



Addis Ababa University
School of Commerce
Logistics and Supply Chain Management Unit

**EFFECTS OF OUTSOURCING STRATEGY ON
OPERATIONAL EFFICIENCY AMONG ETHIO
TELECOM ZONAL OFFICES**

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**A Thesis submitted to the school of Graduate Studies of Addis Ababa University School
of Commerce in Partial Fulfillment for the Degree of Master of Arts in Logistics and
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STATEMENT OF DECLARATION

I, Andualem Eshetu, declare that this research entitled “Effects of outsourcing strategy on operational efficiency among Ethio telecom zonal offices” is the outcome of my own effort and study and that all source of material used for the study have been duly acknowledged. I have produced independently except the guidance and suggestion of the research advisor. No part of this thesis has been presented either completely or in part to any other institutions for any award. It is submitted for the Partial Fulfillment of the Degree of Masters of Art in Logistics and supply chain Management (LSCM) from Addis Ababa university school of commerce.

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Acronyms and list of abbreviations

IT	Information Technology
ROI	Return on Investment
BPO	Business Process Outsourcing
OPEX	Operational Expenditure
ANOVA	Analysis of variance
CAAZ	Central Addis Ababa Zone
NAAZ	North Addis Ababa Zone
SAAZ	South Addis Ababa Zone
EAAZ	East Addis Ababa Zone
WAAZ	West Addis Ababa Zone
SWAAZ	South West Addis Ababa Zone

Abstract

Outsourcing has become an important business strategy because it enables businesses to reduce and control operating costs, to improve company focus, to gain access to excellent capability and to free internal resources for other purposes. The concept of operational efficiency encompasses the practice of improving all of your processes (all your company's activities that lead to your final product or service). Although there is substantial investment on telecom infrastructure and service expansion over the last decade aimed at improving the reach and capabilities of mobile networks in Ethiopia, the country's mobile penetration (of active subscriptions) remained among the lowest in sub-Saharan Africa. The purpose of this study was to establish the effect of outsourcing strategy on operational efficiency among Ethio telecom zonal offices. The research objectives were: to establish the extent and nature of outsourcing strategy implemented, to find out the effect of outsourcing on operational excellence, to determine the effect of outsourcing on financial efficiency of operations, to establish the effect of outsourcing on brand-customer relationship capability of operations and to establish effects of outsourcing on operational responsiveness capabilities of Ethio telecom zonal offices. A correlational research design was adopted in this study. Stratified random sampling was used to select questionnaire respondents while purposive sampling was used to select interview respondents. Quantitative data resulting from the questionnaire was analyzed using Statistical Package for Social Sciences 22(SPSS) while qualitative data was analyzed using themes and presented in form the of narratives. From the data analysis, this study found out that business process outsourcing was most popular form of outsourcing used in Ethio telecom zones. Further, outsourcing had effects on operational excellence, and operational responsiveness capability while its effects on financial efficiency of operations and brand-customer relationship capabilities of operations were found to be statistically insignificant. From the findings, this study recommended increased supervision on performance of outsourced service providers to ensure they deliver agreed upon results, increasing the level of outsourcing from tactical to strategic then working towards transformational outsourcing and establishing proper communication on quality requirements of outsourced services. Furthermore, all parts of internal operations should be communicated with outsourcing decisions in order to put new policies or procedures into action at the right time.

Key words: outsourcing, efficiency, strategy, operations

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

In today's business environment of increasing demand by customers for better value, organizations are forced to look for new ways to generate value and satisfy their customers while minimizing cost. According to Chopra and Meindl (2007), outsourcing is described to result in the supply chain function being performed by a third party and one of the most important issues facing a firm. On the other hand, Waters (2010) defines it as the deliberate movement of a series of connected business processes to a third party who manages them on behalf of the company. The classic processes were IT, warehousing and distribution, facilities management, and payroll. To these can now be added: call centers, manufacturing, web-development, home shopping, credit cards, and even merchandising and design, leveraging external skills and resources to reduce costs, achieve flexibility of use of resources by dovetailing other companies' expertise and focus into your company to improve competitiveness and customer service.

Seyoum (2009) maintains that the outsourcing of products and services to external suppliers continues to expand, as firms search for ways to lower costs while improving their products to remain competitive. Firms that outsource often realize cost savings and an increase in capacity and quality. Outsourcing cannot be approached as a simple "make or buy" decision, but, instead, it should be considered as a corporate strategy, put in place by top management to improve the performance of firms (Marchegiani, Pirolo, Peruffo, & Giustiniano, 2010). Giustiniano, Luca, Clarioni & Giulio (2013) argue that outsourcing is not merely a means of cost reduction but it also implies a transfer of intellectual capital. From this perspective, the development and maintenance of competencies might be necessary to achieve a competitive edge against competitors and drain resources, allowing top management to improve performance. In addition, firms can achieve sustainable competitive advantages, if they are able to reallocate human and financial resources in profitable activities. According to Masinga (2014) Outsourcing decision significantly reduces the organization costs also very crucial in enhancing organization performance through both Financial measures include profits, revenues, returns on investment (ROI), returns on sales and returns on equity, sales growth, and profitability growth. Nonfinancial measures include overall performance of the firm relative to competitors, employment of additional employees, customer satisfaction, employee satisfaction, customer loyalty, brand awareness and owners' satisfaction with the way business is progressing.

According to Mulat (2007), Ethiopian organizations are willing to outsource non-core business functions, such as maintenance and janitorial services, security services and information technology

services. The most expressed reasons for outsourcing in ascending order are: allowing more focus on core business, improving service level, acquiring innovative ideas and cost savings. Some companies believe that outsourcing is more cost effective; as it allows them to concentrate on their core competencies and to purchase the products or services from expert companies than to produce in-house. For example, TV3 Ghana Limited outsources its internet services from UCOM Ghana Limited. The television giant does this to cut down on the costs it would incur in creating an internet service and managing it themselves as well as remaining competitive. Some other firms also outsource because they need to improve their quality and speed of software maintenance and development. Others also believe that outsourcing is now offering much value than it previously did (Yeboah, 2013). Another example is commercial bank of Ethiopia, management get more time to focus on core activities and able to increase the accessibility of banking service by opening new branches in different part of the country (Betelhem, 2017). Osborne and Gaebler (1992) claim that it is a powerful policy instrument for reducing public expenditure and improving the performance of government owned business enterprises.

It is often argued that outsourcing improves efficiency because it introduces competition into the provision of public services and because private firms are relatively free of political interference (Jansen & Stonecash, 2004). Although many firms outsource to reduce costs, they often fail to do so and may actually increase it if not handled properly (Handfield, 2006). It is for this reason and the researcher's theoretical knowledge of outsourcing and operations this research sought to assess effects of outsourcing strategy on efficiency of operations among Ethio telecom zonal offices.

1.2 Statement of the problem

Outsourcing plays crucial role influencing efficiency of undertakings vital to achieve business objectives because it directly affects the firm's operational activities. Primary goals of the organizations are related to market opportunities. Economy and efficiency of conversion operations are predominant with the study and practice of operations management (Kumar & Suresh, 2009). Strategy is the direction and scope of an organization over the long-term: which achieves advantage for the organization through its configuration of resources within a challenging environment to meet the needs of markets and outsourcing is an increasingly popular enterprise management strategy (Koszewska, 2004).

According to Yetnayet (2016) Ethio telecom adopted outsourcing as a strategy since France telecom management group took over the management of Ethio telecom with a two and half year contract starting 2010. She stated that France telecom was focused on short-term goals than long-term goals of the company. Their main target was revenue generation in the short term. However, the relationship between outsourcing strategy and efficiency of operations in Ethio telecom zones after France telecom management group left has not been assessed.

McLavor (2010) maintains that the world has embraced the phenomenon of outsourcing and companies have adopted this principle to help them expand into other markets. Mirza (2012) upholds that outsourcing functions have both risks as well as some latent requirements in governing the relationship. Only if such conditions are properly examined by the firm then it can make the decision regarding outsourcing and harvest the benefits in terms of cost reduction and increasing efficiency.

Although Ethio telecom remained a monopoly in providing telecommunications service in Ethiopia, according to IT Web's www.itweb.co.za (2017) the company has enlarged to become the largest mobile operator in Africa in terms of subscriptions, with 57.34 million total mobile subscribers in 2017. The environment under which it is operating in is rapidly changing forcing the company to adopt the sourcing strategies that are driving the business sector to utilize resources. According to Business Wire Research (2017), although there is considerable investment in telecoms services, some \$3.1 billion has been invested in telecom infrastructure and service expansion over the last decade aimed at improving the reach and capabilities of mobile networks, the country's mobile penetration remains among the lowest in the world. Nevertheless, growth is strong and considerable growth potential remains. This brought the mobile penetration (in terms of active subscriptions) to 23.3%, among the lowest in Sub-Saharan Africa.

Research on outsourcing has typically focused on the transaction level. However, it is also important to theorize and study the implications of outsourcing at the firm level because governance decisions of organizational activities are interdependent and affected by organization specific factors. This study establishes the effects of outsourcing strategy on operational efficiency among Ethio telecom zonal offices with a view of providing recommendations on how it can be effectively implemented and/or its effects mitigated.

1.3 Research questions

The following research questions are assessed in this research paper

1. To what extent outsourcing strategy is implemented among Ethio telecom zonal offices?
2. How does outsourcing affect operational excellence of Ethio telecom zonal offices?
3. How does outsourcing affect financial efficiency of operations among Ethio telecom zonal offices?
4. How does outsourcing affect brand-customer relationship capabilities of Ethio telecom zonal operations?
5. How does outsourcing affect operational responsiveness capabilities of Ethio telecom zonal offices?

1.4 Objectives of the study

1.4.1 General objective

The general objective of the study is to analyze effects of outsourcing strategy on operational efficiency among Ethio telecom zonal offices.

1.4.2 Specific Objectives

The specific objectives are:

1. To establish the extent and forms of outsourcing strategy implementation among Ethio telecom zonal offices.
2. To establish the effects of outsourcing strategy on operational excellence among Ethio telecom zonal offices.
3. To examine the influence of outsourcing strategy on financial efficiency of operations among Ethio telecom zones.
4. To establish the effects of outsourcing strategy on brand-customer relationship capabilities of Ethio telecom zonal operations.
5. To establish the effects of outsourcing strategy on operational responsiveness capabilities of Ethio telecom zonal offices.

1.5 Significance of the study

This study highlights the types of outsourcing relationships implemented and its effect on operational efficiency. As the company aggressively continued increasing its number of customers and area of coverage while demand for telecommunications service surge rapidly, the results of this study could help the company management make policy decisions related to outsourcing in order to boost efficiency and improve service delivery. The findings and recommendations of this study provide insights to Ethio telecom management and ultimately to its owner the Ethiopian government on how efficiency can rise through outsourcing strategy so that this important sector can facilitate national development endeavors. With good adoption of outsourcing, other institutions and organizations would want to know the effect of outsourcing on operational efficiency in Ethio telecom and therefore adopt the right method in acquisition of goods and services. It could also act as a stimulus for further research to refine and extend the present study especially in Ethiopian institutions responsible for economic infrastructure development.

1.6 Scope of the study

The research focused on six zones of Ethio telecom in Addis Ababa namely south, north, east, west, southwest and central Addis Ababa zones. All zonal offices were accounted because of proximity to the researcher place of work and time essence and convenience. It covered operational efficiency among Ethio telecom zones. The study randomly collected and analyzed data from these zones.

1.7 Limitation of the study

This research did not include additional data collected from outsourced service providers, due to the reason that, based on conversation the researcher had with known outsource providers they are not willing to participate for academic or any other purpose fearing they will be singled out for criticism and lose the business. Thus, this research is based on only the data obtained from the case organization. In addition, due to time and budget constraint, the study only considered employees located in and around Addis Ababa. Therefore, any conclusion drawn from this research is based on the above circumstances.

1.8 Definition of terms and Concepts

A conceptual definition tells what the concept means, while operational definitions tell how the researcher measured these concepts for this study .

1.8.1 Conceptual Definitions

Efficiency

Efficiency can be defined as doing things right. Operational efficiency refers to a ratio of outputs to inputs (like land, capital, labor, etc.). (Roy, 2009)

Operations

Operation is that part of an organization, which is concerned with the transformation of a range of inputs into the required output (services) having the requisite quality level. (Kumar & Suresh, 2009)

Outsourcing

The strategic use of resources outside of the company to perform activities traditionally handled by internal staff and resources. (Handfield, 2006)

1.8.2 Operational Definitions

Operations

Galloway (1998) defines operations as all the activities concerned with the transformation of materials, information or customers. The staff involved in the transformation process may include both people who are directly employed by the organization and those contracted to supply services to it. They are described as 'labor'. The facilities of an organization – including buildings, machinery and equipment – are referred to as 'capital'.

Operational efficiency

Optimal use of resources by an operational activity or group of activities to achieve outstanding customer satisfaction. The concept of operational efficiency encompasses the practice of improving all of your processes (all your company's activities that lead to your final product or service). Key indicators are Operational Excellence, Financial Efficiency, proficient Brand-Customer Relationships, and optimum operational Responsiveness.

