



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

**ASSESSMENT OF FACTORS AFFECTING INCOMING CALLS  
AT ETHIOPIAN ELECTRIC UTILITY CALL CENTER**

**BY**

**MUEZ YIHDEGO  
SGS/0254/2009A**

**JUNE, 2018  
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**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF  
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## **DEDICATION**

This work is dedicated to my mom W/ro Worku Kabsay, who sacrificed everything for who I am today and who left me forever at the time I could start to pay her back.

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## LIST OF ACRONYMS

CBE	Commercial Bank of Ethiopia
CC	Call Center
CCO	Chief Customer Officer
CCSO	Chief Customer Service Officer
EEP	Ethiopian Electric Power
EEU	Ethiopian Electric Utility
EEPCo	Ethiopian Electric Power Corporation
ELPA	Ethiopian Electric Light and Power Authority
FCR	First Call Resolution
HIC	High Incoming Calls
ICMI	International Customer Management Institute
ICT	Information and Communication Technology
IPCC	Internet Protocol Call Center
IVR	Interactive Voice Response
SPSS	Statistical Package for Social Science
TTMS	Trouble Ticket Management System
KB	Knowledge Base
KPI	Key Performance Indicator
REG	Rwandan Energy Group

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## ABSTRACT

*The aim of this study was to analyze the factors for incoming calls at Ethiopian Electric Utility (EEU) call center. Ethiopian Electric Utility call center receives high number of calls and is unreachable as a result. Several customers are heard complaining on different media about Ethiopian Electric Utility service provisioning. The study was focused mainly on employee perspective. The study was made at EEU call center located at Jemmo area. The call center has 159 employees (agents) and all the 159 agents of the call center were considered for the study. Questionnaire survey was used to collect response from agents. Additionally, three management members of EEU who supervise the call center operation were interviewed. To gain an insight on customer perspective, three customers who represent big enterprises, government organizations and residential customers, respectively, were interviewed. Data was also collected through researcher's observation and from statistical report of the call center. Both primary and secondary data were used. Mainly SPSS version 20 was used for data analysis and excel 2016 is used as well to analyze the call center statistical report. The result showed that the highest two reasons for call to the call center are power interruption and fallen electricity pole. The top two factors for high incoming calls are unavailability of adequate information in the call center and inability to address the root causes of customers' problems. EEU call center is accessible through telephone channel only. The suitable channel options to implement at EEU call center are self-service, SMS, web chat and email. First call resolution is found to be very low and it is not measured by the call center. It is concluded that even if EEU receives high incoming calls to its call center, the company is poor on making efforts to minimize the calls. To reduce incoming calls, it is recommended that EEU should focus on providing permanent solution to repeated problems such as rehabilitation of old power cables and preventive maintenance of old transformers. Another recommended intervention is to equip agents with relevant information about EEU services and products such as procedure to subscribe for new services. Implementing multi-channel service is among main recommendations of the researcher. The recommended access channels are self-service, social media and email.*

**Key words:** *call center, access-channel, root cause, FCR, power interruption, information adequacy*

# CHAPTER ONE

## INTRODUCTION

### 1.1. Background of the Study

According to Goyal *et al.* (2016), service sector is the largest and fastest growing sector globally; contributing more to the global output and creating more jobs than any other sector. At present, it is not easy for organizations to satisfy their customers as customers' expectations are growing rapidly. According to the American Express (2014), only 62% customers believe companies meet their customer service expectations. Customers compare their service providers not only with direct competitors but also with any good experience they come across; it could be a retail shop or a hotel (Hyken, 2016). It is not enough to meet customer demand; going ahead of customers' expectations is required (ibid).

To survive in the growing business competition, organizations must understand what customers need and should serve them efficiently. Organizations have to address customers' issues proactively than waiting for them to complain or to terminate their service (Faulkner, 2003). In all aspects, organizations are required to define clear processes which can help the employees impress customers (Whitford, 2010). As a result; organizations are becoming more and more customer oriented.

Customers are having the upper hand than ever and demanding higher and higher services. The big companies which provide excellent customer services educate customers to expect higher (Hyken, 2016). Customers do not want to wait too long while calling their service providers. Clark (2014) stated that while contacting their service providers, customers are willing to wait less than five minutes only. Similarly, customers are demanding contact channel choices in addition to the traditional telephone channel. Email and web chat have already become among basic channels (Faulkner, 2003; Bliss, 2006; Call Center Helper, 2017). So, the importance of building excellent customer service is increasingly crucial. The number of customers who use social media is growing from time to time (Statista, 2018; Hyken, 2016).

Customer service is a key domain which serves as a competitive advantage for service providers in different sectors. Rech (n.d.) cited in Peppers and Rogers (2004) described that telephone call has been the main channel of interaction between customers and service providers for long time and it still is the major one (ContactBabel, 2017; Call Center Helper, 2017). According to ContactBabel (2017), in USA, 68% of incoming transactions come through telephone channel. Especially for complex requests, the majority of customers choose to speak to call center agents (America Express, 2014). This results in increase of incoming calls to call centers. The rising cost of call centers is also a concern for many organizations (ibid). However; other channels have also become basic requirements of organizations. Customers are increasingly migrating to self-service channels with which they can handle their issues without the support of employees (Hyken, 2016). Besides, customers using social media for complaint are increasing (Blunt and Wilson, 2013). Efficient implementation of multiple channels helps to reduce incoming calls. Alorica (2007) stated that reducing call volume helps to increase efficiency and satisfy customers. Fewer calls do mean lower costs as well as happier customers.

Ethiopian Electric Utility (EEU) was re-established in 2014 acquiring the authorities and obligations of the previous Ethiopian Electric Power Corporation (EEPCo). Ethiopian Electric Light and Power Authority (ELPA) which was founded in 1956 is the predecessor of EEPCo. EEU is a government owned company-established to handle the distribution and service of electric energy all over Ethiopia. (The world folio, 2017; EEP, 2017).

EEPCo was managing all power related activities such as generation, distribution as well as end user service. However, since the formation of EEU, the power generation and power distribution duties are split and two autonomous organizations are established. EEU is responsible for the power distribution to customers as well as service& maintenance management. The utility has to distribute the generated power and sell electrical energy to consumers in line with the policies and priorities of the Ethiopian government. EEU is the only electric service provider in Ethiopia with more than 12,000 employees and more than 2.5 million customers (ibid).

As the researcher was not able to access EEU website at different times, information from key informants and EEU's social media account is used here. EEU has a call centre accessed through 905. The call centre is located at Addis Ababa, Jemmo area. It operates with 50 seats and 159 agents. Call Centre 905 is free of charge and serves in two shifts during the day and evening time.

The researcher has attempted to use the call centre service and most of the time it is inaccessible. The key informants also stated that the call centre receives high incoming calls.

EEU has presence on Twitter and Facebook with 220 followers in twitter as well as 3,125 likes and 3,176 followers in Facebook, respectively, as of May 12, 2018, (Twitter, 2018; Facebook, 2018). Compared to the number of customers, the number of followers is small. Besides, these two social media accounts do not have link with the call centre team and they are administered by other teams. EEU frequently posted on their Twitter and Facebook pages that they are experiencing repeated power interruption for different reasons. This research attempts to assess the major factors that affect incoming calls at EEU call centre.

## **1.2. Statement of the Problem**

It is difficult to think of our world without electricity. The manufacturing sector, the financial sector, the ICT industry, the home appliances, government and private organizations, the train industry, the school, the hospital, all require electricity to operate and provide the intended service. So, there is no doubt that electricity is one of the key necessities in our day to day life (Lindeman, 2015). Therefore, customers demand uninterrupted power supply. When there is interruption, customers demand very quick resolution and they cannot wait to contact their service provider.

Reports and customer feedback on different media show that customer service practice of EEU and many other organizations in Ethiopia is poor (The Ethiopian Herald, 2017; AllAfrica.com, 2017). Customers of different sectors are not treated well; there is a reversed attitude where the customers carefully treat their service providers' employees to be well served. According to the observation of the researcher and feedback from key informants in Commercial Bank of Ethiopia (CBE) and EEU, several service organizations do not have call center or if they have their call centers are not accessible.

Ethiopian electric utility has established a call center with an access number of 905. The organization tries to receive customers' complaints mainly via the call center. However; it is common to hear that the call center is inaccessible and not customer friendly. The researcher can also witness the inaccessibility problem in the call center based on personal experience with the

center. In March 2018, the researcher made an attempt to reach the call center to ask for nearby EEU shop/center and below is what happened.

On the first attempt, the researcher had to call 7 times to reach the Call Center's IVR. Then, the IVR informed that there are 66 customers ahead. The researcher waited for 5.32 minutes to talk to an agent. Then the researcher asked for a nearby center to recharge prepaid EEU card, the lady transferred the researcher to another employee who then informed him that he does not know. A call of seven times ended up with no solution. As the first attempt did not bring the needed solution, the researcher had to call again to try for better information. On the second time, it took the researcher 11 attempts to reach the IVR queue. Then, another lady responded. She was politer than the previous two employees but again there was no information about the nearby center. She advised the researcher to search for EEU branch around.

In short, for the same case, the researcher had to make 18 attempts and finally there was no information. One of the possible reasons could be high incoming calls which do not match with the available resource. If a call center is not accessible, customers have to call again and again to reach it or have to search for physical service centers (branches) instead. Besides, the researcher did not find alternative contact channels such as email or web chat to contact EEU call center.

Several publications are made on call center area worldwide. However; the researcher found only a few unpublished studies made on Ethiopian call centers. But the topic of the researcher is not directly addressed on all of them. A study was made by Yirga (2013) on the complaint handling practice of ethio telecom at two zones and the service center. Yirga's study showed that ethio telecom's call center was not accessible and customers did not get timely response for their complaints. Yirga's (2013) study did not specifically address factors that affect incoming calls. Another study made by Tesfaye (2015) was focused on the impact of job stress on turnover intentions and found out that there was high job stress and turn over in ethio telecom call center. Similarly, Tesfaye's (2015) research did not address factors that affect incoming calls. Therefore; the researcher was interested in this topic to bridge the current gap on the area by assessing the factors which possibly affect incoming calls at 905 call center (EEU call center) mainly on employee perspective.



### **1.3. Research Questions**

The study attempts to answer the following questions:

- a) What are the major call reasons to EEU call center?
- b) What are the factors contributing to incoming calls in EEU call center?
- c) What would be the possible channels to handle EEU customers' requests?
- d) What are the methods to reduce calls in EEU call center?
- e) What is the level of issue resolution at first call in EEU call center?
- f) What is the level of information adequacy at EEU call center?

### **1.4. Objectives of the Study**

#### **1.4.1 General Objective:**

The general objective of this study is to examine the cause of high incoming calls in Ethiopian Electric Utility call center.

#### **1.4.2 Specific Objectives:**

The study attempts to achieve the below specific objectives:

- a) To identify the major call reasons to EEU call center.
- b) To assess the factors contributing to incoming calls in EEU call center.
- c) To examine the possible type of channels to handle EEU customers' requests.
- d) To assess the methods to reduce incoming calls to EEU call center.
- e) To assess the level of information adequacy at EEU call center.
- f) To assess the level of information adequacy at EEU call center.

### **1.5. Significance of the Study**

First of all, the study will attempt to provide contextual contribution to the current body of knowledge on the subject. Several authors have made researches and produced articles with regard to call center and incoming calls in different parts of the world. However, the topic is not widely researched in the Ethiopian context. The researcher found few unpublished literatures on issues related to call centers in Ethiopia; but they do not deal with factors to incoming calls. So, this study attempted to bridge this gap and contribute to the body of knowledge in Ethiopian context.

Ethiopian Electric Utility claims that it is striving to achieve service excellence and satisfy its customers in the coming years. Therefore; this study would serve as good input for improvement on the call center area by informing the factors for high incoming calls and methods to reduce calls.

The study can also serve as additional reference for future researchers on the topic, especially, for those who are interested in Ethiopian situation.

## **1.6. Scope of the Study**

The scope of this research is delimited to assessing the causes of incoming calls at EEU Call Center. The utility has a centralized national call center located in Addis Ababa, at Jemmo area, and the study mainly focused on this center. All 159 agents of EEU call center were surveyed and 3 people from management team were interviewed. Besides, 3 customers were interviewed. Both primary and secondary data were collected and used.

## **1.7. Limitations of the Study**

The study has some limitations. Because of cost and time limitation, the scope of this study focused on EEU call center only. So, it might be difficult to generalize the findings to other organizations. Other researchers might carry out a similar study on other call centers. The researcher did not find researches made on the subject matter in Ethiopian context and is unable to include the same in empirical literature. Despite the above limitations, the research can contribute to body of knowledge on the stated topic as mentioned on the ‘significance of the study’.

## **1.8. Organization of the Study**

This research document has five chapters. *Chapter One* introduces the work of the researcher and contains the background of the study, statement of the problem, objective (both general and specific), scope, significance of the research and ethical considerations. *Chapter Two* presents literature review and discusses the different subtopics around the topic of the study. *Chapter Three* explains the research methodology followed in this

research. The research design, population and sampling techniques, data collection and analysis methods are discussed under this chapter. The *fourth chapter* presents the results and discussion and finally *Chapter Five* presents conclusion and recommendations of the researcher. References and appendices are appended at the end of the last chapter.

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### 2.1. Theoretical Reviews

##### 2.1.1. Operational Definition of Terms

**Call center:** is a center where customers call to and get information from or submit compliant.

**Agents:** are employees in call center that handle customer calls.

**IVR** –is the recorded voice customers hear before they reach agents.

**Multi-channel:** means several channel options that customer can access call center through.

**Inbound/incoming calls:** are calls that originate from customer to call center.

**Outbound calls:** are calls that originate from call center and destine at customers.

**Knowledge Base:** is a technology to upload information about products, services and procedures to assist employees.

**905:** is a number through which customers call and access EEU call center.

##### 2.1.2. Conceptual Views

###### 2.1.2.1. Customer Expectations from Service Providers

Customers visit business organization or service providers to buy a product or service they want (Doane and Sloat, 2003). Customers want to get what they need when they needed it at a certain quality and price. The electric industry is not an exception in terms of the above points. According to Cohen (2004), customers are demanding higher electric service reliability and lower prices. Doane and Sloat (2003) stated that a service provider must have an appetite for delivering excellent customer service. If the customer is not the central concern of your organization, after all, you may not have an organization to be concerned about. It is the job and goal of the service providers to carefully understand their customers and resolve the problems faced by their customers (Bliss, 2006; Cohen, 2004; Hyken, 2016).

