, LIFAN won a sales income statistics of 13.3 billion RMB, and 380 million USD for exportation. It was listed in "Top Enterprises in China" of Forbes and ranked the 88th. In June 2009, LIFAN won Chinese "Nation Card" becoming one of 100 famous enterprises which can represent national economic development since the establishment of People's Republic of China

#### LIFAN MOTORS in Ethiopia-YANGFAN MOTORS PLC

YANGFAN MOTORS PLC is a subsidiary branch of LIFAN Motors (China) engaged in assembling and distributing LIFAN vehicles in Ethiopia. At present in Ethiopia it has more than 100 employees from which 97% are Ethiopians. The factory is located at Eastern industry zone of Dukem city on 10780 M<sup>2</sup>. The show room is located at Bole Michael road in front of cargo terminal besides to Addis cardiac hospital. The service station is located at Kera in front of the court office.

#### **1.2.3. NYALA MOTORS**

Nyala Motors Share Company was incorporated in April 1973 by five founding members with a registered capital of ETB 50,000. Today 43 years later the organization has grown extensively. The Head quarter is located in Addis Ababa, Megenagna – Airport ring road. In addition the company is operating 5 branch offices (Hawassa, Bahir Dar, Diredawa, Mekelle, Jimma) in the major cities of the country. The company is currently organized in four divisions and eight departments. It is an exclusive supplier of Nissan motors, UD trucks, Eicher motors, unicarriers forklifts and Macpower battery.

## Vision

“To be the leading national assembler and distributor of superior quality vehicles, Trucks and Machineries supported by reliable after sales service”

## Mission

We strive to be Customer Oriented national company that is socially responsible and can bring growth through delivery of better products and services”

## Values

The success of our company should be measured by the contribution it gives to shareholders, Employees, Government and community.

- Our Motto is Safety and quality comes first.
- Working towards customers’ satisfaction.
- Team Work.

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

A rapidly changing business environment, increased use of technology, higher market competition, and higher potential profits in after sales service has changed the way companies view after sales services Muhammed, et al. (2011). It is no longer treated as a cost center, but instead has become a major profit source with profitability ranging up to 45% of corporate revenues for many business environments (Saccani, et al., 2007).

According to Oliver (2007) as cited by Datsomor, H.K. (2012), for the automobile industry, made up of dealers and manufacturers, customer satisfaction through quality service remains one of the main factors affecting customer loyalty. On the other hand, according to Lin (2009) as cited by (Kindye, 2011), only 4% of dissatisfied customers complain, and eventually one dissatisfied customers tells nine other people about the

problem. Hence, customer satisfaction plays an important role for the success and continuous existence of the company.

The increase in the sales of motor vehicles has made motor vehicle servicing a critical issue in the motor Industry and in the future success of the motor vehicle brands. Poor service quality in motor vehicle servicing has not received attention and due to its importance, it is necessary to examine this topic.

It is however interesting to note that there are studies of service quality across a wide scope of service sectors including, the insurance sector Akalu A., (2015), Hotel industry Abraham G. (2015), in the aviation industry Liliya T. (2016) and in the banking sector Meron M., (2015). Nonetheless, since after sales service is not commonly practiced in Ethiopia; empirical evidence are limited except the study conducted on Assessment of After-Sales Service Behaviors of Ethiopia Telecom Customers by Potluri, R. et al. (2010) and a study made by Kindye E.(2011) on effect of after sale services on customer satisfaction and loyalty in automotive industry of Ethiopia using Kano model.

The results of Kindye E. indicate that after sale services (maintenance, spare parts supply, telephone service, warranty, car washing, and documentation services) has effect on customer satisfaction and loyalty, and after sale service satisfaction and loyalty has positive relationship. In addition different companies provide same after sale service in different way, and the way their offer the service for their customer has a significant difference on the satisfaction of customers. Therefore the researcher has found that it is important to see the effect of after sales service quality on customer satisfaction by using another model SERVPERF model in order to fill the model gap in the industry.

Further, little published research has been undertaken associated with the issue after sales service quality in Ethiopia. This limited publication imply that there are more questions than answers about the after sales service quality and its effect on customer satisfaction in the automotive industry in Ethiopia indicating the importance of this research.

This study therefore aims at filling the knowledge gap in exploring the extent to which service quality, as measured through consumer perception affects customer satisfaction in automotive after sales service.

The SERVPERF scale is used to examine the topic and it is found to be superior not only as the efficient scale but also more efficient in reducing the number of items to be measured by 50% (Hartline and Ferrell, 1996; Babakus and Boller, 1992; Bolton and Drew, 1991)” cited by Mesay Shita 2012. Many studies have been conducted by adopting the SERVPERF model. The researcher is also convinced to use the SERVPERF method to examine the effect of after sales service quality on customer satisfaction in the automotive industry in Ethiopia. Therefore this study will hopefully lead to enhance knowledge and understanding about the concept and practices of after sales service quality and its effect on customer satisfaction in the automotive industry in Ethiopia.

## **1.4 Research Questions**

### **General research question**

How does after sales service quality affect customer satisfaction in the automotive industry in Ethiopia?

### **Specific research questions**

How does the reliability of after sales service affect customer satisfaction in the automotive industry in Ethiopia?

How does after sales service employees responsiveness affect customer satisfaction in the automotive industry in Ethiopia?

How does after sales service employees empathy affect customer satisfaction in the automotive industry in Ethiopia?

How does after sales service tangibles affect customer satisfaction in the automotive industry in Ethiopia?

How does after sales service employees assurance affect customer satisfaction in the automotive industry in Ethiopia?

What is the dominant service quality dimension that has a strong relation with customer Satisfaction in the automotive industry in Ethiopia?

## **1.5. Objective of the Study**

### **General Objective of the Study**

The general objective of this study is to examine the effect of after sales service quality on customer satisfaction in the automotive industry of Ethiopia: The case of Nyala Motors, Moenco, and Yang Fan Motors.

### **Specific Objectives of the Study**

- To examine the relationship between service quality dimensions and customer satisfaction in the Ethiopian automotive industry.
- To examine the effect of service quality on customer satisfaction.
- To identify the dominant after sales service quality dimension which highly affects customer satisfaction in the automotive industry in Ethiopia;

## **1.6. Significance of the Study**

The subject matter of this study adds value on the effect of after sales service quality on customer satisfaction in the automotive industry in Ethiopia to the literature depending on SERVPERF model and to those researchers who would like to pursue their research on after sales service quality in Ethiopia, because the introduction of after sales service quality in Ethiopia is a recent phenomenon. In addition, the paper can benefit firms in the automotive industry. Moreover, it can benefit MOENCO, NYALA motors and Yang Fan Motors because it draws attention where more attention should be given to satisfy and delight customers in after sales service quality.

## **1.7. Scope of the Study**

This study concentrates on examining the effect of after sales service quality on customer satisfaction by using Cronin and Taylor (1992) SERVPERF model. The study used the five dimensions of SERVPERF method those are reliability, responsiveness, empathy, tangibility and assurance. The study is conducted in MOENCO (Avanza) and Nyala Motors (Juke) as they are pioneers in the car supply market and Yang Fan motors (Lifan 530) which is also one of the pioneers in the car assembly market on selected car brand users which got after sale service more than one time in the companies after sale service outlet of Addis Ababa.

## **1.8 Limitation of the Study**

The study was conducted in MOENCO (Avanza) and Nyala Motors (Juke) from pioneers in the car supply market and Yang Fan motors (Lifan 530) which is also one of the pioneers in the car assembly market on a

selected car brand customers which got after sales service more than one time in the companies after sales service outlets. So the findings of this study may not give the general picture of the automotive after sales industry in Ethiopia and also only questionnaire was used to collect the data.

## **1.9 Organization of the Research Report**

As shown below the study has organized into five chapters. The chapters are comprised of: Introduction, Review of related Literature, research design and methodology, Results and Discussions and, Summary, conclusions and recommendations.

**The first chapter** provides a general introduction of the study including background of the study, Statement of the problem, Research questions, Objectives of the study, Significance of the study, Scope and limitation of the study, organization of the study and Definition of key Terms.

**Chapter two** covered the literature relevant to the study .It includes concepts and theoretical framework, empirical literature as well as discussions on the retailers based brand equity model and Hypotheses and conceptual framework.

**Chapter three** has elaborated research design and methodology: the type and design of the study .It include research method sampling technique, data collection method and method of data analysis that has been used in the study and reliability and validity tests and Ethical considerations has included.

**Chapter four** has summarized the findings of the study and discuss in detail.

**Finally chapter Five** has comprised of four sections which include summary findings, conclusions, recommendation of the study and future research areas.

## 1.10 Definitions of Key Terms

**After sale service:** after-sales services are often referred to as “product support activities”, meaning all activities that support the product-centric transaction Rigopoulou, et al. (2008).

**Service quality:** is an achievement in customer service and reflects at each service encounter. Customers form service expectations from past experiences, word of mouth and advertisement. In general, Customers compare perceived service with expected service in which if the former falls short of the latter the customers are disappointed Mohd J. et al. (2015).

**Customer Satisfaction:** is a person’s feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations Kotler (1997).

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

This chapter provides an insight to the readers about the theoretical framework, empirical review and conceptual framework and hypothesis of the topic under study .In line with the objectives of the study, this chapter covers topics related to after sales service, service quality, customer satisfaction and empirical review. Furthermore, the conceptual framework of this study will be presented at the end of this chapter.

#### **2.1. Introduction**

Despite being home to the continent's second largest population, the overall automotive market size remains small in the short to medium term for current and prospective assemblers and producers. However, Ethiopia's strong government support for industrialization and the development of auxiliary industries coupled with a large cost competitive labor pool, and sizeable investments in infrastructure (both physical and economic) could position the country favorably for automotive manufacturing in the long term to service both the regional and domestic market with price competitive vehicles Automotive insight (2016).

Though the history of vehicle found back to the regime of Minilik II Ethiopia's Ministry of Transport reports in 2015 that there are 587 400 vehicles on the road, with an annual growth rate of approximately 6%. Approximately 84% of the market is passenger vehicles while commercial vehicles make up 16%.Second-hand vehicles dominate the market. Approximately 85% of vehicles are second-hand imports, of which almost 90% are Toyotas. These vehicles are imported primarily from the Gulf States, through the Port of Djibouti. The vast majority of Ethiopia's

vehicles are concentrated in Addis Ababa, while the number of vehicles in rural areas remains low Automotive insight (2016).

Eskinder (2007), on his study of the automotive industry and trend analysis in Ethiopia, stated Ethiopia's automotive industry as one of the major contributors to the national economy. In addition as he stated Ethiopia imports all of its automotive (vehicle) needs, it does not manufacture automotive. In Ethiopia the key suppliers of commercial trucks with respective mark of trucks are AMCE (IVECO), EIG (SCANIA), EBG (VOLVO), ORBIS (MERCEDES), Nyala Motors (Nissan Diesel), National Motors (ISUZU), Ethio Nippon (MITSUBISHI) , HAGBES (DAEWOO) and MOENCO(TOYOTA).

But now the case is somehow different there are companies which assemble cars in Ethiopia. The Ethiopian Investment Commission (EIC) reports that 31 foreign vehicle investment projects (largely Chinese projects but also some involvement of European companies) and 73 domestic vehicle assembly investment projects have been licensed since 1998. This means that a total of 104 companies have been licensed for vehicle assembly in the country over the past two decades. However, only a few of these are operational, with the vast majority licensed at the pre-implementation stage. As per the report the domestic assembling firms include Yang Fan (Lifan), Betret international (BYD), Mesfin Industrial Engineering (Geely), Nigma motors and ZAZ (Nigma produce Daewoo, Chevrolet under licence), Bishoftu Automotive Industry (BAI) (Bishoftu),Belayab Engineering (FAW), Automotive Manufacturing Company of Ethiopia (AMCE)(IVECO)( Automotive insight (2016)).

## **2.2. THEORETICAL REVIEW**

### **2.2.1. After Sales Service**

According to Muhammad et al. (2011) after sales service is defined as customer support following the purchase of a product or service. It is usually formalized by a warranty or service agreement between the service provider and the customer. By providing after sales services, the company facilitates the customer's attainment of the initially perceived value of the product (during purchase).

Gaiardelli, et al. (2007) defined after sales service as those activities taking place after the purchase of the product and devoted to supporting customers in the usage and disposal of the goods to make them loyal.

While according to Rigopoulou, et al. (2008) after-sales services are often referred to as "product support activities", meaning all activities that support the product-centric transaction. Furthermore, as stated in Potluri and Hawariat (2010) the term "after-sales services" has been approached in the literature under two broad perspectives. When referring to service providing companies, after-sales services are being treated as one among several supplementary service elements provided. On the other hand, when referring to tangible goods, they are mostly seen as operative activities of some or all members of the distribution chain.

According to Kotler (2002), attracting a new customer is five times greater than the cost to keep a current customer happy. According to Adrian, et al. (1995) in today's marketing environment, an increasingly important source of competitive advantage is the way we serve customers. In recent years, more and more organizations focus their attention on retaining existing customers rather than attracting new ones.