Outsourcing strategy

Turning to service providers and supply chain partners to perform or manage complete business process, non-core business process elements, professional services, projects, infrastructure systems and customer service, which were originally handled by in-house resources.

1.9 Organization of the study

The first chapter above summarizes and states the problem as evident from the review of existing literature. The concept of outsourcing is discussed in subsequent sections, and the researcher provides objectives, research questions and usefulness of this study to various stakeholders. The researcher finally outlines the scope and limitations of the study, and gives definitions of key terms as used in this study.

The next chapter (chapter two) saw the insights of existing literature on the subject of outsourcing by studying other literature closely related to this study. It will discuss in detail the concepts of outsourcing, operations, efficiency. It further analyzes existing literature on measures of operational efficiency.

Chapter 3 outlines the research methodology used in the study. It describes the research design and the sampling design used to attain representative sample size from the target population. It further outlines the data collection methods and research procedures and data analysis methods utilized in the study.

Chapter 4 presents and interprets the results and findings of the study after careful analysis of the collected data. The presentation of the findings are systematically ordered based on the research questions stated in chapter one and made use of tables and figures. It then discusses the findings outlined, relating them to the literature done in chapter two.

Finally, chapter five further summarized and draws conclusions from the discussions and offered recommendations. In addition, it presented areas of future research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents literature related to the area of study by discussion concepts and nature of outsourcing, operations system, operational efficiency and its measures. The chapter also gives theoretical framework.

2.2 Theoretical Concepts and Nature of Outsourcing

Business process outsourcing (BPO) is defined simply as the movement of business processes from inside the organization to an external service provider Duening & Thomas (2005). World Trade Organization defines outsourcing as a transfer of routine, repetitive activities to external providers. Such a relationship is regulated by a contract between the outsourcer and the service provider. The consequence of outsourcing is the reduction of employees in outsourcing company and the increase of employees in the outsourced service provider company (World Trade Organization, 2004). In this context, outsourcing is viewed as the process of subcontracting a service to a third party company to provide a service that could otherwise be performed by in-house workers. Simply put, outsourcing refers to a transfer of a business function or a service to an external, third party service provider. On the other hand, Troaca (2012) traces its meaning as “The concept of outsourcing came from the American terminology ‘outside resourcing’, meaning to get resources from the outside. The term was later used in the economic terminology to indicate the use of external sources to develop the business, which typically were using their internal resources.” Kavcic (2014) defines outsourcing as a form of company control. Increasingly, companies are aware of the problems caused by not outsourcing nonstrategic activities, as this deters them from their main activities. By outsourcing non-strategic activities, companies can focus on strategically important areas; i.e. to what is required from them by the market and what they are really good at. Focus on strategically important tasks enables companies to increase their added value.

Mehta, Armenakis & Irani (2006) argued that during the growth and development of business process outsourcing industry, businesses also started to outsource their human resource and finance functions apart from traditional contact center outsourcing. The general tendency was to outsource only non-core business processes to an outside vendor but this phenomenon has been changed and now companies are also outsourcing their core business processes to gain and maintain competitive advantage. Andone, Ioan, Pavaloaia & Vasile-Daniel (2010) suggests that outsourcing entails a number of risks and not only benefits. First, the company may lose control of the essential functions that includes information and other features, such as commercial function, production, personnel.

According to Mulat (2007), despite the reasonable level of awareness of top-level managers about the concept of outsourcing, the use of outsourcing in Ethiopia has been low and highly dominated by non-

core business functions such as maintenance and janitorial services, security services and information technology services. The variation in the satisfaction level regarding the outsourced services may be due to either the variation of service level provided by different service providers or the variation of expectation level of the organization (outsourcer). Also confirmed that Ethiopian organizations are willing to outsource non-core business functions, such as maintenance and janitorial services, security services and information technology services. Conversely, Accounting and Administration outsourcing service providers will face great challenges from Ethiopian organization to deliver their services. This is mainly due to the organizations fear of loss of confidential information and loss of control. In addition, the organizations suspect that the external service providers are not loyal to them.

As stated by Troaca & Bodislav, (2012) the type of outsourcing relationships can be described as: one provider - one customer, one supplier more customers, some vendors - a client or several vendors - more customers. The evolution of Outsourcing has led to a wide variety of Outsourcing services today. With a wide list of Outsourcing services, it is important in learning - What is outsourcing, to uncover what the different types exactly are. Therefore, in this section, types of Outsourcing will be discussed.

On the words of Nearshore Technologies (2017), in the 19th and early 20th centuries, companies did not use Outsourcing as a business practice like today. There was no IT outsourcing at all, in fact, Outsourcing was not even formally identified as a business strategy until 1989. The only type of Outsourcing that really occurred during this period was when companies hired external suppliers for ancillary services. Unaware of the possible benefits of outsourcing, this early Outsourcing only occurred because most organizations were not completely self-sufficient; they outsourced the functions for which they had little to no competency internally.

The Industrial Revolution brought us specialization which in time brought us Outsourcing and changed the way companies did business. During this period, companies started to answer that seemingly heavy question - why outsource? Here, outsourcing more services occurred because there was a rapid increase in the production of goods. The market for goods quickly expanded and profits were like never before. This led more and more managers to ask and discover what is outsourcing? And here, companies started outsourcing accounting, insurance, engineering, and legal needs to specialized firms. Also at this point in time, Outsourcing to such specialized firms only took place within the home country unlike today where offshoring is a popular business practice.

Outsourcing support services appeared to be the next round of outsourcing services. By the 1990s, organizations began to focus more on cost-saving strategies. This entailed functions necessary to run a company, but not specifically related to the core business. Here, managers contracted emerging specialized companies to deliver Outsourcing services such as accounting, human resources, data processing, internal mail distribution, security, and maintenance work. These specific Outsourcing services are still highly relevant today and commonly involved in an answer to what is outsourcing.

Unlike the 19th and early 20th centuries, today, there are many different types of Outsourcing services that managers should understand when wondering why outsource services anyway? These Outsourcing services are often grouped into four main categories: professional services, process-specific activities, total business process and project Outsourcing.

A- Professional services Outsourcing

Professional Outsourcing includes accounting, legal, purchasing, information technology (IT), IT or administrative support and other specialized services. This is the most common area for these specific types of Outsourcing services, as there is a potentially high cost savings associated with this type of arrangement. The company pays only for services actually provided while having access to high quality resources, which significantly reduces overhead costs.

B- Process-Specific Activities Outsourcing

Other Outsourcing services can be specific to a process or internal procedure, which is commonly referred to as process-specific Outsourcing. Today, it is very common to outsource specific operation-related aspects to other companies or units that specialize in that specific service. For example, a bakery can outsource the delivery of a packaged cake to a courier company like UPS or FedEx. Such an Outsourcing contract would then involve details on delivery timelines, customer contacts and costs, which then allows each company to focus on its strength and improve customer service all while reducing costs and time.

C- Business Process Outsourcing

Besides professional service Outsourcing and process-specific outsourcing, there is also outsourcing services for operational activities. A business process is a complete, dynamically coordinated set of activities or logically related tasks that must be performed to deliver value to internal or external customers or to achieve other strategic goals (Trkman, 2010). In simple terms, business process outsourcing (BPO) is defined as the movement of a business process from inside the organization to external service providers. BPO is the delegation of a (usually non-core) business process to an external service provider who owns, administers and manages it. Specifically, BPO involves contracting with one or more BPO service providers for the provision of the execution of business process (Saxena & Bharadwaj, 2009). Business process outsourcing (BPO) occurs when an organization turns over the realization of a particular process (such as design products/services, production, managing human resources, information, financial and physical resources) to a third party that specializes in that process. Using outsourcing, a firm (BPO client) has a benefit from the selected BPO provision which can complete the process more efficiently. BPO client has a possibility to concentrate on its core

competency and free limited organizational resources (Brown & Wilson, 2005). For example, machine maintenance and equipment repair can be acquired through Outsourcing services or even specialized IT outsourcing services that specialize in that specific type of equipment or machinery. Other types of operational activities can include landscaping, cleaning services, and facilities maintenance or property management.

D- Project Outsourcing

Sometimes companies have trouble managing one of their projects or even just completing a portion of a specific project. In such a case, companies can project outsource. There are individuals and specialized units that specialize in project management that companies can outsource to. These Outsourcing services can be contracted to either manage entire projects or complete portions of projects. There may be a number of reasons why companies would want to outsource such a function, especially because there are many benefits of outsourcing parts of projects, but project outsourcing most often occurs because companies simply do not have enough available people in house or enough skills, or funds to do it on their own. It is a more appealing choice than taking the time and money to contract someone in house and lose key operational staffs or even to train someone, especially if it is on a function that is commonly dealt with by IT outsourcing (Brown & Wilson, 2005). Companies need to understand these benefits of outsourcing when learning what is outsourcing exactly and what are all the benefits of outsourcing? as it thus saves time and money.

Levels of Outsourcing; There are three levels of outsourcing – tactical, strategic and transformational. ***Tactical outsourcing*** is used by companies to determine and solve specific problems. Regularly the firm is already in ‘problems’ and outsourcing is seen as an immediate approach to address them. Regular problems are the following: the lack of financial resources, deficient internal managerial competence, an absence of talent, or a desire to downsize, etc. (Brown & Wilson, 2005,). Tactical outsourcing is a type of traditional outsourcing and is taking into account cost control and the make-or-buy decision. The tactical outsourcing results in obvious advantages as cash savings, cash infusion from the sale of assets, etc. (Ghodeswar&Vaidyanathan, 2008).

The outsourcing activity becomes ***strategic*** when it is adjusted to the organization’s long-term corporate or business strategies, and when the advantages of outsourcing project will rise. Strategic outsourcing is relevant for an enterprise and its future core capabilities, organizational structure/architecture, cost, business performance and competitive position (Maurice &Greaver, 1999).

Transformational outsourcing is defined as a long-term relationship through which a service provider assists the client in stimulating continuous business change while also achieving operational efficiency and effectiveness. This level of outsourcing is an emerging practice, where organizations are looking outside for help for more fundamental reasons – to encourage quick organizational change, implement new strategies, and reshape company boundaries. Transformational outsourcing places the ability to

convey new capacities to the organization squarely in the hands of executives who have and value these capabilities. In other words, the outsourcing partner provides a management team that is experienced in the capability that the organization seeking change needs. Also, those executives are empowered by the outsourcing process to implement the practice they bring with them (Chew & Gottschalk, 2013).

2.3 The operations system

An operation was defined in terms of the mission it serves for the organization, technology it employs and the human and managerial processes it involves. Operations in an organization can be categorized into Manufacturing Operations and Service Operations. Manufacturing Operations is a conversion process that includes manufacturing yields a tangible output: a product, whereas, a conversion process that includes service yields an intangible output: a deed, a performance, an effort. Operations system converts inputs in order to provide outputs, which are required by a customer. It converts physical resources into outputs, the function of which is to satisfy customer wants. To ensure that the plans for the operations subsystems are accomplished, the operations manager must exercise control by measuring actual outputs and comparing them to planned operations management. Controlling costs, quality, and schedules are the important functions here (Kumar & Suresh, 2009).

According to Roy (2005), Operations Management can be defined as the management of the conversion process, which converts land, labor, capital, and management inputs into desired outputs of goods and services. It is also concerned with the design and the operation of systems for manufacture, transport, supply or service. The operations system of an organization is the part that produces the organization's products. In some organizations, the product is a physical good (refrigerators, breakfast cereal); while in others, it is a service (insurance, health care for the old people). However, these organizations have something in common. They have a conversion process, some resource inputs into that process, the outputs resulting from the conversion of the inputs, and information feedback about the activities in the operations system. Once goods and services are produced, they are converted into cash (sold) to acquire more resources to keep the conversion process alive. Feedback information is used to control the operations system, by adjusting the inputs and transformation processes that are used to achieve desired outputs.



Figure 2.1- The transformation model. Source; the Open University (2011)

2.3.1 Objectives of operations: Customer service and efficiency

The goal of operations is to run efficiently, provide consistent, high-quality services and continually improve the customer experience. For all operations, the goal is to create some kind of value-added, so that the outputs are worth more to consumers than just the sum of the individual inputs. The random fluctuations consist of unplanned or uncontrollable influences that cause the actual output to differ from the expected output. Random fluctuations can arise from external sources (fire, floods, earthquake, lightning, or even some diseases like SARS), or they can result from internal problems like defects in materials and equipment, human error (Roy, 2005).