In the present world, customer satisfaction is very crucial for subsistence and growth of any organization (Shahin *et al.*, 2010; Goyal *et al.*, 2016). Business cannot continue unless it satisfies its customers. Every customer has its own unique request and must be treated accordingly by the

organizations. Business organizations have to be aware that customers tend to speak more about their negative experiences than positive ones. America Express (2012) explained that on average consumers tell 8 people about their good experiences and to 21 people about their bad experiences. Bad experiences expand much faster than good ones (Clark, 2014). Like any other business organization, electric service utilities also must provide reliable and affordable electric power and related services. However, many utilities, today, still do not comprehensively understand what customers need. This includes service, information sharing, communications, and dispute resolution (Cohen, 2004).

Service providers need to make sure their departments out of the call center pay attention to the feedback their call centers collect from customers. They need to understand that the call center is there to represent their organization and serve as a bridge with the customers. However; recent surveys showed that the number of people who have negative attitude towards call center is increasing. Professionals who consider call center as “a nuisance”, “a necessary evil” or a cost center is growing (Call Center Helper, 2017).

#### **2.1.2.2. Customer Service as Top Priority**

Cohen (2004) stated that customer service must be the top priority in the utility organizations. Customer service team listens to customers' pain every day and they are the ones to drive the organization to understand this pain and respond positively towards it. According to Whitford (2010), customer service is expected to manage expectations and feelings of customers by building excellent processes. Customers are more and more aware of service quality and are demanding higher. Therefore; organizations are required to deal with this fact and serve customers efficiently (Goyal *et al.*, 2016). According to Doane and Sloat (2003), organizations should value customers and make them the number one focus of their organization.

No excuse that hinders the delivering of excellent customer service works. Friedman (2005) stated that one should not argue with customers as there is no benefit out of it. All you need is to understand the customers' feedback and work hard to serve at their expectation. However, it is also crucial to be aware that service excellence is not a last stop but a long journey. One cannot say that he/she has achieved service excellence. They can only keep improving at all times and exceed customers' expectations as much as possible. This is not an easy task and is possible only

through high commitment of the management and employees of organizations. It takes to prioritize customer service and convince your employees to really care and be willing to go the extra mile (Failte Ireland, 2013). Customers perceive excellent customer service if they are served by knowledgeable employees who can provide adequate response to their queries. (Clark, 2014).

According to Goyal *et al.*, (2016), customers are conscious of the whole life cycle they interact with their service providers and organizations need to take care of every contact with their customers. While doing this, companies should understand that there are two extreme risks in handling customers' issues (Bliss, 2006). One is when no one in an organization cares about customers' issues. In this case, customers complain every time and no one addresses their concerns. Incoming calls to call center can also increase here. The second extreme is when everyone makes effort to resolve the same issue. Even if it is good that everyone is focused to address customers' issues, there might exist duplication of efforts thereby causing inefficiency (*ibid*). Therefore; to manage customer accountability across an organization, one should define clear metrics for each department to show them what to deliver for the customer.

### **2.1.2.3. The Role of Call Centers in Customer Services**

The need for customer service is mainly to deal with the possible poor experience companies deliver and to manage such dissatisfied customers. A large number of agents are assembled to handle incoming calls from them (Bliss, 2006). Customers want their calls to be taken quickly and get adequate response. They hate queuing in long virtual lines.

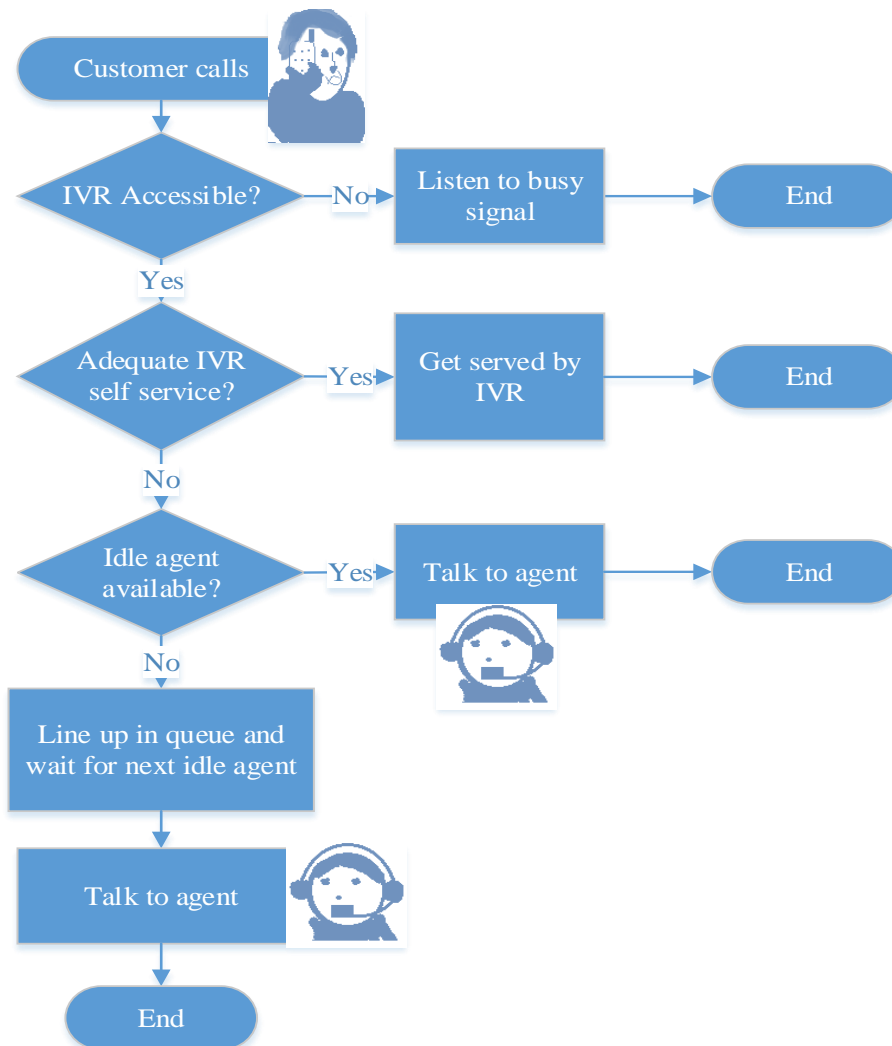
According to Faulkner (2003), at old times, the options for customers to contact their service providers were either to wait for opening hour to enter a shop or submitting letter. That time is over long ago. Call centers are playing a vital role in today's business globally (Shneppe and Sedols, 2010; Aksin *et al.*, 2007). The industry has given work opportunity for millions of people around the world (Aksin *et al.*, 2007). In 2008, USA alone had 47,000 call centers and 2.7 million agents. Where as in Europe, Africa and the Middle East there were 45,000 call centers and 2.1 million agents (Gwuowo, 2010). This is because call center has become a necessary department for any utility operation (Cohen, 2008). Pepper and Rogers (2004) stated in their book that among the important changes Northeast Utilities (now, Eversource Energy) made is redesigning the call center to be customer focused and training its agents to be polite while serving customers.

Alorica (2017) stated that contact centers are often the frontline when it comes to influencing customer perceptions. Doane and Sloat (2003) mentioned that a customer relationship developed over years can be destroyed in seconds of conversation with a call center agent if poorly handled. So, the telephone conversation with each customer represents a very important link between the customer and the organization. Each conversation with the customer has to be made with enthusiasm and never in monotone or robotic manner (ibid).

#### **2.1.2.4. IVR and Call Flow**

Interactive voice response is a media the customer reaches while calling a call center. Sometimes, customers may hear busy signals which means they are not yet in the IVR. This is infrequent (Ugwuowo, 2010). While reaching the IVR, customer listens to recorded information which is common to all callers. Many IVRs also have self-services where customers can make complete transaction by themselves without reaching agents. If customers want to talk to agents, they are queued in the IVR until the next idle agent is available to handle them (Ugwuowo,2010; Aksin, 2007). Below is general call flow remodeled by the researcher after reading different literature. Customers can abandon calls at any step of the flow.

Figure 1: General Call flow



Source: Own construction based on Ugwuowo, 2010; Aksin, 2007 and observation on Ethio Telecom, Ethiopian Air Lines, CBE and EEU call centers' IVRs.

#### 2.1.2.5. Customer Service Contact Channels

Faulkner (2003) stated that it is not a progression but a part of basics for a call center to be accessed through different channels such as telephone, e-mail, web site, letter, fax, and SMS. (Knox et al., 2003) also mentioned that internet, call center, post and branches are the contact options for customers. However; according to Peppers and Rogers (2004), the number of organizations that use to interact with their consumers through telephone and web site is increasing from time to time.

Availing alternative channels has crucial role in successfully minimizing volume of incoming calls. It is also a matter of creating convenience or choice for the customers. Customers should



not be forced to contact through only one channel, they need choices to use according to their preferences (Lorenz et al., 2014; Cohen, 2004; Hyken, 2016). Therefore; organizations shall implement the needed technology and appropriate structure to establish and manage the channel combination. According to ContactBabel (2017), close to 25% of call center doings is via digital channels. The world has progressed from single channel to multichannel and now to omni-channel (ibid). To encourage customers to use less costly channels, it is needed for organizations to work on the behavior of consumers and agents (ContactBabel, 2017; Hyken, 2016). Besides, services provided through the different channels must be the same.

The American Electric Power company (AEP) in Ohio has email and telephone contact channels and also is available at Facebook and Twitter (AEP Ohio, 2015). A self-service is available to report power outage, to follow up the status of a reported case, manage personal account and other services. AEP also has a mobile application. AEP posts frequently asked questions (FAQs) on their website. There is a dedicated telephone contact number for business customers other than the residential one. “Customers represent different levels of value to the enterprise and they have different needs from the enterprise” (Peppers and Rogers, 2004). A dedicated call center access number must be in place for business customers as they should not equally queue with individual customers. Among the reasons of contact for AEP customers are power interruption, information request, smart meter related, bill related, new connection, rates and tariffs, maintenance status and safety (AEP Ohio, 2015).

The Rwandan Energy Group (2018) is available to its customers through telephone (both call center and a fixed phone number), email, Twitter, Facebook, website, postal address and physically through branches. Besides, the Rwandan Energy Group (REG) has also posted the name, telephone and email contact of all branch managers in its website.

The contact channels namely; voice, email, web chat are expected to continue with a big share despite the massive introduction of social media. However, the global trend is showing that more and more customers are using social media to inform or complain on their service providers (Blunt and Wilson, 2013). According to Clark (2014), consumers make use of different channels to reach their service providers. For easy requests, customers prefer reporting via company websites, text messaging and social media whereas for more serious inquiries, customers choose

talking to agents (ibid). Customers like companies that are able to provide unified customer experience and manage properly (Bliss, 2006).

According to the Call Center Helper (2017), through time, customers are shifting from using websites, voice channel (phone) and letter towards using emails. The number of customers who use email to contact their service providers is increasing more than other channels as it needs less effort and could be read at any suitable time. The top three channels which are expected by call center professionals to grow quickly are web chat, mobile app and social media (ibid). 70% of public sector and 85% of service sector call centers either use mobile app or consider implementing it in a year or so (Contact Babel, 2017). 75% of customers search online for an answer to their customer service issue which implies that this volume of customers can be handled by self-service system (Alorica, 2017).

#### **2.1.2.6. Call Center Parameters**

There are several call center parameters mentioned in several literatures; but the researcher states the main ones which are referred frequently as below.

##### **a) First Call Resolution (FCR)**

McCullen (2017) specified that first call/contact resolution is a key performance indicator which measures the ability of call centres to address consumer issues at first contact. It is computed by dividing the number of calls addressed at first interaction by the total incoming calls and multiplying by 100 percent. Callers does not want to make repeated calls for the same case. They want solution at first call (ibid).

ICMI (2011) stated that the importance of first call resolution is increasing as it has higher impact on customer satisfaction than any other KPI. High first call resolution implies higher efficiency and lower costs as well as customer satisfaction. It reduces volume of incoming calls as customers do not need to call again for the same case (McCullen, 2017; Lorenz. et al., 2014; ContactBabel 2017). Identifying repeated calls and addressing the root causes of them can enhance FCR. High FCR results in less volume of calls which then results in less work load and less cost. It is also good for agents as they face less annoying calls.

### **b) Average Handle Time (AHT)**

ContactBabel (2017) mentioned that average handling time is a traditional and very old indicator which is easy to measure and is still used by several call centres. However; these days, due to the fact that every call from a customer is different and takes different length of time to be addressed, the focus given to average handling time is declining. Average handle time must be a reasonable one and not very short or very long (ibid). When it is very long, it implies agents are not well trained. When very short, it implies agent is running to close the conversation quickly without giving sufficient response which then results in repeated calls. Addressing some customer issues through self-service which could be via IVR, website or SMS is a solution to reduce AHT (Watkin, 2018; Peppers and Rogers 2004; Alorica, 2017).

### **c) Customer Satisfaction (CSAT)**

This metric measures the satisfaction level of customers on their service provider. Measurement is made based on direct feedback from customers. Threshold of the level of customers' happiness before buying more services and level of unhappiness before leaving an organization is still without common consensus. Customer satisfaction is a KPI that all service providers need to have. However; it is clear that high customer satisfaction results in customer loyalty and higher profit and lower satisfaction follows with the loss of customers (ContactBabel, 2017; McCullen, 2017; ICMI, 2011). Some organizations use net promoter score (NPS) instead of customer satisfaction.

### **d) Service level/ Efficiency**

This is a commonly used KPI that measure the length of time consumers wait before talking to an agent. Majority of call centres intend to have low waiting time (Evenson et al., 1999; Watkin, 2018; ContactBabel, 2017). According to ICMI (2011), service level measures the accessibility of a call centre to customers. The KPI is expressed as how many of calls are answered in how many seconds. It is important to achieve the same service level all over the day (ibid). Otherwise, the call centre will be accessible in some part of the day and inaccessible later on. Even if there is no industry standard for any call center KPI, Seyrafiaan (2018), described that 80-20 (meaning 80% of calls answered in 20 seconds) is a common service level in many call centers. According to key informants, Ethio telecom call center also adopted the same KPI.

### **e) Calls Per Day**

This KPI measures the number of calls an agent handles per day. The objective of the metric is to measure the productivity of employees (McCullen, 2017). The important issue to consider in relation to this KPI is while focusing on the volume of work, quality of service should be given due attention.

#### **2.1.2.7. Factors Affecting Incoming Calls**

According to Ernst and Young (2009), 25-30% of calls arriving to call centers are those which could have been avoided. These are calls coming as a result of non-customer friendly offers, checking status of reported issues and customers calling again for unsolved problem. This implies higher calls, higher cost and low customer satisfaction.