### **2.2.1.1. Objectives of After Sale Service**

According to Loomba (1998), the main objective of the after-sales is to keep the customer satisfied through trust, credibility and sense of security conveyed by the organization, and building lasting relationships that contribute to increased performance for sustainable results.

Forooz and Rostami (2006) as cited by Kindye E. (2011) have shown after sale service advantages like:-

- . Competitive advantage
- . Customer satisfaction
- . Long- term customer relationship, customer retention and loyalty
- . New product success and development
- . High profit
- . Differentiation
- . Branding

Gaiardelli, et al. (2007) said an effective after-sales service protocol is essential to streamline service management and meet customer's expectations, it can let you experience customer delight, while also saving on your bottom-line and it generates profit. Henley center headlight vision (Anon., 2007) shows more than 1,800 customers who had purchased all the automotive brands sold in the U.S, Excellent service not only reinforces relationships with customers who already feel loyal to a brand. It can also defuse ill will that causes disaffected customers to bad-mouth the brand.

According to Potluri and Hawariat (2010), delivery of after-sales service is becoming increasingly critical as businesses do everything in their power to be more cost-effective, boost profit margins, and meet customer demand for a product or service. However, most of the business organizations are not aware about the after-sales service factors and its impact towards the customer satisfaction. Failing to realize the

importance of the factors can lead to a disastrous and threatening business relationship. This may lead dissatisfied customers switch to a competitor or the company lose potential for new customers due to negative word-of-mouth effect. Hence, every business should know the objective and importance of having after sale service and implement it to satisfy customers and make them loyal.

### **2.2.1.3. Components of After Sales Service**

According to Goffin (1999) there are seven elements of after sale support which must be provided to customers over the working lifetime of product these are:

- 1. Installation:** - for many products the first element of product support following the sale is installation. This is usually performed for complex product or where personnel from the manufacturing company or their representatives involve safety issues.
- 2. User training:** - the complexity of some type equipment necessitates that manufacturers provide good training for users. Many computers based and complex products include functions that help users learn to use them more efficiently.
- 3. Documentation:** - most products have some form of documentation and industries such as medical electronics plays key role. Typical form of documentation covers equipment operation, installation, maintenance, and repair. Good documentation can lead to lower support cost.
- 4. Maintenance and repair:** - maintenance and repair are an important element of product support, which has required companies to invest significant resource. Preventive maintenance is undertaken to clean, refurbish or replace parts of equipment which otherwise would be liable to fail. Mechanical parts, for example, normally require regular maintenance as in the case of cars.

- 5. Online support:** - telephone advice on product is a major element of customer support in many industries. Product experts give online consulting to customers to help them use products more or, sometimes to trace the cause of fault (troubleshooting).
- 6. Warranties:** - manufacturers of most products offer warranty and, in some markets such as automobiles. Manufacturers try to gain a competitive advantage by offering longer warranty periods. Warranty reduces the financial risk of owning products and therefore it is an important element of customer support.
- 7. Upgrades:** - offering customer the chance to enhance the performance of the existing products can be an important aspect of support. For example, computer manufacturers offer upgrades, because they increase the working lifetime of products and can be a significant source of revenue. Original equipment manufacturers have a competitive advantage in this because they normally have records of where equipment has been sold which could benefit from upgrading.

According to Potluri and Hawariat (2010), the major tasks related to after-sales services of fixed lines in ETC are: -

- **Provision of information.** Customer may require information about products and services, availability, delivery dates, and prices. They may require information on progress, e.g. what is happening with their order or fault.
- **Service delivery.** It is required that the service provider to undertake a series of tasks which may vary from product to product and from service to service. Delivery is the setting up, by the service provider, of all the components required for the operation and maintenance of a service as defined in the service specification and to be used by the customers.
- **Maintenance and repair service.** This service function includes all activities associated with repair from the instant a service does not offer

one or more of the specified features to the instant these features are restored for use by the customer. The process must also be Consistent from the customer's perspective, irrespective of which product or service is being repaired.

- **Billing service.** Billing is common to almost all services that are not provided free of charge. Inaccurate, illegible, or incompatible bills disappoint customers. Customers usually expect bills to be clear, informative, itemized in ways that make it clear how the total was computed.
- **Customer complaints handling.** Complaint is the result of an organization's service failures that occurs for many reasons. Any type of service failures bring about negative feelings and responses from customers. Complaining customers need quick responses. Thus, if an organization welcomes and encourages complaints, it must be prepared to act on them quickly.

According to Kindye E. (2011) major after sales components in the automotive industry are:

**Maintenance service:** companies give maintenance service to retain or restore a part of the car to achieve its maximum user life.

**Spare parts supply:** Companies' delivers spare parts with the right quality at the right time and the right place for the cars they deliver.

**Online service (telephone) service:** companies give telephone service in two cases that is either provides feedback for customer calls when they faced problem, or After the vehicles got maintenance service the after sale service technicians call for owners of the vehicle to inform them to take their vehicle.

**Car washing:** it is keeping the car clean after the maintenance service is over

**Inspection:** it is an examining the cars capability whether it fulfills its set standards.

**Warranty:** Warranties serve as persuasive marketing tools: (i) promotional and (ii) protectoral. As a promotional tool, warranties serve to promote the reliability and quality of a product with longer and better warranty terms implying a more reliable product. As a protectoral tool, warranties provide assurance to consumers against defective products that fail to perform satisfactorily over the warranty period.

**Training (driving orientation):** driving orientation / training for customers in order to make familiar what is on the vehicle. Since vehicles have sophistication and variation of parts from time to time, especially vehicles produced recently are computerized. **Documentation:** it is a documents which shows the full history of the vehicle from the date of purchase and overall service story of the vehicle.

### **2.2.2 Service Quality**

Service quality is the result of the comparison that customers make between their expectations about a service and their perception of the way the service has been performed (Gronroos, 1984; Parasuraman et al., 1985, 1988).

Service quality has been defined as the degree and direction between customer service expectations and perceptions. Ms.R.Suriya et al. (2015)

According to Rajnish K. et al. (2010) there are several reasons why customers must be given quality service. Most important of them are:

- Industry has become so competitive that customers now have variety of alternatives, if the customer is lost, it can be extremely difficult to win back the individual and
- Most customers do not complain when they experience problems. These customers simply opt out and take their business elsewhere.

## **2.2.2.1 SERVICE QUALITY MEASUREMENT MODELS**

### **1. The GAP Model**

The GAP model was proposed by Parasuraman, A., Zeithaml, V.A. and Berry, L.L in 1985. The model presupposes that service quality is the difference between expectation and performance relating to quality dimensions. These differences are referred to as gaps. There are five those are:

Gap 1: Difference between consumers' expectation and management's perceptions of those expectations, i.e. not knowing what consumers expect.

Gap 2: Difference between management's perceptions of consumer's expectations and service quality specifications, i.e. improper service-quality standards.

Gap 3: Difference between service quality specifications and service actually delivered i.e. the service performance gap.

Gap 4: Difference between service delivery and the communications to consumers about service delivery, i.e. whether promises match delivery?

Gap 5: Difference between consumer's expectation and perceived service. This gap depends on size and direction of the four gaps associated with the delivery of service quality on the marketer's side.

According to this model, the service quality is a function of perception and expectations and can be modelled as:  $SQ = \sum_{j=1}^k (P_{ij} - E_{ij})$

Where:  $SQ$  = overall service quality;  $k$  = number of attributes.

$P_{ij}$  = Performance perception of stimulus  $i$  with respect to attribute  $j$ .

$E_{ij}$  = Service quality expectation for attribute  $j$  that is the relevant norm for stimulus  $i$ .

## **2. SERVQUAL MODEL**

So as to measure customer satisfaction with respect to different aspects of service quality and to overcome problems that are created as a result of the gap between management and customers, a survey instrument was developed by Parasuraman et al. (1988). The instrument is called SERVQUAL. The basic assumption of the measurement was that customers can evaluate a firm's service quality by comparing their perceptions with their experience. Normally, it is designed to measure service quality as perceived by the customer.

Based on their study Parasuraman *et al* (1985) identified ten key determinants of service quality. These are:

1. Reliability
2. Responsiveness
3. Competence
4. Access
5. Courtesy
6. Communication
7. Credibility
8. Security
9. Understanding/ knowing/ the customer
10. Tangibles

and later these ten determinants have been reduced to five.

In 1988, Parasuraman *et al.* discovered an instrument for measuring consumers' perception of service quality, after that it became known as SERVQUAL. The SERVQUAL model measures the discrepancies between customers' expectations and perceptions. The SERVQUAL instrument consists of 22 items (Table 1) and comprises two parts: expectations and perceptions.

**Table 2.1: Service Quality Dimensions**

Tangibles	<ul style="list-style-type: none"><li>• Modern equipment.</li><li>• Visually appealing facilities.</li><li>• Employees who have a neat, professional appearance.</li><li>• Visually appealing materials associated with the service.</li></ul>
Reliability	<ul style="list-style-type: none"><li>• Providing services as promised.</li><li>• Dependability on handling customer's service problems.</li><li>• Performing services correctly the first time.</li><li>• Providing services at the promised time.</li><li>• Maintaining an error - free records.</li></ul>
Responsiveness	<ul style="list-style-type: none"><li>• Keeping customers informed about when services will be performed</li><li>• Prompt service to customers.</li><li>• Willingness to help customers.</li><li>• Readiness to respond to customer's requests.</li></ul>
Assurance	<ul style="list-style-type: none"><li>• Employees who instill confidence in customers.</li><li>• Making customers feel safe in their transactions.</li><li>• Employees who are consistently courteous.</li><li>• Employees who have the knowledge to answer customer's questions.</li></ul>
Empathy	<ul style="list-style-type: none"><li>• Giving customers individual attention.</li><li>• Employees who deal with customers in a caring fashion.</li><li>• Having the customer's best interest at heart.</li><li>• Employees who understand the need of their customers.</li><li>• Convenient business hours.</li></ul>

A number of researchers have reported different dimensions for expectations, perceptions and gap scores. Thus, the universality of SERVQUAL's five dimensions has been questioned (Buttle, 1996; Carman, 1990; Cronin and Taylor, 1994). Shortcomings concerning convergent and discriminant validity have also been noted (Buttle, 1996) as cited by Mohd et al. (2013). Nevertheless, despite the criticism, SERVQUAL has been widely used in various contexts throughout other studies. The SERVQUAL instrument has been widely used because it provides a basic skeleton, which can be adapted or supplemented to fit the characteristics or specific research needs of a particular organization. (Parasuraman, Zeithaml and Berry, 1988).

Although many studies have used the SERVQUAL model as a framework in measuring service quality, there has also been theoretical and operational criticisms directed towards this model exist in the literature of services marketing. These criticisms have mainly revolved around right from its dimensional structure to the interpretation and implementation of the instrument (Buttle, 1996; Babakus and Boller, 1992; Lam Wong and Yeung, 1997; Smith, 1995; Newman, 2001) as cited by Mohd et al. (2013).

### **3. THE SERVPERF MODEL**

The SERVPERF model was carved out of SERVQUAL by Cronin and Taylor (1992). They questioned the conceptual basis of the SERVQUAL scale and found it confusing with service satisfaction. They, therefore, opined that expectation (E) component of SERVQUAL be discarded and instead performance (P) component alone be used. They proposed what is referred to as the 'SERVPERF' scale. SERVPERF directly measures the customer's perception of service performance and assumes that respondents automatically compare their perceptions of the service quality levels with their expectations of those services. Besides

theoretical arguments, Cronin and Taylor (1992) provided empirical evidence across four industries (namely banks, pest control, dry cleaning, and fast food) to corroborate the superiority of their 'performance-only' instrument over disconfirmation-based SERVQUAL scale.

Being a variant of the SERVQUAL scale and containing perceived performance component alone, 'performance only' scale is comprised of only 22 items. A higher perceived performance implies higher service quality. In equation form, it can be expressed as:

$$\sum_{j=1}^k P_{ij} = SQ_i \quad (2)$$

where:  $SQ_i$  = perceived service quality of individual 'i'

$k$  = number of attributes/items

$P$  = perception of individual 'i' with respect to performance of a service firm on attribute 'j'

Methodologically, the SERVPERF scale represents marked improvement over the SERVQUAL scale. Not only is the scale more efficient in reducing the number of items to be measured by 50 per cent, it has also been empirically found superior to the SERVQUAL scale for being able to explain greater variance in the overall service quality measured through the use of single-item scale. This explains the considerable support that has emerged over time in favor of the SERVPERF scale (Babakus and Boller, 1992; Bolton and Drew, 1991b; Boulding *et al.*, 1993; Churchill and Surprenant, 1982; Gotlieb, Grewal and Brown, 1994; Hartline and Ferrell, 1996; Mazis, Antola and Klippel, 1975; Woodruff, Cadotte and Jenkins, 1983) as cited by Sanjay *et al.* (2004). Also when applied in conjunction with the SERVQUAL scale, the SERVPERF measure has outperformed the SERVQUAL scale (Babakus and Boller, 1992; Brady, Cronin and Brand, 2002; Cronin and Taylor, 1992; Dabholkar *et al.*, 2000). Seeing its superiority, even Zeithaml (one of the founders of the SERVQUAL scale) in a recent study observed that "...Our results are

incompatible with both the one-dimensional view of expectations and the gap formation for service quality. Instead, we find that perceived quality is directly influenced only by perceptions (of performance)” (Boulding *et al.*, 1993) as cited by Sanjay *et al.* (2004). This admittance cogently lends a testimony to the superiority of the SERVPERF scale. Sanjay *et al.* (2004)

### **2.2.3. Customer Satisfaction**

According to Mohd J. *et al.* (2015) customer satisfaction is the key parameter to know the customer expectation for a particular product of brand. Customer satisfaction is defined as the percentage of total customers who are using the product and experience the quality of service of their service center and they feel happy or satisfy.