Kumar and Suresh (2009), maintains that Objectives of Operations Management can be categorized into Customer Service and Resource Utilization. The first objective of operating systems is to utilize resources for the satisfaction of customer wants. Therefore, customer service is a key objective of operations management. The operating system must provide something to a specification, which can satisfy the customer in terms of cost and timing. Thus, providing the 'right thing at a right price at the right time' can satisfy primary objective. Another major objective of operating systems is to utilize resources for the satisfaction of customer wants effectively. Customer service must be provided with the achievement of effective operations through efficient use of resources. Inefficient use of resources or inadequate customer service leads to commercial failure of an operating system. Operations management is concerned essentially with the utilization of resources, i.e. obtaining maximum effect from resources or minimizing their loss, underutilization or waste. The extent of the utilization of the resources' potential might be expressed in terms of the proportion of available time used or occupied, space utilization, levels of activity, etc. Each measure indicates the extent to which the potential or capacity of such resources is utilized. This is referred as the objective of resource utilization.

2.3.2 Efficiency of operations in telecom companies

This occurs when a certain output is obtained with a minimum of inputs. The desired output can be increased by minimizing the down times as much as possible (down times are coffee breaks, machine failures, waiting time, etc). Efficiency can be defined as doing things right. Operational efficiency refers to a ratio of outputs to inputs like land, capital, labor, etc. (Roy, 2005). Organizational efficiency is the ability of the organization to perform its activities at a lower cost. In service sectors, efficiency has been defined in terms of the cost of servicing customers (Weigelt & Sarkar, 2012).

Larger operators generally compare themselves to other larger operators – missing the efficiency innovation that smaller late-entrants have had to do. Larger operators are also having a stronger preference for in-house compared to smaller operators: The percentage of headcount with partners is lower the bigger an operator is. Some operator groups have realized the decoupling of scale and efficiency and try to internationalize functions that aren't market specific – as e.g. central network operations, billing, product development, IT and support functions. The networks OPEX per base

station decreases with the outsourcing rate since cost saving is a major driver for outsourcing in the first place, this is not really surprising. With the exception of emerging markets, outsourcing levels are still low within Networks, though. The current level of 10% of headcount is much lower than the overall outsourcing level within operators (Efficiency Index, 2017).

2.4 Empirical discussion on Outsourcing and operational efficiency

When measuring operational efficiency, a company should define, measure, and track a number of performance indicators on both the input and output side. According to Bhandari and Mania (2002), most organizations that embrace outsourcing partnerships look for immediate cost reductions. As they expand the role of their outsource partner, they find that the long-term implications are much more strategic. An outsource service provider that understands unique business imperatives can play a major role in expanding a competitive advantage by improving processes quality and managing the integration of new technology and specialized expertise. Process and technological obsolescence is mitigated through shared accountability. Effects of outsourcing are measured by operational process-driven efficiencies in four ways; Operational excellence, Financial efficiency of operations, Brand-Customer relationship and responsiveness of operations. Economics Nobel prize winner Debreu (1951) offered the first measure of productive efficiency with his coefficient of resource utilization. Debreu's measure is a radial measure of technical efficiency. It measures the achievement of the maximum feasible input contraction or output expansion. It can be said that the first two measures stated above deal with achievement of input contraction through outsourcing and the rest two deal with output expansion. When improving operational efficiency, the output to input ratio improves.

• Operational Excellence

It takes time, money and sustained effort to build process capabilities in-house and no organization can perform them all masterfully. Outsourcing partner specialized in these activities typically undertakes to deliver agreed-upon results (Bhandari and Mania, 2002).

Operational excellence means a series of “intangible assets” that enable organizations to continuously improve all areas of performance. Operational excellence is not just a concept; it is philosophy aimed at improving performance and leading to business success. It is a philosophy at operational level with strong implications on competitiveness, at the strategic level (Naftanaila, Radu & Cioana., 2013).

•Financial Efficiency of operations

The outsourcing of process capabilities improves the financial efficiency of a telecom organization's operations by increasing the return on its capital employed. Outsourcing provides the opportunity to add process capabilities without adding capital or employee overheads. The financial benefits increase when these processes are run efficiently from external locations (Bhandari and Mania, 2002).

Financial Efficiency refers to the efficiency with which resources are correctly allocated among competing uses at a point of time. It can be said that neither profitability ratios nor turnover ratios by themselves provide good indicators to measure operational efficiency (Zala, 2010).

- **Brand-Customer Relationship capability**

Outsourcing helps a telecom organization extend its own brand-customer relationship capabilities. A simple example is the new account creation and number administration process, which can often be faster and better handled - from both the customer's and company's perspective - through best practiced outsourcing than through in-house processing (Bhandari and Mania, 2002).

Customer brand relationship is developed over a period of time due to customers' previous experience with a brand (Bowden, 2009). The brand can be perceived as a mechanism that engages the buyer and the seller with the intention of creating a long-term customer brand relationship, which is called the relationship builder. The customer brand relationship is derived from the brand experience, brand knowledge and/or brand meaning that the customer associates with the brand. The relationship largely depended on the success of establishing a brand meaning, which is a crucial mediator between brand experience and customer brand relationship (Şahin&Kitapci, 2011). This is an important element since it is perceived to provide businesses with competitive advantage by establishing a strong bond between the customer and the brand (Bowden, 2009).

- **Operational Responsiveness**

In the growth era of the business cycle, speed became the very currency of innovation. In the down cycle, it remains as critical for the company to be able to respond quickly when it cannot predict outcomes. When business volumes of activities and transactions can vary widely, outsourcing could add flexibility, adaptability and ability to scale (Bhandari and Mania, 2002).

Outsourcing is a powerful strategic tool that can gain an organization many benefits including responsiveness if gone about in the right way. However, the consequences can be detrimental for the organization if they do not go about it in the right way. To avoid the pitfalls requires advance planning. Roles, responsibilities, and conflict resolution terms must be outlined clearly along with the performance measures in order to evaluate the service. In order to improve responsiveness and agility companies must outsource to a best in class provider to take advantage of the best practice they have employed. Agile Marketing organizations are able to adapt their marketing efforts, quickly and successfully, in response to changing customer behavior, market conditions and business direction to the benefit of improved market share or customer value. (O'Riordan, 2005)

2.5 Research Gap

There has been an enormous amount of research conducted on the effects of outsourcing in organizations, making it one of the most praised, criticized and debated management practices (Elmuti & Kathawala, 2000). Despite all the research, countless management texts, relevant articles and associated conference papers, outsourcing strategy remain a major source of frustration for managers. In this regard, this study sought to establish the effect of outsourcing on operational efficiency among Ethio telecom zonal offices. The attitudinal results presented in this study provides support for the claims of outsourcing proponents that outsourcing allows companies to enhance operational efficiency through improved operational excellence, financial efficiency, proficient brand customer relationship, and increased operational responsiveness. Outsourcing in this sense, would be beneficial to organizational success and value for customers.

2.6 Conceptual framework

After completing a literature survey, and defining the problem, one is ready to develop a conceptual framework. The conceptual framework discusses the interrelationships among the variables that are deemed integral to the dynamics of the situation being investigated. According to Saunders (2009) during data interpretation, you are likely to be using a conceptual framework against which you will analyze your data. This could involve using an established theoretical construct to help you to make sense of your findings (Zikmund& Carr, 2013). In this study, the dependent variable operational efficiency shown by Operational Excellence, Financial Efficiency, Brand-Customer Relationships and Organization Responsiveness while the independent variable is outsourcing strategy represented by types of outsourcing relationship. Figure 2.2 presents the conceptual framework.

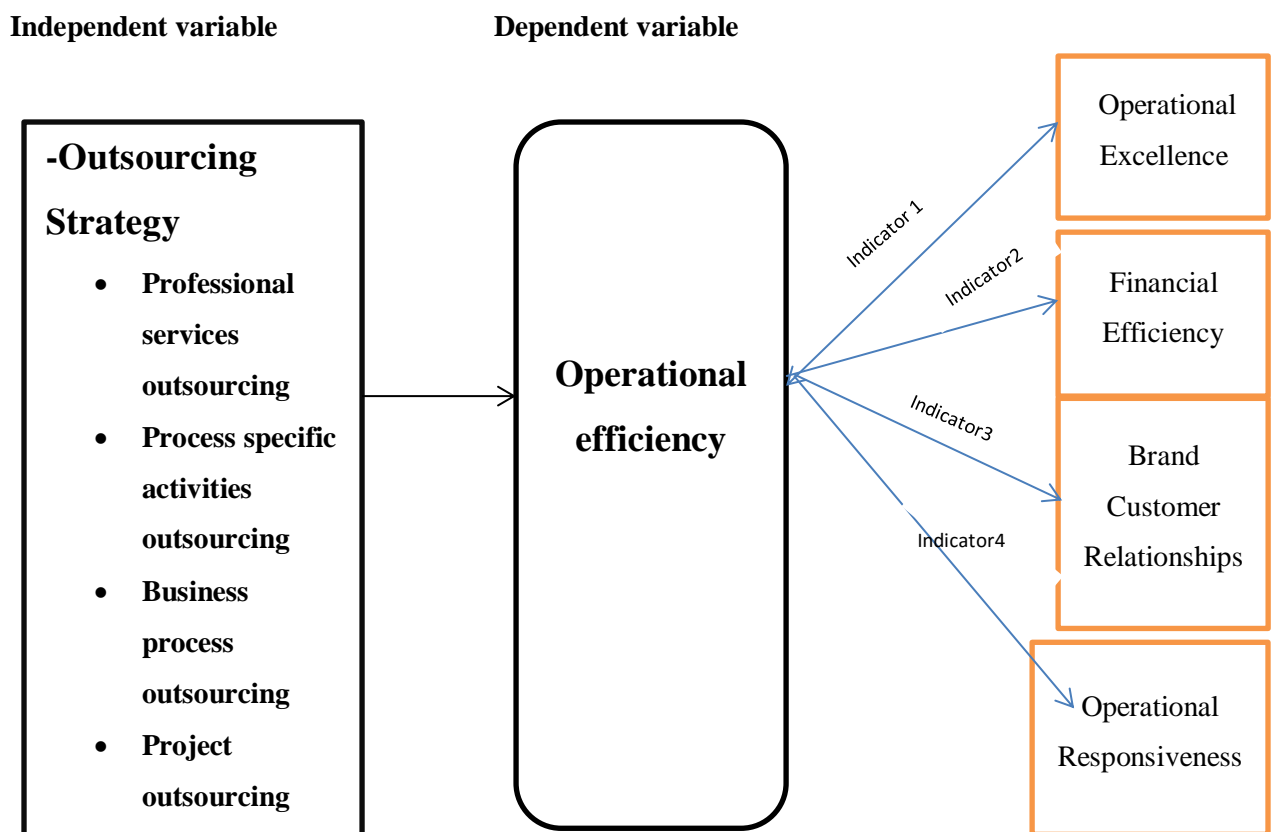


Figure2.2 Conceptual frameworks by the researcher (2018)

CHAPTER THREE: METHODOLOGY

3.1 Description of the study area

The study area is focused on Ethio telecom operations structured by six zonal offices covering Addis Ababa and areas up to 250 KM outside of the city. Each zone has similar but independent internal structures with distinct operational boundaries. These zones are south, north, east, west, southwest and central Addis Ababa zones. Management of Operations in each zone is divided by seven functional departments namely fixed access network, network operations and maintenance, direct channels, indirect channels, business partner, finance and physical and environmental security.

3.2 Research Approach

This research used inductive research approach to assess the effects of outsourcing on operational efficiency among Ethio telecom zonal offices. The research moved from specific observations of operational efficiency and outsourcing to broader generalizations and conclusions. Inductive approach, also known in inductive reasoning, starts with the observations and theories are proposed towards the end of the research process as a result of observations (Goddard & Melville, 2004)

3.3 Research design

This study adopts correlational research design. When the researcher is interested in delineating the important variables associated with the problem, the study is called a correlational study. It may be of interest to know that attempts are made to establish cause-and-effect relationships through certain types of correlational or regression analyses (Sekaran, 2003). In this study relationship between the independent variable outsourcing strategy and dependent variable operational efficiency is established using multiple linear regression analysis.

3.4 Unit of analysis

The principal unit of analysis in this research is variance on input/ output ratio of operations among Ethio telecom zonal offices using four performance indicators (operational excellence, financial efficiency, brand-customer relation and responsiveness).

3.5 Population of the Study

Population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate Sekaran (2003). There are 2600 employees in all six Ethio telecom zones. Effects of outsourcing strategy on efficiency of operations handled by these employees are studied by taking sample from this target population.

3.6 Sampling Design

Sampling involves any procedure that draws conclusions based on measurements of a portion of the population. In other words, a sample is a subset from a larger population Zikmund (2013). A sample is a subset of the population. It comprises some members selected from it. In other words, some but not all, elements of the population would form the sample Sekaran (2003). In this study, stratified random sampling based on their location is used to get information from Ethio telecom zonal employees using questionnaire. Purposive sampling for interviews was used in the selection of respondents. Purposive/judgmental sampling as a type of non-probability sampling method whereby the units selected to be observed are selected based on the researcher's judgment about which ones will be the most useful. Stratified random sampling is used because it assists in minimizing bias when dealing with the population. With this technique, the sampling frame can be organized into relatively homogeneous groups (strata) before selecting elements for the sample. According to Janet (2006), this step increases the probability that the final sample will be representative in terms of the stratified groups. These strata are those six Zonal offices. Simple random sample was taken in each stratum.

