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ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

“The Effects of Multiple Project Management on Organizational Performance; in the case of Ethio telecom Portfolio”

By: Kelil Aman; ID: GSR/2638/14

**A project work Report submitted to School Of Commerce Project Management Department
in partial fulfillment of a Master of Arts (MA) degree in project management**

Advisor: Fesseha Afewerk(A/Professor)

July 10, 2023

Addis Ababa, Ethiopia



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Statement of Declaration

I, Kelil Aman, have carried out independently a research project on the topic entitled “The Effects of Multiple Project Management on Organizational Performance; in the case of Ethio telecom Portfolio” in partial fulfillment of the requirement for the Degree of Masters of art in Project Management with the guidance and support of the research advisor Fesseha Afework (A/Professor) This study is my own work that has not been submitted for any Degree or Master program in this or any other institutions.

Kelil Aman

Signature _____

Date _____

Addis Ababa, Ethiopia

Statement of Certification

This is to certify that Kelil Aman has carried out this research project on the topic entitled “The Effects of Multiple Project Management on Organizational Performance; in the case of Ethio telecom Portfolio” under my supervision. This work is original in nature and it is sufficient for submission for the partial fulfillment for the award of Degree of Masters of Art in Project Management.

Fesseha Afework (A/Professor)

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Date _____

Addis Ababa, Ethiopia



ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE
GRADUATE PROGRAM

Research Project for MA in Project Management

By:

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July 9, 2023

External Examiner

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ABBREVIATIONS AND ACRONYM

MPM: Multiple Project Management

PPM: Project Portfolio Management

VAS: Value Added Service

FGD: Focus Group Discussion

MLR: Multiple Linear Regressions

ROI: Return on investment

OP: Organizational Performance

SRS: Simple Random Sampling

ABSTRACT

*The main purpose of the study was to assess the effects of multiple project management on organizational performance at ethiotelecom portfolio. The study aimed to understand the current practicing of multiple project management, studying the most underlying factors that affect the multiple project management effectiveness and its implication towards the organizational performance. A mixed research approach was applied in order to achieve the intended purpose of the study. Questionnaire, interview were used for the purpose of collecting required data for the study. Stratified sampling technique was employed in selecting the samples. the sample size is 33 but the observed sample size is 21. The Questionnaire survey was collected from the three strata's including, ethiotelecom Vas portfolio project managers, project office staffs and the functional managers at program levels. The data were analyzed using software Statistical Package for Social Science (SPSS V.26) to generate mean, frequencies, standard deviation, percentages of the statics, Correlation and MLR. In analysis of factors that are determinants of multiple project managements can be summarized as Project Manager Assignment factors with the mean score of 4.2025 are considered as **Less significant factor** , Resource Allocation factors with the mean score of 3.8733 are considered as **Less significant factor** ,Organizational Culture factors with the mean score of 3.755 are considered as **Less significant factor** ,Project Management Process factors with the mean score of 4.27 are considered as **Highly significant** ,Project Manager Competencies factors with the mean score of **4.291** are considered as **Highly significant** affects the MPM. Furthermore, the study reveals measurement factors of organizational performance at ethiotelecom, stems from our construct between the two factors; Economic Measure of Organizational Performance factors are considered as **Highly significantly influenced Organizational Performance** with the mean score of (4.228) . However, Operational Measure of Organizational Performance factors are considered as **less significant** factor of OP with the mean score of 3.99. The study certainly assures that MPM significantly affected the dependent variable OP, through fitting the MLR model. Among three prepositions our study two of them are supported by the Pearson correlation coefficient.*

Keyword: - MPM- Multiple Project Management, OP- Organizational Performance, MLR- Multiple Linear Regression

CHAPTER 1

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Differentiating project ideas through customizing the unique futures to a given product or service in terms of development may impact both product and process opportunities for any business company. As a consequence of limited resources for development activities, companies need to choose and compromise among the opportunities for their project development (Dye and Penny packer, 1999).

Project management can be defined as the well preserved approach for implementation of projects expectation agreed upon unique results under consideration of specified time and defined resource allocated (Cooper, 2005; Gareis, 2005). Now a day's, researchers propose that in order to meet overall strategic objectives, dealing with project management are becoming worthwhile. (Lan-ying& Yong-dong, 2007).

Identifying the projects followed by prioritizing and making an authorization of projects to manage and controlling them accomplish a specific strategic business can be considered as a prominent tool that can be taken as a part of Project Portfolio Management (PPM)" (Project Management Institute, 2006, p. 5).

Multiple project management (MPM) are mostly seen applicable in a condition where organization with multiple projects try to improve the way of managing with complexity and enhancing the efficiency (Archibald RD, 1975) , organizing the cut-brake span of project cycles (PMI, 2005), and knowledge transfer among parallel projects (Nobeoka K , 1995). Various scholars on the subject matter acknowledge MPM as portfolio management [5], despite this, others perceives MPM is all about managing resources incurse of multi projects in hand.

A multiple team project is any project that requires the collaboration and involvement of two or more independent teams. Multi-project management can help achieve those goals by focusing on **capacity planning, task prioritization and resource allocation**. (Eskerod, 1996; Payne,

1995) It's important to be up-to-date on what's happening on the project so that you can move your resources from one project to the next as they're needed.

Multiple project management by itself laid a huge complex for project management offices and any concerned project manager towards managing resources and multiple team members accordingly. This is because, project managers are forced to manage multiple projects in a way under consideration of optimizing the resources that are available and also by arranging the team makeup's efficiently across all project.(Marshall, 2021)

Indeed, this research tried to assess the effects of multiple project management on organizational performance through specifically taking the case of ethiotelecom VAS Portfolio. Through, employing a mixed research approach utilizing explanatory research design wishing to find out the causal relationship between the dependent variable (organizational performance) and four independent variables sorted out from empirical reviews (**reasonable assignments, resource allocation, organizational culture, competency of project managers**). As we had refined from the literature review we found that **Operational measurements and Economic measurements** are perceived as the success criteria for organizational performance.