Kotler and Keller (2009) defined customer satisfaction as “the level of persons felt state resulting from comparing a product perceived performance or outcome in violation to his / her own expectations. “Customer satisfaction represents the influence of a long relationship between the firm and its customer.

According to Rigopoulou, *et al.* (2008) customer satisfaction is the state of mind that customers have about a company when their expectations have been met or exceeded over the lifetime of the product or service. Customer satisfaction measurement involves the collection of data that provides information about how satisfied or dissatisfied customers are with a service. This information can be collected and analyzed in many different ways. Many organizations regularly check the levels of customer satisfaction to monitor performance over time and measure the impact of service improvement.

According to Brady and Robertson, (2001) customer satisfaction is an individual’s feeling of pleasure or disappointment resulting from

comparing a product's perceived performance in relation to his expectations.

According to Rizaimayet *al.* (2009), customer satisfaction measures should depend on quality, on-time delivery, money, issue factor, accommodation and cooperation.

According to Mohd J. et al.(2015) reasons for importance of customer satisfaction are

- Customer satisfaction also increases the lifetime value of the customer.
- .Customer satisfaction is also a point of differentiation.
- Customer satisfaction is also helpful to reduce the negative communication of word of mouth.
- It shows the loyalty and repurchase intentions of the customer.
- For reducing customer churn customer satisfaction is important.

#### **2.2.4. Customer Satisfaction and After Sales Service Quality**

Quality in services provides a competitive factor for continued consumption, especially when intangibility relations are tightened between quality and services. Service quality plays a notable role as a source of sustainable competitive advantage for the companies Alireza F. et al. (2011).

After sales service quality has major influence on customer satisfaction as customers buy products or services and on whether they continue to do so. Preserving their long term customer relationships requires that these businesses both measure and appropriately adjust the quality of their customer's service. As a result measurement and improvement in the current service quality level are of interest to companies whose revenues in whole or part from service delivery Rajnish K (2010).

It is well known that the margin from after-sales service is much larger than that from the product. That is, aftersales service is considered a key revenue generator in certain categories (Cohen et al., 2006; Cohen and Whang, 1997). Hence, on one hand, offering a large number of extra after-sales service plans to consumers, leads to higher profitability on the other hand recent marketing management focuses on lifetime value of a customer and maintaining long-term relationships with customers (Gupta and Lehmann, 2007).

From this customer-relationship viewpoint, after-sales service is regarded as an important factor that has an impact on establishing good relationships with customers. On the other hand, a default and free basic after-sales service, also plays an important role in attracting more customer attention in a market with severe brand competition. Offering adequate after-sales service to customers has become a major generator of revenue, profit, and competency in modern industries Cohen et al., (2006).

Alireza F. et al. (2011) conducted a study with a purpose of investigating the effect of after-sales services on customers' satisfaction as well as on their behavioral intentions, namely "repurchase intention" and "word-of-mouth" (WOM). The research conducted followed a quantitative methodology. The selected research tool was a questionnaire. The study conducted was targeted at customers of a large retail chain marketing home appliances in Iran and 302 usable responses were utilized. A path analysis was performed using the "Amos 18" software. Findings show that after-sales service quality, affect satisfaction, which in turn affects behavioral intentions. Hence, after-sales services affect the overall offering and thus, the quality of the relationship with customers.

Fen & Lian, (2005, p.59-60) as cited by Kindye E.(2011) found that both service quality and customer satisfaction have a positive effect on

customer's re-patronage intentions showing that both service quality and customer satisfaction have a crucial role to play in the success and survival of any business in the competitive market. This study proved a close link between service quality and customer satisfaction.

### **2.3. Empirical Studies on After Sales Service Quality on the automotive industry**

Wu Shuqin. and Gang, L. (2012) conducted an empirical study on the relationship between after sales service qualities in China Automobile sector and they found that fairness, empathy, reliability and convenience have significant positive impact on customer satisfaction while responsiveness doesn't have a significant impact on customer satisfaction and at the same time satisfaction has a significant positive impact on trust and trust has a significant positive impact on commitment. They also found satisfaction and commitment both have a significant positive impact on relationship value but trust cannot impact relationship value directly.

Minwir A. et al. (2014) conducted a study in the Saudi Arabian Automobile Company (SAACO) with the aim of examining the relationship between service quality, customer satisfaction and customer loyalty. Spearman correlation analysis indicated that all quality dimensions have significant positive effect on both customer satisfaction and customer loyalty. A questionnaire was personally distributed to 140 customers and 117 were returned. The study suggests that in order for the automobile companies to keep up with the competition, it is essential to conduct periodic quality assessments to proactively identify and fix any gaps between customers' expectations and actual perceived service quality. Continuous improvement in service quality is necessary to increase customer satisfaction, loyalty, retention, market share and profitability.

Datsomor, H.K. (2012) adopted the SERVQUAL service quality model with its five dimensions (tangibles, reliability, responsiveness, assurance and empathy) to measure customer's perception of service quality and to investigate its effect on their loyalty. A self-completion questionnaire with a total of 45 closed questions and 2 open ended questions was developed to gather field data from 5 Toyota Ghana branches nationwide. All of the items were measured by using a five Point Likert-type response scale. SPSS software was used to carry out reliability test, descriptive analysis (frequency and percentage distributions), correlation coefficient tests and regression model analysis on the data obtained. Responses to the open ended questions were also studied and this study affirms that each of the dimensions of service quality has positive impact on customer loyalty.

## 2.4 Conceptual framework and Hypotheses

Berndt, A. (2009) explained the five dimensions of SERVQUAL model which is also the dimension for SERVPERF model/ with respect to automobile service center and these are reliability, assurance, tangibles, empathy and responsiveness.

**Reliability:** This refers to the extent to which the service provider (the dealership) delivers on the promises made to the customer (O'Neill and Palmer, 2003; Buttle, 1996). Dealerships are known to contact the customer, promising that the vehicle will be ready for collection at a specific time. Upon arrival at the dealership, the customer is told that the vehicle is “nearly ready”, much to their frustration. Reliability is regarded as the most important dimension of service quality (Chowdhary and Prakash, 2007; Zeithaml et al., 2006).

H1 After sales service reliability has a significant positive impact on customer satisfaction.

**Assurance:** this refers to the degree of confidence and trust that the dealership is able to engender in the customer, based on the interactions between the parties (Zeithaml et al., 2006; O'Neill and Palmer, 2003; Buttle, 1996). In the case of the dealership, the main source of assurance is with the service adviser. Their knowledge and manner of interaction with the customer inspires trust in the organization.

H2 After sales service assurance has a significant positive impact on customer satisfaction.

**Tangibles:** This refers to the physical cues that are part of the service delivery process (Zeithaml et al., 2006; O'Neill and Palmer, 2003). They are used to communicate to the customer about the service that can be

expected. Tangible cues that form part of this dimension include the signage, parking and layout of the dealership itself.

H3 After sales service tangibility has a significant positive impact on customer satisfaction.

**Empathy:** Here, the customer is treated in such a way that they feel important to the organization, and that their needs are important to the organization, such as that they receive caring, individualized attention (Zeithaml et al., 2006; O'Neill and Palmer, 2003). In the case of the motor dealership, this can be seen in the interactions between the organization and the customer, and the nature of this interaction. Commenting on this Parasuraman et al (1988), said that customers want to feel understood and important to the service providers' firm.

H4 After sales service empathy has a significant positive impact on customer satisfaction.

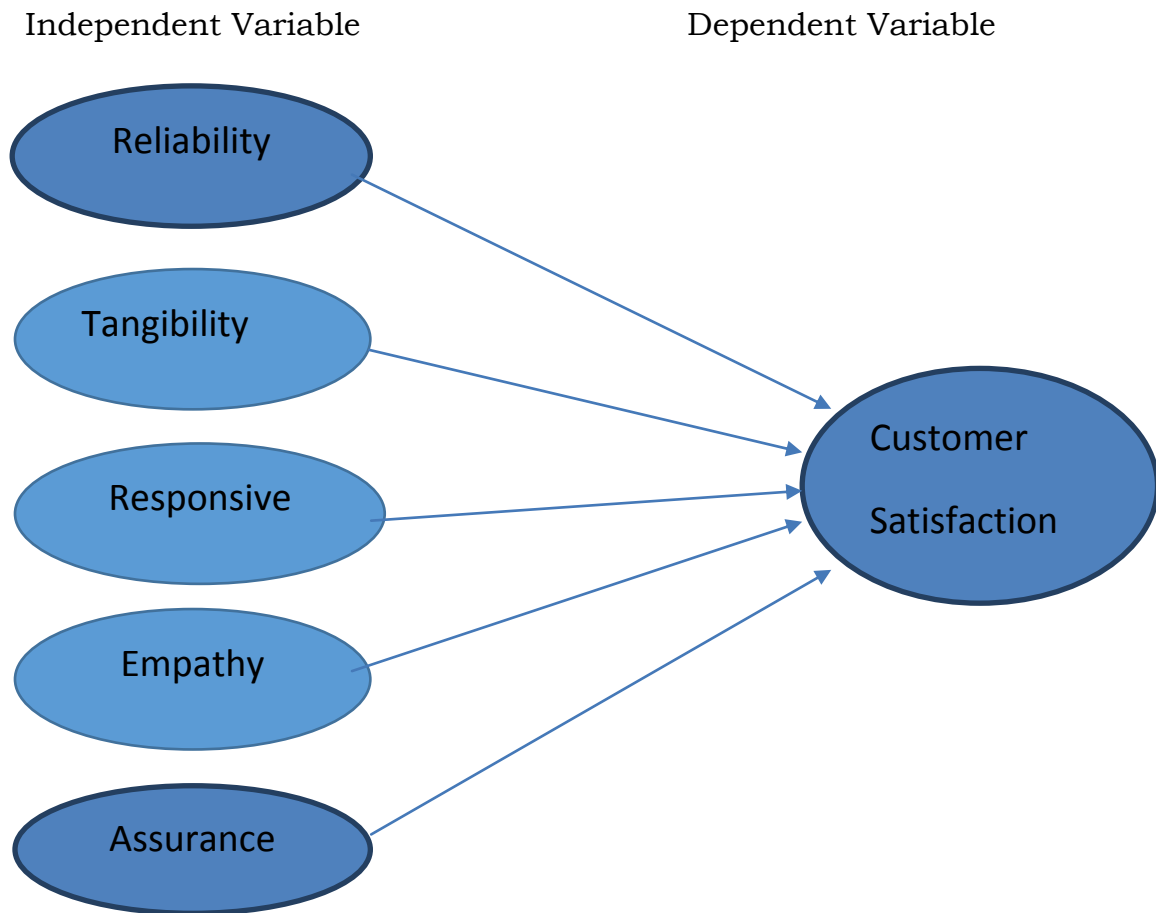
**Responsiveness:** this refers to the willingness on the part of the service provider to deliver assistance to the customer (Zeithaml et al., 2006; O'Neill and Palmer, 2003). In the case of the motor dealership, this refers to the changes that have been observed in service hours from just being weekdays to include weekend and night services, due to the changes in the needs of customers.

H5 After sales service responsiveness has a significant positive impact on customer satisfaction.

## Conceptual Framework

The conceptual framework indicates the crucial process, which is useful to show the direction of the study. The study shows the relationship between the five service quality dimensions and customer satisfaction. Also the study focuses on SERVPERF model.

**Figure2.1. Conceptual framework**



Source: Parasuraman et al., 1988

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

In this chapter, the researcher made discussions about the research approach, research design, research method, population and sampling technique, procedure of data collection and method of data analysis used on the study. In addition survey related reliability, validity and ethical considerations are presented.

#### **3.1 Research Approach**

The research used a deductive style of reasoning which operates from the general to specific. A general set propositions relating to a given phenomenon is narrowed down to a specific set of testable hypotheses or to a single testable hypothesis. John A. et al. (2007)

Quantitative research is a means for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures. The final written report has a set structure consisting of introduction, literature and theory, methods, results, and discussion Creswell, (2009). Based on the objectives of the study and the availability of relevant information, this study has used quantitative research approach to test the credibility of the SERVPERF model in the context after sales service quality in the automotive industry in Ethiopia.

The quantitative approach with a deductive style of reasoning was applied to examine the relationship between the dependent variable (i.e. customer satisfaction) and independent variables (i.e. the five dimensions of SERVPERF model)

### **3.2. Research Design**

Research design can be described as a plan for executing the research and answering the research aim and objectives. It provides the structure to resolve the identified problem and avoid situations where the evidence does not address the initial research problems. There are three forms of research design which are descriptive, exploratory and explanatory research designs.