It is crucial for organizations to understand the factors of the calls coming to their call center so that they can be able to address them proactively. However; several organizations do not recognize what call reasons their call center is receiving, the root cause of the calls, the performance of their employees and the level of call transfers (Lorenz et al., 2014).

Unable to address the root cause of customers' issues could allow both repeated and increased calls. One of the reasons why quick action is not taken on customer feedback is that the reports submitted to executives are often not complete and not clearly indicating the volume and trend of issues. (Bliss, 2006; STI Knowledge, 2004). Many companies manage to collect a pile of customers' feedback but fail to reduce, eliminate or justify the customers' frustration they receive. If a company is not determined enough in driving the trend of demanding issues down, it wastes its time in resolving the same problem again and again (Bliss, 2006). This results in repeated incoming calls to the call center which implies higher incoming calls than if permanent solution was provide for the problem.

The last minute day off is one of the challenges in call center which contribute to increased number of calls. At the end of shift schedules call center employees leave their working place early. This results in less number of agents and less accessibility of the call center which in turn lets customers to call now and then to reach the call center. 55% of call centers have such issues (call center helper, 2017).

Another factor for increasing calls is malfunctioning tools in the call center. Agents cannot achieve targets with undependable equipment. If their phone is not working, they cannot answer calls. The same if the computer is not working, if it is slow, if there are bad quality furniture causing back pains (Ernst and Young, 2009). All these cases make agents miss calls and customers might need to do several attempts.

Several organizations emphasize on having shorter call duration than taking longer time and addressing issues at first transaction. This makes agents rush to finish the call quickly than taking adequate time and understanding the cause of the problem for permanent resolution. As a result, the customer might leave without adequate information and might call again (Lorenz et al., 2014; ContactBabel, 2017).

Another source of multiple calls is using jargons in public communications. Jargons or abbreviations can be reasons for additional calls which could have been avoided if there were no jargons (Friedman, 2005; Ernest and Young, 2009). When a company releases an advertisement on the media, it might be a reason for some calls (ContactBabel, 2017). If agents are not informed about it, they cannot rightly address callers' requests resulting in dissatisfaction and repeated calls. Organization should make sure agents are informed on any communication before it is sent to customers.

There are several reasons which hinder organizations from building a great call center. According to Call Center Helper (2017), budget, management buy-in, agent buy-in, broken processes and lack of skills of the employees are the major barriers. However; many call center managers and professionals never call their call centers (ibid).

The poor communication between call center and the rest of the business could be a reason of high incoming calls. Cohen (2004) stated that the lack of proper integration between pre sales and post sales activities makes utilities unable to answer to customers calls and requests.

#### **2.1.2.8. The Role of Social Media on Customer Service**

According to Blunt and Wilson (2013), for several years, customers have been struggling with traditional customer service to get response and not satisfied enough, but the introduction of social networks provided an outlet. Customers did not stay long to understand that they can force

organizations to deliver their commitment through social media. The bargaining power balance has already shifted in favor of customers (ibid). Several organizations viewed social media as an opportunity to reduce average handling time (AHT), gain financial benefits and improve customer service reputation. With social media such as Facebook and Twitter, news spread so fast to so many people than ever before (Ernst & Young, 2009).

The number of customers who use social media to query for customer service has shown significant increase (Clark, 2014). Customers believe that social media has given them superior customer voice and it is a better way to communicate with organizations than call centers (ibid). With the expansion of smart phones and tablets, 70% of peoples' online social interactions are location independent enabling the possibility to serve customers online from anywhere.

Based on the report from Statista (2018), the number of social media users is booming. Facebook alone had above 2.2 billion users as of April 2018, followed by you tube and whatsapp, 1.5 billion users each. WeChat users reached 980 million. This trends show that people are increasingly engaged in social media networks. In 2012, 90% of global internet users were already social network users as well (Blunt and Wilson, 2013). Customers are considering social media as easily accessible and effective channel and they might tend to post every small incident resulting in increased complaints to companies. The synergy between social media and mobility has by far eased to share our thoughts, requests and criticisms. Even if customer behavior is culturally specific, the use of social channels is no different in different parts of the world, (Clark, 2014).

#### **2.1.2.9. Methods to Reduce Calls**

Call reduction is important because it enhances efficiency, improves customer satisfaction, minimizes cost, enables agents to handle more important issues and improves company image. Reducing calls should not be prohibiting customers from making a call, rather should be addressing their issues proactively (Laffredi, 2004).

Before going into effecting actions to reduce calls, it is important for call centers to log each customer call (Faulkner, 2003; Laffredi, 2004). Then, classify the call reasons to identify the major ones. If each call is not logged correctly, an organization cannot think of having the right solution for major customer issues. Organizations should also categorize calls in to complaints and requests. Services where the organization can do nothing about should be identified and ways

to eradicate them should be searched (Laffredi, 2004). For efficient minimization or elimination of incoming calls, organizations can take different measures some of which are the following.

a. **Providing permanent solution:** Analyzing customer calls and identifying the root cause in order to provide permanent solution are methods that can reduce calls (Lorenz et al., 2014; Bliss 2006; Laffredi, 2004; Alorica, 2017). If the root cause of a customer call reason is addressed, customers are happy and do not need to contact the call center in the first place. This implies less calls and lesser employees needed. To address the root cause of major call reasons, there must be a smooth information flow between call center and the rest of the business (Faulkner, 2003). The technical division, the sales division, the marketing division and other parts of the company should analyze their respective issues and provide permanent solution.

The information about incoming customer calls have to be classified into something that is actionable. The volume and trend of comments and issues has to be tracked and be separated to operational areas. This helps to identify simple targets to take action on and to assigned accountability for the resolution of the categorized issues. Companies are not expected to focus on each customer contact but to emphasize on the top ten calls and work on them in priority (Bliss, 2016; Faulkner, 2003).

b. **Implementing channel options:** According to Blunt and Wilson (2013), even if the main benefit of multi-channel is to provide choice of interaction for customers; on a live chat, one agent can handle several customers in parallel which is not possible while handling over the phone. Email feedback could be quicker than explaining over the phone. Therefore; introducing such channels and shifting some incoming voice calls to such channels can minimize calls and reduce operation cost (ibid). However; call centers need to have a tool that reassures they are not duplicating efforts on the same issue received via different channels (Faulkner, 2003). Besides, organizations should have clear automated first response to requests through non-telephone channels; for instance, 'your requested well received, we will reply within 24 hours' (ibid).

c. **Proactive awareness creation:** It is necessary for organizations to proactively inform customers about changes that impact them to minimize potential customer calls and thereby reducing customer service cost (Cohen, 2004; Faulkner, 2003). Whenever improvements are implemented to enhance service quality or customer satisfaction, the impact on incoming

calls has to be measured properly to evaluate the level of success and see future actions. (Goyal *et al.*, 2016).

All information to the media has to be made after it is shared to agents. The supervisors must first brief their agents through short message, email or meeting. Otherwise, agents will get the information from customers and they fail to handle customer requests. Besides, they become frustrated. Temporary IVR announcements could also be loaded to handle simple customer questions to minimize calls (ContactBabel, 2017).

- d. **Improving FCR:** A customer who is properly handled at the first call will not tend to call again (Doane and Sloat, 2003). For calls to be handled well at first contact, agents need to be well equipped with comfortable working tools. For instance, if a headset an agent uses is irritating, there is a possibility that the agent hesitates to take calls seriously (Call Center Helper, 2017). Elevating the role of call center employees from problem solver to delivering a customer experience and using the personal interaction between the employee and customer for one to one coaching helps to better understand what to improve (Doane and Sloat, 2003). Organizations also need to inspire and motivate employees to work further than their operational constraints to improve FCR.
- e. **Availing adequate knowledge in call center:** Another method to reduce repeated calls is making sure adequate knowledge is in place. Here, training to agents and implementation of knowledge base are key things to do (Murphy, 2015; Faulkner, 2003; Call Center Helper, 2017). Availing a knowledge base helps agents provide precise answer to customers' enquiries and avoid repeated calls. Developing script and distributing to employees also help provide accurate response to callers.
- f. **Automation:** Murphy (2015) stated that organizations must analyze which repetitive calls could be handled by self-service, email, web chat and SMS and automate accordingly. Online channels are cheaper than telephone channel. Alorica (2017), suggests that it is possible to reduce calls and thereby reducing costs while at the same time making your customers happy. Organizations must think of automating easier enquiries such as checking order status, checking account balance and address change.



- g. **Empowered position:** The customer work is beyond merely customer service; it is everyone's job. So, organizations must create awareness in every department and at all levels (Bliss, 2006). To make sure such efforts persist for long time until good customer orientation is created within the company, an empowered titleholder need to be in place. This titleholder can be chief customer officer (CCO), customer service director, chief customer service officer (CCSO), customer service head, etc. such intervention helps to create a link between the call center and the top management of a company so that customers' concerns are heard and solved.
- h. **Use social media:** According to Blunt and Wilson (2013), younger customers who are less than the age of 24 have probably been introduced to social media before any channel else and so this is the channel they use to express anything they feel including request for assistance. The social media is further growing and it is clear that future call centers need to introduce social channel as one interaction outlet especially for their younger customers. According to Call Center Helper (2017), many organizations are planning to deploy web chat, mobile app and social media as their next channel. More and more customers are engaged in chatting. Users of social media such as WeChat and Whatsup are growing fast. This implies that organizations need to examine the possibility for smart investments in automation as it can help minimize agent-assisted calls while still delivering high-quality customer experiences. This does not mean the role of agents will be diminished, it will instead go forward towards handling complex issues such as account closure and warranty claim which require autonomy and abstract thinking (Hyken, 2016; Alorica, 2017).

## **2.2 Empirical Reviews**

### **2.2.1. International Trends in Call Centers**

A study carried out by McCullen in 2017 showed that emphasis on first contact resolution minimized volume of incoming calls, transfer of issues, holding time, and negative influence to customer experience. McCullen also reported that a cost saving of \$600,000 was achieved as a result of the concentrated effort on first call resolution. Improvement on first call resolution results in less repeated incoming calls.

A research carried out by Clark in 2014 where 1000 respondents took part showed that for complex requests such as asking for maintenance service, 37% customers chose to speak with call center employee, 19% prefer to speak face to face and 17% said they chose to contact via website or email. However; the interest of consumers to talk to employees face to face has highly decreased. The same survey also indicated that 26% of respondents in 2011, 32% in 2012 and 38% in 2014 responded as organizations are giving lower and lower focus to good customer service. In addition, 33% of customers consider that quick response to enquiries is the most vital feature of a great customer service employee. When call center employees respond quickly, they tend to handle several calls and this helps call center accessibility and reduces number of attempts. Whereas 29% said that customer service employee should handle enquiries without transferring to others.

In a research made in 2017 by the Call Center Helper entitled “what contact centers are doing right now” and responded by 380 call center professionals, the emphasis to agent empowerment is sustained at around 61%. On the other hand, multi-skilling agents has decreased compared to the result in 2015 (90.5% in 2015 to 80.4% in 2017). This indicates that call centers are concentrating more on creating autonomous agents who focus on few skills to provide complete response to customers and enhance first call resolution.

D'Alleo and Santangelo (2011) surveyed 114 call center operators in Italy focusing on “organizational climate and burnout”. Among the findings is that 24% of the call center operators said they experience high exhaustion at the end of the working day and they feel excessively fatigued to work for the next day. 62% responded as the communication with their management is sufficient and information is delivered to them on time. More than half of the employees do not have desire for the work and they consider it less challenging work. 80% of the operators are happy dealing with customers.

Clark (2014) also showed that 40% customers post on social media expecting concrete reply for a service/product related matter from organization. 55% of the respondents said that the organizations solve issues posted on social media always or sometimes. Clark also found that customers are demanding shorter on hold over the phone while contacting call center. In 2012, 19% of customers said they are willing to stay a maximum of 5 minutes and the figure is up to

22% in 2014. Whether face to face or over the phone, the average waiting time consumers are willing to stay on hold is 13 minutes.

A story presented by Doane and Sloat (2003) states that a customer who wanted to purchase two quilts waited on call center queue for 25 minutes and heard the menu for five times with no one answering his call. The customer again tried the direct office telephone and found out even worse experience that he was transferred 10 times with no success. The customer then reaches one lady and she again transferred him to another recorded voice (IVR) after asking what he needed. The customer finally gave up and wrote a letter of frustration with a recommendation that the managers should call their own call center and experience the bad service they are offering to their customers. Knowing that customers talk more about their bad experiences, we can imagine to how many people this customer has told about his bad experience and the negative implication of this to the reputation of the company is high.

Another finding by Call Center Helper (2017) is that significant percentage of companies (64.5%, increased from 59.7% in 2016) perceive the call center as a “source of customer insight” and 20.9% of the customers perceive it as a “source of marketing information”. In 39.5% of the companies the call center is considered as a cost center by the rest of the business. Significant share of the companies had bad perception towards call centers; 7.4% consider call center as irritating one and other 21% consider it “a necessary evil”. 75.6% of the respondents said they have knowledge base in their call center. More than half of them (51.5%) are available in social media to respond to their customers. The use of call script in call centers has increased by 5% and reached 52.9% in 2017. 66.6% of them said they carry out customer survey and try to understand the satisfaction level of their customers as well as the services with problems.

The same survey also found out that the top five used channels in 2017 are voice, email, web chat, social media and letters. The share of email has shown increment every year and grew by 6% from the year 2014 to 2017. Customers are choosing the privacy, less effort and convenience of contacting via email. Only 45.7% of the respondents said they provide similar experience to their customers throughout all contact channels and 21% said they provide different service across channels. Such experience leads customers to talk to employees than using email or other nonhuman channels resulting in increase of calls. 99% of the professionals believe that individual

coaching of call center employees is important. 41.2% of the respondents said that they called their call center in the past week where as 9.8% never called their own call center.

A study carried out by ContactBabel (2017) on 214 call center managers/supervisors showed that call center statistical report analysis solution is useful for identifying training requirements to agents (93% of respondents), identifying cases of noncompliance with procedure (93%) and identifying improvement areas to business process (100%). First call resolution was considered as the most important KPI to focus on by majority of the respondents. Similarly, the same KPI is mentioned as the most valued one by customers, followed by politeness of agents. In this study, the priority area of improvement for the call centers was also assessed and 37% of respondents said their priority improvement area is customer satisfaction, followed by 36% in favor of efficiency/productivity improvement. Whereas improvement related to cost is the least priority with 6%. 43% of respondents said that agents use 4 and more applications to manage a call and 73% responded their agents use 3 and more applications. With regard to channel preference, 61% said telephone is their preference, followed by email covering 15% and web chat 14% whereas social media 4%. The average first call resolution achievement in US call centers in 2017 is 74%. The study also showed that with regard to the ideal waiting time in queue before a customer has to be offered for call back, 44% of respondents believe it is between 1-3 minutes and another 24% said it should be 3-5 minutes.