Data collection tools integrated both open and closed ended questionnaire and interviews blended with secondary source of information. **Project Managers, program Managers and Project Management Office** is the target audience for data collection purpose.

Multiple linear regressions (MLR) will be used to evaluate the relationship between dependent and independent variable. Correlation will be another tool to describe the association effect between two continuous variables. Hypothesis testing may also taking place to assure our claims of null hypothesis approved or disapproved. SPSS version 26 is selected for our data analysis duty.

1.2. OVERVIEW OF ETHIOTELECOM

Ethiotelecom is believed to be a pioneer public telecommunication operator across Africa (BerhanOumer A., 2021). Until 1952, the operator was under the Telephone, Telegraph, and Postal services department. Since then the so-called Imperia Board of Telecommunication was formed up With proclamation No. 131/52, Finally, the Ethiopian government rebranded ETC, the operator, as Ethio Telecom by November 2010.

Ethio-Telecom is under ownership of the Ethiopian government and the state maintains its monopoly position upon countries telecommunication sector over more than a century plus silver until private telecom operator Known as Safaricom emerged into the sector as a huge competitor only before two years ago.

The company possesses wide ranges of multiple projects on the telecom sector. The profiling shows the portfolio encompasses several areas including fixed wireless, CDMA, hybrid Sim account, domain name service, M2M business, Roaming, internet, fax, business mobile, fixed line service, VSAT , ADSL, , VAS, EVDO mobile broadband, VPN are the major parts.

The company developed a new verge strategy called LEAD Strategy starting from year 2022 and ending at 2025 aiming to advance and change the scheme of telecom business making through changing the traditional revenue to the contemporary Value added service(VAS) more of content driven business that are estimated to coup up the fast and furious world globalized digital market.

1.3. STATEMENT OF THE PROBLEM

The proper management of a single project require a multitask activities encompassing the project constraints starting from scoping up to project closing stage. Likewise, **multiple project management** by itself has got a huge challenge than that of a single project since the project managers are expected to lead a number of projects at the same interval. To conclude, multiple project management is all about optimizing the resource scheduling and management of scarce resource within an organization and efficiently utilizes team members and the resources across all projects (Marshall Simmons, 2021).

With the advancement of technology and global market competition as well as achieving its company vision, the company has continued to improve its business strategy through a period of time aiming to couple up the fast growing digital world economy. Hence Ethio telecom shifted from a 3-year period “Bridge Strategy” into a newly content and digital based Strategy known as “Lead strategy” which launched June 2022 and planned to stay till June 2025. With regard to this, a new advancement of Multiple VAS projects are now flourishing through employing complex and dynamic multiple project management practices.

In order to securing the ultimatum business goal, aligning the goal with the functional strategy is an ice-breaker. Coaching and mentoring of teams are the crucial ways of implementing plans alongside with implementing the governed strategy. (David,S.(2013) Beyond Goals)

The major challenge that faces entertaining multi-project management is to implement the large number of parallel projects with the same resource pool. With respect to this concern, a number of difficulties may arise. To mention some impediment; **Missing deadlines, conflicts upon resources, losses of quality and unexpected cost disburse** occur every corner in frequent manners. (Eskerod, 1996; Payne, 1995)

This concern has practically been faced by Ethio telecom during the shift made to lead strategy instantly acquiring more complex projects with expectation of limited skilled experts and limited scarce resource available for the expansion and differentiation of multiple team administration attributing resource conflicts, loss of qualities and cost overrun as a whole that may implicate the degradation to the organizational performance.

While making a review to the study area we find out that there is no single research taken regarding the specific title we raised over. Perhaps I noticed one research paper for fulfillment of MA to Project Management at ST.MARRY university study on the title of “practice and challenges of project portfolio management: the case of ethio-telecom infrastructure expansion project” (Solome,2022)

Surely we can say that, there is almost no published research work seeking out how ethio telecom is operating on managing multiple team projects under its Portfolio and analyzing the level of effects of multiple project management on the ethio telecom performance.

Thus, the ultimatum of this study is to assess the factors that cause multiple project management influences organizational performance and the effect in the overall success of VAS portfolio in ethiotelecom.

1.4. RESEARCH QUESTIONS

Central question

What is the effect of multiple project management in organizational performance in case of Ethio telecom VAS portfolio?

Specific question

1. What are the factors that affect managing multiple projects?
2. What is the multiple project management practice in Ethio telecom portfolio?
3. What is the effect of the factors on organizational performance?

1.5. OBJECTIVE OF THE STUDY

1.5.1. General objective

The main objective of this study is to investigate the effect of managing multiple projects towards organizational performance in Ethio telecom Portfolio.

1.5.2. Specific objectives

1. To identify factors that impacts multiple project management effectiveness.
2. To assess the multiple project management practice of Ethio telecom VAS portfolio
3. To assess the effects of identified factors towards organizational performance.

1.6. HYPHOTESIS

H1: - Proper **Assignment of Project** to multiple project managers shall affect Organizational Performance positively

H2: Proper **Allocation of Resources** positively impacted the Organizational Performance

H3: there is direct relation between **Organizational cultures** with Organizational Performance

1.7. SIGNIFICANCE OF THE STUDY

The findings of this study will have practical significance, especially □-

Policy makers: - as it will identify strategies to help to improve multiple team project administration and multiple project execution as well as factors that hinder Organizational performance.

Researchers: -since the study will explore possible strategies for improving multiple team project management practice to enhance Overall Organizational performance. It will broaden the researchers" understanding of the various factors influencing performance of multiple team project management.

Project Managers: - It will develop an understanding to the project Manager on how to prioritize projects with respect to resource allocation and other factors shall contribute positively towards their performance at work.

1.8. SCOPE OF THE STUDY

Primarily In our study we try to make a closer look at the portfolio of ethiotelecom related with new product advancement portfolio known as Value added Service. More or less, this portfolio is believed to bring the high customer satisfaction and ROI for the telecom industry now a day.