Exploratory research design is a fact finding research design where the major emphasis is on clarifying the research problem and research direction. (Yin, 2009) as cited by Erika E. (2013).

Explanatory research design is concerned with learning of why (i.e. how one variable produces changes in another (Yin, 2009) as cited by Erika E. (2013).

Descriptive research design is practical for collecting and assessing opinions, behaviors and features of a population or for studying the state of affairs. (Yin, 2009) as cited by Erika E. (2013).

Based on the objective and research questions the researcher has used descriptive as well as explanatory research design. The reason behind using descriptive research design is to describe the service quality dimensions that lead to customer satisfaction, and that of explanatory is to explain, understand, predict and control the relationship between the independent variable (SERVPERF dimensions) and the dependent variable (customer satisfaction).

### **3.3. Population and Sample**

#### **3.3.1. Population**

Target population of this study are car users at MOENCO (Avanza) with a population of 1500, at Yangfan Motors (Lifan 530) with a population of 825 car users and at Nyala Motors (Juke) with a population of 120 car users, the brands of cars are selected as they are recent brands with in the last four years and were highly sold by the companies.

#### **3.3.2. Sample Design**

According to the methodology literatures, there are two main sampling methods, probability and non-probability sampling Zikmund(2000). Probability sampling is based on the concept of random selection and the population will have an equal chance for being selected, whereas Non-probability sampling is that sampling procedure which does not afford any basis for estimating the probability that each item in the population has of being included in the sample. In this type of sampling, items for the sample are selected deliberately by the researcher; his choice concerning the items remains supreme. In other words, under non-probability sampling the organizers of the inquiry purposively choose the particular units of the universe for constituting a sample on the basis that the small mass that they so select out of a huge one will be typical or representative of the whole. Kothari (2004)

For this study Judgment (purposive sampling) data collection method was used, questionnaires were distributed in the service outlets of the companies for the above mentioned brand car users who come to the service outlets more than ones and found in the service outlet at the time of data collection in Addis Ababa. This is because as Fogli (2006) as cited by Kindye E. (2011) one limitation of customer satisfaction questionnaires and interviews is analyzing customer views depending on

one specific service employees while they interact with more than one employee. Hence taking customer who got service more than one time is more appropriate to measure customer satisfaction.

### 3.3.3. Sample Size

Data was collected from the companies customers using the sample determination method developed by Carvalho (1984),

**Table 3.1 Sample determination method**

Population	Sample Size		
	Small	Medium	Large
51 – 90	5	13	20
91- 150	8	20	32
151 – 280	13	32	50
281 -500	20	50	80
501 – 1200	32	80	125
1201 – 3200	50	125	200
3201 – 10000	80	200	315
10001 – 35000	125	315	500
35001 – 150000	200	500	800

Source: Carvalho, 1984

Based on the table the researcher has took a sample of 80 from Avanza car users 80 from Lifan530 car users and 20 from Juke car users. The total sample for the research was 180.

### **3.4. Data Sources and Types**

The researcher has used both primary and secondary sources of data in the study. The secondary data was collected from publications including journals, articles, and various materials that have relevance to this study and the sources were used only for literature purpose. In this study, primary data generated and presented through a structured questionnaire.

### **3.5. Data collection procedures**

The data was collected by a self-administered face to face survey throughout the Service outlets of the companies in Addis Ababa. The researcher with the help of collaborators had distributed and collected the questionnaires. Since convenience sampling was employed, the researcher used the customers who came to the service outlet at the time of data collection and users of the selected brands and who came to the service outlet more than one time.

### **3.6. Data collection instrument**

A structured questionnaire was prepared based on the works of and scales developed and accustomed to the sector. The measurement or questionnaire was adopted from Gencer Y. et al (2017) which is especially made to measure service quality in the automotive industry.

The questionnaire is prepared in three parts. The first part of the questionnaire consists of issues related to the personal information of the respondent. It included the age, gender, educational background and type of car they owned. The second part was concerned with the questions used to assess service quality on the selected automotive after sales service outlets. The research instrument designed is based on the five dimensions of service quality. The developed questionnaire includes

seven items which correspond to the tangibles dimension, five items which correspond to the reliability dimension, five items to the responsiveness dimension, six items to empathy dimension and four items which correspond to the assurance dimensions. Respondents were asked to indicate their degree of agreement with each of the items on five point likert scale.

The third part of the questionnaire measures the level of customer satisfaction by three items are used in this section and five point Likert scale which ranges from 'highly satisfied' to 'highly dissatisfied'.

The questionnaire has been translated in a legal translation office and distributed in the Amharic version. Table 3.2 shows the questions developed by Gencer Y. et al (2017).

**Table 3.2.List of Questions**

Tangibles	Entry Exit and Parking Convenience (ekTAN1) Take Advantage of Technology (ekTAN2) Certificate of Quality Standards (ekTAN3) Visually Appealing Waiting Lounge (ekTAN4)
Reliability	Delivery of the Service at the time Promised (REL1) Keep Accurate Records (REL5) Accurate detection of the Failure (ekREL1) Use of Original Products (ekREL2) Reliable Repairing (ekREL4) Personal Information Security (ekREL5)
Responsiveness	Telling Customers Exactly the time of Service (RES1) Adequate Transportation Facilities (ekRES2) Concerned Staff (Willing to help customers) (RES3) Not being too Busy to Respond to Customers (RES4) Compatible Staff (ekRES1) Qualified Labor Force (ekRES3) Equal Treatment (ekRES5) Attentive Service (ekRES6)

Assurance	Knowledgeable Staff (ekASS1) Feel Safe in Transactions (ASS2) Politeness of the Staff (ASS3) Informative Explanations (ekASS3) Reasonable Pricing (ekASS4)
Empathy	Delivery of the Service at the time Promised (REL1) Keep Accurate Records (REL5) Accurate detection of the Failure (ekREL1) Use of Original Products (ekREL2) Reliable Repairing (ekREL4) Personal Information Security (ekREL5)
Customer Satisfaction	Overall I am satisfied with the after sales service of the company I feel I do the right thing when I choose this vehicle service company The after sales departments service meet my expectations

Source: Gencer Y. et al (2017)

A pilot survey was conducted on 30 sample respondents prior to administering the questionnaire to the selected sample size. The pilot survey was conducted to check if the questionnaire was clear, easy to understand and straightforward to ensure that the respondents could answer the questions with no difficulty. Based on the feedback from the pilot survey, some changes were made on the questionnaire before administering to the selected sample size.

### 3.7. Data Analysis

In different research design, data analysis methods should be related with the type of research method chosen for the study. As mentioned in the previous section, primary data was collected in this study. To conduct the analysis exhaustively, the data was analyzed with the combination of both descriptive statistics like mean, frequency, cross tabulation and standard deviation of the variables and inferential statistics like correlation analysis to examine direction and significant of the correlation of the variables considered under this study and regression analysis to examine the relationship between the dependent variable ( i.e. Customer satisfaction) and the five independent variables (i.e. Tangibility, Reliability, Responsiveness, Empathy and Assurance) with Pearson correlation and linear multiple regression techniques.

Simple mean and tabulation was applied to get clear picture about the first part of the questionnaire about the respondent's profile. Then after, in order to get inference about the model and its applicability inferential statistics was used. By applying a bivariate correlation analysis, the researcher was tried to see the influence of tangibility, reliability, responsiveness, empathy and assurance on the overall customer satisfaction. This was accomplished in order to pinpoint the causal relationship of the independent variables to the dependent variable. In order to accomplish all the above requirements, the researcher has used SPSS version 20 software to analyze the data.

The regression equation or model specification for an examination of the effect of after sales service quality on customer satisfaction

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \Sigma$$

Where, Y= Customer satisfaction

$\alpha$ = Y intercept/constant

$\beta_1$ = The beta weight or regression coefficient of Tangibility

$\beta_2$ = The beta weight or regression coefficient of reliability

$\beta_3$ = The beta weight or regression coefficient of responsiveness

$\beta_4$ = The beta weight or regression coefficient of empathy

$\beta_5$ = The beta weight or regression coefficient of assurance

X1= Tangibility

X2= Reliability

X3 =Responsiveness

X4 =Empathy

X5= Assurance

$\Sigma$  = sum of residuals or error terms

### **3.8. Validity and reliability**

#### **3.8.1. Reliability**

For this study Cronbach's alpha was used to assess the internal consistency of variables in the research instrument. Cronbach's alpha is a coefficient of reliability used to measure the internal consistency of the scale; it represented as a number between 0 and 1. According to Zikmund et al., (2010) scales with coefficient alpha between 0.6 and 0.7 indicate fair reliability a Cronbach's alpha score of .70 or higher are considered as adequate to determine reliability.

The result of the Cronbach's alpha for this study's instrument was found to be in the acceptance range i.e.  $>0.7$  which is 0.947. Thus showing as indication of acceptability of the scale for further analysis since all the five items of service performance dimensions (tangibility, reliability, responsiveness, empathy and assurance) measuring service quality was above 0.7. The Cronbach's alpha coefficient of the five dimensions of service quality is shown in Table 3.3 below.

**Table 3.3. Reliability analysis**

<b>Measurement</b>	<b>Number of items</b>	<b>Cronbach's Alpha</b>
<b>Tangibility</b>	4	0.871
<b>Reliability</b>	6	0.867
<b>Responsiveness</b>	8	0.852
<b>Empathy</b>	5	0.855
<b>Assurance</b>	5	0.927
<b>Customer satisfaction</b>	3	0.863
<b>Overall reliability</b>	31	0.947

Source: Field Survey 2017

### **3.8.2. Validity Analysis**

Validity is the extent to which differences found with a measuring instrument reflect true differences among those being tested, (Kothari, 2004). In other words, Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. In order to ensure the quality of the research design content and construct validity of the research were checked.

According to Kothari (2004) Content validity is the extent to which a measuring instrument provides adequate coverage of the topic under study. If the instrument contains a representative sample of the universe, the content validity is good. Its determination is primarily judgmental and intuitive. It can also be determined by using a panel of persons who shall judge how well the measuring instrument meets the standards, but there is no numerical way to express it. Based on this definition the content validity was verified by the advisor of this research, who looked into the appropriateness of the questions and the scales of measurement. In addition, a discussion with fellow researchers as well

as the feedback from the pilot survey was used to check the appropriateness of the questions.

A measure is said to possess construct validity to the degree that it confirms to predicted correlations with other theoretical propositions. Construct validity is the degree to which scores on a test can be accounted for by the explanatory constructs of a sound theory. For determining construct validity, we associate a set of other propositions with the results received from using our measurement instrument. If measurements on our devised scale correlate in a predicted way with these other propositions, we can conclude that there is some construct validity (Kothari, 2004). Therefore, in order to test the construct validity, correlation coefficient for the independent and dependent variables was calculated. The independent variables consist of dimensions of SERVPERF model while the dependent is the customer satisfaction. Based on the result of the correlation analysis, the five factors measuring service quality were positively related with customer satisfaction. Since the independent variables are positively related with the dependent variable, the independent variable therefore was considered as a good measure of customer satisfaction.

### **3.9. Ethical considerations**

All information collected from the respondents were treated with confidentiality without disclosure of the respondents' identity. Moreover, no information has been modified or changed, hence information gotten was presented as collected and all the literatures collected for the purpose of this study have been appreciated in the reference list.

The researcher firmly believes that the collection of data from human subjects will raise important ethical considerations. These range from legitimacy to moral issues and usually involves trade-offs between competing pressures in a given situation. A researcher needs to be

mindful of the damage that can occur to themselves, the academic community and to the respondents when undertaking research. In this study, the researcher followed all the ethical procedures. The participants in the study was selected with full consent and informed to respond for questionnaires with confidence and understanding the purpose of the thesis; and the researcher reassured that the collected information will be kept confidential.

## **CHAPTER FOUR**

### **ANALYSIS AND DISCUSSIONS**

#### **Introduction**

In this chapter, the collected data are summarized and analyzed in order to realize the ultimate objective of the study. The purpose of this study is to examine the effect of after sales service quality in the Ethiopian Automotive industry. Accordingly, the demographic profiles of the respondents, the service quality of the company based on the measurements are discussed. At last, summary of the findings are presented.

#### **4.1. Data cleaning and Editing**

Out of 180 Questionnaires distributed to customers 166 questionnaires were returned and found to be valid which accounts 92.22 percent of the total. For technical questions a likert scale within the range of 1 and 5 was applied and to check that there were no outliers a descriptive statistics which shows the minimum and maximum was made and it was found that all answers were within the range of 1 and 5 the results are attached with Appendix3.

#### **4.2. Test of normality of the Data**

The assumption of normality is important to select the data analysis method (Greene, Walls, & Schrest, 1994) . Thus, testing whether the sample data differ significantly from normal is important in addition to sample adequacy.

The normality probability plots were plotted to assess normality and the values of skewness and kurtosis should be zero in normal distribution; positive values of skewness indicate a pile-up scores on the left of the distribution, whereas negative values indicate a pile-up on the right. The

further the value is from zero, the more likely it is that the data are not normally distributed (Field, 2005).

A common rule of thumb test for normality is to run descriptive statistics to get skewness and kurtosis. Skew should be within the +2 to- 2 range when the data are normally distributed. Kurtosis also should be within the +2 to -2 range when the data are normally distributed (Hair, Anderson, Tatham, & Black, 1998).