Over all sample size N is determined with 95% confidence level. In this study the total population of the study is 2600 formally permanent employees of Ethio telecom in those six Zonal offices as obtained on March 2018. The sample size calculator gave a minimum recommended sample size of 142 staffs. However, 155 questionnaires were distributed to provide for non-responses. Seven managers from different zones were interviewed.

EQUATION 3-1 RAOSOFT'S SAMPLE SIZE CALCULATION FORMULA

$$\begin{aligned}x &= Z^{(c/100)^2} r(100-r) \\n &= \frac{Nx}{((N-1)E^2 + x)} \\E &= \text{Sqrt}[\frac{(N-n)x}{n(N-1)}]\end{aligned}$$

Source: raosoft.com

Where:

N- Population size,

r- The fraction of responses that you are interested in, and

Z (c/100) - is the critical value for the confidence level c.

To allocate over all sample size N among h strata the following formula was used:

EQUATION 3.2 Proportional allocations:

$$n_h = N w_h$$

n_h : Total number of sample units in stratum h

N: Over all sample size

N_h : Total number of population units in stratum h.

$w_h = N_h/N$: The h-th stratum weight.

Table 3.1- Sample size selected per each Zone

No.	Ethio telecom Zonal office	Total Population unit	Total Sample units
1	EAAZ	527	31
2	SWAAZ	465	28
3	NAAZ	441	26
4	WAAZ	430	26
5	SAAZ	416	25
6	CAAZ	321	19
	Total	2600	155

Source: Survey data

3.7 Data sources and collection procedures

Data can be obtained from primary or secondary sources. Primary data refer to information obtained firsthand by the researcher on the variables of interest for the specific purpose of the study (Sekaran, 2003).

Data was collected using primary source method since primary data is the first hand information obtained from respondents through use of questionnaires and interviews. The questionnaire contains structured Likert scale questions to capture the ratings of the effect of outsourcing. It also helps in determining the forms and extent of outsourcing used. The questionnaire also contains a section meant

to collect information on the background of the respondents. Whereas the questionnaire yields quantitative data, interviews are used to collect qualitative information.

According to Walliman (2011), although we are surrounded by data, in fact, bombarded with them every day from the TV, posters, radio, newspapers, magazines and books, it is not so straightforward to collect the correct data for your purposes. It needs a plan of action that identifies what data you need where the necessary data are to be found and what are the most effective and appropriate methods of collecting that data. This study collected primary data by administering questionnaires and interviews. The questionnaires were distributed to the respondents and duration of one week was given to respondents to fill the questionnaire. Follow-ups were made to ensure high response rate. In order to effectively carry out interviews, the researcher booked appointments with the interviewees. Notes were taken during the interviews using an interview guide. These notes then become the text from which themes are extracted.

3.8 Data analysis method

To make the collected data amenable to analysis it was:

Edited- examining collected raw data to detect errors and omissions to correct these when possible. Editing involved a careful scrutiny of the completed questionnaires and/or schedules. Editing was done to assure that the data are accurate, consistent with other facts gathered, uniformly entered, as completed as possible and have been well arranged to facilitate coding and tabulation.

Coded- assigning numerals or other symbols to answers so that responses can be put into a limited number of categories or classes.

Classified- arranging data in groups or classes based on common characteristics.

Tabulated- summarizing raw data and displaying the same in compact form for further analysis. (i.e., in the form of statistical tables)

Empirical findings from the collected data were analyzed and interpreted using statistical tools. It consists of reliability test. The results are presented using descriptive statistics such as mean, frequencies, and regression. The analysis of quantitative data resulting from the questionnaire involved coding, data entry, and data processing using IBM Statistical Package for Social Sciences (SPSS) version 22. Regression was applied in the analysis of the operationalized data to determine the relationship between the variables. The equation is of the form:

EQUATION 3.3- Regression equation

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_i$$

Where

β is a correlation coefficient

Y= effects of outsourcing on operational efficiency performance indicators (operational excellence, financial efficiency, brand-customer relations, operational responsiveness)

X1= Professional services outsourcing

X2= Process specific activities outsourcing

X3= Business Process outsourcing

X4= Project outsourcing

ϵ_i = error term associated with the regression model (researcher's assumption).

The results are presented in tables. On the other hand, qualitative data from interviews were analyzed thematically and presented in form of narratives.

3.9 Ethical considerations

Sekaran (2003) maintains that several ethical issues should be addressed while collecting data. These pertained to the researcher and those who helped to collect the data. Treating the information given by the respondent was strictly confidential and guarding his or her privacy was one of the primary responsibilities of the researcher. The researcher did not misrepresent the nature of the study to subjects. The purpose of the research was explained to them. Personal or seemingly intrusive information was not solicited. No one was forced to respond to the survey and when someone does not want to avail of the opportunity to participate, the individual's desire was respected. Informed consent of the subjects was the goal of the researcher. This holds true even when data are collected through mechanical means, such as recording interviews, videotaping, and the like. Subjects were not exposed to situations where they could be subject to physical or mental harm. There was no misrepresentation or distortion in reporting the data collected during the study.

CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter represents the empirical findings and results on the collected data. Different statistical techniques were applied to provide answers to the research questions by investigating, interpreting, and bringing forth implications drawn from the findings.

4.2 Response Rate

In summary, a response rate of 74.2% was achieved and this means that 115 out of 155 employees selected for the surveyed have responded.

Accordingly, the results obtained are-

Table 4.1 Response Rate

Description	Amount
Selected sample for the study	155
Filled and returned valid questionnaire	115
Response rate	74.2%

Source: Study data

4.3 Reliability Analysis

The most common reliability coefficient is the Cronbach's alpha which estimates internal consistency by determining how all items on a test relate to all other items and to the total test; internal coherence of data. The reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more reliable the test is. Based on the reliability test it was supposed that the scales used in this study were reliable to capture the constructs as shown in the Table 4.2.

Table 4.2 Reliability Analysis

	Cronbach's Alpha	Comments
Operational Excellence	.719	Accepted
Financial efficiency of operations	.738	Accepted
Brand-customer relationship	.696	Accepted
Operational responsiveness	.711	Accepted

Source: Primary data

4.4 Respondents' Background Information

Demographic characteristics of the respondents were of importance in this study. These include gender, age and highest level of education. The findings are presented below.

Gender

This study sought to establish the gender of the respondents. The findings presented in figure 4.1 reveal that more than half of the respondents 61.7% (71 respondents) were male while 38.3% (44 respondents) were female. This implies that the majority of the respondents were male.

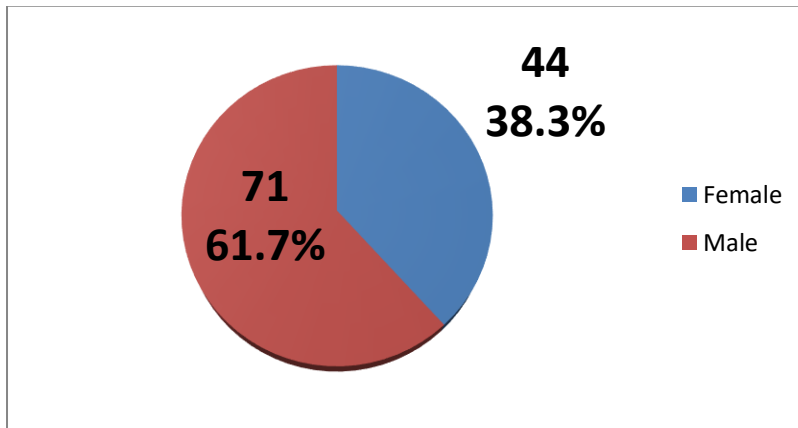


Figure 4.1 Respondents' Gender Distribution

Source: Primary data

Age

Study results presented in figure 4.2 reveals that the majority of the respondents 40% (46) were aged between 25 and 35 years followed by those aged between 36 and 45 years who were 28.7% (33). Another 13% (15) of the respondents were aged up to 24 years. The rest of respondents 6.1% (7) were aged over 55 years.

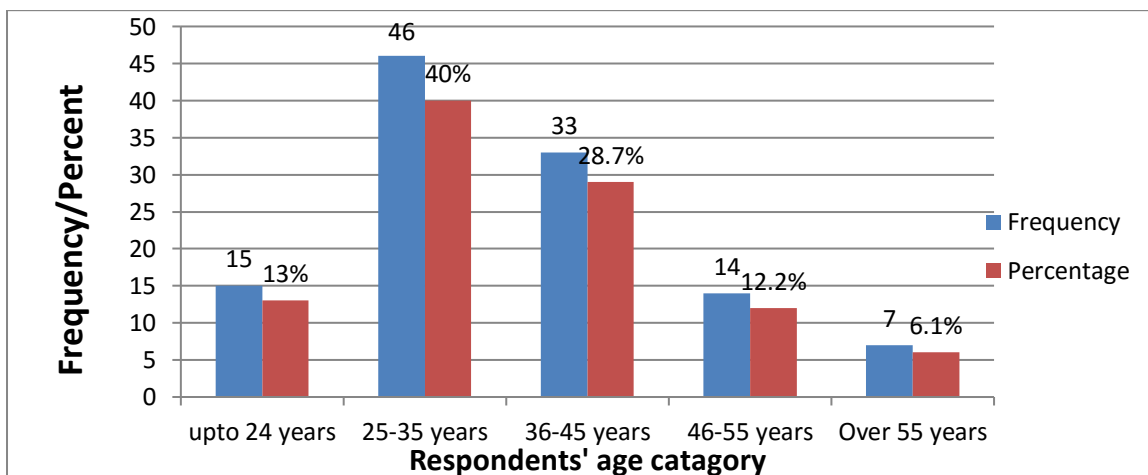


Figure 4.2 Respondents' Age Distribution

Source: Primary data

Highest Level of Education

It was important to determine the respondents' highest level of education. Study findings presented in table 4.3 show that the majority of the respondents (73%, 84) had attained bachelor's degree. Diploma holders followed with a response of 13% (15) while the respondents who had postgraduate qualifications were 9.6% (11). Another 4.4% (5) of the respondents had attained a certificate. This implies that most of the employees from the Ethio telecom zones from which the respondents were drawn had attained at least a bachelor's degree. These findings also reveal that all the respondents had formal professional training. This implies that the duties carried out by the respondents required specialized training.

Table 4.3 Respondents' Highest Level of Education

Academic Qualification	Frequency	Percentage
Certificate	5	4.4
Diploma	15	13
Bachelor's Degree	84	73
Postgraduate Degree	11	9.6
Total	115	100

Source: Primary data

4.5 Extent and forms of outsourcing strategy implementation

Establishing the extent and form of outsourcing strategy implementation among Ethio telecom zonal offices was one of the objectives of this research. To do this, forms of outsourcing were provided for the respondents to rate the extent to which Ethio telecom zones implemented them. The rating scale was 1= very little extent, 2= little extent, 3=average, 4= large extent, 5= very large extent. The findings are presented in table 4.4 below.

Table 4.4- The extent of Outsourcing strategy implementation among Ethio telecom zonal offices

	1	2	3	4	5	Total	Mean
In our institution Professional support and expert services are outsourced/ professional services outsourcing	21.7	57.4	18.3	2.6	0.00	100	2.02
Specific internal operations related activities are performed by outsourced service providers/ Process-Specific activities outsourcing	16.5	54.8	20.9	7.8.	0.00	100	2.20

Entire business process like maintenance, Property management and cleaning are outsourced / Business Process Outsourcing	13	43.5	29.6	11.3	2.6	100	2.47
Entire projects or portions of projects are outsourced and managed outside of Ethio telecom/ Project Outsourcing	20	57.4	17.4	5.2	0	100	2.08

Source: Primary data

When asked to give the extent to which professional support and expert services are outsourced, most of the respondents 57.4% (66) gave a little extent rating followed by 18.3% (21) of the respondents who gave average, 21.7% (25) very little extent ratings, 2.6% (3) Large extent and none of the respondents gave very large extent. The resulting mean was 2.02 which tends towards 2 (little extent rating) indicative of the fact that the majority of the respondents were of the view that professional outsourcing in their institutions is barely implemented. These findings point to the fact that most professional and expert services like legal, accounting and IT support are provided using in-house staff and resources of Ethio telecom zonal offices.

To determine whether specific internal operations related activities are outsourced the respondents were asked to rate the extent of its usage. From the findings, a mean of 2.20 was recorded with most of the respondents 54.8% (63) gave little extent rating followed by 20.9% (24) of the respondents gave average extent rating. Another 16.5 % (19) of respondents gave very little extent rating while 7.8% (9) of the respondents gave large extent rating. This means that the use of process specific outsourcing is at low level. This is in line with features of outsourcing described by Malhotra (2007) as the activities with mutual interdependencies are less likely to be outsourced, as it is highly undesirable to outsource those activities that are connected to other critical activities within the organization. However, this type of outsourcing could help an organization to focus on its strengths by reducing costs and saving time.