Since ethiotelecom has actively working in more than 12 regional offices and five zonal offices (North, South, Central, Western and Eastern zones) in Addis Ababa possessing organizational structure having more than 14 division arrangements and since this divisions operate various projects at different site, frankly speaking this whole projects under portfolio are managed from central zone i.e. Head Office.

The company has more than twelve divisions in its organizational structure and all these divisions launch various projects at different sites for different purposes at different times. Nonetheless, all projects are managed from the central zone i.e. the head office. And ofcourse our respondent will be the portfolio management bodies working at Head Office.

1.9. Organization of report

This study report contains **five** interrelated chapters. **Chapter one** is an introduction, its main focus are introducing the very concerns of the study in all aspect. It will discuss the background of the study, statement of the problem, basic research questions, objectives of the study, definition of terms, significance of the study and the scope. **Chapter two** is reviews of literatures tries to defend and articulate claims and stands for the main study framework pertaining to Multiple Project management. It encompasses an introduction, theoretical review, empirical review and the conceptual framework of the study. **Chapter three** is Research Methodology mainly focuses on sampling method, methods of data collection operation and analysis of data and tools for data analysis as well as interpretation of results, **Chapter four** is Result and discussion intends to signify the results and findings of the study and result interpretation following standard statistical tools and finally discussion on the findings would be held. The final chapter, **chapter five** is Summary which contains four sections that will include a summary of findings, conclusions, recommendations and future research works

CHAPTER 2

LITERATURE REVIEW

Here the review of literature has got three frames; firstly theoretical, empirical aspect of multiple project management will be discussed. After that, theoretical review, empirical review and construct will be articulated for the Organizational Performance. Lastly, the summary conceptual frame work of the study will be presented.

2.1 Theoretical Review of Multiple Project Management

Typically, the main valid reason towards implementation of MPM is all about realizing the organizational efficiency and management of multiple projects in parallel. In order to formulate our guiding proposition for our study we tried to cover up the literature under practicing of multiple project management which exactly covers area of inputs, internal process and the expected outputs of project implementation in an organization. Here in this literature review we try to triangulate literatures based on our study construct multiple project management. Hence, we tried to cover areas that are possibly being raised as concern and researched by several subject matter specialists and authors on the subject matter.

Certainly; for effective administration of multiple projects, focusing on the interaction among groups of multiple project is a crucial task. This focus should target the realistic and achievable portfolio management, more specifically addressing proper project selection, Prioritization and resource allocation (Fricke SE, Shenhar AJ ,2000).

Employing a rigorous, exact and formal project **selection** method for managing the multiple projects in accordance with the scarce resource allocation by itself, has laid a foundation for creating a highly competitive organization insisting the ability to provide sufficient and appropoite resources. (Payne JH, 1995)

According to Payne (Payne JH, 1995) project selection should better consider factors like relevance with an overall business objective, proper lineage of project size, the time line and technical feasibility and financial viability are to be listed. Moreover, the author by the name Adler (Adler PS, ..., 1996) also emphasized that, overlooking the capacity of the resource at

hand has a negative impact on proper administration of multiple projects within an organization by far.

After completion of the selection process, **assignment** of projects to the multiple project manager would emerge as another challenging task of managers in MPM work environment. Kuprenas et al (Kuprenas AJ,...,2000) proposed that the efficiency of multiple team project management relies on the size of projects that the assigned multiple project manager manages at a time. To add more, a study reveals that for an engineering sector project manager assigning two to three “major” projects may upgrade and scale up an effective utilization of his/her productivity (Fricke SE, Shenhar AJ ,2000).

There are some Steps that needs to be followed inorder to make sure the proper assignment producer taken place. To mention some of them; Realizing of project priority, alignment of project competency of multiple project manager and project requirements, identifying structural limitations are among the steps. (Patanakul P, Milosevic D,2006) (Patanakul P,...,2007).

Alongside project manager assignment, the challenges that faces multiple project management practice are the **allocation of resource** (Fricke SE, Shenhar AJ ,2000). various studies stated viable techniques and tools for scarce resource allocation; integer programming, theory of queuing, methods of heuristic, etc are among them (Levy N, Globerson S. 6–18, 1997) well infact this tools may not fit with MPM setting it may not be applicable to an operational-level for a MP manager to allocate resources among project teams.

In course of defining the success factors effective MPM practice, Fricke and Shenhar proposed that Management support considered as the climax one. Management support can be more clarified in terms of , implementing **proper project sizes**, **Allocating resources** wisely, defining a **clear goals**, stating **project priority** and proper **assigning** of multiple **project manager** (Fricke SE, Shenhar AJ ,2000).

Moreover, organizations that intend to apply MPM better posses a strong and workable **organizational culture**. **Communication** and **ownership of projects** are considered as part of Organizational Culture (Fricke SE, Shenhar AJ ,2000).

Whenever raising the concerns of MPM, the inter-project dependencies and interaction may become the real issue. (Payne JH, 1995) (Eskerod P,1996). Hence MP Managers should give attention to project interdependence aiming to achieve the business goal in contrary to individual project success.

Researches firmly stated that implementing portfolio management in an operational level may help address the communication gap through creating a space for which functional managers, multiple project managers and also team members integrated in course of planning and control ranging from single project up to portfolio of projects. Actually this will eliminate the existing tradeoff between claims of functional managers and multiple projects managers (Platje A,...1994) (Platje A, Seidel H, 1993). **Multi project scheduling** can be considered as a prominent way in linking projects (Ireland LR ,1997).

Competency can be regarded as a necessary condition for effective MPM that every multiple project managers expected to possess. In his survey Tullett's (Tullett AD, 1996) mentioned specifically that every multiple project manager should follow a kind of approach named **innovative thinking style** that may help in achieving the project success by employing structured and systematic framework in planning and managing as well.