Normality analysis for the 6 variables was conducted.As a result, all the 6 variables in this study are within +2 to-2 range. That means they are normally distributed.

**Table 4.1. : Normality of distribution using Descriptive statistics**

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Tangibility	166	-.130	.188	-1.312	.375
Assurance	166	.064	.188	-.914	.375
Empathy	166	-.142	.188	-1.139	.375
Customersatisfaction	166	-.560	.188	-.577	.375
Reliability	166	-.355	.188	-.428	.375
Responsiveness	166	-.022	.188	-1.044	.375
Valid N (listwise)	166				

Source: Researcher's Survey, 2017

### **4.3. Descriptive Statistics**

#### **4.3.1. General profile of respondents**

To find out general background of customers of after sales service in MOENCO, NYALA MOTORS and YANG FAN motors, the respondents were asked their Gender, Age, income level, ,Educational Status, occupation, the type of car they own and visiting frequency of the service

center in the last one year. The results obtained from the structured questionnaires are represented on the tables below.

**Table 4.2. Gender profile of the respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	143	86.1	86.1	86.1
Female	23	13.9	13.9	100.0
Total	166	100.0	100.0	

Source: Researcher's Survey, 2017

As shown on the above table from 166 respondents majority of the respondents were male, 143(86.1%) were male and 23(13.9 %) of the respondents are female which shows that activities surrounding the maintenance of a car are left for men.

**Table 4.3 Age of the respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18 - 29	38	22.9	22.9	22.9
30 - 39	45	27.1	27.1	50.0
40 - 49	55	33.1	33.1	83.1
> 50	28	16.9	16.9	100.0
Total	166	100.0	100.0	

Source: Researcher's Survey, 2017

As depicted on the table 4.3 from 166 respondents 38(22.9%) were between 18 to 29 years old. 45(27.1%) of the respondents were between 30 and 39 years old. Whereas 55(33.1%) of the respondents were within the age group of 40 to 49 and the remaining 28(16.9%) were above the age of 50.

**Table 4.4. Education level of the respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
Certificate	39	23.5	23.5	23.5
BA degree and above	44	26.5	26.5	50.0
Valid Diploma	63	38.0	38.0	88.0
Others	20	12.0	12.0	100.0
Total	166	100.0	100.0	

Source: Researcher's Survey, 2017

From table 4.4. Out of 166 respondents 39(23.5%) of them have got certificate, 44(26.5%) of the respondents have got BA degree and above, the majority of the respondents which is 63(38%) have got diploma and the remaining 20(12%) have at least finished their elementary classes.

**Table 4.5 Income level of the respondent**

	Frequency	Percent	Valid Percent	Cumulative Percent
< 5000	21	12.7	12.7	12.7
5001 – 7500	38	22.9	22.9	35.5
Valid 7501 – 10000	75	45.2	45.2	80.7
> 10000	32	19.3	19.3	100.0
Total	166	100.0	100.0	

Source: Researcher's Survey, 2017

Based on Table 4.5. out of 166 respondents majority of them 75(45.2%) are within the income group of 7501 – 10000, 38(22.9%) of them were in the income group of 5001 – 7500, 32(19.3%) of the respondents have got an income of more than 10000 Birr and the remaining 21(12.7%) have got an income less than 5000 Birr.

**Table 4.6. Current occupation of the respondent**

	Frequency	Percent	Valid Percent	Cumulative Percent
Self Employed	72	43.4	43.4	43.4
Private Sector	60	36.1	36.1	79.5
Valid Public Sector	25	15.1	15.1	94.6
Others	9	5.4	5.4	100.0
Total	166	100.0	100.0	

Source: Researcher's Survey, 2017

As shown on table 4.6 from a total of 166 respondents majority of them which accounts 72(43.4%) of them were self-employed, 60(30.1%) of them were engaged in private sector, 25 (15.1%) are engaged in public sector and the remaining 9(5.4%) of the respondents were in other occupations.

**Table 4.7. The type of car the respondent owns**

	Frequency	Percent	Valid Percent	Cumulative Percent
Juke	18	10.8	10.8	10.8
Avanza	73	44.0	44.0	54.8
Valid Lifan530	75	45.2	45.2	100.0
Total	166	100.0	100.0	

Source: Researcher's Survey, 2017

Based on the information on table 4.7. From the total respondents 75(45.2%) were users of Lifan 530 which are customers of YangFan Motors, 73(44%) of the respondents were Avanza car users which are customers of MOENCO and the other 18(10.8%) are Juke brand car users and customers of Nyalala Motors.

### 4.3.2. SERVPERF Dimensions

#### 4.3.2.1 Tangibility

Tangibility refers to the appearance of physical facilities, equipment, personnel and Communication materials. Accordingly the mean value of tangibility is 2.87 and as it can be seen from the Table4.8. Out of the 4 questions asked under tangibility dimension the highest mean score is obtained on the statement which asks about whether service firm gives a certificate for the quality of standards and the lowest mean score is obtained on the statement which asks about the waiting lounge of the service firm.

**Table 4.8. Descriptive Statistics of Tangibility**

	N	Mean	Std. Deviation
This service firm has a convenient entry exit and parking	166	2.8193	1.46593
Materials in the service firm take advantage of technology	166	2.9277	1.55141
This service firm gives a certificate for the quality of standards	166	3.0060	1.45434
The waiting lounge of this service firm is visually appealing	166	2.7470	1.29655
<b>Tangibility</b>	<b>166</b>	<b>2.8750</b>	<b>1.28916</b>
Valid N (listwise)	166		

Source: Researcher's Survey, 2017

#### 4.3.2.2. Reliability

Reliability is the ability to perform the promised service dependably, accurately and consistently. It is performing the service right the first time. It also means that the firm honors its promises. Reliability of

service designates the service firms capability to supply the promised output at the stated level. Accordingly the mean value of reliability is 3.24. The highest mean score is obtained on questions no.6 thus respondents agree that there is a personal information security in the service centers. The lowest mean score is obtained on question no.4 which asks whether the service firm uses original products or not.

**Table 4.9. Descriptive statistics of Reliability**

	N	Mean	Std. Deviation
This service firm provide its service at the time it promised to do so	166	3.2048	1.37738
This service firm keeps accurate records about the vehicle	166	3.3614	1.41916
In this service firm the failures on the vehicle are accurately detected	166	3.1084	1.44400
This service firm uses original products	166	3.0301	1.46649
This service firm is reliable in repairing	166	3.2289	1.35580
In this service firm there is a personal information security	166	3.5241	1.47176
Reliability	166	3.2430	.88184
Valid N (listwise)	166		

Source: Researcher's Survey, 2017

#### **4.3.2.3. Responsiveness**

Responsiveness refers to the prompt response to the service need of the customer and thereadiness of employees to provide service. It is the speed and timeliness of service delivery. This includes the speed of overall services rendered and the ability of the service to respond promptly to customer service requests, with minimal waiting and queuing time. When the customer is kept waiting for no apparent reason creates unnecessary negative perceptions of quality. Conversely, the

ability for the service firm to recover quickly when service fails and exhibit professionalism will also create very positive perceptions of quality. This dimension touched on subjects as information about the request by customers being authorized promptly, communication of new products to customers and handling of customer professionally.

As it can be noted from the table below the mean score of responsiveness is 3.42. The highest mean score is obtained on question number 3. Here majority of the respondents agree that the service firm staffs are never busy to respond to customers responses. And the lowest values were scored on the fourth question which asks about the compatibility of the staffs for their position.

**Table 4.10. Descriptive statistics of responsiveness dimension**

	N	Mean	Std. Deviation
Responsiveness	166	3.4197	.91558
This service firm staffs tell the time the service will be delivered	166	4.2229	.75780
This service firm staffs are always willing to help customers	166	4.3253	.75652
This service firm staffs are never busy to respond to your requests	166	2.8193	1.46593
This service firm staffs are compatible	166	3.0060	1.45434
The staffs in this service firm give attentive service	166	3.0361	1.41375
This service firm staffs give equal treatment to all the customers	166	3.1084	1.44400
Valid N (listwise)	166		

Source: Researcher's Survey, 2017

#### 4.3.2.4 Empathy

Empathy is providing caring and individualized attention to customers to make them feel they are receiving caring services and individualized attention. Service empathy characterizes both the service provider's willingness and capability to respond to individual customer desires. This means putting one's self in the shoes of the customer. The mean score of Empathy is 3.12. Majority of the respondents agree that there are different options to make payments hence the highest mean score is obtained therein. The lowest mean score is obtained on the question which asks whether the service firm offers gifts and promotions.

**Table 4.11.Descriptive Statistics for Empathy**

	N	Mean	Std. Deviation
Empathy	166	3.1205	1.24927
After sales service staffs give you individualized attention	166	3.0361	1.41375
After sales service staffs deliver you a quality service	166	3.1084	1.44400
There are different options to make payments in this service firm	166	3.2289	1.46649
This service firm offers gifts and promotions	166	3.0301	1.35580
After sales service staffs understands the customer's specific needs	166	3.1988	1.46978
Valid N (listwise)	166		

Source: Researcher's Survey, 2017

#### 4.3.2.5. Assurance

Assurance is the knowledge and courtesy of employees and their ability to convey trust and confidence so that the customer feels he or she is in courteous, able and competent hands. It relates to the capability of the service provider to deliver the output, specifically in terms of the knowledge, politeness and trustworthiness of the employees to the customer of the service firm. This dimension is about the behavior and ability of the employees to instill confidence, secure transactions, courtesy of the employees and the knowledge of the employees to answer questions from customers. Accordingly assurance has a mean score of 2.65. The variable which contributes the highest score is the question which asks about the reasonability of the service price and the lowest value was scored by the question which asks about the knowledge of the service staffs to understand about the customers feelings.

**Table 4.12. Descriptive statistics of Assurance**

	N	Mean	Std. Deviation
Assurance	166	2.6470	1.06194
This service firm staffs have sufficient knowledge to understand what you are saying	166	2.5181	1.25395
You feel safe in the after sales service delivery	166	2.6084	1.35635
Staffs in this service firm are polite and courteous	166	2.6205	1.30985
Employees in this service firm give informative explanation for their customers	166	2.6867	1.35671
The price of after sales service is reasonable	166	2.8012	1.45319
Valid N (listwise)	166		

Source: Researcher's Survey, 2017

To summarize the mean and standard deviation of each service quality dimensions is represented in the table below. The service quality dimension with the highest mean score is Responsiveness 3.4197 followed by Reliability 3.2430 Empathy 3.1205 Tangibility 2.8750 and Assurance 2.6470. With this we can infer that the after sales service provided by Ethiopian Automotive service centers is somewhat satisfactory.

**Table 4.13. Descriptive Statistics for Service quality dimensions**

	N	Mean	Std. Deviation
Tangibility	166	2.8750	1.28916
Reliability	166	3.2430	.88184
Responsiveness	166	3.4197	.91558
Empathy	166	3.1205	1.24927
Assurance	166	2.6470	1.06194
Valid N (listwise)	166		

Source: Survey 2017

### 4.3.3. Customer Satisfaction

As explained in the literature review, customer satisfaction involves the fulfillment of customers' anticipation of the goods and services. Customers become satisfied if the performance of the good or service is equivalent to, or even surpasses, the original expectation.

The mean score for the customer satisfaction is 3.3092. from the three questions which contributed for the total mean value the highest score was found on the third question which asks whether the expectations are meet or not in the after sales service department and the lowest score was obtained on the question asked whether the customers fill they do the right thing while choosing the service firm.

**Table 4.14. Overall Customer satisfaction level**

	N	Mean
Customer satisfaction	166	3.3092
Overall I am satisfied with the after sales service of the company	166	3.2831
I feel I do the right thing when I choose this vehicle service company	166	3.0542
The after sales departments service meet my expectations	166	3.5904
Valid N (listwise)	166	

Source: Researcher's Survey, 2017

## 4.4. Inferential statistical analysis

### 4.4.1. Correlation Analysis

**Table 4.15 correlation analysis between after sales service quality dimensions and customer satisfaction**

		Tangibility	Reliability	Responsiveness	Empathy	Assurance	Customer satisfaction
Tangibility	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	166					
Reliability	Pearson Correlation	0.632	1				
	Sig. (2-tailed)	0					
	N	166	166				
Responsiveness	Pearson Correlation	0.88	0.757	1			
	Sig. (2-tailed)	0	0				
	N	166	166	166			
Empathy	Pearson Correlation	0.658	0.816	0.849	1		
	Sig. (2-tailed)	0	0	0			
	N	166	166	166	166		
Assurance	Pearson Correlation	0.23	0.333	0.273	0.313	1	
	Sig. (2-tailed)	0.003	0	0	0		
	N	166	166	166	166	166	
Customersatisfaction	Pearson Correlation	0.66	0.692	0.728	0.729	0.363	1
	Sig. (2-tailed)	0	0	0	0	0	
	N	166	166	166	166	166	166

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

Source: Researcher's Survey, 2017

This study employs correlation analysis, which investigates the strength of the relationships between the studied variables. Pearson correlation analysis was used to provide evidence of convergent validity. Pearson correlation coefficients reveal magnitude and direction of relationships (either positive or negative) and the intensity of the relationship (-1.0 + 1.0). Correlations are perhaps the most basic and most useful measure of association between two or more variables (Marczyk, Dematteo and Festinger, 2005). General guidelines of correlations of .01 to .03 are considered small, correlations of 0.3 to 0.7 are considered moderate, correlations of 0.7 to 0.9 are considered large and correlations of 0.9 to 1.00 are considered to be very large (Marczyk, Dematteo and Festinger, 2005). Depending on these assumptions, all basic constructs were included into the correlation analysis and a bivariate two tailed correlation analysis was done.

the coefficients show that the five factors measuring after sales service quality were all positively related with the customer satisfaction within the range of 0.23 to 0.88, all were significant at  $p < 0.01$  level. Three independent variables Assurance, Tangibility and Reliability show a moderate level of positive relation (0.363, 0.66 and 0.692 respectively) while the other two independent variables Responsiveness and Empathy show a large level of positive relation with customer satisfaction (0.728 and 0.729). Table 4.14 also shows the correlation of the independent variables within themselves. It can be noted that all variables are positively correlated with each other where the strongest correlation goes to the one between Tangibility and Responsiveness (0.88) followed by empathy and responsiveness (0.849) and empathy and reliability (0.816) while the correlation is very small between Tangibility and Assurance (0.23).