Business process outsourcing occurs when an organization turns over the realization of a particular process (such as design products/services, production, managing human resources, information, financial and physical resources) to a third party that specializes in that process (Brown & Wilson, 2005). Study findings on BPO usage revealed a mean of 2.47, which is below average extent (3). Moreover, study findings revealed that 29.6% (34) of the respondents gave an average rating while 11.3% (13) gave large extent rating. Another 2.6% (3) gave very large extent rating while 13% (15) were recorded by very little extent. Another 43.5% (50) of the respondents gave little extent rating. From these findings, it can be observed that over 56% of the respondents gave below average usage of business process outsourcing. This implies that business process outsourcing strategy is relatively popular in Ethio telecom zonal offices.

The use of project outsourcing was determined by rating the extent to which entire projects or portions of projects are outsourced and managed outside of Ethio telecom zonal offices. This statement recorded a mean of 2.08 indicative of the ratings tended towards 2 (little extent). Study results also showed that

17.4% (20) of the respondents gave an average rating while large extent was reported by 5.2% (6) of the respondents. Another 57.4% (66) gave a little extent while very little extent and very large extent recorded a response of 20% (23) and 0% respectively. This shows that project outsourcing was less used in Ethio telecom zones. According to Brown & Wilson (2005), it is a more appealing choice than taking the time and money to contract someone in house and lose key operational staffs or even to train someone. This finding tells us that Ethio telecom zonal offices lose some key operational staffs to projects at the expense of pressing daily operational issues also it invests time and money to train someone in-house.

4.6 Effects of outsourcing strategy on operational excellence

Establishing the effect of outsourcing on operational excellence was one of the objectives of this study. In order to establish the effect of outsourcing on operational excellence various statements were provided for rating by the respondents. The rating scale used was very large extent=5, large extent=4, Average=3, little extent=2, Very little extent=1. The response percentages are presented in table 4.5

Table 4.5 Statements on Operational excellence

	1	2	3	4	5	Total	Mean
Zonal operations are being provided with better process capabilities	18.3	57.4	17.4	6.1	0.9	100	2.14
External partners deliver agreed upon results for operations	11.3	60.0	19.1	8.7	0.9	100	2.28
There is continual improvement of activities in the workplace	9.6	64.3	18.3	6.1	1.7	100	2.26
Resource utilization for better customer service is enhanced	4.3	58.3	27.0	10.4	0.00	100	2.43

Source: Primary data

A statement whether zonal operations are being provided with better process capabilities recorded 57.4% (66) little extent response followed by 18.3% (21) very little extent while 17.4% (20) respondents gave average extent. Another 6.1 % (7) respondents gave high extent rating and 0.9% (1) respondent said better process capabilities are provided by outsourcing strategy at a very large extent. This resulted in a mean of 2.14. This mean is greater than 2 but tends towards 2 (little extent) indicative of the respondents' view that outsourcing strategy slightly provided better process capabilities for operations in Ethio telecom zonal offices. These findings show that outsourced service providers are not specialized enough to undertake outsourced activities at a high level.

A statement whether external partners deliver agreed upon results recorded little extent response of 60% (69) whereas 19.1% (22) of respondents provided average rating. Another 0.9% (1) respondents gave very large extent while very little extent was 11.3% (13) and large extent response recorded 8.7% (10).

This resulted in a mean of 2.28. This mean tends towards 2 (little extent) indicative of the fact that outsourcing partners failed to provide agreed upon operational capabilities to Ethio telecom zonal operations from which the respondents were drawn. This means that outsourcing did not provide intended operational improvements. Outsourcing partner specialized in these activities typically undertakes to deliver agreed-upon results (Bhandari and Mania, 2002)

When asked to give their level of agreement on the extent to which activities in the work place are being continually improved, the majority of the respondents 64.3% (74) said at a little extent while 18.3% (21) respondents provided average extent response. Another 9.6% (11) of respondents gave very little extent whereas 6.1% (7) of respondents provided large extent rating the rest 1.7% (2) respondents gave very large extent rating. These ratings resulted in a mean of 2.26. This implies that the majority of the respondents were of the opinion that outsourcing did not led to continuous operational efficiency improvement as ascribed by literatures on outsourcing.

Similarly, the study sought to establish enhancement of resource utilization for better customer service. The responses were 4.3% (5) very little extent, 58.3% (67) little extent, 27.0% (31) average, 10.4% (12) large extent and no one responded very large extent. This resulted in a mean of 2.43, which tend towards little extent. This implies that the majority of the respondents believed that outsourcing did not lead to resource utilization for better customer service. This hints at a gap in the implementation of outsourcing and the need to ensure customer focus. According to Naftanaila et al (2013), Operational excellence is not just a concept; it is philosophy aimed at improving performance and leading to business success. It is a philosophy at operational level with strong implications on competitiveness at the strategic level. These findings demonstrate outsourcing didn't touch operational efficiency and business success effectively in Ethio telecom zonal offices. Kumar and Suresh (2009) maintain that customer service must be provided with the achievement of effective operations through efficient use of resources. Inefficient use of resources or inadequate customer service leads to commercial failure of an operating system

Multiple Linear Regression Analysis

The multiple linear regression analysis models the relationship between the independent variable, which was outsourcing strategy represented by the four forms of outsourcing: professional outsourcing, process-specific outsourcing, business process outsourcing and project outsourcing and the dependent variable operational efficiency shown by operational excellence.

The coefficient of determination (R Square) and correlation coefficient (R) shows the degree of association between outsourcing and operational efficiency shown by operational excellence. The research findings indicated that there was a positive relationship ($R = 0.445$) between the variables. The study also revealed that only 16.9% of operational excellence variance among Ethio telecom zonal

offices could be explained by outsourcing of services and functions. The next table shows the multiple linear regression model summary and overall fit statistics. The findings are as shown in the Table 4.6.

Table 4.6 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.445	.198	.169	.50037

Source: Primary data

Table 4.7 below shows the results of ANOVA test which revealed that the combined independent variables; different forms of outsourcing have a significant effect on operational efficiency shown by operational excellence in Ethio telecom zonal offices. This can be explained by high F values (6.795) and low p values (0.001) which are statistically significant at 95% confidence interval. This therefore implies that outsourcing has a statistically significant effect on operational efficiency shown by operational excellence in Ethio telecom zonal offices. These findings are in line with the recommendation by Boston Consulting Group (2011); effectively outsource activities that are subscale, repetitive and non-differentiating when the economic benefits are both evident and sustainable.

Table 4.7 ANOVA

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.805	4	1.701	6.795	.001
	Residual	27.541	110	.250		
	Total	34.346	114			

Source: Primary data

Table 4.8 below show the results of regression coefficients, which reveal that a positive effect was reported for all the forms of outsourcing used in Ethio telecom zonal offices. Further, the results showed that at 95% confidence level Business process outsourcing ($p=0.004$) was statistically significant since the p value was less than 0.05 and the t values were high (greater than 2.132). This implies that outsourcing had positive effect on operational excellence especially when Business process outsourcing is used. Outsourcing enables the organization to adapt more readily to changing market environments, focus on core competencies, and take advantage of the knowledge, expertise and efficiencies of third-party suppliers (D' Aveni & Ilinitch, 1992)

Table 4.8 Coefficients

Coefficients		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.378	.197		7.011	.000		
	Professional outsourcing	.076	.068	.098	1.119	.265	.945	1.058
	Process specific activities outsourcing	.100	.068	.147	1.467	.145	.726	1.378
	Business process outsourcing	.167	.057	.289	2.906	.004	.739	1.353
	Project outsourcing	.056	.072	.077	.773	.441	.729	1.371

Source: Primary data

As table 4.8 shows the tolerance values of all independent variables are above 0.1 and the VIF values are below 10 which indicate there is no multicollinearity problem. The independent variables are not strongly inter correlated so that they are distinguishable from each other

According to the regression equation established, taking all factors into account (professional outsourcing, process-specific outsourcing, business process outsourcing and project outsourcing) as constant at zero, operational excellence among Ethio telecom zonal offices will be 1.378.

Further, study result shows that for a 1-point increase in business process outsourcing (i.e. increase from little to average number of business processes outsourcing) , operational efficiency via operational excellence improvement is predicted to increase by 0.167, given that all the other factors are held constant.

The equation for the regression model is expressed as:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

$$Y = 1.378 + 0.076X_1 + 0.100X_2 + 0.167X_3 + 0.056X_4 + \epsilon$$

Where

β is a correlation coefficient

Y= Operational excellence

X1= Professional Outsourcing

X2= Process-Specific Outsourcing

X3= Business Process Outsourcing

X4= Project Outsourcing

4.7 Effects of outsourcing strategy on financial efficiency of operations

Examining the influence of outsourcing strategy on financial efficiency of operations was one of the objectives of this study. In order to establish the effect of outsourcing on financial efficiency various statements were provided for rating by the respondents. The rating scale used was very large extent=5, large extent=4, average=3, little extent=2, very little extent=1. The response percentages are presented in table 4.9

Table 4.9 Statements on Operations financial efficiency

	1	2	3	4	5	Total	Mean
Operational resources are allocated correctly	3.5	41.7	28.7	24.3	1.7	100	2.79
There is delivery of more services by means of currently employed capital	3.5	52.2	27.8	14.8	1.7	100	2.59
Operations are streamlined to minimize waste	4.3	55.7	20.9	15.7	3.5	100	2.58
Demand for additional employment is reduced	7.0	34.8	24.3	27	7	100	2.92

Source: Primary data

When asked whether operational resources are allocated correctly in Ethio telecom zonal offices where respondents were drawn from, 24.3% (28) of the respondents gave large extent rating and 1.7% (2) gave very large extent rating. Average rating was reported by 28.7% (33) responses while 41.7% (28) respondents provided little extent rating and 3.5% (4) respondents answered very little extent rating. The resulting mean was 2.79 indicative of the fact that most of the respondents were at least in view of outsourcing enabled allocating operational resources correctly at near average extent. This implies that through outsourcing, Ethio telecom zonal resources are sub optimally allocated to operations although according to Kubr (2002) such an operating strategy allows the efficient allocation of resources. However, it should be noted that the financial benefits through outsourcing strategy increases when processes are run efficiently from external locations (Bhandari and Mania, 2002).

Outsourcing often enables institutions to deliver more services by means of currently employed capital. When asked If there is delivery of more services by means of currently employed capital, more than half of the respondents (52.2%, 60) gave little extent rating while those who replied at very large extent were 1.7% (2). Another 27.8% (32) gave Average rating while very little extent response recorded 3.5% (4) and large extent rating recorded a response of 14.8% (17). These ratings resulted in a mean of 2.59. This implies that through outsourcing Ethio telecom zonal offices missed the prospect to increase the return on its capital employed in contrary of a finding by Vintr & Stanimirovic (2011) stated as it generates greater returns to capital investments as organizational and corporate effect.

When asked whether operations are streamlined to minimize waste, most of the respondents 55.7% (64) replied little extent followed by 20.9% (24) of respondents provided average extent response. Another 15.7% (18) respondents gave large extent rating and 4.3% (5) said at very little extent whereas 3.5% (4) very large extent rating was recorded. These ratings resulted in a mean of 2.58. This mean implies most respondents did not agree that outsourcing minimized waste in operations of Ethio telecom zonal offices hence operational efficiency is not improved at considerable extent. This is in-line with problem areas of outsourcing as identified by VINTR & Stanimirovic (2011) unawareness of the potential long-term negative implications of outsourcing projects, problem in utilization of human and other resources and the synergies within the public sector organizations.

Outsourcing often leads to reduction of employees in outsourced areas hence demand for additional employment is reduced. However, in Ethio telecom zonal offices 34.8% (40) of respondents replied little extent rating and 27% (31) gave large extent response. Another 24.3% (28) replied average while very little extent and very large responses recorded 7% (8) each. This resulted in a mean of 2.92, which tend towards average (3). This is equivocally in line with the argument by Bhandari and Mania (2002) that Outsourcing provides the opportunity to add process capabilities without adding capital or employee overheads. However, one of the cost effects of outsourcing strategy is transformation of fixed costs into variable costs (VINTR & Stanimirovic, 2011). These findings point towards problems in effective implementation of outsourcing strategy in Ethio telecom zonal offices.

Multiple Linear Regression Analysis

To establish the effect of outsourcing on financial efficiency of Ethio telecom zonal offices’ operations using multiple linear regression model, the four forms of outsourcing: professional outsourcing, process- specific outsourcing, business process outsourcing, and project outsourcing were made the independent variables while zonal operations financial efficiency was the dependent variable.

The coefficient of determination (R²) and correlation coefficient (r) shows the degree of association between outsourcing and operational efficiency. Study findings indicated that there was a positive relationship (R= 0.244) between the variables. The study also revealed that 2.5% of variance in financial efficiency of operations among Ethio telecom zonal offices could be explained by different forms of outsourcing adopted. The findings are as shown in the Tables 4.10 below. The next table shows the multiple linear regression model summary and overall fit statistics.