Multitasking must be key functions of effective multi project manager. Reducing the switchover schedule outlays (Rubinstein JS...,2001) when ever skip from projects to projects , it is believed that pressure may exerted on shoulder of project managers; but the project managers should possess the ability to deal on leading and building the team the same time. They better be in charge for the leading and administering multiple project teams simultaneously (Fricke SE, Shenhar AJ ,2000)(Patanakul P,2005). In addition, in case of unprecedented occurring happens due to unfavorable relationship occur upon multiple project environment let's say for example adjusting the priority, e.g. change in priority; multiple-project manager should aware of how to solve conflicts and mediate the problem (Payne JH, 1995).

Certainly the valid reasons for implementation of MPM are to make sure better efficiency and administration of projects wisely. Beside meeting the Four constraints of projects and satisfying customer expectations, the effective usage of organizational resource can be raise

as one of the outputs expected from multiple-project managers (Ireland LR ,1997) (Fricke SE, Shenhar AJ ,2000).

2.1.1. Multiple project management constructs

The two stages of refining the measurements of multiple project management can be articulated using to two distinct categories. These two influencing factors are organizational levels and operational level.

Discussing the **organizational level** we can find, Project Assignment, Resource Allocation and Organizational Culture. On the other hand, project management process and multiple project manager competencies are parts of **operational level** influencing factors.

Since our more concern is on organizational level we formalized our proposition or **hypothesis** formulated relating to organizational level factors; **Project Assignment, Resource Allocation and Organizational Culture**

2.2. Theoretical Review of Organizational Performance

To start with the concept organizational performance, some researcher on the area denotes that it seems the concept is not much researchable, and it is more valid on conceptual framework rather than helping in way towards empirically framework (Hannan & Freeman, 1977) .

Certainly, most research works on the stream are yet unable to predefine the sufficient and credible indicator of organizational performance (Molnar and Rogers, 1976; Kahn, 1977), frequently the performance of the specified organization assumed to be effective, benchmarking the overall purpose and constraints employed that are identified under organizational effectiveness investigation” (Cameron and Whetten, 1983; Cameron, 1986)

In course of defining the exact elements towards identifying the criteria for organizational performance is said to be almost negligible even if most research have been performed over the title. (Seashore, 1962; Seashore and Yuchtman, 1967)

Raising the theoretical stance authors stated that there is no such a general consensus towards the literature on the standards to be used in **measuring the organizational performance** (Bolman, L. G., & Deal, 2003; DeClerk, 2008; Scott, W.R, and Davis, 2015). However, organizational performance can be stated mainly in six distinct approach approaches. To list them, **goal** approach (Chung, R-G., and Lo, 2007; Ho, 2008), **System Resource** Approach (Cutler et al. 2003), **Social system** approach (Georgopoulos, 1957), **competing values** approach (R. E , J. & Thakor, K. S, Quinn, DeGraff, Cameron, 2014), **subjective** Approach (Wholey J., 1996) and finally **Constituency** Approach (Agle, B. R..., 2006).

As we have done a review on organizational performance literature we can find on **most literatures** that, Organizational performance mostly seen represented by organizational **effectiveness** (Price, 1968; Steers, 1975; Campbell, 1977; Mackenzie, 1978; Pfeffer & Salancik, 1978), and secondly by organizational **efficiency** that it attributed (Scott, 1987; Mackenzie, 1978).

While discussing the other dimensions still there are some mild factors that are possibly mentioned. To list some; reaction of **stakeholders** (Worrell, Davidson, 1993), marking **innovation** and **conflict** managements (Zey-Ferrell, 1979) and face of **institutionalization** (Powell, 1991; Nelsen, 1997) are the topics that are occasionally discussed.

2.2.1. Factors Affecting Organizational Performance

Effectiveness and Efficiency

In the first place, organizational **effectiveness** is named as an “external standard” this is because it actually measure the performance of organization with regard to some preset standard that needs to be meet. It concentrates on how actually the demand of various interested groups is being addressed with respect to the activities performed (Pfeffer and Salancik, 1978).

Hence, in order to evaluate the best performance of an organization or to know how much effective were the organization it is all depend on the preseted standards. Various literatures identified most widely used indicators that show the organizational effectiveness presented

standards. To list some; the first one is profitability (Lawrence, 1967), margin of productivity (Argote, 1990), concern on reliability (Roberts, 1989), degree of cohesiveness (Krackhardt, 1989), morale value (Katz et al., 1951; Walker, 1957), adaptiveness (Kaufinan, 1960; Lounamaa, 1986), acquiring institutionalization (Selznick, 1957), etc

On the other hand, organizational efficiency labeled as “internal standard performance” since it evaluates the ratio of dividend outcome over input (Mackenzie, 1978; Scott, 1987). It actually measures not only the desired effect that deemed happen but it also measures how efficiently the work has done? That is, with a minimum of inputs" (Scott, 1987).

Finally we can conclude that, the most influential determinants of organizational performance are Organizational effectiveness and organizational efficiency. It seems that both are highly interrelated and often use interchangeably.

Balanced Score Card

The well known Balanced Scorecard are developed by two professors of Harvard University are meant to measure the organizational performance. Intending to measure beyond financial measure to lead into sustainable longterm performance measure.

BSC recommends the toplevel managers can outline the organizational performance through , tracking the minor metrics that address the four dimensions: Financial concern, Internal Business, Customer concern and finally growth and learning focus.

Six of the Best Measures of Organizational Performance

In recent times the contemporary construct summary of organizational performance tends to possess six best measures. To list the six measures; objectives achievement, Efficiency of Business Process, result of investment and projects, Market performance, Alignment and workforce metrics (walkme team,2023).

Six of the Best Measures of Organizational Performance



Achievement of Objectives (the achievement of objectives towards expenditure, danger-level profits, growth, or innovation.) , **Business Process Efficiency**(measured using business process swiftness, results, cost-efficiency and perceived agility), **Results of Business Investments** (high level metrics includes financial return (ROI), Project results, efficiency and project cost against observed cost) , **Marketplace Performance** (capture the economic worth impact market share, innovation, valuation, size, and profits) , **Alignment** (familiar with its objectives, Team cohesiveness, business unit alignment with organization), **Workforce Metrics** (Skills and proficiency, Productivity and performance, Engagement and motivation, Sentiment, Retention and loyalty)

2.3. Empirical review and Construct of organizational performance

The three distinct levels of measuring of organizational performances can be listed as personal, groups and finally organizational level (Knies, Jacobsen and Tummers, 2016). Moreover, the author named Patanakul .et. al proposes the measurement criteria for the effective performance of an organization employing MPM better be channeled into Organizational, project and individual perspective.