## 4.4.2 Regression Analysis

### 4.4.2.1. Diagnosis Test

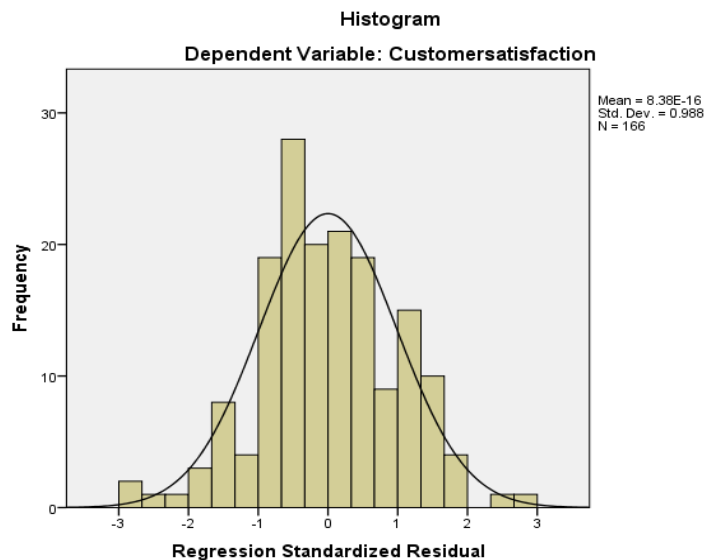
Before running a regression analysis tests were conducted in order to ensure the appropriateness of the data for the assumptions of regression

#### 1. Normality Assumption

Normality of a data should be test before running the regression analysis because multiple regressions require that the independent variables in the analysis be normally distributed. According to Brooks (2008), as cited by Abate (2012) if the residuals are normally distributed, the histogram should be bell- shaped and thus this study implemented graphical methods to test the normality of data. From the Histogram figure it can be noted that 4.1 the distribution is normal curve, demonstrating that data witnesses to the normality assumption.

As the assumption holds as the histogram was a bell- shaped and the residuals were normally distributed around its mean of zero.

**Figure 4.1. Normality test graph**



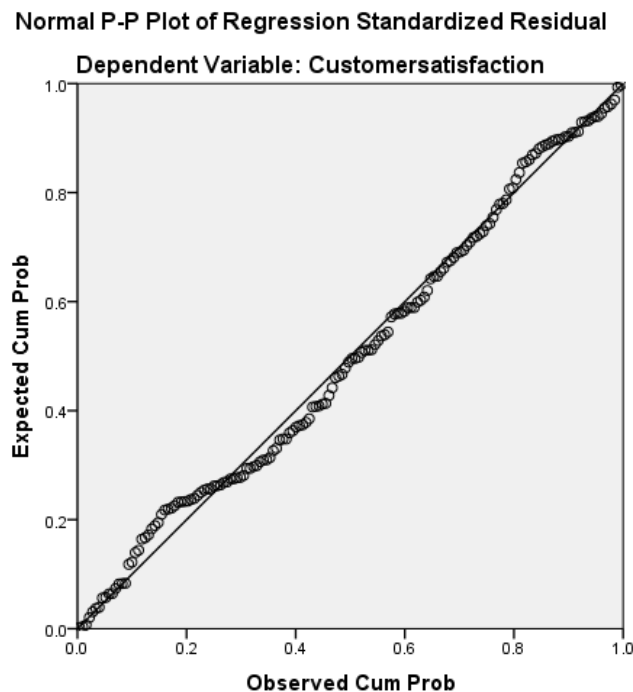
Source: Researcher's Survey, 2017

## 2. Linearity test

Linearity refers to the degree to which the change in the dependent variable is related to change in the independent variable. To determine whether the relationship between the dependent and independent variables the normal probability plots were used to test the normality assumption as shown by the Normal P P-Plot Figure 4.2 as you can see from the graph below.

As shown in the Figure below residuals were normally distributed around its mean of zero which indicates that the data were normally distributed and it was consistent with a normal distribution assumption. As the figures confirmed the normality assumption of the data, this implies that the inferences made about the population parameters from the sample statistics tend to be valid.

**Figure 4.2. Graph of Linearity test**



Source: Researcher's Survey, 2017

### 3. Multicollinearity Test Assumption

In regression, multicollinearity occurs when independent variables in the regression model are more highly correlated with each other than with the dependent variable. When the independent variables in the regression model are highly correlated with one another; they are basically measuring the same thing. In other words, when two variables are highly correlated, they both communicate essentially similar information. One way to assess multicollinearity is to examine correlations among the independent variables. If a correlation matrix demonstrates correlations of 0.90 or higher among the independent variables, they may be a problem with multicollinearity. Hair et al. (2006) argued that correlation coefficient below 0.90 may not cause serious multicollinearity problem, as cited by Muhammed (2012). Multicollinearity can also be detected using tolerance value and variance inflator factor (VIF) value. . Multicollinearity does not exist among all the independent variables provided that the tolerance value of all the independent variables was greater than 0.1 and the VIF values of all the independent variables are also less than 10. As you can see from Table 4.16 below all independent variables are greater than 0.1 tolerance and the VIF value of all the independent variables are also less than 10.

**Table 4.16 :Multicollinearity analysis**

Model	Collinearity Statistics		
	Tolerance	VIF	
1			
	Tangibility	.211	4.738
	Assurance	.884	1.131
	Empathy	.196	5.107
	Reliability	.311	3.219
	Responsiveness	.109	9.214

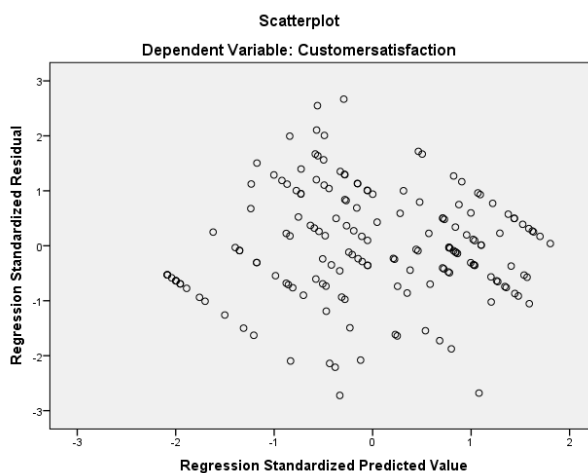
a. Dependent Variable: Customersatisfaction

Source: Researcher's Survey, 2017

#### 4. Homocedasticity

This assumption tells us that for each value of the predictors the variance of the error term should be constant. Said in another way, Homoscedasticity is an assumption in regression analysis that the residuals at each level of the predictor variables have similar variances. That is, at each point along any predictor variable, the spread of residuals should be fairly constant. For a basic analysis, we first plot \*ZRESID (Y-axis) against \*ZPRED (X-axis) on SPSS because this plot is useful to determine whether the assumptions of random errors and homoscedasticity have been met (Field, 2009). The graph of \*ZRESID and \*ZPRED should look like a random array of dots evenly dispersed around zero. If there is any sort of curve in this graph, then, the chances are that the data have broken the assumption of linearity (Field, 2009). As can be seen in the scattered plot below, the residuals at each level of explanatory variables look like they are evenly dispersed around zero and that the graph is not something like cone shaped. Therefore, it is safe to say that this study has no homoscedasticity problem.

**Figure 4.3.Homocedasticity**



Source: Researcher's Survey, 2017

Based on the normality and homoscedasticity tests and the researcher believes that this result from the regression analysis can be used by the automotive industry in Ethiopia.

#### 4.4.2.2. Tangibility

**Table 4.17A. Model Summary of Tangibility**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.660 <sup>a</sup>	.435	.432	.88426	1.425

a. Predictors: (Constant), Tangibility

b. Dependent Variable: Customersatisfaction

Source: Researcher's Survey, 2017

From the regression analysis we can see that here is a positive statistical relationship between tangibility (the independent variable) and customer satisfaction (the dependent variable). As the table below presents the coefficient of determination (R-squared) indicates the proportionate amount of variation in the response variable (customer satisfaction) explained by the independent variable (tangibility) in the linear regression model. The larger the R-squared is, the more variability is explained by the linear regression model. Thus, 43.5% (R Squared=.435) of the variation on customer satisfaction is explained by tangibility.

**Table 4.17B. Coefficient table of Tangibility**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.584	.168		9.418	.000
	Tangibility	.600	.053	.660	11.240	.000

a. Dependent Variable: Customer satisfaction

Source: Researcher's Survey, 2017

On the coefficient table we find the beta value which measures of how strongly each independent variable influences the dependent variable.

Thus a unit increase in tangibles leads to .518 increases in customer satisfaction other things being constant. Therefore the more the after sales service departments invests on its physical facilities equipment, technology and appearance of its personnel the more it satisfies its customers.

#### 4.4.2.3. Reliability

**Table 4.18 A. Model summary of Reliability**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.692 <sup>a</sup>	.479	.476	.84948	1.611

a. Predictors: (Constant), Reliability. Dependent Variable: Customersatisfaction

Source: Survey 2017

As depicted on the table above the result of the regression analysis of the independent variable reliability on the dependent variable customer satisfaction shows existence of positive and statistically significant relationship. The independent variable reliability alone explain (0.479) 47.9% variation.

**Table 4.18B: Coefficients table for Reliability**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1	(Constant)	.325	.252	1.289	.199
	Reliability	.920	.075		

a. Dependent Variable: Customersatisfaction

Source: Researcher's Survey, 2017

On the coefficient table we find the beta value which shows that a unit increase in reliability leads to .92 increases in customer satisfaction other things being constant. The service firms should invest to enhance its ability to perform the promised service dependably and accurately so that the satisfaction level of its customers increases.

#### 4.4.2.4. Empathy

**Table 4.19A Model summary for Empathy**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.729 <sup>a</sup>	.531	.528	.80558	1.609

a. Predictors: (Constant), Empathy. b. Dependent Variable: Customersatisfaction

Source: Researcher's Survey, 2017

As shown on the table above the result of the regression analysis of the independent variable empathy on the dependent variable customer satisfaction shows existence of positive and statistically significant relationship. The independent variable reliability alone explain (0.531) 53.1% variation.

**Table 4.19B. Coefficients table for empathy**

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.174	.169		6.960	.000
Empathy	.684	.050	.729	13.631	.000

a. Dependent Variable: Customersatisfaction

Source: Researcher's Survey, 2017

On the coefficient table above we find the beta value which shows that a unit increase in empathy leads to 0.684 increases in customer satisfaction other things being constant. Therefore the more the Service gives care and individualized attention to customers, the more the customer is satisfied.

#### 4.4.2.5. Assurance

**Table 4.20A. Model summary for Assurance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.363 <sup>a</sup>	.132	.127	1.09618	1.018

a. Predictors: (Constant), Assurance. b. Dependent Variable: Customersatisfaction

Source: Researcher's Survey, 2017

As shown on the table above the result of the regression analysis of the independent variable assurance on the dependent variable customer satisfaction shows existence of positive and statistically significant relationship. The independent variable reliability alone explain (0.132) 13.2% variation.

**Table 4.20B Coefficient table for Assurance**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.247	.229		9.809	.000
Assurance	.401	.080	.363	4.993	.000

a. Dependent Variable: Customersatisfaction

Source: Researcher's survey 2017

On the coefficient table for assurance we find the beta value which shows that a unit increase in assurance leads to 0.684 increases in customer satisfaction other things being constant. Therefore the more the Service gives care and individualized attention to customers, the more the customer is satisfied.