Table 4.10 Model Summary

Model Summary				
Model	R	R Square	Adjusted Square	Std. Error of the Estimate

1	.244	.059	.025	.65120
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Source: Primary data

Table 4.11 below show the results of ANOVA test which revealed that the combined independent variables have a statistically insignificant effect on financial efficiency of operations in Ethio telecom zonal offices. This can be explained by low F values (1.738) and high p values (0.147) which are statistically insignificant at 95% confidence interval. This therefore implies that there was no enough evidence to suggest outsourcing have significant effect on financial efficiency of operations in Ethio telecom zonal offices.

Table 4.11 ANOVA

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.948	4	.737	1.738	.147
	Residual	46.647	110	.424		
	Total	49.596	114			

Source: Primary data

Table 4.12 below shows the results of regression coefficients, which reveal that a positive effect was reported for all the forms of outsourcing except process-specific outsourcing and project outsourcing that recorded -0.152 and -0.022 respectively. However, the coefficients can't be interpreted since the over model didn't produce statistically significant evidence of effect.

Table 4.12 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.473	.256		9.666	.000		
	Professional service outsourcing	.113	.088	.122	1.280	.203	.945	1.058
	Process specific activities outsourcing	-.151	.089	-.185	-1.705	.091	.726	1.378
	Business process outsourcing	.162	.075	.233	2.164	.033	.739	1.353
	Project outsourcing	-.022	.094	-.025	-.232	.817	.729	1.371

Source: Primary data

As table 4.11 shows the tolerance values of all independent variables are above 0.1 and the VIF values are below 10 which indicate there is no multicollinearity problem. The interdependent variables are not strongly inter correlated so that they are distinguishable from each other.

Further, study results show that operational financial efficiency among Ethio telecom zonal offices is predicted to be 2.473, given that all the other factors are held constant (forms of outsourcing strategy) as zero.

The equation for the regression model is expressed as:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

$$Y = 2.473 + 0.113X_1 - 0.151X_2 + 0.162X_3 - 0.022X_4$$

Where

β is a correlation coefficient

Y= Financial efficiency

X1= Professional Outsourcing

X2= Process-Specific Outsourcing

X3= Business Process Outsourcing

X4= Project Outsourcing

4.8 Effects of outsourcing strategy on brand-customer relationship

Establishing the effects of outsourcing strategy on operational efficiency by means of brand-customer relationship was one of the objectives of this study. In order to establish the effect of outsourcing on brand-customer relations various statements were provided for rating by the respondents. The rating scale used was very large extent=5, large extent=4, average extent=3, little extent=2, very little extent=1. The response percentages are presented in table 4.13

Table 4.13 outsourcing and operational efficiency by brand-customer relation capabilities

	1	2	3	4	5	Total	Mean
The Ethio telecom brand is being introduced to more people without additional effort	4.3	45.2	25.2	17.4	7.8	100	2.79
Zonal operations created positive experience for customers	4.3	40	33	21.7	0.9	100	2.75
There is improved reliability and assurance of services	14.8	45.2	23.5	13	3.5	100	2.45
Zonal operations has promoted bond between the Ethio telecom brand and customers	7.8	65.2	11.3	11.3	4.3	100	2.39

Source: Primary data

When asked whether the Ethio telecom brand is being introduced to more people without additional effort, 45.2% (52) of respondents replied that it did at a little extent followed by 25.2% (29) gave an average extent response while 17.4% (20) replied large extent rating. Another 7.8% (9) of respondents

replied that outsourcing introduced the Ethio telecom brand to more people in at very large extent whereas 4.3% (5) of respondents from Ethio telecom zones replied very little extent rating. This resulted in a mean of 2.79 indicating outsourcing strategy in Ethio telecom zones is not properly improving brand-customer relations as suggested by Gereffi (2001). He suggests that sellers use brands to lock in customer relationships and to compete when reach (choice) goes up. Thus building brand awareness is a fundamental challenge and a major source of market power for firms thus the degree of outsourcing will be greater for firms with high levels of brand name capital. Furthermore, search costs are reduced in thicker markets (Grossman and Helpman, 2002), and this too should favour outsourcing.

Next, the respondents were asked to rate the extent to which zonal operations created positive experience for customers from the findings, the resulting mean was 2.75 which is between average (3) and little extent (2) tends towards average (3). Study results showed that 40 % (46) of the respondents gave little extent rating while 33% (38) gave average rating. Another 21.7% (25) gave large extent rating whereas 4.3% (5) and 0.9% (1) responses were given for very little and very large ratings respectively. This implies that outsourcing is barely generating capabilities of operational efficiency for best possible experience of Ethio telecom zonal office customers although outsourcing could have substantial impact. Wantao, Ramakrishnan and Prithwiraj (2013) reveal that, the firm's marketing capability (such as market knowledge about customer needs and past experience in forecasting and responding to these needs) can proactively generate operations capabilities in terms of quality, delivery, flexibility and cost

To establish the extent to which reliability and assurance of services is improved respondents were asked to rate the statement. From the findings, this statement recorded a mean of 2.45. Very little extent rating recorded a response of 14.8% (17) while little extent rating recorded a 45.2% (52) response. Another 23.5% (27) respondents gave average rating and 13% (15) respondents agreed at large extent with the statement whereas the remaining 3.5% (4) gave the very large extent response. These findings reveal that outsourcing strategy is generating little operational capability in Ethio telecom zonal offices. A simple example is the new account creation and number administration process, which can often be faster and better handled - from both the customer's and company's perspective - through best practiced outsourcing than through in-house processing (Bhandari and Mania, 2002).

Further, respondents were asked to rate the extent to which zonal operations has promoted bond between the Ethio telecom brand and customers. This statement recorded 7.8% (9) very little extent, 65.2% (75) little extent and 11.3% (13) average extent responses. Whereas, another 11.3% (3) large extent and 4.3% (5) very large extent response rates were recorded. This resulted in a mean of 2.39 which tend towards disagree (2). These findings indicate that outsourcing strategy didn't add sufficient operational capabilities in Ethio telecom zonal offices. It involves the process that enable a firm to build sustainable relationship with customers, which in turn will lead to improved operational capability such as new product development and more flexible delivery (Day, 1994). The relationship largely depended on the

success of establishing a brand meaning, which is a crucial mediator between brand experience and customer brand relationship (Şahin&Kitapci, 2011). This is an important element since it is perceived to provide businesses with competitive advantage by establishing a strong bond between the customer and the brand (Bowden, 2009).

Multiple Linear Regression Analysis

To establish the effect of outsourcing on brand-customer relationship capabilities of Ethio telecom zonal offices operation using multiple linear regression model, the four forms of outsourcing: professional outsourcing, process- specific outsourcing, business process outsourcing, and project outsourcing were made the independent variables while zonal operations efficiency via brand customer relationship was the dependent variable.

The coefficient of determination (R²) and correlation coefficient (r) shows the degree of association between outsourcing and brand-customer relationship. Study findings indicated that there was a positive relationship (R= 0.246) between the variables. The study also revealed that 2.7% of variance in operational efficiency through brand-customer relationship capabilities among Ethio telecom zonal offices could be explained by different forms of outsourcing adopted. The findings are as shown in the Tables 4.14 below. The next table shows the multiple linear regression model summary and overall fit statistics.

Table 4.14 Model summary

Model Summary				
Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.246	.061	.027	.67407

Source: primary data

Table 4.15 below show the results of ANOVA test which revealed that the combined independent variables have a statistically insignificant effect on brand-customer relation capability of operations in Ethio telecom zonal offices. This can be explained by low F values (1.778) and high p values (0.138) which are statistically insignificant at 95% confidence interval. This therefore implies that there was not enough evidence to suggest outsourcing has significant effect on operational efficiency by means of brand-customer relation capabilities in Ethio telecom zonal offices.

Table 4.15 ANOVA

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.231	4	.808	1.778	.138
	Residual	49.981	110	.454		
	Total	53.212	114			

Table 4.16 below shows the results of regression coefficients, which reveal that a positive effect was reported for all the forms of outsourcing except process-specific outsourcing and project outsourcing that recorded -0.057 and -0.075 respectively. Study results also showed that none of the forms of outsourcing was statistically significant except project outsourcing with a p value of 0.020 and a t value of 2.351 while all the other forms recorded p-values greater than 0.05 and t-values less than 2.132. This means that at 95% confidence level, the variables produced statistically insignificant values for this study except project outsourcing. However, the coefficients can't be interpreted since the over model didn't produce statistically significant evidence.

Table 4.16 Coefficients

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.262	.265		8.545	.000		
	Professional outsourcing	.086	.091	.090	.945	.347	.945	1.058
	Process specific activities outsourcing	-.057	.092	-.067	-.622	.535	.726	1.378
	Business process outsourcing	-.075	.077	-.105	-.976	.331	.739	1.353
	Project outsourcing	.228	.097	.254	2.351	.020	.729	1.371

Source: Primary data

As table 4.16 shows the tolerance values of all independent variables are above 0.1 and the VIF values are below 10 which indicate there is no multicollinearity problem. The interdependent variables are not strongly inter correlated so that they are distinguishable from each other.

Moreover, study results of the regression equation show that keeping all the independent variables as constant at zero, operational efficiency of brand-customer relationship capabilities is predicted to be 2.262. The equation for the regression model is expressed as:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

$$Y = 2.262 + 0.086X_1 - 0.057X_2 - 0.075X_3 + 0.228X_4 + \epsilon$$

Where

β is a correlation coefficient

Y= operational efficiency via brand customer-relationship capabilities

X1= Professional Outsourcing

X2= Process-Specific Outsourcing

X3= Business Process Outsourcing

X4= Project Outsourcing

4.9 Effects of outsourcing strategy on operational responsiveness

Establishing the effects of outsourcing strategy on operational responsiveness was one of the objectives of this study. In order to establish the effect of outsourcing on operational responsiveness various statements were provided for rating by the respondents. The rating scale used was very large extent=5, large extent=4, average extent=3, little extent=2, very little extent=1. The response percentages are presented in table 4.17

Table 4.17 outsourcing effects on responsiveness capabilities

	1	2	3	4	5	Total	Mean
Ethio telecom's external partners are best in class providers	9.6	67.8	13	9.6	0	100	2.23
There is improved response to new customer requirements	11.3	64.3	10.4	11.3	2.6	100	2.30
Ethio telecom zonal operation involves information sharing and performance measures	13	60.9	12.2	11.3	2.6	100	2.30
Ethio telecom adapts zonal operational efforts quickly and successfully.	14.8	56.5	13.9	14.8	0	100	2.29

Source: Primary data

To establish whether Ethio telecom outsources to best provider respondents were asked to rate the extent external partners are best in class providers. 9.6 % (11) of respondents gave very little extent and large extent response whereas 67.8% (78) of respondents gave little extent response. Another 13% (15) gave average extent rating while there was no very large extent response. This resulted in a mean of 2.23, which tends towards little extent rating. These findings imply that outsourcing strategy in Ethio telecom zonal offices is not influencing operational efficiency as ascribed by literature since it outsources to less specialized outsourced service providers. In order to improve responsiveness and agility companies must outsource to a best in class provider to take advantage of the best practice they have employed (O'Riordan, 2005).

Respondents in Ethio telecom zonal offices from which sample was drawn then gave their response on whether there is improved response to new customer requirements. This statement recorded 11.3% (13) very little extent, 64.3% (74) little extent and 10.4% (12) average extent responses. Another 11.3 (13) of respondents gave large extent rating while 2.6% (3) of respondents gave very large extent rating. This resulted in a mean of 2.3. This indicates outsourcing did not have high effect on operations among Ethio telecom zonal offices to quickly respond to new customer requirements. O'Riordan (2005) maintains that Agile Marketing organizations are able to adapt their efforts quickly and successfully, in response to changing customer behavior, market conditions and business direction to the benefit of improved market share or customer value.

Moreover, respondents were asked whether operations in Ethio telecom zonal offices involves information sharing and performance measures. 13% (15) of respondents gave very little extent rating while 60.9% (70) of respondents gave little extent rating and 12.2% (14) of respondents were on average

extent rating stand. Another 11.3% (13) gave large extent rating and 2.6% (3) gave very large extent rating to the statement. The resulting mean was 2.3. This indicates potential danger to Ethio telecom zones operational efficiency. According to O'Riordan (2005) Outsourcing is a powerful strategic tool that can gain an organization many benefits including responsiveness if gone about in the right way. However, the consequences can be detrimental for the organization if they do not go about it in the right way. To avoid the pitfalls requires advance planning. Roles, responsibilities, and conflict resolution terms must be outlined clearly along with the performance measures in order to evaluate the service.

Finally, respondents were asked to rate the statement; Ethio telecom adapts zonal operational efforts quickly and successfully. This statement recorded 14.8% (17) very little extent, 56.5% (65) little extent and 13.9% (16) average extent ratings. Another 14.8% (17) of respondents gave large extent rating while none gave very large extent rating to the statement. This resulted in a mean of 2.29 which tends towards disagree (2). These findings are in contrary with an argument by Bhandari and Mania (2002) that when business volumes of activities and transactions can vary widely, Outsourcing could add flexibility, adaptability and ability to scale.