The organizational part measuring criteria can be multiple-project manager's deliverable, productivity of Resource and organizational learning. The project accomplishment and success measures with respect to customer satisfaction and meeting schedule are The project-level metrics. Personal development and contentment are personal level measurements (Patanakul and Milosevic (2009).

Due to various clarification of terminology are raised related with organizational performance, the **construct** for measuring organizational performance are keep changing and advancing in timely fashion. The famous author by the name Luo et al. once performed a meta analysis over the study area suggested that, OP can be measured interms of economic and operational performance (Luo et al. ,2012).

The economic Measures dealt with range of outcomes related with financial and market perspectives which mostly evaluates the profit, sales, ROI for share holders and other financial metrics. **The operational Measures**, in contrary, looks around visible indexes like customer satisfaction, organization social capital and fame, customer loyalty, integrity, and competitive advantage derived from resource productivity.

To conclude, various researchers settled the multi dimensional construct of OP through forming three main aspects like performance of **financial aspect**, performance related with **product market**, and finally **shareholder return** on Investment. And some other mentions the six best measures of OP.

2.4. Conceptual framework of the overall study

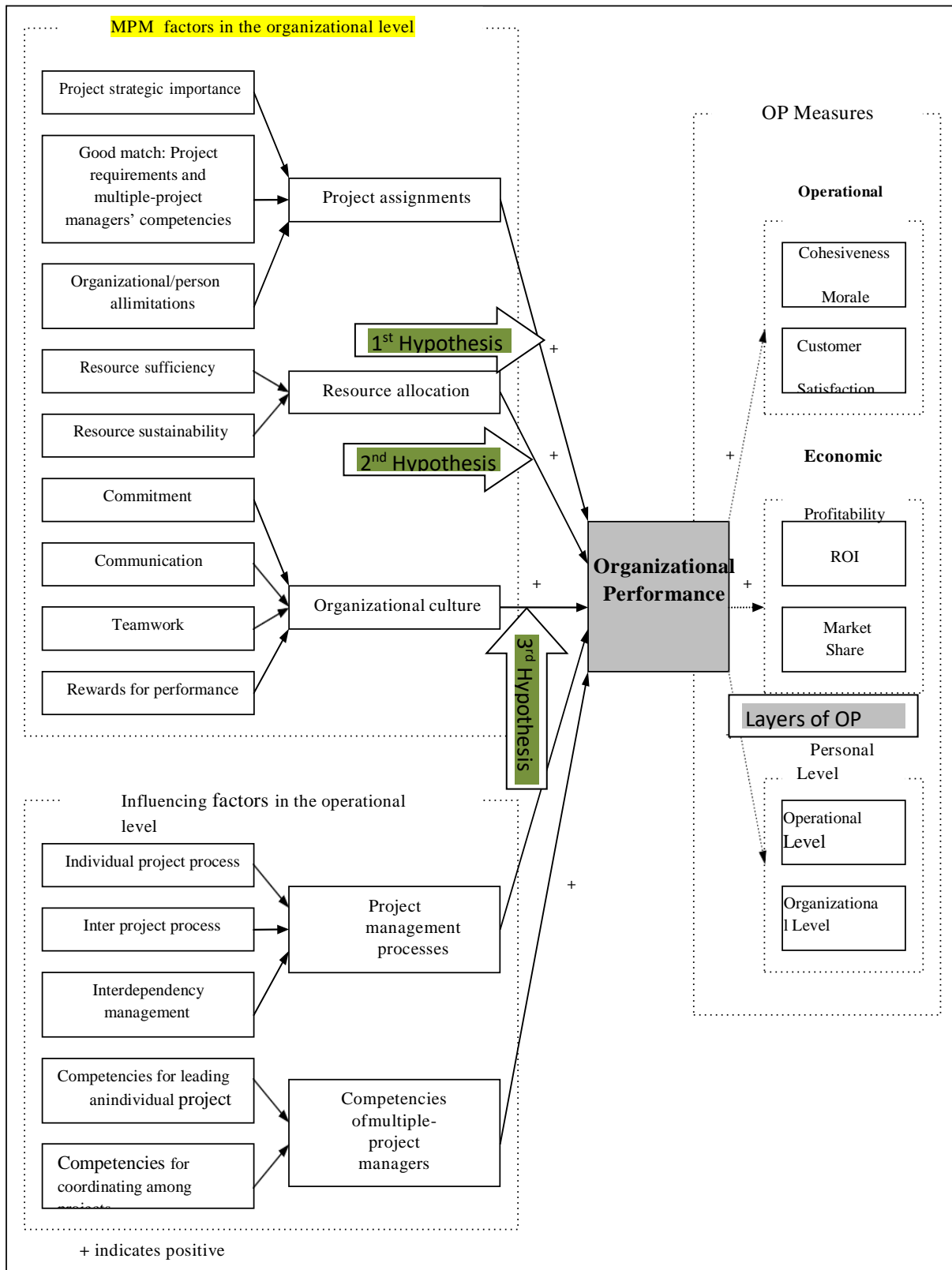
2.4.1. Introduction

Certainly, conceptual frame work can be illustrated as a blue print for the research process, by indicating the key factors to draw a flow of research operation onwards data analysis and interpretation of data's towards clarify the simplified relationship among those variables and concepts. Moreover, this illustration oftenly had done using either narrative form or else in graphical form.

The conceptual framework for our study can be articulated with these narratives;

If **Ethiotelecom** pays attention on proper **selection of viable projects**, and applying skillful **assignment** of competent multiple project managers, arranging a reasonable **resource allocation**, building advanced and excels **organizational culture** and internalizing the **project management process** will enhance the overall Organizational performance in terms of Economic measures and Operational measures of organizational performance. Below figure shows the graphical illustration.