### **2.2.2. Call Center Trend in Africa**

The researcher did not find many researches made on the researcher's topic in African call centers. There are some researches made on call center area but factors that affect incoming calls are not addressed widely. Below are some empirical studies carried out in African call center operations.

According to a research in call center carried out in South Africa, when organizations fail to inform call center employees on changes related to service provisioning proactively, agents know nothing about it and could not provide accurate information to customers. This erodes their confidence and also it makes the customers call repeatedly (Hauptfleisch, 2006). This results in high incoming calls to call centers.

Benner et al. (2007) carried out a research in 64 call centers in south Africa. The finding showed that south African call centers achieve their call center targets to the level of close to global average. According to a study made in different countries within and out of Africa, the average is 87% where as in south Africa 86.5% of call center targets are achieved. This shows that the South African trend is very close to international. The turn over average of the 64 call centers is 16%. Another finding is that it is compulsory for agents to use scripts to handle calls.

A study was made in Kenya by Mwendwa, & Gitonga, in 2017 with regard to identify the factors influencing call center agent turnover. The study was made on 141 agents and used a descriptive research design. The findings from the study showed that the factors influencing attrition (turn over) of agents at Kenya Power are training and development, rewards management, job characteristics, supervisor support and career growth. In this study, the factors affecting incoming calls are not addressed.

Muthoka (2017) carried out a study in call center with the title “Factors Affecting Call Center Performance in the Banking Industry in Kenya: A Study of Sidian And Chase Bank” for the fulfilment of his Masters degree. The main objective of the study was to define the factors influencing call center performance in Kenyan banking sector. The study addressed the impact of outsourcing on call center performance, the influence of call centers in customer satisfaction nad the effect of technology on call center performance. The study was made on 340 bankers and research design deployed was descriptive design. Muthoka (2017) found out that the call center was reachable via different channels. His study also showed that the agents had sufficient knowledge and provide adequate response to customers’ requests. Moreover; Muthoka also stated that that the call center was well equipped technologically and process wise.

Another study made by Banks and Roodt (2011) in south Africa was conducted on call centers of 44 different organizations by distributing a questionnaire to 180 call center managers. This study showed that when managers are out of office, the primary parameter to follow up was the number of calls handled within a definite time. The managers assume that if there are no waiting calls, customers are satisfied. Another finding was that South Africa call center managers highly focus on efficiency than quality and they make effort to avoid repeated calls.

From the above researches, the researcher understood the topic “factors affecting incoming calls” is not addressed and is a gap to be answered by this study.

### **2.2.3. Call Center Trend in Ethiopia**

There is big gap with regard to empirical researches on call center in Ethiopian context. The researcher found only a few researches made on Ethiopian call centers and below is the summary of them.

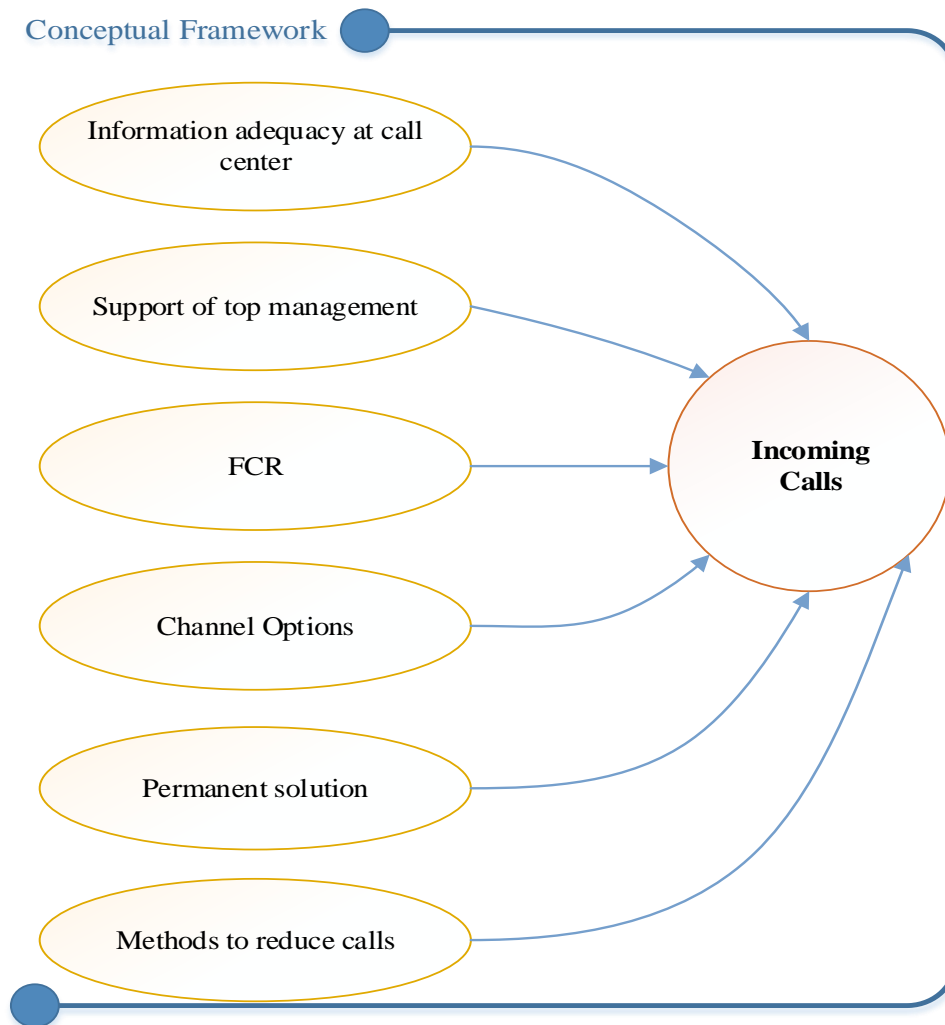
Tesfaye (2015) made a research on the topic “The Effect of Job Stress On Turnover Intentions: Evidence from Ethio Telecom” and he carried out the study on 317 call center employees. He intended to evaluate the causes job stress and the influence of job stress on the decision of employees leave the call center. Tesfaye (2015) stated that the major sources of job stress are call monitoring, dialog scripting, time pressure, work overload and job monotony. He also mentioned that there is positive relationship between Job stress and turnover intention. Tesfaye further said that there is job stress and turnover intention are high in Ethio Telecom.

Another research in Ethiopian context was made Yirga (2013) on ethio telecom call center and branches. The study was made on 128 customers and 8 employees in Addis Ababa and its objective was to analyze complaint handling practices of ethio telecom and customers’ reaction. Yirga found out that ethio telecom delays in responding to customers’ complaint and ethio telecom’s call center was not reachable. He also stated that network quality was the dominant problem. Customers said ethio telecom did not clearly communicate its complaint handling procedure and majority of them found the information through their personal connections.

In summary; the empirical literature review showed that there are plenty of researches made internationally on call center area but not much on factors influencing incoming calls to call centers. On African context, call center is not a widely researched subject and more specifically the researcher did not find a single research made on factors affecting incoming calls to call center. Similarly, in Ethiopia, only few unpublished researches which are presented above are found and none of them addressed the topic of the researcher. Therefore; the researcher believed it is necessary to assess the factors affecting incoming calls to EEU call center to bridge this gap and contribute to the body of knowledge on the call center are in Ethiopian context.

## 2.3 Conceptual Framework

Figure 2: Conceptual Framework



Source: Own construction based on the literature review, 2018

The above variables are mentioned and used by different authors in several researches as presented on the literature review (Call Center Helper, 2017; Clark, 2014; Bliss, 2006). When there is *adequate information* at call center, employees (agents) provide accurate answer to customers and minimize repeated calls. *Support of top management* is crucial for call center agents to get quick answers for their escalations so that they give quick answers to customers. when *FCR* increases, it means customers get adequate response at first contact and do not call again. Several *channel options* minimize number of calls to 905. Providing *permanent solution* to repeated customers issue reduces incoming calls. Generally, devising and implementing *methods to reduce calls* is a great solution to minimizing calls.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Research Design and Approach**

The researcher used mixed research approach (both qualitative and quantitative). Quantitative approach is used to analyze the questionnaire responses and statistical reports of EEU call center. Whereas qualitative research approach is used to analyze the data collected from different literatures, from interview and from observation. The study described the causes for incoming calls from customers to EEU call center (905 call center). For this kind of research descriptive design is appropriate. So, the researcher used a descriptive research design.

#### **3.2 Sample and Sampling Techniques**

The study was made at EEU call center (905) which is found at Jemmo. The call center serves all EEU customers in Ethiopia. The target population of the study covered the EEU call center agents with total population of 159 employees. As the total population is small, census is applied and it means all of them were considered for the study. Therefore; sampling is not made. Additionally, 3 EEU management members were interviewed. The managements were chosen based on the contribution they have towards managing 905 call center. Two enterprise customers and one condominium committee were also interviewed. The enterprise customers were chosen from big service providers and government administrations. The condominium site is considered to get some insight on residential (individual) customers.

Ethio Telecom is chosen for interview from enterprise customers as it is one of the biggest service providers with its network equipments installed throughout Ethiopia and operating with power supply. The information is consulted with key informants in EEU and Ethio Telecom. From government administration, Lideta Sub-city is considered. The management members interviewed were two call center supervisors and one EEU top management.

#### **3.3 Types of Data and Tools/Instruments of Data Collection**

A mix of primary and secondary data was collected and used for this research. Primary data was collected from the agents and managements of EEU, from EEU customers and through



observation by the researcher. Secondary data was collected from EEP website, statistical reports of the call center, different literatures (books, journals, articles and websites). Different data collection instruments were used to collect the primary and secondary data (stated in Section 3.4 below).

Both qualitative and quantitative data types are used to achieve the objective of the study. Qualitative data was collected through interviews, observation and document review. The observation was made by calling EEU call center at different times and taking notes. Quantitative data was collected through questionnaires distributed to the call center employees. The statistical report of EEU call center is also used as a source of quantitative data.

### **3.4 Procedures of Data Collection**

Data collection is among the very important steps which might determine the quality of research. Data collection instrument should go in conformance with methodology (Graham, 2011). Both primary and secondary data are collected. The technique which was deployed for the data collection was survey technique. The researcher made use of multiple data collection instruments. These were questionnaire, interview, document review and observation. Primary data was collected through questionnaire, observation and interview whereas secondary data was collected from different sources by document review.

Information adequacy at call center, support of top management, FCR, channel options, provision of permanent solution, methods to reduce calls and major call reasons were mainly measured by questionnaire distributed to employees. In addition, interview with management and customers was carried out for the above variables. Observation is made to further examine information adequacy, first call resolution and channel options. Document review was also made to collect additional data on all variables via literature review and 905 statistical report review.

The observation is done by the researcher calling to EEU call center with a real case and observing the call management of the employees. The researcher was taking necessary time to access the IVR at times when the call center was inaccessible. The researcher used a check list while making the observation.

The researcher carried out all the six interviews by himself by preparing interview questions ahead of the appointment time. The questionnaire is designed based on the research questions. A five point Likert scale is mainly used for the closed ended questions. In addition, open ended question was added to receive any issues which might remain unaddressed by the closed ended questions. The researcher did an effort to make sure the questions cover the relevant aspects of the study. The researcher has tried to make the questionnaire clear, brief and understandable to the respondents. The questionnaire was reviewed by friends and also commented and validated by the advisor. Besides; before distributing all the questionnaires, pre-testing was made with 20 agents of EEU to make sure they understand it easily. The questionnaire was then edited as per the result of the pre testing. These respondents are not considered on the final analysis. A drop-off and pick-up method was used for distributing and collecting the questionnaires, respectively. The researcher used his friends who were BSC and MA holders to distribute and collect the questionnaires back. The 139 employees were organized in four groups in the call center and they work in shifts. The data collectors first checked for their shifts and distributed and collected the questionnaire accordingly. The data collectors explained each question to supervisors of the four groups face to face and they were at the work place providing clarity while questionnaire was filled.

### **3.5 Methods of Data Analysis**

There are different methods of data analysis based on the type of data being qualitative or quantitative. Descriptive analysis was used to analyze the questionnaire response. More specifically; percentage, frequency and mean were used to analyze the data. To code and analyze the collected questionnaire responses, Statistical Package for Social Science (SPSS) version 20 software was used. The result of SPSS was then taken for presentation and interpretation.

According to Graham (2011), primary analysis has to be presented in the form of table, graph and also should be explained in words to show what is discovered. Therefore; for easy presentation of the data, the researcher used tables and graphs as appropriate. Excel 2016 was used to analyze the data collected from call center statistical report. Besides, document analysis method is used to analyze the interview and results of observation.

### **3.5 Reliability and Validity**

#### **3.5.1. Reliability**

To check the internal consistency of the data, reliability test is made using Cronbach's Alpha in SPSS version 20 software. Cronbach's Alpha measures the level of internal consistency and a value of between 0.7 to 0.95 is acceptable (Tavakol et al., 2011). The reliability was analyzed and is beyond the acceptable threshold of 0.7 as shown on table 1 below. The overall reliability of all measures is 0.731. Therefore; the data is internally consistent.

Table 1: Cronbach's Alphas Test

<b>Measure</b>	<b>Cronbach's alpha</b>
Factors for HICs	0.709
Major call reasons	0.813
Channel options	0.855
Call reduction methods	0.907
Information adequacy	0.793

Source: Own computation with SPSS, 2018

#### **3.5.2. Validity**

Validity refers to the extent to which an instrument can measure what the researcher intends to (Clause, 2016). To check its validity, the questionnaire was checked and commented by colleagues and the advisor. A pre-test which was made before the main questionnaire was also collected. Adjustments were then made on wording and content of the questionnaire. Besides, the researcher made use of different field instruments for triangulation to enhance the validity.