#### 4.4.2.6. Overall regression analysis

**Table 4.21A Model summery**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.786 <sup>a</sup>	.618	.606	.73621	1.616

a. Predictors: (Constant), Assurance, Tangibility, Reliability, Empathy, Responsiveness

b. Dependent Variable: Customersatisfaction

Source: Researcher's Survey, 2017

**Table 4.21B. Regression analysis**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	.252	.291		.866	.388	-.322	.825
Tangibility	.199	.097	.219	2.059	.041	.008	.390
Reliability	.234	.117	.176	2.008	.046	.004	.464
Responsiveness	.135	.179	.112	.754	.452	-.218	.488
Empathy	.288	.104	.307	2.780	.006	.083	.493
Assurance	.141	.057	.128	2.454	.015	.027	.254

a. Dependent Variable: Customersatisfaction

Source: Researcher's Survey, 2017

The coefficient table for service quality dimensions indicates the beta values of the independent variables. From this the regression equation is derived as:

**Regression Equation**

$$Y = a + bX1 + bX2 + bX3 + bX4...$$

$$CS = 0.252 + 0.199Tan + 0.234Rel + 0.288Emp + 0.141Ass$$

Where,

CS = Customer satisfaction

Tan = Tangibility

Res = Responsiveness

Ass = Assurance

Rel = Reliability

Emp = Empathy

In the regression analysis table all explanatory variables significantly and positively affect the dependent variable customer satisfaction at ( $p < 0.05$ ) except the variable responsiveness with a significance level of 0.452 which the  $p > 0.05$  and so the effect of responsiveness on customer satisfaction is insignificant.

As we can see from the Beta coefficient Empathy dimension has the highest contribution to customer satisfaction followed by reliability, tangibility and assurance respectively.

#### 4.4.2.7. ANOVA Results

**Table 4.22: ANOVA results**

Dimensions	Type of Car	Name	N	Mean	F	Sig
Tangibility	Car Type	Juke	18	3.0139	11.85	.000
		Avanza	73	2.9349		
		Lifan 530	75	2.7833		
Reliability	Car Type	Juke	18	3.2963	14.511	.000
		Avanza	73	3.4772		
		Lifan 530	75	3.0022		
Responsiveness	Car Type	Juke	18	3.4074	17.243	.000
		Avanza	73	3.4680		
		Lifan 530	75	3.2445		
Empathy	Car Type	Juke	18	3.0333	19.428	.000
		Avanza	73	3.3781		
		Lifan 530	75	2.8907		
Assurance	Car Type	Juke	18	3.1222	4.409	.000
		Avanza	73	2.6301		
		Lifan 530	75	2.5493		

Source: Researcher's Survey, 2017

As per the findings from the ANOVA table it was observed that there are significant differences in SERVPERF dimensions among the different types of cars from the three companies who participated on the study. The descriptive results of ANOVA table for the tangibility dimension Nyala motors has the highest mean score followed by MOENCO and Yang Fan Motors respectively, and for reliability dimension MOENCO has the highest followed by Nyala motors and Yang Fan Motors, when we look at the responsiveness dimension MOENCO has the highest mean followed by Nyala Motors and Yang Fan Motors, for the empathy dimension MOENCO has the highest mean followed by Nyala Motors and Yang Fan motors, for the assurance dimension Nyala Motors has the highest mean followed by MOENCO and Yang Fan Motors.

## 4.5. Hypothesis Testing

**Table 4.23. Summary of the overall outcome of the regression analysis and hypotheses testing**

<b>Hypotheses</b>	<b>Result</b>	<b>Analysis Technique</b>	<b>Reason</b>
H1: After sales service tangibility has a significant positive impact on customer satisfaction.	H1: Accepted	Multiple Regression	$\beta=0.199$ , $P<0.05$
H2: After sales service reliability has a significant positive impact on customer satisfaction.	H2: Accepted	Multiple Regression	$\beta=0.234$ , $P<0.05$
H3: After sales service responsiveness has a significant positive impact on customer satisfaction.	H3: Rejected	Multiple Regression	$\beta=0.135$ , $P>0.05$
H4: After sales service empathy has a significant positive impact on customer satisfaction.	H4: Accepted	Multiple Regression	$\beta=0.288$ , $P<0.05$
H5: After sales service assurance has a significant positive impact on customer satisfaction.	H5: Accepted	Multiple Regression	$\beta=0.141$ , $P<0.05$

(Source: Researcher's survey, 2016)

## **4.6. Discussion**

This section presents the findings of the study in line with the objectives of the study, with respect to the first objective, to examine the relationship between service quality dimensions and customer satisfaction in the Ethiopian automotive industry, it is found that all service quality dimensions (Tangibility, Reliability, Responsiveness, Empathy and Assurance) had a positive and significant correlation with the dependent variable (customer satisfaction) and this result was consistent with the study made by Minwir A. et al. (2014) in the Saudi Arabian Automobile Company (SAACO).

The second objective of this study was to examine the effect of service quality on customer satisfaction and on the study it is found that four of the explanatory variables (Tangibility, Reliability, Empathy, Assurance) significantly and positively affect the dependent variable customer satisfaction at ( $p < 0.05$ ) and this result was consistent with the findings of Datsomor, H.K. (2012) who conducted a study in 5 Toyota Ghana branches nationwide. And one of the dimensions responsiveness with a significance level of 0.452 in which  $p > 0.05$  was found to have no significant effect on customer satisfaction and this study is also consistent with the study made by Wu Shuqin. And Gang, L. (2012) who conducted an empirical study on the relationship between after sales service qualities in China Automobile sector.

The third objective of the study was to identify the dominant after sales service quality dimension which highly affects customer satisfaction in the automotive industry in Ethiopia and it is found that from the Beta coefficients Empathy dimension is the dominant service quality dimension followed by reliability, tangibility and assurance respectively.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

This chapter winds up the study undertaken so far by giving insights about summary, conclusions, recommendations and highlighting future research areas

#### **5.1 Summary of the Major Findings**

This basic interest of study is to examine the effect of after sales service quality on customer satisfaction in the Ethiopian automotive industry. To satisfy this interest a descriptive as well as inferential analysis were done and the summary of the findings and implications are presented below.

Descriptive statistics showed that

- From the total respondent 45.2% are customers of Yang Fan Motors, 44% were MOENCO customers and the remaining 10.8% were customers of Nyala Motors.
- Descriptive results showed that 86.1% of after sales service customers were male, majority of the customers are below the age of 50, majority of the customers around 64.5% have diploma and above and there was no illiterate. Majority of them around 64.5% have an income level above 7500 Birr per month. Most of the respondents are self-employed.
- The highest mean is scored with Responsiveness dimension 3.4197, followed by Reliability 3.2430 Empathy 3.1205 Tangibility 2.8750 and Assurance 2.6470.
- Overall customer satisfaction on after sales service is above satisfactory level that is 3.3092.

Inferential analysis results

- As correlation results showed all the five dimensions of SERVPERF are positively correlated with customer satisfaction. Empathy is found to

have the highest positive correlation with customer satisfaction (0.729) followed by responsiveness (0.728), reliability (0.692), tangibility (0.66) and that of assurance is (0.363) besides the findings of the inter correlation results show that the highest correlation is between tangibility and responsiveness (0.88) followed by empathy and responsiveness (0.849), and the lowest inter correlation is between assurance and tangibility (0.23).

- The multiple regression analysis tells us that all the explanatory variables together correlate with the dependent variable customer satisfaction at  $R=78.6\%$  and they explain 61.8% or ( $R$  square= 0.618) variation in the level of customer satisfaction.
- To test the hypotheses and also to identify the dominant service quality dimension the researcher has performed a multiple regression analysis and found that empathy is the most dominant dimension followed by reliability tangibility and assurance. This dimension also has the highest beta value. Out of five dimensions responsiveness dimension is found to be insignificant with  $P>0.05$ . While the four dimensions of SERVPERF have a significant and positive effect on customer satisfaction.

## **5.2. Conclusion**

- This study is conducted to examine the effect of after sales service quality on customer satisfaction. Based on the findings of this study there is a positive correlation between SERVPERF dimensions and customer satisfaction.
- Majority of the after sales service customers were male.
- As per the result for the four dimensions whose results were significant (Tangibility, reliability, empathy and assurance) a one unit change in each dimension individually will have 0.518, 0.92, 0.684 and 0.36 unit change in the dependent variable.

- From the mean results of all dimensions (Responsiveness dimension 3.4197, Reliability 3.2430, Empathy 3.1205 Tangibility 2.8750 and Assurance 2.6470) we can say that automotive after sales service customers are somewhat in between dissatisfaction and satisfaction with the service.
- The results obtained from the regression analysis confirm that four out of the five after sales service performance dimensions are significant while responsiveness dimension is insignificant with a significance level greater than 0.05.

### **5.3. Recommendations**

This research has shown the impact of after sales service quality on customer satisfaction in the automotive industry in Ethiopia. The results obtained confirm that four of the service performance dimensions (empathy, reliability, tangibility and assurance) have a positive and significant impact on customer satisfaction. Based on the findings and conclusions of the study the following recommendations are forwarded to the management of after sales service departments.

- As per the findings of the study Empathy dimension was the dominant service performance dimension which highly affects customer satisfaction and also has the highest positive correlation with customer satisfaction however customers were found less satisfied on this dimension as it is clearly put on the mean values. One way of addressing this could be by treating customer with great respect, giving individualized attention to customers, serving customers based on their specific needs and improving its accessibility and by building and arranging working hours in a way it meets the customer's need.
- Reliability is considered as one most important dimension next to empathy dimension. Even though the mean value of this dimension was

not bad but to improve it to a better one after sales service firms should provide the service at the time it promised to, should improve their records about the vehicle and have to use original products and improve reliability in repairing.

- As the service quality dimensions represent 60.8% of the variation in customer satisfaction the after sales service firms should work on all the service quality dimensions to improve and maintain its customer satisfaction and companies should make further studies to find other variables which may affect customer satisfaction other than the above mentioned variables.

#### **5.4. Direction for future research**

This study has covered only three automotive service companies Therefore, it would be better for any forthcoming researchers who want to investigate similar issue including more number of Automobile brands so as to find out other factors that can affect after sales service quality.

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# Appendix

## Appendix 1 English questionnaire

Addis Ababa University College of commerce

Department of marketing management

Dear respondents,

I, TegbarTsegaye, am post graduate student in Addis Ababa University School of commerce in marketing management department. First of all I would like to thank you for spending your valuable time in filling the questionnaire.

I am conducting a research on examining the effect of after sales service quality on customer satisfaction. You are the one who can give the researcher the real picture of services offered by the company. Your responses to the questionnaire will be kept strictly confidential and the information is accessed only by the researcher for academic purpose.

### **Part I**

#### **General Information**

Instruction please put a tick mark  on the most appropriate category against each question

1. Age

A. 18-29

C. 40-49

B. 30-39

D. 50 years and above

2. Gender

A. Male

B. Female

3. Monthly income

A.  5000 and below

B.  5001 - 7500

B.  7501 - 10000

D.  10000 and above

4. Education level

A.  Certificate

C.  Bachelor's Degree and above

B.  Diploma

D.  Others

6. Current Occupation

A.  Self Employed

C.  Public Sector

B.  Private Sector

D.  Others

7. The type of car you owned

A.  JUKE

C.  Lifan 530

B.  Avanza

8. Frequency of visiting the after sales department per year

A.  First time

C.  2 – 3 times

B.  4 – 10 time

D.  More than 10 times

**Part II Perception statements**

**Instruction:** Please put a tick mark  the most appropriate response number against each statement where (1= Strongly Disagree; 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree)

No	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	<b>Tangibles Dimension</b>	1	2	3	4	5
1	The after sales department has a convenient entry exit and parking					
2	The after sales department uses technology					
3	The after sales department gives a certificate for the quality of standards					
4	The waiting lounge of the after sales department is visually appealing					
	<b>Reliability Dimensions</b>					
5	After sales service department provide its service at the time it promised to do so					
6	The after sales department keeps accurate					

	records about the vehicle					
7	The failures on the vehicle are accurately detected					
8	The after sales department uses original products					
9	The after sales department is reliable in repairing					
10	In the after sales department personal information is secured					
	<b>Responsiveness Dimension</b>					
11	The after sales service staffs tell the time the service will be delivered					
12	After sales service staffs are always willing to help customers					
13	The after sales service staffs are never busy to respond to your requests					
14	The after sales staffs are compatible					
15	There is an adequate transportation facility in the after sales service outlets					
16	The after sales service staffs are qualified					
17	The after sales service staffs gives equal treatment to all the customers					
18	The staffs in the after sales service department gives attentive service					
	<b>Assurance Dimension</b>					
19	The after sales service staffs have sufficient knowledge to understand what you are saying					
20	You feel safe in the after sales service delivery					
21	The after sales service staffs are polite and courteous					
22	Employees in the after sales department give informative explanation for their customers					
23	The price of after sales service is reasonable					
	<b>Empathy Dimension</b>					
24	After sales service staffs give you individualized attention					
25	After sales service staffs deliver you a quality service					
26	There are different options to make payments in the after sales department					

27	After sales service department offers gifts and promotions					
28	After sales service staffs understands the customer's specific needs					
	<b>Satisfaction</b>					
29	Overall I am satisfied with the after sales service of the company					
30	I feel I do the right thing when I choose this vehicle service company					
31	The after sales departments service meet my expectations					