Figure 1 Conceptual framework



CHAPTER 3

RESEARCH METHODOLOGY

This study employed both quantitative and qualitative methodology that involves a selected sample from the target population. This section of report deals with the description and explanation of the research methodology and the design employed to undertake this particular study. It walks you through the overall methodological approach, the sampling methods, data collection, analysis and validity of the research design.

3.1. Research approach

It's known that research is classified based on numerous criteria. But according to its approach, it is classified as a mixed type approach including qualitative and quantitative altogether. Since the objectives of this study have different nature, a mixed method approach (both quantitative and qualitative) adopted to achieve the objectives. The purpose of using such a mixed methods approach is to gather data that was not obtained by adopting a single method and for triangulation so that the findings with a single approach could be substantiated with others wherever possible.

3.2. Research design

The study adopt Explanatory Research Design employing quantitative methods specifically causal relationships between factors affecting organizational performance empirically¹. Since, this design is very analytical, conceptual and inferential, which describes existing conditions by comparing groups of respondents. This design is very useful as it allows the researcher to collect data through interviews and questionnaire. The data includes role of multiple project management underlying in factors on organizational performance, factors that contribute to low multiple project management practices and strategies for improving Managing Multiple projects.

¹An empirical research based on actual observations or experiments. The research may use quantitative research methods, which generate numerical data and seek to establish causal relationships between two or more variables

3.3. Sample design

3.3.1. Population of the study

The target population for this study is Project Manager, program managers and project **management offices (PMOs)** at Head office of Ethio telecom working on VAS Portfolio.

3.3.2. Sampling technique

The study adopted stratified sampling method using Division Functionalities to identify the samples from the whole population assisted by **Stratified sampling technique** for identifying the samples in the sub-population. The research has 3 stratas based on job position roles Project Manager, Program Manager and Project office staffs.

3.3.3. Sampling procedure

The study used stratified sampling techniques for dividing the total targeted population into three based on multiple team project leading roles Manager, program managers and project management offices (PMOs). This procedure helps to make sure fair chance is given for managers in each division. Moreover, the procedure helps to generate comprehensive views about the study topic.

3.3.4. Sampling size

Evenif the author named Gay (2006) proposes the minimum acceptable sample size for descriptive research is 10% of the population proposed under study population, the well known researcher Acharya et al. quote in his book (Acharya et al., 2013) that, The best approach in identifying the depth problem and addressing the very scope of the study is all about looking in to the entire possible population considering the research area.

We employed standardize sampling size formula for our **finite population** size of 60, used the 2nd sample size formula in our case,

Unlimited population:
$$n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\epsilon^2}$$

Finite population:
$$n' = \frac{n}{1 + \frac{z^2 \times \hat{p}(1-\hat{p})}{\epsilon^2 N}}$$

Using this standardize formula with Confidence level 90%, Margin Error 10, population Proportion 50% if not used and using population size which is 60 for VAS portfolio. Hence the sample size 33

This sample size allocated using SRS method among ethiotelecom VAS portfolio core sampling frame which are project managers, program managers and project management offices (PMOs).

3.4. Data Collection

3.4.1. Source of data

Primary source of information followed by secondary data. The aim of collecting the **primary data** is to obtain first-hand information from the Project Managers. The purpose of using **secondary data** during the actual data collection and analysis will strengthen the reliability of the research data, and supplement the information missing in the primary information.

3.4.2. Research Instrument

The **primary data** collected by employing both quantitative and qualitative research instruments using closed-ended questionnaire, open ended Questionnaire, Key Informant interview. The questionnaire for quantitative data collection will administered by the researcher – the primary data will be collected from sample project managers by actual visits (face-to-face) Ethiotelecom Head Office or sending the questionnaire to be filled online. Whereas the interview with selected PMO staffs, program manager and specified project manager will be conducted in appearing and meeting with the targeted Respondent in their appropriate time in the office using **qualitative** Key informant interview.

Secondary source of information collected by desk review on subject matter and publication review on related issues.

3.5. Data analysis method

Since this study is the descriptive and explanatory type of research, the collected data will be analyzed by using frequency and percentage of the respondents utilizing **SPSS 26** latest version. To show and rank the respondent's responses table and graph will be used. Process of data analysis will involve the following three steps:

First preparing the data for analysis, then analyzing the data and finally, interpreting the data. Based on these steps, analysis of data involved presenting data or respondent's demographic data analyzed using frequency tables, percentage and graphs, For **Effect analysis** we applied Multiple Linear Regression (MLR) and Spearmans Correlation Coefficient.

Multiple Linear Regressions (MLR): employed to observe the causal effect relationship amongst the independent factors affecting the Multiple Project Management upon the dependent variable **Organizational Performance**.

List of independent variables emanated from the conceptual framework can be summarized:

Reasonable assignments, sufficient and sustainable resource allocation, specific organizational culture, Project management Process and competency of project managers. The MLR **formula** can be summarized in $Y=a+ b1X1+ b2X2+ b3X3 +b4X4+b5X5+error$, which is

$$\text{Organizational Performance} = a + b1 (\text{Reasonable Assignments}) + b2 (\text{Resource Allocation}) + b3 (\text{Organizational Culture}) + b4 (\text{Competency of project managers}) + b5(\text{Project management processes}) + e$$

Correlation Test Statistics: applied to closely observe the degree of association among independent variables with that of dependent variables. **Inferential statistics** Pearson correlation mounted to evaluate the Hypothesis.

Moreover, the information from secondary data supports the analyses. Then the data from open-ended questions will be analyzed. Finally, the analyzed data will be interpreted into results. Lastly, the results obtained from the analysis will be presented as a finding.

3.6. Reliability

Reliability is the ability to obtain similar results by measuring an object, trait or construct with an independent but comparable measures (Messick's, 1995). From this juncture, the researcher's fellows asked to tell in their own words what specific terms mean. This will ensure that the respondents have to interpret the items in the instruments in the similar manner each time they read them.