### **3.6 Ethical Considerations**

The main input for this research is response from respondents and it is impossible to realize the study without it. The researcher approached respondents with respect and politeness. Besides, the researcher understands that he has the obligation to secure the respondents' anonymity and confidentiality of the information they provided and treated accordingly. The responses collected from the respondents are solely used for the purpose of this research.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.1 Data Presentation and Analysis

##### 4.1.1. Summary of Closed Ended Questions

**Table 2:** Major Call Reasons to EEU Call Center

Where: SD=strongly disagree, D=disagree, N=Neutral, A=agree, SA=strongly agree

Call Reasons	Measurement	SD	D	N	A	SA	Mean
Power interruption	Frequency	1	6	7	24	83	4.5
	Percent	0.8	5.0	5.8	19.8	68.6	
Prepaid meter charging information request	Frequency	9	16	7	60	29	3.69
	Percent	7.4	13.2	5.8	49.6	24	
Nonfunctioning prepaid meter	Frequency	8	19	11	48	35	3.69
	Percent	6.6	15.7	9.1	39.7	28.9	
Service maintenance delay after reporting to EEU	Frequency	5	16	4	22	74	4.19
	Percent	4.1	13.2	3.3	18.2	61.2	
Bill information request	Frequency	19	19	11	55	17	3.26
	Percent	15.7	15.7	9.1	45.5	14.0	
Delay to provide new service	Frequency	8	17	17	58	21	3.55
	Percent	6.6	14	14	47.9	17.4	
Burnt transformer	Frequency	2	4	12	38	65	4.32
	Percent	1.7	3.3	9.9	31.4	53.7	
Fallen electricity pole	Frequency	0	8.0	8.0	40	65	4.34
	Percent	0.0	6.6	6.6	33.1	53.7	
Tariff/price information request	Frequency	12	32	12	52	13	3.18
	Percent	9.9	26.4	9.9	43.0	10.7	
Information inquiry on service procedure	Frequency	9	12	9	72	19	3.66
	Percent	7.4	9.9	7.4	59.5	15.7	
<b>Mean average</b>							<b>3.84</b>

Source: Computation from SPSS Result, 2018

As presented in the above table, power interruption has highest mean (and much higher than the average mean) in the table with a mean of 4.5. With SA and A summed up together, 88.4% of the respondents agreed that power interruption is the major call reason. It is also the call reason with the highest strong agreement response. Only 7 respondents representing 5.8% of the total

employees responded otherwise. This implies that EEU customers experience high power interruption and it is the top reason why they contact EEU call center.

The other call reasons which scored above the average mean are fallen electricity pole, burnt transformer and service maintenance delay after reporting to EEU with a mean score of 4.34, 4.32 and 4.19, respectively. 86.8% agreed that fallen electricity pole is also major call reason. Burnt transformer is supported by 85.1% to be a main call reason followed by service maintenance delay chosen by 79.3%. Information inquiry on service procedure, Prepaid meter charging information request, Nonfunctioning prepaid meter and Delay to provide new service scored slightly below the mean average as 3.66, 3.69, 3.69 and 3.55, respectively. They represent agreement rate of 75.2%, 73.6%, 68.6% and 65.3%, respectively.

Bill information request and Tariff/price information request scored lower mean, lower agreement rate and higher disagreement. Bill information request and tariff/price information request recorded a mean of 3.26 and 3.18, agree plus strongly agreed response rate of 59.5% and 53.7% and a disagree plus strongly disagree response of 31.4% and 36.4%. Therefore, the two call reasons still have important share but are not the biggest reasons for customers to call 905.

**Table 3:** Factors for High Incoming Calls

<b>Factors</b>	<b>Measurement</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>	<b>Mean</b>
Lack of training	Frequency	6	13.0	24	41.0	37.0	3.74
	Percent	5	10.7	19.8	33.9	30.6	
Unavailability of adequate information in the call center	Frequency	0	5.0	13.0	40.0	63.0	4.31
	Percent	0	4.1	10.7	33.1	52.1	
Lack of on time support from top management	Frequency	4	10	28	19	60	4.01
	Percent	3.3	8.3	23.1	15.7	49.6	
Inability to address the root cause of problems reported by customers	Frequency	4	6.0	22.0	40	49.0	4.02
	Percent	3.3	5.0	18.2	33.1	40.5	
Unavailability of other channels such as email, web chat, social media.	Frequency	8	23	14	22	54	3.75
	Percent	6.6	19	11.6	18.2	44.6	
No knowledge base system to assist agents	Frequency	22	16	9	33	41	3.49
	Percent	18.2	13.2	7.4	27.3	33.9	
<b>Mean average</b>							<b>3.89</b>

Source: Computation from SPSS Result, 2018

The top one factor for HICs to EEU call center is by far unavailability of adequate information in the call center. 85.2% of the respondents either agreed or strongly agreed that this is the major factor. Besides, no respondent strongly disagreed. It represents the highest mean score of 4.31. This depicts that the lack of adequate information at call center is the main cause for high incoming calls.

The next highest factor is inability to address the root cause of problems reported by customers. this factor is chosen by 73.6% to be the major factor with only 8.3% of disagrees. It has a mean of 4.02, higher than the average mean.

Lack of on time support from top management scored a mean of 4.01 and the biggest rate of neutral response. 65.3% said lack of prompt support from top management is a major factor for HICs and 23.1% said they do not know.

The table also shows that 61.2% said unavailability of knowledge base is main factor where as 62.8% said unavailability of other channels such as email, web chat, social media is also major cause for HICs.

**Table 4:** Channel Options to Handle Request from EEU Customers

Channel options	Measurement	SD	D	N	A	SA	Mean
Availability through various channels other than 905 voice	Frequency	14	14	1	29	63	3.93
	Percent	11.6	11.6	0.8	24	52.1	
Email channel to handle customer requests	Frequency	14	22	10	24	51	3.63
	Percent	11.6	18.2	8.3	19.8	42.1	
Web chat can be helpful to reduce incoming calls	Frequency	11	17	12	34	47	3.74
	Percent	9.1	14	9.9	28.1	38.8	
Self-service application can help reduce calls	Frequency	5	15	9	26	66	4.1
	Percent	4.1	12.4	7.4	21.5	54.5	
Presence on social media to handle customer inquiries	Frequency	5	20	12	18	66	3.99
	Percent	4.1	16.5	9.9	14.9	54.5	
<b>Mean average</b>							<b>3.88</b>

Source: Computation from SPSS Result, 2018

As shown on the above table, big share of the respondents are in favor of multi-channel call center in general and self-service specifically with 76.1% and 76% agrees (agree plus strongly agree), respectively. ‘Self-service application can help reduce calls’ scored the highest mean of

4.1 in the list. 69.4% of the respondents showed their agreement that EEU should handle enquiries via social media. Web chat and email channel are comparatively low scored but still the majority of the respondents support that the availability of both contributes to reduce incoming calls.

On the contrary, as presented on the table, between 20 – 29% responded that email, web chat and social media channels are not necessary. 29.8% and 20.6% responded against email and social media, respectively. Therefore, even if the majority support the implementation of multi-channel, considerable number of respondents did not share this view and this has implication to the planning and implementation of multi-channel customer service. Only 16.5% objected the need for self-service application. This is discussed in Section 4.2 (Discussion).

Table 5: Methods Used to Reduce Calls at EEU Call Center

Methods to reduce calls	Measurement	SD	D	N	A	SA	Mean
Adequate training to agents on products/services	Frequency	40	17	5	38	21	2.86
	Percent	33.1	14	4.1	31.4	17.4	
Resolve the root cause of major customers' issues	Frequency	50	24	13	20	14	2.37
	Percent	41.3	19.8	10.7	16.5	11.6	
Avail different contact channels to reduce call volume	Frequency	51	19	5	32	14	2.5
	Percent	42.1	15.7	4.1	26.4	11.6	
Knowledge base system for agents	Frequency	50	14	11	22	24	2.64
	Percent	41.3	11.6	9.1	18.2	19.8	
Preventive maintenance to avoid customer complaints	Frequency	49	24	11	17	20	2.46
	Percent	40.5	19.8	9.1	14	16.5	
Solve customers' problems the first time they reach the call center	Frequency	55	21	3	21	21	2.44
	Percent	45.5	17.4	2.5	17.4	17.4	
<b>Mean average</b>							<b>2.55</b>

Source: Computation from SPSS Result, 2018

The above table illustrates the following. Overall, the respondents disagree that EEU efficiently implemented methods to reduce calls evidenced with a mean of 2.55 only. 62.9% respondents said that EEU does not solve customers' issues the first time they call 905. Similarly, 61.1% also responded EEU does not solve root cause of major customers' problems. A bit more than half of the respondents (52.9%) said there is no KB system in EEU call center. These findings imply that the main prevention mechanisms to avoid repeated calls are not well implemented.

With regard to preventive maintenance, 60.3% responded EEU does not do it well. 57.8% also said that EEU call center did not avail different channel options for customers. These two percentages imply that EEU did not go far in implementing methods to reduce calls.

The only slightly positive score presented on this table is training to agents. 48.8% said EEU provides adequate training where as 47.1% said otherwise. 5 people (4.1%) are indifferent. The researcher also noted here that even if the overall score of training is positive, 33.1% have strong disagreement while 17.1% strongly agree. Therefore; it is hard to say, training is well secured.

**Table 6:** The Level of Information Adequacy at EEU Call Center

Information adequacy	Measurement	SD	D	N	A	SA	Mean
Complete information available to customers	Frequency	44	25	11	21	20	2.57
	Percent	36.4	20.7	9.1	17.4	16.5	
Communication to the media is shared to EEU call center agents before media	Frequency	68	34	7	8	4	1.73
	Percent	56.2	28.1	5.8	6.6	3.3	
When new call reasons emerge, EEU management respond quickly	Frequency	60	25	4	17	15	2.19
	Percent	49.6	20.7	3.3	14	12.4	
Enough documents to assist agents with detail information	Frequency	64	27	5	17	8	1.99
	Percent	52.9	22.3	4.1	14	6.6	
<b>Mean average</b>							<b>2.12</b>

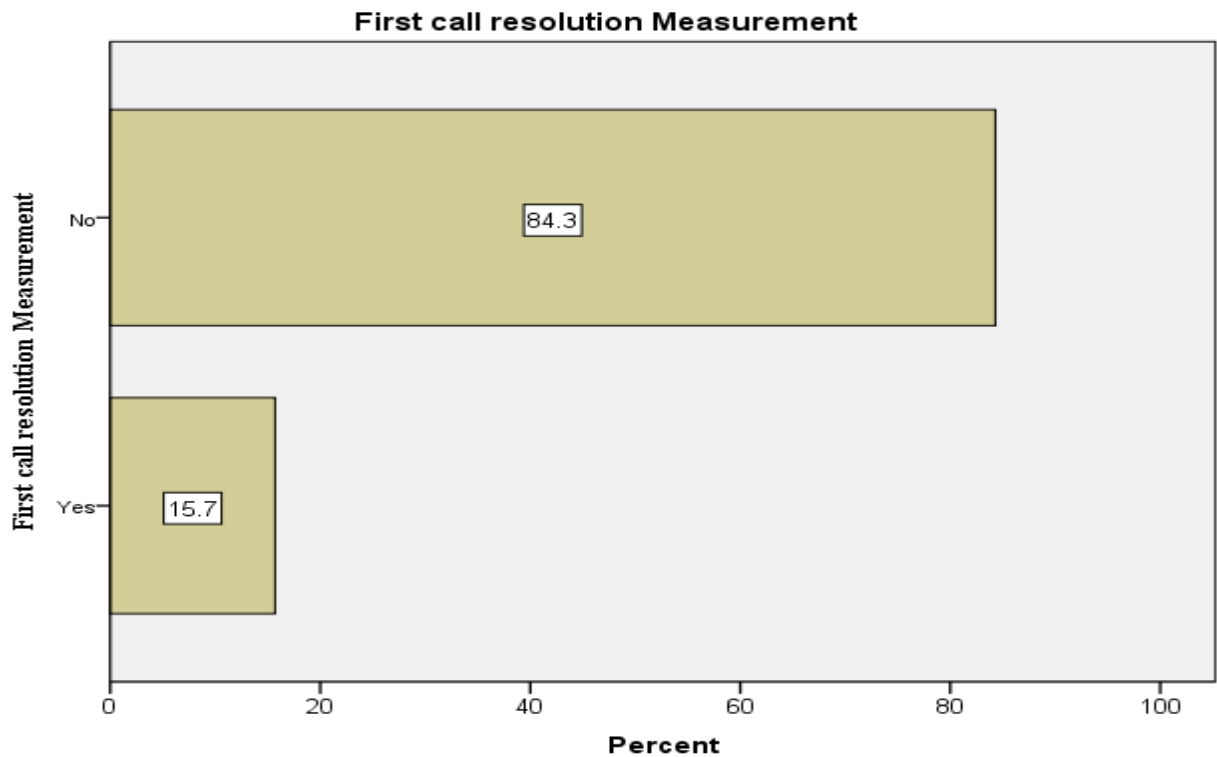
Source: Computation from SPSS Result, 2018

The results presented on the above table prove that EEU call center does not have adequate information to support customers' requests. The average mean of the information adequacy at 905 is as low as 2.12; less than half compared to the expectation score of 5.

Going to the details, 84.3% of respondents said that information is not shared to call center before it is broadcasted on media. In line to this, 75.2% responded that there are no enough documentations to assist agents and 57.1% said that complete information is not available to customers. This implies that customer get informed before agents do. On the parameter 'When new call reasons emerge, EEU management respond quickly', 70.3% responded as they disagree. The above findings show that as there is no adequate information in 905, agents are not able to handle customers' queries properly which results in repeated calls. This in turn contributes to high incoming calls.