Multiple Linear Regression Analysis

The multiple linear regression analysis models the relationship between the independent variable, which was outsourcing strategy represented by the four types of outsourcing: professional outsourcing, process-specific outsourcing, business process outsourcing and project outsourcing and the dependent variable operational efficiency shown by operational responsiveness.

The coefficient of determination (R Square) and correlation coefficient (R) shows the degree of association between outsourcing and operational efficiency shown by operational responsiveness. The research findings indicated that there was a positive relationship ($R = 0.445$) between the variables. The study also revealed that 10.2% of operational efficiency variance in operational responsiveness among Ethio telecom zonal offices is explained by outsourcing of services and functions. The findings are as shown in the Table 4.18. The next table shows the multiple linear regression model summary and overall fit statistics.

Table 4.18 Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.366	.134	.102	.60547

Source: Primary data

Table 4.19 below shows the results of ANOVA test which revealed that the combined independent variables; different forms of outsourcing have a statistically significant effect on operational efficiency shown by operational responsiveness among Ethio telecom zonal offices. This can be explained by high F values (4.243) and low p values (0.003) which are statistically significant at 95% confidence interval.

Table 4.19 ANOVA

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.222	4	1.555	4.243	.003
	Residual	40.325	110	.367		
	Total	46.547	114			

Source: Primary data

Table 4.20 below show the results of regression coefficients, which reveal that a positive effect was reported only for project outsourcing among Ethio telecom zonal offices. Further, the results showed that at 95% confidence level Project outsourcing ($p=0.011$) was statistically significant since the p value was less than 0.05 and the t values were high (greater than 2.132). This implies that outsourcing had positive effect on operational efficiency among Ethio telecom zonal offices when project outsourcing is used. Outsourcing reduces the required investment in employees, expertise and assets required to perform an activity (Bettis et al., 1992). Particularly in rapidly changing environments, outsourcing can reduce innovation and adaptation costs allowing the organization quickly respond to the local environment without being locked into its existing technologies or strategies (Harrigan, 1983)

Table 4.20 Regression Coefficients

Coefficients		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.844	.238		7.752	.000		
	Professional services outsourcing	-.009	.082	-.010	-.109	.913	.945	1.058
	Process specific activities outsourcing	-.106	.082	-.134	-1.290	.200	.726	1.378
	Business process outsourcing	-.011	.070	-.017	-.165	.869	.739	1.353

Project outsourcing	.343	.087	.409	3.938	.000	.729	1.371
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Source: Primary data

As table 4.20 shows the tolerance values of all independent variables are above 0.1 and the VIF values are below 10 which indicate there is no multicollinearity problem. The interdependent variables are not strongly inter correlated so that they are distinguishable from each other.

According to the regression equation established, taking all factors into account (professional outsourcing, process-specific outsourcing, business process outsourcing and project outsourcing) as constant at zero, operational responsiveness among Ethio telecom zonal offices will be 1.844. Further, study results show that for a 1-point increase in project outsourcing (i. e. from little to average extent project outsourcing), operational responsiveness among Ethio telecom zonal offices are predicted to increase by 0.343, given that all the other factors are held constant. It is a more appealing choice than taking the time and money to contract someone in house and lose key operational staffs or even to train someone (Brown & Wilson, 2005).

The equation for the regression model is expressed as:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

$$Y = 1.844 - 0.09X_1 - 0.106X_2 - 0.11X_3 + 0.343X_4 + \epsilon$$

Where

β is a correlation coefficient

Y= Operational responsiveness

X1= Professional Outsourcing

X2= Process-Specific Outsourcing

X3= Business Process Outsourcing

X4= Project Outsourcing

4.10 Thematic analysis and Narrative of the interviews

Table 4.21 Outline of participants for interview

Type of respondent	Work place	Themes	Tool	Number
Manager	Ethio telecom South Addis Ababa zone	Types and extent of outsourced activities, perception and experience about effects of outsourcing strategy on operational efficiency capabilities in their domain	In-depth interview	2

Manager	Ethio telecom South west Addis Ababa zone	Types and extent of outsourced activities, perception and experience about effects of outsourcing strategy on operational efficiency capabilities in their domain	In-depth interview	1
Manager	Ethio telecom Central Addis Ababa zone	Types and extent of outsourced activities, perception and experience about effects of outsourcing strategy on operational efficiency capabilities in their domain	In-depth interview	1
Manager	Ethio telecom North Addis Ababa zone	Types and extent of outsourced activities, perception and experience about effects of outsourcing strategy on operational efficiency capabilities in their domain	In-depth interview	1
Manager	Ethio telecom East Addis Ababa zone	Types and extent of outsourced activities, perception and experience about effects of outsourcing strategy on operational efficiency capabilities in their domain	In-depth interview	1
Manager	Ethio telecom West Addis Ababa zone	Types and extent of outsourced activities, perception and experience about effects of outsourcing strategy on operational efficiency capabilities in their domain	In-depth interview	1

One of the methods selected to ascertain effects of outsourcing strategy on operational efficiency among Ethio telecom zonal offices was doing a qualitative research by conducting in-depth interview with selected representative managers of the Ethio telecom zones. Purposive selection was used to ensure the representativeness of those interviewed managers and solicit useful data. Seven managers were selected for the interview and at least one manager from each zone was included. All the Managers who were interviewed for the study have worked for more than 14 years inclusive of their year of service in Ethiopian Telecommunication Corporation, which was reestablished as Ethio telecom in 2010. Their year of service ranges from 14 years to 25.

All these managers ascertain that although vehicles maintenance and office equipment manufacturing services are outsourced, most professional and expert services are provided in-house by stating examples of legal, accounting, purchasing and IS department employees who are currently providing support in-house. They also maintain that few specific internal operations related activities like transportation including vehicles operators, SIM card and voucher card distribution are outsourced to other organizations. Regarding business process outsourcing, they stated that non-core entire processes of office equipment maintenance, office furniture manufacturing, cleaning, bill collection and garages are outsourced. According to the managers involved in the study, only small portions of projects like parts of civil construction are outsourced and managed outside of Ethio telecom.

Four of the seven managers interviewed stated that operational excellence is not adequately improved by outsourcing strategy. They claimed outsourced service partners eventually became transactional and they do not focus on internal operational needs in terms of timing and level of service quality. This in turn burned out employees and limited them from improving their internal activities. The rest said

outsourcing provided better capabilities in terms of reaching more customers and reducing the time customers could have spent in Ethio telecom shops.

These managers stated that outsourcing reduced number of employees in outsourced areas at the beginning of implementation that led to reduced salary and per diem expenditures, minimizing office space rentals hence increasing return from buildings and equipment. Nevertheless, gradually they felt increased employment in those areas when outsourced service providers began failing to deliver required services on time. They were forced to use internal resources to answer internal and external customer complains. This implies reduced financial efficiency of operations.

Regarding brand-customer relationship capabilities, these managers provided a mixed theme. They think that through outsourcing Ethio telecom reached more people hence introduced its brand to more people. On the other hand, outsourcing negatively affected the Ethio telecom brand when outsourced service providers turn opportunists in order to cultivate agreed additional payments when specific targets are reached. This led to battle between providers in prepaid voucher card distribution and sales. Some started selling below Ethio telecom prices by passing given boundaries and promoting their own company names. In addition, bill payment faced delay and miscommunication between service providers and Ethio telecom internal operations resulting in customer dissatisfaction. These findings indicate that outsourcing strategy in Ethio telecom zones is at tactical level. Tactical outsourcing is used by companies to determine and solve specific problems. Regularly the firm is already in ‘problems’ and outsourcing is seen as an immediate approach to address them (Brown & Wilson, 2005)

Moreover, Managers interviewed for this study maintained that although outsourcing made reducing the magnitude of operations easy, outsourced service providers lack best capabilities and are not fully integrated with operations. Inefficiencies of outsourced service providers led to rework and delay in service delivery. In addition, performance of providers is partially measured usually enabling them to pass penalties for under performance and information sharing is not fully programmed leading to delay in responding to new customer requirements. These findings tell that Ethio telecom zonal operational efficiency is minimally affected by outsourcing and it is headed towards severe inefficiency. According to O'Riordan (2005). Outsourcing is a powerful strategic tool that can gain an organization many benefits including responsiveness if gone about in the right way. However, the consequences can be detrimental for the organization if they do not go about it in the right way. To avoid the pitfalls requires advance planning. Roles, responsibilities, and conflict resolution terms must be outlined clearly along with the performance measures in order to evaluate the service.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMENDATIONS

5.1 Introduction

The purpose of this study was to establish the effects of outsourcing on operational efficiency among Ethio telecom zonal offices. In this section, a summary of findings obtained during the study are discussed, the findings will then be related to the research questions, the researcher general conclusion about the results and recommendations based on the research objectives. The research objectives were: to establish the forms and extent of outsourcing strategy implementation among Ethio telecom zonal offices, to find out the effect of outsourcing on operational efficiency using four performance indicators: to establish effects of outsourcing on operational excellence, to determine the effect of outsourcing on financial efficiency of operations, to establish the effect of outsourcing on brand-customer relationship capabilities of operations and to establish effects of outsourcing on operational responsiveness among Ethio telecom zonal offices.

5.2 Summary of key findings

5.2.1 Forms and extent of outsourcing

Findings on the forms of outsourcing used showed that business process outsourcing was one of the most popular form of outsourcing implemented among Ethio telecom zonal offices shown by the highest recorded mean of 2.47 followed by process specific activities outsourcing, project outsourcing and professional services outsourcing which recorded means of 2.20, 2.08 and 2.02 respectively. These findings imply that outsourcing strategy is implemented at low level among Ethio telecom zonal offices. Additional findings from the interviews were in tandem with these findings. Interview results revealed that most professional and expert services are provided in-house and few specific internal operations related activities like transportation including vehicles operators, SIM card and voucher card distribution are outsourced to other organizations. Regarding business process outsourcing, they stated that non-core business processes of office equipment maintenance, office furniture manufacturing, cleaning, bill collection and garages are outsourced. According to the managers involved in the study, only small portions of projects are outsourced and managed outside of Ethio telecom.

5.2.2 Effects of outsourcing strategy on operational excellence

Results of the statements rated to establish the effects of outsourcing on operational excellence were as follows: Zonal operations are provided with better process capabilities (mean 2.14), external partners deliver agreed upon results (mean 2.28), continual improvement of activities in the workplace (mean 2.26) and enhanced resource utilization for better customer service (mean 2.43). These findings indicate that all statements recorded means of at most mean 2.43 which is greater than 2 but it tends toward 2 (little extent effect) indicative of the majority of the respondents were at least in disagreement with the statement. These findings are in tandem with the interview findings that four of the seven managers interviewed stated that operational excellence is not adequately improved by outsourcing strategy while the rest said outsourcing provided better process capabilities in terms of reaching more customers and reducing the time customers could have spent in Ethio telecom shops. However, while they achieved trivial operational efficiency progress by minimizing time, money and sustained effort to build process capabilities in-house, they have not reached the magnitude of improvements ascribed to outsourcing specially in continually improving activities in the work place.

Multiple linear regression analysis findings where operational excellence was the dependent variable and different forms of outsourcing were the independent variables revealed that there was a positive relationship ($R= 0.455$) between the variables. The study also revealed that 16.9% of operational excellence variance among Ethio telecom zonal offices can be explained by outsourcing of services and functions. In addition, ANOVA test results revealed that the independent variables; different forms of outsourcing have a significant effect on operational excellence among Ethio telecom zonal offices. This can be explained by high F values (6.795) and low p values (0.001) which are statistically significant at 95% confidence interval. The results of regression coefficients, which reveal that a positive effect was reported for all the forms of outsourcing, used among Ethio telecom zonal offices. Further, the results showed that at 95% confidence level Business process outsourcing ($p=0.004$) was statistically significant since the p value was less than 0.05 and the t values were high (greater than 2.132). This implies that outsourcing had positive effect on operational excellence especially when Business process outsourcing is used.

Further, study results show that for a 1-point increase in business process outsourcing (increasing the outsourcing to average number of business processes), operational efficiency via operational excellence

improvement among Ethio telecom zonal offices is predicted to increase by 0.167, given that all the other factors are held constant.

5.2.3 Effects of outsourcing on financial efficiency of operations

Study findings on the effect of outsourcing on financial efficiency of operations revealed that it had statistically insignificant effect. Rated statements on financial efficiency of operations among Ethio telecom zonal and outsourcing recorded that; allocating operational resources correctly a mean of 2.79, delivering more services by means of currently employed capital a mean of 2.59, streamlined operations to minimize waste a mean of 2.58 and reduced number of employment a mean of 2.92. Similarly, interview findings showed that outsourcing reduced number of employees in outsourced areas at the beginning of implementation that led to reduced salary and per diem expenditures, minimizing office space rentals hence increasing return from buildings and equipment. Nevertheless, gradually they felt increased employment in those areas when outsourced service providers began failing to deliver required services on time. They were forced to use internal resources to answer internal and external customer complains. This implies reduced financial efficiency of operations.