This process produces findings among groups which were similar in all applicable respects, because the items with unclear meaning to the respondents will be identified and adjusted. To get reliable data, the researcher ensured reliable instruments; this is attained by ensuring that instruments like questionnaires will be tested before being fully applied into the study. This also done by testing the instruments (questionnaire and interview) in the same individuals with the same questions over a relatively short period of time and check their correlation.

This is done towards assessing the reliability we tried to run **Cronbach's alpha test statistics** in away to measure the amount of shared variance, or covariance that specific items of instrument holds to the amount of overall variance

The respondents encouraged giving suggestions and comments concerning instructions and clarity of the questions and relevance to ensure accuracy and meaningfulness of the inferences that also included the issues of validity. Because of the interview with the project Manager, Program Manager or Project Management Office was conducted by the researcher.

3.7. Limitation of the study

The fact that are clearly seen defects the generazabilty of this research are the undergone organizational structure of ethiotelecom that limited access to the resource on use to the research and lack of cooperativeness of focal persons at projects level under the portfolio are the main limitation we encountered.

3.8. Ethical consideration

Informed consent of participants and getting formal clearance as well as maintaining confidentiality is types of ethical principles whenever conducting any research works (Cohen et al (2007).

A research clearance letter obtained during administration of the data collection. Meanwhile the research consent has to be well articulated in a way to inform respondents about the rationale behind conducting the study, assuring them that privacy confidentiality and anonymity that shall be guaranteed including watchful treatment of the information gathered to ensure no harm came to any participant in this study.

CHAPTER 4

RESULTS AND DISCUSSION

4.1. Introduction

This chapter focused mainly with making presentation, analysis of data and drawing interpretation of the analyzed data obtained through questionnaire and interview. The results are depicted in the form of figures, tables much of frequency and descriptive statistics. A total number of 33 questionnaires were distributed and out of them 21(93%) of them were found valid and used in the study for further analysis.

4.2. Results of the Questionnaire

4.2.1. Types of Independent and dependent variable and Reliability test

The questionnaire has got 5 independent variables and one dependent variable. rational project assignments, attainable resource allocation , specific organizational culture, Project management Process and competency of project managers are independent variables, where as Organizational Performance is a Dependent Variable.

Reasonable Assignment we got 4 factors, (Q1. When project were assigned to me, my manager understood the strategic importance and the project priority, Q2. My manager always took into account my personal competencies when he or she assigned projects to me, Q3. Whenever project assignment has done priority toward a project take into a consideration, Q4. There were always an appropriate number of projects assigned to me so that I was able to handle them effectively) The reliability test of the scales indicated the Cronbach' s alpha value of 0.758 , found reliable greater than 0.70. **Resource Allocation** dealt with six variables, (Q1.I had enough resources to complete my projects, Q2.Resources stayed with me as long as there was a need for them, Q3.Our resource allocation process is dynamic, it can be changed in real time, Q4.The resource allocation system is capable of resolving leashes easily, Q5Is the resource allocation process is visible and transparent, Q6.Is it responsive enough for change in budget, requirement and skills?)The reliability test of the scales indicated the **Cronbach's alpha value of 0.761**, found reliable greaterthan than 0.70. **Organizational Culture** dealt with 8 factors (Q1. Members in my organization had a strong sense of contribution to project development, Q2. The working environment encouraged team members to communicate with each other for a mutual goal

within our organization, Q3. There was a strong cohesiveness under working as a team, Q4. There was a clear reward policy for outstanding performance, Q5. Individual working from different department share a common view, Q6. we have ethical value to differentiate right from wrong, Q7. it is easy to reach to an agreement even in a difficult situation, Q8. we have a chance to introduce our idea before management decision made) with The reliability test of the scales indicated the Cronbach' s alpha value of 0.834 , found reliable greater than 0.70. For **project Management Process** we got 3 factors (Q1. When leading each project, I followed our established project management process, Q2. I had a way to integrate my projects and that helped me manage them more effectively, Q3. I understood that all projects under my responsibility had interdependency among them) with The reliability test of the scales indicated the Cronbach' s alpha value of 0.826 , found reliable greater than 0.70.

For **competency of Project manager** we dealt with 7 factors (Q1. I was able to effectively develop a project plan and project schedule, Q2. I knew the business perspective of my projects, Q3. My teams respected me as their leader, Q4. I was organized. I knew where my project documents were. I was in the top of them, Q5. I understood the technical aspect of my project, Q6. I solved projects in such a way that the solutions benefited all of my projects as much as possible, Q7. I was able to effectively develop a project plan and project schedule) with The reliability test of the scales indicated the Cronbach' s alpha value of 0.778 , found reliable greater than 0.70. The dependent variable **organizational performance** has got 12 factors (**Economic Measures** Questions (1. The Projects that i lead achieved the forecasted Profitability, 2. The margin of productivity of my projects are fitted with the plan, 3. Our project contribute the planned sales amount ,4. Our project scale up the market share of ethiotelecom, 5. The return on investment of our project are considered viable) **Operational Measures Question**(6. My productivity increases because I simultaneously led multiple projects, 7. I used the knowledge i have gained from managing one projects to manage multiple projects, 8. The team cohesiveness is seen amazing among groups, 9. Our customers are loyal to our service we sought, 10. The team member's morale value enhanced from project to project, 11. My customers are all satisfied by my service, 12. Leading multiple project improved my administration capacity)) with The reliability test of the scales indicated the Cronbach' s alpha value of 0.729 , found reliable greater than 0.70