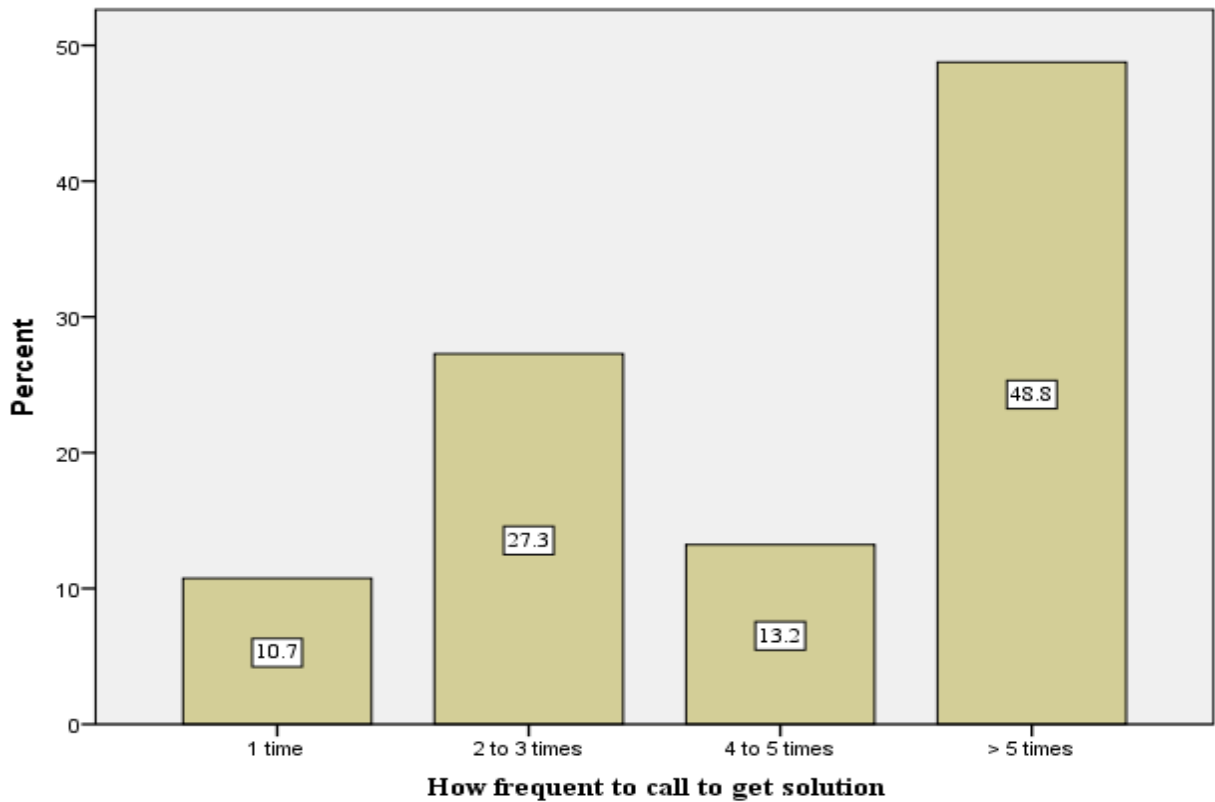
**Figure 3: First Call Resolution Measurement**



Source: Computation from SPSS Result, 2018

Figure 4 above shows that 84.3% of the surveyed employees said FCR is not measured at 905 call center. 15.7% responded as FCR is measured. Therefore; results show that FCR is not properly measured. This denotes that inputs are not properly noted to improve the provision of solution to customers' issues at first contact. This allows repetition of calls to continue on similar cases.

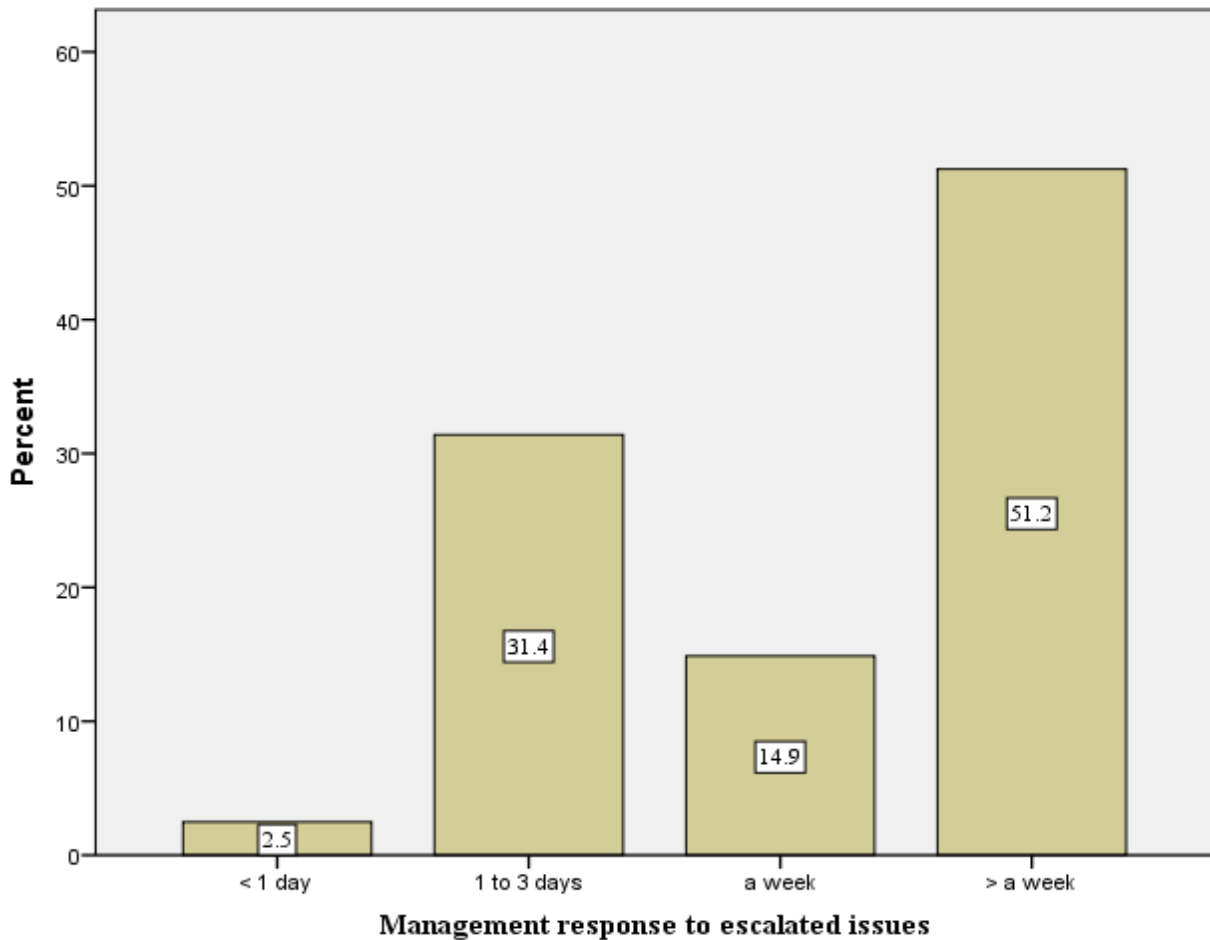
**Figure 4:** Frequency of Calls to Get Solution



Source: SPSS Result, 2018

The above graph shows that customers made a call to Number 905 several times to get their problem solved. 48.8% of respondents said customers have to call more than five times and 13.2% said 4-5 times for solution. 27.3% also responded that 2-3 calls are enough. Only 10.7% said customer can get solution at first call. These results imply that customers have to call again and again to get their issues addressed.

**Figure 5: Management Response Speed to Escalated Issues**



Source: SPSS Result, 2018

Employees were also asked about the response speed of management when issues are escalated. More than half said that EEU management responds in above a week time and 66.1% said EEU management responds in a week or above. 31.4 of the respondents rather said the management gives feedback within 1 to 3 days. Therefore; according to the majority, EEU management delays to respond to escalation of the call center.

#### **4.1.2. Summary of Responses to Open-Ended Questions**

At the end of the closed ended questions, the questionnaire also had an open ended question. Few employees responded to the open questions as summarized below.

They stated that there is communication gap between call center employees and managers and they expressed their wishes to share Ethio telecom experience. Some respondents mentioned that

they never meet with supervisors to exchange information and the work is done arbitrarily. Some said there is completely no response from our management and it might take a year to get feedback. Other respondent also added up that the same way as the agents listen to customers, must EEU listen to them. Another point raised is that promises of the management must be kept. One respondent wrote that EEU does not fulfil 5% of what is mentioned in the questionnaire. Another respondent said that some management do not remember where the call center is.

Lack of training, inadequate information and adequate resource are mentioned as well. When new service is released, they said they get the information from customers and not from their company. Another respondent said that they respond to customer by guess which results in both employee and customer dissatisfaction. They also mentioned that supervisors have no knowledge about the work they lead and their background is not related to the work. E.g. some are from profile management sections and they do not have technical knowhow.

They recommended that the call center should have relation with maintenance team as maintenance delay is the main root cause for high incoming calls. Another reason for HIC is because maintenance employees tell customers that they do not maintain unless they give them money. Maintenance team is not efficient; some cases stay 8 to 10 days unsolved after registration. Abuse of tea break and old distribution lines are mentioned as additional call reasons. They also recommended EEU Call center should provide service in different language as Ethio telecom.

#### **4.1.3. Summary of Interview with EEU Management**

The researcher has interviewed three members of EEU management: two from lower level management, and one from top management.

*Do you receive high incoming calls at EEU CC? Would do you kindly explain the major factors for high incoming calls to EEU CC?*

All the three management members stated that EEU call center receives high incoming calls. They mentioned that the number one factor for HICs is power interruption. The lower level managers both said that frequent damage to fuse is the major root cause for the repeated power interruption. One manager mentioned that delay in maintenance and the limited capacity of the call center are also factors for repeated calls.

*Does EEU have other channels on top of voice/telephone channel?*

With regard to channel options the three manager gave the following feedback. One said that it is mainly the telephone channel. EEU is available in social media but it is not the call center people handling it and they have no visibility to it. The second respondent said it is only telephone channel but some people go physically to branches. The third said Facebook and district's phone numbers are also considered as additional channel. However; he stated also that issues raised by customers in Facebook are not handled on daily basis. EEU uses social media mainly on big holidays to post important messages to its customers.

*Do you have a plan to reduce incoming calls? What are your planned methods to reduce calls?*

All the three managers responded that EEU has an intention to reduce incoming calls. The solutions proposed are smooth communication between call center and maintenance team, rehabilitation of old lines in 8 major cities and 6 big cities, to increase call center staff, to improve resource shortage of maintenance team, to reorganize maintenance centers as they are too few today especially in Addis, to increase call center seat from 50 to 80 and to move it to EEU premises, to deploy self-service in IVR, to improve training provision to employees to increase FCR, to quickly inform agents when there is big outage of power lines.

*Have you ever called EEU call center (your CC)? If yes, how frequent?*

The managers said they have called their call center several times to check whether it is accessible.

*Do you think it is necessary to have other channels to minimize incoming calls?*

All of them said 'yes' to additional channels to minimize incoming calls. With regard to their preference for next channels, one said email and web chat are necessary whereas SMS is good to have. The second one said, SMS is necessary and all other channels are good to have. The third one said for now maximizing 905 capacity is needed and for future feature starting 2019 Facebook and email are required.

*Are you happy with the current call center technology? If not, why?*

The three managers agree that the current call center technology is good but they did not use all the features available. Two of them raised that, the major issue is the call management system (IPCC) and the complaint management systems (TTMS) are not integrated. Agents need to copy

data from IPCC and paste to TTMS for complete registration. This exposes them to errors. Besides, there is no systematic feedback mechanism to customer when their issue is addressed.

*Do you think mobile app self-service is necessary for EEU? Do you have plan to implement it?*

All of them said mobile app self-service is necessary for EEU call center.

*Is EEU solving customers' complaints and providing accurate information at first contact?*

Two management members said that EEU is not good at solving customers' complaints and providing accurate information at first contact and there is no good trouble ticket system to follow up maintenance. They added up that repeated calls come as a result. The third said that EEU is good at both issues but sometimes delay to address problems.

*Is EEU call center costing more than its benefit or vice versa? Why?*

For a question which says 'Is EEU call center costing more than its benefit or vice versa? Why?', the top management said that it is not costly. Call Number 905 is handling more than 16,000 calls per day and as public organization it is necessary to serve the public. Both the lower management said it is costly as the company is not using it efficiently and the top management does not follow up to issues raised from customers.

*Would you also talk about whether EEU call center provides adequate information to customers? if no, why?*

Two management members said EEU call center makes effort to provide adequate information to customers and it manages to provides even if not perfect. One said the call center does not have complete information in the first place and could not provide the same to customers.

The researcher also understood from the interview that even if 905 call center is a national call center which is accessible from all over Ethiopia, it serves only complaints from Addis Ababa customers. If customers call EEU from out of Addis Ababa for power interruption complaint, they are not served. They need to call the nearby district or physically visit the district's office. But, any customer calling from anywhere in Ethiopia can get general information.

#### **4.1.4. Summary of Interview with Customers**

From customers two enterprise (Ethio telecom and Lideta Sub city) and one residence site namely Girar condominium site (around Kara Kore) were chosen for interview. From Ethio Telecom

operation and maintenance department head, from Lideta sub city communication coordinator and from Girar Condominium the chairman of the residence association are interviewed.

*Do you know that EEU has a call center and the access number? Have you ever called EEU call center? If yes, what is the reason you call EEU most of the time?*

All the three know that EEU has a call center and they know the access number is 905. Besides, all of them called several times. The main reason of their call is similar as well; it is power interruption. They also call when pole is down and EEU cable is damaged.

*How fast do you access EEU call center? 1 attempt, 1-3 attempts, 4-10 attempts, > 10 attempts*

The three customers said 905 call center is not accessible. Ethio telecom said they never access it and they call or physically go to zone managers. Lideta Sub city and Girar condominium responded the same experience. They said most of the time it is not accessible but when they are able to access it, it took them 2-3 attempts to reach. Lideta sub city added up that on their latest experience power was off in their sub city administration (half of the building) and did not return for six consecutive days.

*How many attempts to reach a call center are acceptable for you? What is the maximum time which you consider as acceptable to wait to talk to agents?*

Unexpectedly, all the three interviewees responded the same answer to ‘How many attempts is fine for you?’ and the answer is ‘maximum 3’. They were also asked the maximum time they are ok to wait to talk to an agent. Ethio said 1-2 minutes. Both Lideta sub city and Girar condominium said 2 minutes is acceptable.

*How long do you wait before speaking to EEU agent? <5 minutes, 5-10 minutes, 11-15 minutes, >15 minutes*

They were asked about their experience on the length of waiting time to speak to an agent. Ethio telecom said most of the time agents are not accessible, and when accessible waiting time is 6-7 minutes. Lideta said 5 to 10 minutes and Girar condominium seldom accesses but when they access it takes less than 5 minutes.

*Does EEU solve your problem at the first contact?*

*Do you get enough information about EEU products/service from EEU call center?*

With regard to solving problems at first contact, all of them said EEU never solves a problem at first contact. They need to call several times (some time many people call for the same case) and they go physically to EEU branches. Especially Girar condominium stated that they get good solution when they physically go to Mexico center. With regard to information, all the three organizations said they do not get adequate information from EEU call center.

*How many times within the last month did you report to EEU for complain or information request?*

Ethio telecom said it tried to call EEU on two different days and did not reach agents. Lideta Sub city said they tried 4 times and mostly they reached. Girar condominium said they called 50 times in one month and most of the time did not access.

*Which channel do you mostly use to reach EEU for aftersales services? Why did you use that channel?*

All of them said that they try to use voice/phone channel to reach the call center. Their reason for doing so is because there is no other option.

*Which channels is your preference for easy cases such as information about EEU centers: Voice, Email, web chat, social media, Text messaging, in person, others please, specify?*

They were asked for their channel preference as well. Ethio telecom said its preference is SMS with confirmation. Lideta said social media is best as it is easily accessible by everyone and email is also good. Girar condominium chairman said mobile app is his favorite and SMS is also good.