Multiple linear regression analysis using financial efficiency of operations as the dependent variable and different forms of outsourcing as the independent variables revealed that the effect was not statistically significant with low F value of 1.738 and high P value .147. Which is statistically insignificant at 95% confidence interval although 2.5% of improvement on financial efficiency of operations could have been explained by different forms of outsourcing adopted. Despite the insignificant effect of outsourcing, there is potential in financial efficiency improvement if effectively implemented since it enables organizations to gain long-term success, access to experts, restructure, use new technologies and improved information sharing and return on investment (Jansen & Stonecash, 2004)

5.2.4 Effects of outsourcing on brand-customer relationship capabilities of operations

Four statements were provided for rating by respondents in order to capture effects of outsourcing on brand-customer relationship capabilities of operations among Ethio telecom zonal offices. This statements were: the Ethio telecom brand being introduced to more people without additional effort (mean 2.79), creating positive experience for customers (mean 2.75), improved reliability and assurance of services (mean 2.45) and promoted bond between the Ethio telecom brand and customers (mean 2.39). These findings were echoed by the interview respondents. They indicated that the effects were

not tangible due to lack of commitment from service providers and turned to become opportunists to achieve higher payments also negligence in controlling service providers by Ethio telecom zonal staff.

The multiple linear regression analysis model where the independent variables were the different forms of outsourcing and the dependent variable were brand-customer relationship capabilities revealed that there was a positive relationship ($R= 0.246$) between the variables. The study also revealed that 2.7% of variance on brand-customer relationship capabilities of operations among Ethio telecom zonal offices could have been explained by outsourcing. However, study findings also indicated that the effect of outsourcing on brand-customer relationship capabilities was not statistically significant shown by low F values (1.778) and high p values (0.138) which is statistically insignificant at 95% confidence interval. This could be attributed to the imminent loss of management control and insecurity. Thus calling for careful evaluation of the outsourcing company to make sure the organization's data is protected and the contract has a penalty clause if an incident occurs (Beulen, Ribbers & Roos, 2012).

5.2.5 Effects of outsourcing on operational responsiveness capabilities

Study findings on the effect of outsourcing on operational responsiveness revealed that it had statistically significant effect on operational responsiveness capabilities among Ethio telecom zonal offices. Rated statements on operational responsiveness and outsourcing were; Ethio telecom's external partners are best in class providers recorded a mean of 2.23. improved response to new customer requirements recorded a mean of 2.30, Operations in Ethio telecom zonal offices involves information sharing and performance measures recorded a mean of 2.30 and Ethio telecom able to adapts zonal operational efforts quickly and successfully recorded a mean of 2.29. Findings from the interview data also reveal that although outsourcing made reducing the magnitude of operations easy, outsourced service providers lack best capabilities and are not fully integrated with operations. Inefficiencies of outsourced service providers led to rework and delay in response to new customer requirements. These findings tell that Ethio telecom zonal operational efficiency is minimally affected by outsourcing and it is headed towards severe inefficiency.

The multiple linear regression analysis model where the independent variables were the different forms of outsourcing and the dependent variable were operational responsiveness revealed that there was a positive relationship ($R= 0.445$) between the variables. The study also revealed that 10.2% of variance on operational responsiveness among Ethio telecom zonal offices can be explained by outsourcing strategy. The results of ANOVA test which revealed that the independent variables; different forms of outsourcing have a statistically significant effect on operational efficiency shown by responsiveness

among Ethio telecom zonal offices. This can be explained by high F values (4.243) and low p values (0.003) which is statistically significant at 95% confidence interval.

Further, the results showed that at 95% confidence level Project outsourcing ($p=0.011$) was statistically significant since the p value was less than 0.05 and the t values were high (greater than 2.132). This implies that outsourcing had positive effect on operational efficiency among Ethio telecom zonal offices when project outsourcing is used. This could be attributed to keeping key operational staffs on operational duty instead of assigning them to projects. Outsourcing reduces the required investment in employees, expertise and assets required to perform an activity (Bettis et al., 1992). Moreover, study results showed that for a 1-point increase in project outsourcing (increasing to average extent projects outsourcing), operational responsiveness capabilities among Ethio telecom zonal offices are predicted to increase by 0.343, given that all the other factors are held constant.

5.3 Conclusions

From the study findings, it was concluded that business process outsourcing was the most common form of outsourcing strategy implementation used among Ethio telecom zonal offices while professional services outsourcing was the least used form of outsourcing. In addition, this study also concluded that outsourcing of services and functions is practiced at little extent among Ethio telecom zonal offices.

Moreover, this study concludes that outsourcing strategy positively affected operational excellence of Ethio telecom zonal offices. Operational excellence was mainly about adding process capabilities without taking time, money and sustained effort to build process capabilities in-house. However, despite the positive effect business process outsourcing had on operational excellence of Ethio telecom zonal offices other forms of outsourcing do not affect this operational efficiency performance indicator (operational excellence) which was highly attributed to lack of effective outsourcing strategy implementation.

The Study findings on the effects of outsourcing strategy on financial efficiency of operations among Ethio telecom zonal offices showed no statistically significant evidence of a link between the variables which was attributed to lack of efficiency by outsourced service providers when running outsourced processes. This led to failure in increasing return on capital employed by Ethio telecom zonal offices.

Study results showed that there was no statistically significant effect of outsourcing strategy on brand-customer relationship of Ethio telecom zonal operations. The reasons behind this are extra costs of

managing the cooperation with external companies, the loss of control, the adverse impact on the flexibility of the company, the dependence and possible overdependence on external partners, and the potential opportunistic behavior of partners. This shows negative effects of outsourcing on Ethio telecom brand had not been mitigated which makes it difficult to establishing long term relationship with customers when outsourcing partners turn opportunists to achieve high financial return to themselves.

Further, study results showed that there was significant effect of outsourcing on operational responsiveness capabilities of Ethio telecom zonal offices. However, not all forms of outsourcing had statistically significant effect on operational responsiveness. The only form of outsourcing with significant effect on operational responsiveness of Ethio telecom zonal offices was project outsourcing. When business volumes of activities and transactions can vary widely, outsourcing could add flexibility, adaptability and ability to scale, keeping key operational staffs on operational duties rather than losing them to project assignments, training in-house staff and funding office space and equipment for new staff may result in higher costs and elongated time than outsourcing tasks to a third party. However, this study concludes that Ethio telecom should outsource to best in class providers in order to improve responsiveness using all forms of outsourcing, as the consequences could be detrimental if it did not go about the right way. Roles, responsibilities, and conflict resolution terms must be outlined clearly along with the performance measures in order to evaluate the service.

This study concludes that tactical outsourcing is used by Ethio telecom to determine and solve specific problems. Regularly the firm is already in “problems” and outsourcing is seen as an immediate approach to address them. While some improvements are achieved, they have not reached the magnitude of improvements ascribed to outsourcing. Also beside other causes, gaps on effective implementation of outsourcing strategy contributed for being ranked among the lowest mobile penetration rates (in terms of active subscription) in sub-Saharan Africa although there is considerable investment in telecoms services.

5.4 Recommendations

From the above findings, the following recommendations were made:

- There is a need to promote the level and use of professional services outsourcing in order to have access to advanced capabilities and improve operational efficiency. Besides, there should be increased supervision by in-house staffs to ensure outsourced service providers deliver agreed up on results.

- The practice of outsourcing has to be increased from tactical to strategic level by adjusting it to the organization's long-term corporate or business strategies hence the operational efficiency advantages of outsourcing will rise.
- There is also a need to work towards transformational outsourcing. Transformational outsourcing is a long-term relationship through which a service provider assists the client in stimulating continuous business change while also achieving operational efficiency and effectiveness. This level of outsourcing is an emerging practice, where organizations are looking outside for help for more fundamental reasons – to encourage quick organizational change, implement new strategies, and reshape company boundaries.
- Distribute quality requirements; Make sure that outside vendors receive a clear explanation of quality standards, both verbally and in writing. While Ethio telecom might outsource large quantities of work, having someone in-house who understands how to oversee the outsourced tasks is essential for ensuring that the company's needs are met and services are delivered as promised.
- All parts of internal operations should be communicated with outsourcing decisions in order to put new policies or procedures into action at the right time.

5.5 Recommended Areas for Further Study

From the findings of this study, which found out that outsourcing affects operational excellence and operational responsiveness; its effect on financial efficiency of operations and brand-customer relationship capabilities of operations was found to be insignificant. It is in this view that this study recommends that a study be carried out to establish the factors that influence financial efficiency and proficient brand-customer relationships of operations among Ethio telecom zonal offices.

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APPENDIX 1: Introduction Letter to the Respondents

Addis Ababa University, School of commerce

TO WHOM IT MAY CONCERN

I am a student from Addis Ababa University Undertaking Masters of Arts Degree in Logistics and Supply chain management and an employee of Ethio telecom. I am conducting a research on “EFFECTS OF OUTSOURCING STRATEGY ON OPERATIONAL EFFICIENCY AMONG ETHIOTELECOM ZONAL OFFICES”. I humbly request for your co-operation to assist me to complete this research. I assure you that the information that you provide will be used for academic purposes and responses will be treated with a lot of confidentiality. Your participation will be highly appreciated.

Yours Sincerely,

Andualem Eshetu Abera

GSE/0127/08

APPENDIX 2: QUESTIONNAIRE

I am seeking to undertake a research about ‘EFFECTS OF OUTSOURCING STRATEGY ON OPERATIONAL EFFICIENCY AMONG ETHIOTELECOM ZONAL OFFICES’. Thank you for your time.

This research is being done by Andualem Eshetu a student from Addis Ababa University: School of Commerce. All of the answers you provide in this survey will be kept confidential. No identifying information will be provided. The survey data will be reported in a summary fashion only and will not identify any individual person. I appreciate your response.

**This survey will take about 15 minutes to complete.
Please mark a response for each question using X.**

SECTION A: RESPONDENT INFORMATION

1. Gender Male () Female ()

2. Age category

Up to 24 years ()

25 -35 years ()

36 to 45 years ()

46 to 55 years ()

Over 55 years ()

3. Highest level of education

Certificate ()

Diploma ()

Bachelor's degree ()

Postgraduate degree ()

SECTION B: OUTSOURCED ACTIVITIES

4. To what extent are the following forms of outsourcing relationships are used in Ethio telecom zones?

Key: 1= very little extent, 2= little extent, 3=average, 4= large extent, and 5= very large extent.

	1	2	3	4	5
In our institution Professional support and expert services are outsourced/ professional services outsourcing					
Specific internal operations related activities are performed by outsourced service providers/ Process-Specific activities outsourcing					
Entire business process like maintenance, Property management and cleaning are outsourced / Business Process Outsourcing					
Entire projects or portions of projects are outsourced and managed outside of Ethio telecom/ Project Outsourcing					

SECTION C: OPERATIONAL EXCELLENCE

5. The following statements are related to operational excellence

Very large extent=5, large extent=4, average=3, little extent=2, very little extent=1.

	1	2	3	4	5
Zonal operations are being provided with better process capabilities					
External partners deliver agreed upon results for operations					
There is continual improvement of activities in the workplace					
Resource utilization for better customer service is enhanced					

SECTION D: FINANCIAL EFFICIENCY OF OPERATIONS

6. The following statements are related to financial efficiency of operations

Very large extent=5, large extent=4, average=3, little extent=2, very little extent=1.

	1	2	3	4	5
Operational resources are allocated correctly					
There is delivery of more services by means of currently employed capital					
Operations are streamlined to minimize waste					
Demand for additional employment is reduced					

SECTION E: BRAND CUSTOMER RELATIONSHIPS

7. The following statements are related to Ethio telecom brand-customer relation

Very large extent=5, large extent=4, average extent=3, little extent=2, very little extent=1.

	1	2	3	4	5
The Ethio telecom brand is being introduced to more people without additional effort					
Zonal operations created positive experience for customers					
There is improved reliability and assurance of services					
Zonal operations has promoted bond between the Ethio telecom brand and customers					

SECTION F: OPERATIONAL RESPONSIVENESS

8. The following statements are related to responsiveness levels of Ethio telecom

Very large extent=5, large extent=4, average extent=3, little extent=2, very little extent=1.

	1	2	3	4	5
Ethio telecom’s external partners are best in class providers					
There is improved response to new customer requirements					
Ethio telecom zonal operation involves information sharing and performance measures					
Ethio telecom adapts zonal operational efforts quickly and successfully.					

APPENDIX 3: Interview Guide

1. What are the types of outsourcing relationships being implemented?
2. How does outsourcing affect operational excellence in Ethio telecom zones?
3. To what extent does outsourcing influence operations financial efficiency?
4. How does outsourcing affect branding and customer relationships?
5. How does outsourcing affect operational responsiveness of zones?