**Appendix 2 Amharic Questionnaire**

**አዲስ አበባ ዩኒቨርሲቲ የንግድ ስራ ትምህርት ቤት  
የማርኬቲንግ ማኔጅመንት ዲፓርትመንት**

ውድ የመጠይቁ ተሳታፊዎች፣

ተግባር ጸጋዬ እባላለሁ በአሁኑ ሰዓት በማርኬቲንግ ማኔጅመንት የትምህርት ዘርፍ የሁለተኛ ዲግሪ በመስራት ላይ የምገኝ ሲሆን፣ ይህ ጥናትም የዚህ የድህረ-ምረቃ ትምህርት ማሟያነት ምስራው ነው። የዚህ ጥናት አላማ በኢትዮጵያ በሚገኘው የአውቶሞቲቭ ኢንዱስትሪ ውስጥ የድህረ-ሽያጭ አገልግሎት ጥራት በተገልጋዮች እርካታ ላይ የሚኖረውን ውጤት ለይቶ ለማወቅ ነው። በከባንያው የሚሰጠው የድህረ ሽያጭ አገልግሎት ጥራት ምን ዓይነት መልክ እንዳለው ለአጥኚው የምትገልጹት እናንተ የመጠይቁ ተሳታፊዎች ናችሁ። ስለሆነም እናንተ በመጠይቁ ላይ ለቀረቡት ጥያቄዎች የምትሰጡት ምላሽ በሚስጥር ተጠብቆ የሚቆይ ሲሆን፣ መረጃው ተደራሽ የሚደረገው በአጥኚው ሆኖ ለትምህርት ብቻ የሚያገለግል ይሆናል። በዚህ መጠይቅ ላይ የቀረቡት ጥያቄዎች ለጥናቱ ስኬታማነት ቁልፍ ሚና ስለሚኖራቸው ለሁሉም ጥያቄዎች መልስ በመስጠት ትብብር እንድታደርጉልኝ በትህትና እጠይቃለሁ።

ለምታደርጉልኝ ቀና ትብብር በቅድሚያ ምስጋናዬን አቀርባለሁ።

**ክፍል 1**

**አጠቃላይ መረጃ**

መመሪያ: እባክዎ ለእያንዳንዱ ጥያቄ ተገቢው ምላሽ በቀረበበት ምርጫ ትዩዩ (✓) ምልክት ያኑሩ

1. ዕድሜ  
 ሀ)  18-29                      ለ)  30-39                      ሐ)  40-49                      መ)  50  
 ዓመት እና በላይ
2. ጾታ  
 ሀ)  ወንድ    ለ)  ሴት
3. ወርሃዊ ገቢ  
 ሀ)  5000 እና በታች      ለ)  5000 - 7500      ሐ)  7500 - 10000      መ)  10000  
 እና በላይ
4. የትምህርት ደረጃ  
 ሀ)  ሰርተፊኬት                      ለ)  የመጀመሪያ ዲግሪና ከዚያ በላይ                      ሐ)  ዲፕሎማ  
 መ)  ሌሎች
5. አሁን ያልዎት ስራ  
 ሀ)  በግል ስራ ፈጥረው                      ለ)  የግል ሴክተር                      ሐ)  የመንግስት ስራ  
 መ)  ሌሎች
6. የእርስዎ መኪና አይነት  
 ሀ)  ጂ.ወ.ክ    ለ)  አቫንዥ    ሐ)   
 ሊፋን 530
7. በዓመት የድህረ-ሽያጭ ዲፓርትመንት የጎበኙበት ድግግሞሽ  
 ሀ)  ለመጀመሪያ ጊዜ                      ለ)  4-10 ጊዜያት                      ሐ)  2-3 ጊዜያት                      መ)   
 ከ 10 ጊዜ በላይ

**ክፍል 2 የግል ምልክታ መግለጫዎች**

መመሪያ፡አባባዎ ለእያንዳንዱ ጥያቄ ተገቢው ምላሽ በቀረበበት ቁጥር ትዩዩ (✓) ምልክት ያኑሩ (1=በጣም አልሰማማብኩም፣ 2=አልሰማማብኩም፣ 3=አቋም አልያዝኩም፣ 4=እስማማለሁ፣ 5=በጣም እስማማብኩለሁ)

ተ. ቁ	መግለጫዎች	በጣምአልሰማማብኩም	አልሰማማብኩም	አቋምአልያዝኩም	እስማማለሁ	በጣምእስማማብኩለሁ
	<b>በቁስአካላዊ መግለጫዎች</b>	1	2	3	4	5
1	ይህ ሰርቪስ ማእከል ምቹ የሆነ መግቢያ መውጫና እና ፓርኪንግ አለው					
2	በሰርቪስ ማእከሉ አገልግሎት የሚሰጥባቸው መሳሪያዎች በቴክኖሎጂ የታገዙ ናቸው					
3	በሰርቪስ ማእከሉ የአገልግሎት የጥራት ደረጃ ሰርተፊኬት ይሰጣል					
4	በሰርቪስ ማእከሉ የእንግዶች መጠበቂያ ላውንጅ ስፍራው ለእይታ ማራኪ ነው					
	<b>የአገልግሎት አስተማማኝነት</b>					
5	በሰርቪስ ማእከሉ የቀጠሮ ሰዓት ይከበራል					
ተ. ቁ	መግለጫዎች	በጣምአልሰማማብኩም	አልሰማማብኩም	አቋምአልያዝኩም	እስማማለሁ	በጣምእስማማብኩለሁ
6	በሰርቪስ ማእከሉ ስለተሽከርካሪ ትክክለኛ መረጃ ይቀመጣል					
7	በዚህ ሰርቪስ ማእከል ውስጥ የተሽከርካሪ ብልሽቶች በአግባቡ ይጠናሉ					
8	ይህ ሰርቪስ ማእከል ኦሪጅናል እቃዎችን ይጠቀማል					
9	ይህ ሰርቪስ ማእከል የሚሰጠው የጥገና አገልግሎት አስተማማኝ ነው					
10	በዚህ ሰርቪስ ማእከል ውስጥ የግል መረጃዎች በጥንቃቄ ይያዛሉ					
	<b>ምላሽ አሰጣጥ</b>					
11	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች አገልግሎት የሚሰጥበትን ሰዓት ያሳውቃሉ					
12	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ተገልጋዮችን ለመርዳት ፈቃደኛ ናቸው					
13	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ለተገልጋዮች ምላሽ ለመስጠት ቅድሚያ ይሰጣሉ					
14	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ለተገልጋዮች ምቹ ናቸው					
15	ወደ ድህረ-ሽያጭ ሰርቪስ ማእከሉ የሚያደርስ ተገቢ ትራንስፖርት ፋሲሊቲ ይገኛል					
16	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ለስራው ብቁ ናቸው					
17	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ሁሉንምተገልጋይበእኩልደረጃያስተናግዳሉ					
18	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ለስራው በቂ ትኩረት ይሰጣሉ					

	<b>ማረጋገጫ</b>					
19	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች የሁሉንም ተገልጋይ ጥያቄ ለመረዳት በቂ እውቀት አላቸው					
20	በድህረ-ሽያጭ አገልግሎቱ ስለተሸከርካሪዎች እርግጠኝነት ይሰማዎታል					
21	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ትሁት እና ሰው አክባሪ ናቸው					
22	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ለተገልጋዮች በቂ የሆነ ማብራሪያ እና ገለጻ ይሰጣሉ					
23	የድህረ-ሽያጭ አገልግሎት ዋጋው ተመጣጣኝ ነው					
	<b>ፍላጎትን መረዳት</b>					
24	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ለተገልጋዮች ፍላጎት በቂ የሆነ ትኩረት ይሰጣሉ					
25	በዚህ ሰርቪስ ማእከል ያሉ ሰራተኞች ለተገልጋዮች ጥራት ያለው አገልግሎት ይሰጣሉ					
26	በዚህ ሰርቪስ ማእከል ክፍያ ለመፈጸም ልዩ ልዩ አማራጮች አሉ					
27	በዚህ ሰርቪስ ማእከል ስጦታዎች እና የማስታወቂያ ቅናሾች ይደረጋሉ					
28	በድህረ-ሽያጭ አገልግሎት ማእከል ያሉ ሰራተኞች ስለተገልጋዮች ፍላጎት በቂ ግንዛቤ አላቸው					
	<b>ስለአገልግሎት እርካታ</b>					
29	በአጠቃላይ በኩባንው በሚሰጠው ድህረ-ሽያጭ አገልግሎት ደስተኛ ነኝ					
30	ይህን የተሸከርካሪ ጥገና ማእከል ለመገልገል የወሰንኩት ውሳኔ ትክክል መሆኑ ይሰማኛል					
31	በኩባንው የሚሰጠው ድህረ-ሽያጭ አገልግሎት እንደጠበቅኩት ሆኖ አግኝቼዋለሁ					

### Appendix 3 Descriptive statistics

**Table Descriptive statistics which shows the maximum and minimum results**

	N	Minimum	Maximum
This service firm gives a certificate for the quality of standards	166	1.00	5.00
The waiting lounge of this service firm is visually appealing	166	1.00	5.00
This service firm provide its service at the time it promised to do so	166	1.00	5.00
This service firm keeps accurate records about the vehicle	166	1.00	5.00
In this service firm the failures on the vehicle are accurately detected	166	1.00	5.00
This service firm uses original products	166	1.00	5.00
This service firm is reliable in repairing	166	1.00	5.00
In this service firm there is a personal information security	166	1.00	5.00
This service firm staffs tell the time the service will be delivered	166	1.00	5.00
This service firm staffs are always willing to help customers	166	1.00	5.00
This service firm staffs are never busy to respond to your requests	166	1.00	5.00
This service firm staffs are compatible	166	1.00	5.00
There is an adequate transportation facility in the after sales service outlets	166	2.00	5.00
This service firm staffs are qualified	166	1.00	5.00
This service firm staffs give equal treatment to all the customers	166	1.00	5.00
The staffs in this service firm give attentive service	166	1.00	5.00
This service firm staffs have sufficient knowledge to understand what you are saying	166	1.00	5.00
You feel safe in the after sales service delivery	166	1.00	5.00
Staffs in this service firm are polite and courteous	166	1.00	5.00
Employees in this service firm give informative explanation for their customers	166	1.00	5.00
The price of after sales service is reasonable	166	1.00	5.00
After sales service staffs give you individualized attention	166	1.00	5.00
After sales service staffs deliver you a quality service	166	1.00	5.00
There are different options to make payments in this service firm	166	1.00	5.00

This service firm offers gifts and promotions	166	1.00	5.00
After sales service staffs understands the customer's specific needs	166	1.00	5.00
Overall I am satisfied with the after sales service of the company	166	1.00	5.00
I feel I do the right thing when I choose this vehicle service company	166	1.00	5.00
The after sales departments service meet my expectations	166	1.00	5.00
Valid N (listwise)	166		

## Appendix 4 Overall Cronbach Alpha

**Table: Cronbach Alpha Results for each questions**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
This service firm provide its service at the time it promised to do so	93.4157	703.796	.084	.950
This service firm keeps accurate records about the vehicle	93.2590	705.987	.051	.951
In this service firm the failures on the vehicle are accurately detected	93.5120	648.203	.837	.943
This service firm uses original products	93.5904	656.389	.709	.945
This service firm is reliable in repairing	93.3916	661.052	.702	.945
In this service firm there is a personal information security	93.0964	663.276	.612	.945
This service firm has a convenient entry exit and parking	93.8012	654.088	.741	.944
Materials in the service firm take advantage of technology	93.6928	650.772	.741	.944
This service firm gives a certificate for the quality of standards	93.6145	657.063	.706	.945
The waiting lounge of this service firm is visually appealing	93.8735	666.911	.646	.945
This service firm staffs tell the time the service will be delivered	93.8012	654.088	.741	.944
This service firm staffs are always willing to help customers	93.5843	649.190	.842	.943
This service firm staffs are never busy to respond to your requests	93.5120	648.203	.837	.943
This service firm staffs are compatible	92.6988	686.600	.464	.947
There is an adequate transportation facility in the after sales service outlets	92.4578	698.116	.277	.948
This service firm staffs are qualified	93.6145	657.063	.706	.945
This service firm staffs give equal treatment to all the customers	93.1928	663.817	.643	.945

The staffs in this service firm give attentive service	93.2048	702.806	.100	.950
This service firm staffs have sufficient knowledge to understand what you are saying	94.1024	686.905	.355	.948
You feel safe in the after sales service delivery	94.0120	685.588	.343	.948
Staffs in this service firm are polite and courteous	94.0000	683.806	.384	.947
Employees in this service firm give informative explanation for their customers	93.9337	682.293	.391	.947
The price of after sales service is reasonable	93.8193	683.797	.341	.948
After sales service staffs give you individualized attention	93.5843	649.190	.842	.943
After sales service staffs deliver you a quality service	93.5120	648.203	.837	.943
There are different options to make payments in this service firm	93.5904	656.389	.709	.945
This service firm offers gifts and promotions	93.3916	661.052	.702	.945
After sales service staffs understands the customer's specific needs	93.4217	652.997	.754	.944
Overall I am satisfied with the after sales service of the company	93.3373	654.649	.765	.944
I feel I do the right thing when I choose this vehicle service company	93.5663	666.853	.661	.945
The after sales departments service meet my expectations	93.0301	663.011	.656	.945