*When you interact with EEU, is your priority getting a solution or being treated with respect?*

When interacting with EEU, Ethio telecom preferred solution than respect/politeness as priority. Both Lideta sub city and Girar condominium said treatment is the priority and solution follows.

*How much out of 10 mark would you give to EEU call center?*



Ethio telecom gave 2/10 and said this is because they have the call center but they are not working on it. Lideta Sub city gave it 3/10 and said a lot remains. Girar condominium gave it 5/10 and said the service is poor but they consider the load at national level. Average of the three is 3.3.

#### **4.1.5. Summary of Researcher's Observation**

To start from the good news, there was only one call transfer out of the six interactions with the agents. The IVR is not too long and not so complex but it does not contain helpful self-service information. It only serves as a connector to agents. Besides, it has redundancy that all 4 options mentioned in the IVR lead to agents. Once you reached the agents, most of the time, they are fairly polite. Besides, the researcher did not face long on hold, that is good.

The researcher made an observation on 905 call center at 14 different nonconsecutive days within in April-May, 2018. In each attempt, the researcher decided to be patient and wait as long as it takes to reach at least the IVR even at times it was too busy. During these days, the maximum attempt made to reach 905 IVR is 41 calls and the minimum is 1 call.

With regard to accessibility, 905 call center is accessible only some times. During the 14 days, the researcher made 243 attempts and reached the IVR 14 times. In average, it took 17.4 attempts to reach the IVR. Out of the fourteen, the researcher was able to talk to agents 6 times but failed to reach 8 times. There were two days where the researcher was able to connect to agents in 2 minutes. The overall average handle time (IVR plus agents) was 6.7 minutes. In four instances after reaching IVR, the researcher was disconnected while willing to wait further and reach agents.

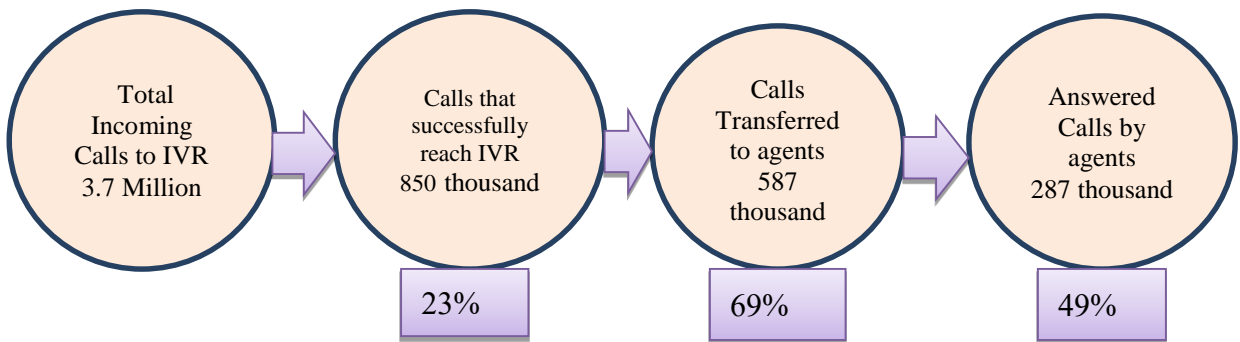
The researcher was calling with real cases; either information request (such as the availability of EEU branch in specific area, procedure to subscribe as new customer) and complain such as power interruption (when there was real power interruption). With regard to information, the researcher received adequate information for decision at only one time of the three interactions. With regard to power interruption, the agents sent follow up number two times and they called also two times to check if power was back. That was much better. But most of the time they say that the case is already registered by other person and everyone has to wait. In terms of making efforts to avoid repeated calls, the researcher did not see any. No adequate information is given. So, you need to call back to try your chance from another agent, a repeated call. Mostly, while

power is interrupted, no one tells when it will come back. So, the researcher had to call again and again to check if people were sent, if it was progressing.

#### 4.1.6. Summary of Statistical Report

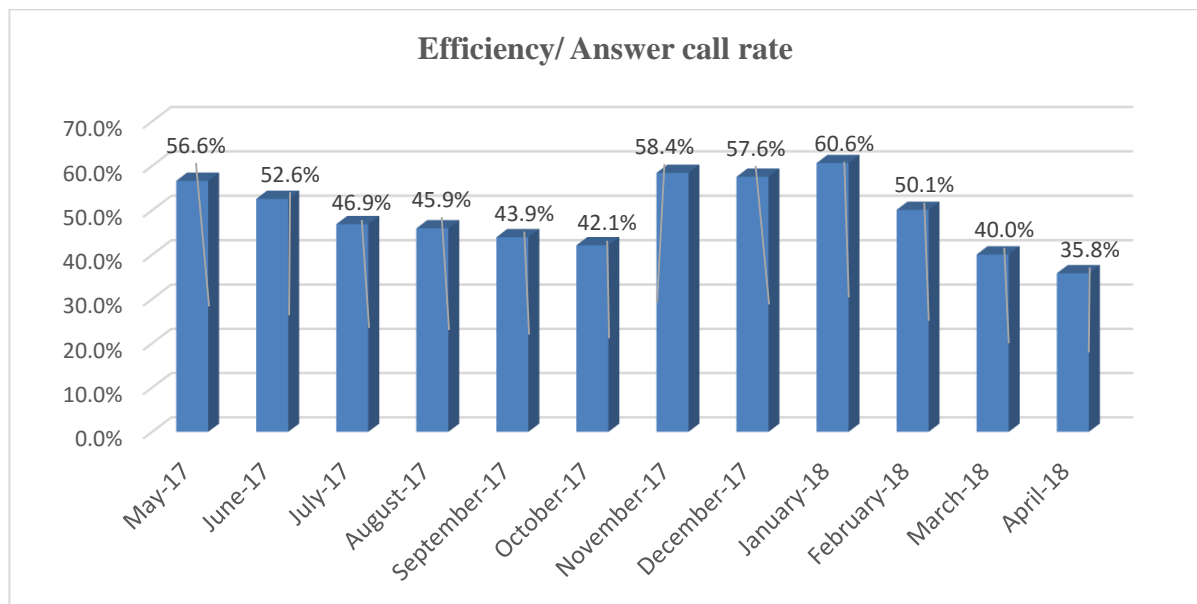
This sub section presents the EEU call center statistical reports extracted from system. According to the statistical report, in EEU call center (905) in average 587,000 calls are transferred to agents per month and agents handle 287,570 per month. Beyond that in average 3,713,398 call attempts are made to the IVR and only 850,544 calls (23%) reach the IVR. Below figure summarizes this trend.

**Figure 6:** Incoming calls to EEU call center, monthly average of May 2017 to April 2018



Source: Own computation from EEU statistical report, 2018

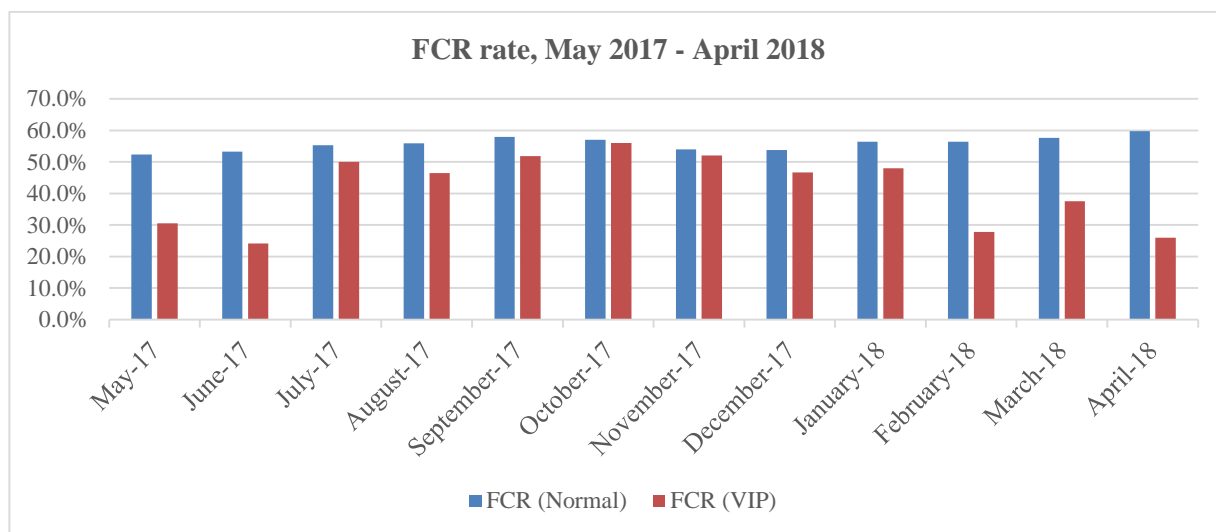
**Figure 7:** EEU call center 1 year efficiency



Source: Own computation from secondary data, 2018

As shown on the above figure, the average efficiency of EEU call center was 49% with a maximum 60.6% in January 2018 and a minimum of 35.8% efficiency in April 2018. This means that 51% of the calls which were able to access IVR were not served. This implies the call center is not easily accessible.

**Figure 8:** First call resolution rate



Source: Own computation from secondary data, 2018

The above table shows the first call resolution of EEU call center for the last one year for both the mass (normal) customers and the enterprise customers (denoted as VIP by the call center reporting system). The average FCR of normal customers for the last one year was 55.8%, while that of the VIPs was 44.1%. This implies that 55.9% of enterprise customers did not get solution at first call and 44.2% of normal customers did not get solution at first contact. The report also showed that 36% of customers called 3 times and above, 10.2% of them called more than 7 times, 5.1% called more than 10 times and 1.7% called more 15 times.

## 4.2. Data Interpretation

According to the questionnaire response collected from EEU call center agents, the top five major call reasons are power interruption with 88.4%, fallen electricity pole with 86.8%, burnt transformer with 85.1%, service maintenance delay with 79.3% and information inquiry on

service procedure with 75.2% of respondents in the ranges of strongly agree and agree. The interview with EEU management also confirmed that power interruption is the top reason followed by the problem of fallen poles. Interviewed customers also said power interruption, maintenance delay, fallen pole and cable damage are the main reasons why they call EEU. The finding is in line with AEP Ohio (2015) report. However; each call from customers is not logged and the call center's statistical report does not give major call reasons report. The main root causes according to the EEU management are fuse burnt, old cable exposed to damage and limited capacity of the call center. The statistical report has also showed that millions of calls are not served because of the limited capacity of the call center. Millions of customer hear the busy signal and cannot reach even the IVR; a contradiction with Ugwuowo (2010) finding that hearing busy signal is not a common thing.

The major factor for high incoming calls is found to be unavailability of complete information in the call center. Customers call for the major call reasons discussed in previous paragraph and they are not accompanied with adequate information so that they do not call back again. One of the EEU interviewee confirmed the same. The interviewed customers also said they do not get enough information. The researcher observed the same gap while calling EEU call center. Failure to address the root cause of customers' problems is also the next major factor. This finding is in conformance with the findings of Lorenz et al. (2014), Bliss (2006) and STI Knowledge (2004). lack of on time support from top management is another major factor as per the feedback from employees' survey. The fact that EEU call center serves only through telephone channel hindered the opportunity to minimize easier call reasons, especially information requests. EEU call center does not have knowledge base which could have helped to minimizing repeated calls. This contradicts with the previous outcomes of Murphy (2015), Faulkner (2003) and Call Center Helper (2017) that KB is important to have and majority of call centers already have it.

According to the input from the interview, 905 call center is a national call center supposed to serve all EEU customers across Ethiopia. For information related requests, it is serving nationwide. However; for complaint/maintenance, it is only serving customers in Addis Ababa. Customers out of Addis Ababa need to call to fixed line telephone of the district in their area. This indicates that when EEU call center starts serving all customers, the number of calls could even increase further.

As the results depicted, a big majority of the respondents believe that EEU must be accessible through different channels to minimize calls. Especially, self-service and social media are highly favored with a support of 76% and 69.4%. Web chat and email channel are also well supported. On the other hand, the interview result of EEU management showed that two of them believe email, web chat and SMS are necessary channel and the top management believes in leveraging the voice channel for now and to consider other channels in the future. The customers responded that SMS, social media and mobile app are their preferred channels. Besides, the statistical reported showed that it seems difficult to manage such a huge amount of calls with one channel. The above findings are in line with Hyken (2016), Faulkner (2003), Cohen (2004) and Lorenz et al. (2014). However; there are two strange findings which are not in agreement with previous findings. Even if not majority, weighty percentage of the respondents voted against email and social media. This is strange because EEU is already present on social media (even if not yet efficient) and also email is considered crucial at present and in the future. This implies that there is a gap between what is expected and what EEU is planning to do.

The questionnaire response result showed EEU is not good at implementing different methods to reduce calls. Majority said that it did not address problems from the root, did not solve problems at first contact, did not do preventive maintenance, did not avail knowledge base system and multiple contact channels. Customers also said that they need to call several times as solution delays. The researcher also observed frequent outages on different areas and permanent solution is not given. This finding conflicts with the former discoveries of Laffredi (2004) and Alorica (2017). EEU top management responded to this point as they have started rehabilitating old lines in 8 major cities across Ethiopia and will continue to 6 more big cities.

As shown on the questionnaire survey result, 84.3% of the respondents believe media communication is not shared to EEU call center agents before being broadcasted. That is quite a big number and indicates a big gap. This is totally opposite to the argument in ContacBabel (2017) that agents must be first informed. Majority also said there is no sufficient document and the management does not give quick response for new issues. The customers said that they do not get sufficient information from EEU call center. Some of the EEU interviewed managers also confirmed that EEU call center does not have adequate information. The researcher is also a witness for the same based on the observation result. Therefore, EEU call center is not supporting customers with needed information on time.

First call resolution (FCR) is not measured at EEU call center; evidenced by the survey response. This is against the theory that FCR is the key performance indicator in call center as stated by McCullen (2017). Measuring FCR is the starting point to towards improving it. Besides, majority of respondents (62%) said that a customer needs to call 4 times or above to get his/her issue addressed. The management response is crucial to improve FCR at call center. In EEU, nearly two third said that management responds in a week or beyond. The feedback from the customers is also that they never get solution at first call.

According to the statistical report, the first call resolution (FCR) rate for normal customers is 55.8% and for enterprise customers 44.1%. That is very small and in line with the above evidences. Additionally, the report showed big quantity of customers call frequently to get solution (10.2% called >7 times, 5.1% called >10 times and 1.7% called >15 times). This means that more than 3000 customers call more than 15 times and around 10000 customers call more than 10 times in a month. Therefore; all the instruments proved that FCR is low at EEU call center. This results are much lower than the findings of ContacBabel which states average FCR is 74%.

### **4.3. Major Findings**

Below are the major findings of the study manifested through he different data collection instruments.

- The major call reasons why EEU customer call 905 are power interruption, fallen electricity pole, burnt transformer, service maintenance delay and information inquiry on service procedure.
- Millions of calls are not handled because of the limited human and other resource in 905 call center.
- The major factor for high incoming calls is unavailability of complete information in EEU call center, Failure to address the root cause of customers' problems, lack of on time support from top management and unavailability of channel options.
- 905 call center is planned to serve all customers across Ethiopia. However; practically, the call center serves nationally for information inquiry and only Addis Ababa customers for maintenance.

- Majority of the respondents believe that EEU has to be accessible through self-service, social media, Web chat and email channel to minimize incoming calls to 905. The preferred channels of customers are SMS, social media and mobile app.
- EEU is did not implement strategies to reduce incoming calls such as solving problems at first contact, do preventive maintenance, did not avail knowledge base system and multiple contact channels.to its call center.
- EEU did not address problems from the root, customers need to call several times for solution.
- Media communication is broadcasted before sharing the same information to EEU call center agents.
- There is no sufficient documentation and information to support call center agents give accurate answer to customers.
- EEU call center does not at all monitor First call resolution (FCR) despite the fact that FCR is very important call center parameter. According to statistical data, FCR of 905 is 55.8% and close to 10 thousand customers call more than 15 times to 905 call center in a moth which indicates low FCR.
- Customers gave EEU call center an average mark of 3.3 out of 10 on its overall services.

## CHAPTER FIVE

### CONCLUSIONS & RECOMMENDATIONS

#### 5.1 Conclusions

##### **a) Major call reasons to EEU call center**

The researcher concluded that EEU call center is too busy handling calls that could have been minimized. It is also concluded that power interruption is the top call reason to 905 call center, followed by fallen electricity pole, burnt transformer, service maintenance delay and information inquiry on service procedure being the top five major call reasons. Another conclusion is that EEU did not closely follow up major call reasons and also did not work well on providing permanent solution to repeated problems.

##### **b) Factors contributing to high incoming calls in EEU call center**

The study concluded that the number one factor that affect HICs is absence of complete information at call center followed by in ability to address root cause of repeated problems, lack of quick support from top management, unavailability of multi-channel access and unavailability of KB. The researcher also concluded that majority of the factors for HICs are issues that could be positively influenced by EEU. The good news here is that EEU management is aware of the majority of the issues and it is thinking of plans for mitigation.

##### **c) Channels options to handle EEU customers' requests**

The researcher concluded that EEU requires of having additional channel options; namely, SMS, social media, self-service, web chat and email. Similarly, it is difficult to handle the millions of calls coming to the call center and this demand the distribution of this contacts across different channels. Therefore; the researcher concluded that it is a necessity for EEU to quickly implement multi-channel call (contact) center.

##### **d) Methods to reduce calls in EEU call center**

The study concluded that EEU did not implement mitigation strategies to minimize the huge incoming calls it receives in its call center every day. Actions such as addressing the root cause, improving FCR, availing adequate information at call center, availing multi-channel access and



prevention of complaints are not well done. Availing either of these actions has a crucial role in minimizing incoming calls.

**e) The level of information adequacy at EEU call center**

It is concluded that there is no complete information at EEU call center; public information is shared to customers before agents, there is no sufficient supporting document and there is limitation on the quick support from management for new cases.

Another conclusion here is that agents are not well equipped to handle customers' calls and they need to guess to respond to some customer requests. Therefore; they give wrong/ no information to customer and encourages repeated calls along with dissatisfaction. Call center cannot merely depend on the excellence of individual employees they cannot remember all the information about their company by heart. That is why KB is required. The availability of KB also compensates if someone was in leave and missed some info, he/she can access it from KB.

**f) The level of issue resolution at first call in EEU call center**

The researcher concluded that EEU call center is not good with regard to solving customers' issues at first contact. Customers need to make repeated calls to get what they need from EEU call center. It is also concluded that even if FCR is a key metric in call center and the call center system of EEU can provide FCR report, the call center is not monitoring FCR. The study also concluded that thousands of customers call more than 10 and even 15 times every month. If FCR is not taken seriously and measured periodically, it is impossible to realize improvements on it.

### **5.3 Recommendations**

The researcher recommends the following measures:

- a) EEU needs to focus on analyzing the root cause of major problems and providing permanent solution. To have this position, EEU call center needs to periodically analyze major call reasons (for instance, top 10 call reasons of the week or the month) and to make efforts to address starting from number one call reason and going through 2,3, etc. The researcher also suggests that the call center must log each call reason reaching the agents so that it can summarize and report top call reasons. EEU must focus on providing permanent solution to

recurrent problems such as rehabilitation of old power cables and preventive maintenance of old transformers.

- b) EEU needs to give due attention for information on service procedure. EEU must minimize such calls by availing the information on the company's website in a customer friendly manner. It is also good that the same information be availed in an IVR and web self-care; considering that these channels are cheaper than the telephone channel.
- c) EEU needs to avail adequate information and materials at call center. Call center is a hard place to work. Agents need to serve demanding callers talking over the phone throughout their stay at work place. Therefore; EEU needs to equip its agent with adequate materials such as headset and most importantly adequate information need to be supplied. In this regard, the following actions are recommended.
  - Processes should be crafted to stop broadcasting information on the media before the call center community (including agents) are informed.
  - Knowledge base system should be implemented so that agents can access it for further detail. They should be assisted with KB as it is impractical to expect them remember every information of the organization.
  - Whenever, new issues in which the agents are not aware of come to the call center, there needs to be a process to quickly respond to the agents. This is not only within the call center but with all other departments and the top management (including CEO).
- d) It is cost effective to prevent calls from coming in the first place. This is possible through carrying out preventive maintenance on possible major sources of grievance. Therefore; there is the need to go deeper on all possible root causes for incoming calls and prevent additional calls. Starting from the biggest factor is recommended as working on all factors at the same time might be practically difficult.
- e) EEU serves from individual (residential) customers who use electricity for only basic household appliances to bigger industries which need megawatts of energy. EEU wants to handle the big organization with priority and the researcher recommends a way of prioritization be implemented at EEU call center and all the next processes to handle customer

request. This is possible either by creating another call center dedicated to enterprises or by creating different process within the current call center.

- f) The demands for EEU service are expected to grow along with the economic growth that is underway in Ethiopia and the immediate implementation of multi-channel call center is a necessity for EEU. The researcher recommends the next immediate channels to be self-service (both IVR and web) and SMS. Implementing these channels relieves some amount of calls from telephone channel. It is also required to plan for email, mobile app and web chat in a year time as the global trend of engagement on these channels is increasing from time to time.
- g) Although EEU is already available at Facebook and Twitter, it is not well utilized. The researcher suggests that EEU dedicates some well-trained people under call center operation to handle requests coming through social media as influence of social media is growing.
- h) The researcher also suggests that EEU management has to be very close to the call center. The call center is the center where the biggest transaction is made with customers every day. This implies that a lot of input can be obtained and a company that wants to satisfy its customers need to be so close to hear what customers are saying.
- i) It is recommended that a specific team be assigned to follow up the strategies of minimizing calls. Reducing calls is all about reducing cost and realizing customer as well as employee satisfaction at the same time.
- j) Another suggestion is that EEU needs to start measuring FCR at call center and working on the issues that make customers do repeated calls. First call resolution is not something the call center alone can realize. It needs end to end coordination among stakeholders.
- k) If in case implementing all the above recommendations is difficult, considering outsourcing option with detail study on the benefits and loses is also a choice. Several companies have outsourced their call centers and focused on their core functions.
- l) The researcher also suggests that it is not good thing to declare 905 nationally and let it serve only the customers in Addis Ababa. EEU needs to study whether to centralize (as already started) or decentralize the call center service and implement either of the two. It is recommended to emphasizes on the enhancement of national call center rather than letting regional customers call to districts via land lines in an isolated manner.

m) EEU must have active website which is accessible to customers and non-customers who seek to know about the company. If there is no website, customers call to 905 for everything. As utility organization, it is recommended to design the website mainly to serve customers. So, the researcher suggests EEU to avail as much information and support as possible while avoiding complexity.

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## **APPENDIX A**

### **INTERVIEW QUESTIONS**

#### **Interview Questions to EEU Management**

##### **Category A: Yes/No Questions**

- 1) Do you receive high incoming calls at EEU CC?
- 2) Does EEU have other channels on top of voice/telephone channel?
- 3) Do you have a plan to reduce incoming calls?
- 4) Do you think it is necessary to have other channels to minimize incoming calls?
- 5) Is EEU solving customers' complaints and providing accurate information at first contact?
- 6) Do you think mobile app self-service is necessary for EEU? Do you have plan to implement it?

##### **Category B: Open-Ended Questions**

- 7) Have you ever called EEU call center (your CC)? If yes, how frequent?
- 8) What is the major call reason of EEU customers?
- 9) Would do you kindly explain the major factors for high incoming calls to EEU CC?
- 10) What are your planned methods to reduce calls?
- 11) Are you happy with the current call center technology? If not, why?
- 12) What would be your next channels and when do you plan to have them?
- 13) Is EEU call center costing more than its benefit or vice versa? Why?
- 14) Would you also talk about whether EEU call center provides adequate information to customers? if no, why?

#### **Interview questions to customers**

##### **Category A: Close Ended Questions**

- 1) Do you know that EEU has a call center and the access number?
- 2) How fast do you access EEU call center? 1 attempt, 1-3 attempts, 4-10 attempts, > 10 attempts
- 3) How long do you wait before speaking to EEU agent? <5 minutes, 5-10 minutes, 11-15 minutes, >15 minutes
- 4) Does EEU solve your problem at the first contact?



5) Do you get enough information about EEU products/service from EEU call center?

**Category B: Open Ended Questions**

6) How many attempts to reach a call center are acceptable for you?

7) What is the maximum time which you consider as acceptable to wait to talk to agents?

8) Have you ever called EEU call center? If yes, what is the reason you call EEU most of the time?

9) How many times within the last month did you report to EEU for complain or information request?

10) Which channel do you mostly use to reach EEU for aftersales services? Why did you use that channel?

11) Which channels is your preference for easy cases such as information about EEU centers:

Voice, Email, web chat, social media, Text messaging, in person, others please, specify?

12) Which channel do you prefer for complex issues such as prepaid meter failure?

13) When you interact with EEU, is your priority getting a solution or being treated with respect?

14) Overall; how much out of 10 mark would you give to EEU call center?

## **APPENDIX B**

### **QUESTIONNAIRE**

#### **Dear Participants of this Questionnaire**

This questionnaire is prepared for a research to be carried out under the title “Assessment of Incoming Calls at Ethiopian Electric Utility Call Center – Causes and Mitigation Strategies”. I would greatly appreciate your participation and request a few minutes of your time to respond to the attached questionnaire.

Your sincere participation is crucial for the effectiveness of the study. The results of this study will show the factors of incoming calls at EEU call center and the mitigation strategies. All information you provide will be treated as strictly confidential and you will not be identified by name.

The questionnaire should only take about 15 minutes to complete. Please, for any clarification, please, contact me at [muezye@gmail.com](mailto:muezye@gmail.com) or +251 115 000056

Yours sincerely, Muez Yihdego

**Part I:** Please, read each factor under each dimension and rate each of the following statements/factors by putting (√) mark on the appropriate number with respect to your level of agreement/disagreement. Where;

1= “Strongly Disagree”, 2=” Disagree”, 3= “Neutral”, 4= “Agree”, 5= “Strongly Agree”

Description		Scale				
<b>A1</b>	<b>Reasons why customers call EEU Call Center (CC)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	The major reason for call to EEU CC is power interruption					
2	The major reason for call to EEU CC is prepaid meter charging information request.					
3	The main call reason to EEU CC is nonfunctioning prepaid meter					
4	The major reason for call to EEU CC is service maintenance delay after reporting to EEU					
5	The main call reason to EEU CC is bill information request					
6	The main call reason to EEU CC is delay to provide new service					
7	The major reason for call to EEU CC is burnt transformer					
8	The major call reason to EEU CC is fallen electricity pole					
9	The major reason for call to EEU CC is tariff/price information request					
10	The major reason for call to EEU CC is information inquiry on service procedure					
<b>A2</b>	<b>Factors for high incoming calls (HIC) at EEU call center.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	Lack of training is the main factor for high incoming calls at EEU					
2	Unavailability of adequate/complete information in the call center is the key factor for high incoming calls.					
3	Lack of on time support from top management is the major factor for HIC.					
4	Inability to address the root cause of problems reported by customers is the major factor for HIC.					
5	The major factor for incoming call is unavailability of other channels such as email, web chat, social media.					
6	There is no KB system to assist agents while handling a call.					
<b>B</b>	<b>Possible channel to handle request from EEU customers</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	EEU must be available through various channels other than phone					
2	EEU needs to have email channel to handle customer requests.					
3	Web chat can be helpful to reduce incoming calls.					
4	Introducing EEU customer self-service application can help reduce calls.					
5	EEU must have presence on social media to handle customer inquiries.					
<b>C</b>	<b>The methods used to reduce calls at EEU</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	EEU provides adequate training to agents on products/services.					
2	EEU resolves the root cause of major customers’ issues.					

3	EEU availed different contact channels to reduce call volume.					
4	EEU has a knowledge base system for agents.					
5	EEU does preventive maintenance to avoid customer complaints.					
6	EEU solves customers' problems the first time they reach the CC					
D	<b>The level of information adequacy at EEU call center</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	EEU call center has complete information available to customers.					
2	Any EEU communication to the media is shared to EEU call center agents before it is sent to the media.					
3	When new call reasons emerge, EEU management provide response/clarification quickly.					
4	EEU CC has enough documents to assist agents with detail information.					

**Part II:** Please, read the following questions and put a (√) mark on the box representing your agreement/ choice.

**E. The level of issue resolution at first call?**

- 1) Is first call resolution performance measured in EEU call center?  Yes  No
- 2) How frequent do you think a customer calls EEU to get solution for a specific issue?  
 1 time     2-3 times     4-5 times     >5 times
- 3) How quick does the management respond to escalated issues?  
 < 1 day     1-3 days     a week     > a week

**Part III:** Open question.

Any additional remark you want to mention about EEU call center? Please, state below.

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## DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr. Elias Nour (Assoc. Prof.). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Muez Yihdego Gebrekidan

\_\_\_\_\_

Name

Signature

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

**May, 2018**

## ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Dr. Elias Nour (Assoc. Prof.)

Advisor

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

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Signature

**May, 2018**