4.2.2. Demographic Characteristics of respondent

Table 4. 1 Respondents Profiling Summary

| Demographic | Variables | Freq | % | Valid % |
|----------------|--------------------------------|---------|------|----------------|
| Gender | Male | 12 | 57.1 | 57.1 |
| | Female | 9 | 42.9 | 42.9 |
| Qualification | First Degree | 7 | 33.3 | 33.3 |
| | Phd | 1 | 4.8 | 4.8 |
| | Second Degree | 13 | 61.9 | 61.9 |
| Job Role | Functional manager/Coordinator | 5 | 23.8 | 23.8 |
| | Portfolio manager/Coordinator | 3 | 14.3 | 14.3 |
| | Program manager/Coordinator | 5 | 23.8 | 23.8 |
| | Project manager/Coordinator | 8 | 38.1 | 38.1 |
| Position Level | Program Level | 9 | 42.9 | 42.9 |
| | Project Level | 9 | 42.9 | 42.9 |
| | PMO office | 3 | 14.3 | 14.3 |
| | Minimum | Maximum | Mean | Std. Deviation |
| Experience | 1 | 15 | 6.29 | 3.690 |
| Project Size | 1 | 9 | 2.71 | 2.101 |

Analysis of Demographic data

As indicated in the above summary tables 4.1 stems from the frequency distribution table and descriptive tables for scale data which is annexed at the end pages of this report the findings asserted that, The major 57.1% respondents are male and the rest 42.9% are females.. In terms Education qualification and competencies; first degree holder accounts for 7(33.3%), Second Degree accounts for 13(64.9%) and finally only one holds a PHD(4.8%). The descriptive table also tells that, among the total respondents the average total year of experience is around 6 year, the longest career is shown 15 years whereas, the short one is 1 year long.

The researcher believed that respondents with high academic qualification tend to give more detailed information regarding the issues under study and give more weight to the opinion of the ethio telecom encountered multiple project management implication on ethio telecom's success.

4.2.3. Project Selection

Considering the above summary table 4.1, analyzing the **respondent job role** 38.1% accounts for project manager, 23.8% stand for program manager, 23.8% for functional managers and 14.3% stand for portfolio managers.

Analyzing the current job position where they working at 42.9% are for both project and program level positions, where as 14.3% are accounts for project management office.

Among the total respondents the **Average number of projects** that are under their control is almost **3 Projects**, the maximum project size is 9 whereas, the lowest project size is only 1. This figure shows the project size assigned can be said not deviate from the standard.

The researcher believed that respondents with high job position and the more project assigned tend to give more detailed information regarding the issues under study and give more weight to the opinion of the ethiotelecom encountered multiple project management implication on ethiotelecom's success.

4.2.3.1. Analyzing a Yes or No question on basis of Project Selection

Table 4. 2 Project fitted with Ethio telecom Objectives

| | | Freq | % | Valid % | Cumulative % |
|-------|-------|------|-------|---------|--------------|
| Valid | No | 1 | 4.8 | 4.8 | 4.8 |
| | Yes | 20 | 95.2 | 95.2 | 100.0 |
| | Total | 21 | 100.0 | 100.0 | |

Table 4. 3 Project Helps Ethio telecom create revenue

| | | Freq | % | Valid % | Cumulative % |
|-------|-------|------|-------|---------|--------------|
| Valid | No | 2 | 9.5 | 9.5 | 9.5 |
| | Yes | 19 | 90.5 | 90.5 | 100.0 |
| | Total | 21 | 100.0 | 100.0 | |

Table 4. 4 Project go along with the plan

| | | Freq | % | Valid % | Cumulative % |
|-------|-------|------|-------|---------|--------------|
| Valid | No | 2 | 9.5 | 9.5 | 9.5 |
| | Yes | 19 | 90.5 | 90.5 | 100.0 |
| | Total | 21 | 100.0 | 100.0 | |

As shown in figure 4.2-4.4 The binary responses shown above concluded that the projects are fitted with the company's business objectives and strategy, the projects also helps ethiotelecom gain ideal return on investment and the implementation of the current at hand projects goes hand in hand with the governing plan and schedule.

Hence we can surely conclude that ethiotelecom are in a good position in addressing the project selection rules in good manner.

4.3. Results Related to Factors that affect multiple project management

4.3.1. Likert scales analysis

The 5 point likert **Mean score** analysis can be drawn using the **interval ranging**; From **1 to 1.80** represents strongly disagree or **Very Low**; From **1.81 until 2.60** represents disagree **Low** ;From **2.61 until 3.40** represents true to some extent or **moderate** ;From **3:41 until 4:20** represents agree or **High**; From **4:21 until 5:00** represents strongly agree or **Very High**.

Hence, respondents were asked to indicate their opinion about the underlying factors affecting multiple project management pertaining with ethiotelecom Portfolio. As a result, their Response presented in the following tables and discussed based on the responses,interview results.

Table 4. 5 Respondent answers for Project Assignment.

4.3.1.1. Project Manager Assignment

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|--------|----------------|
| Q1. When project were assigned to me, my manager understood the strategic importance and the project priority | 21 | 3 | 5 | 4.33 | .856 |
| Q2. My manager always took into account my personal competencies when he or she assigned projects to me | 21 | 3 | 5 | 4.48 | .750 |
| Q3. Whenever project assignment has done priority toward a project take into a consideration | 21 | 2 | 5 | 3.95 | 1.117 |
| Q4. There were always an appropriate number of projects assigned to me so that I was able to handle them effectively | 21 | 3 | 5 | 4.05 | .865 |
| Average Mean Score | 21 | 2.75 | 5 | 4.2025 | 0.897 |

Table 4.5: shows that the Average mean score of Project Manager Assignment Factors is

(4.2025) with a Std. Deviation of (.897) which indicates that Project Manager Assignment factors are considered as **High Level Factor of Multiple project Management**. The standard deviation .897 is less than one, which means there was agreed consistency in respondents' opinion of the Project Assignment factors.

Take into consideration of personal competency seen as a major significant factor over project assignment.

Table 4. 6 Respondent answers for Resource Allocation.

4.3.1.2. Resource Allocation Analysis

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|----|----------|---------|----------|----------------|
| Q1.I had enough resources to complete my projects | 21 | 2 | 5 | 3.81 | 1.209 |
| Q2.Resources stayed with me as long as there was a need for them | 21 | 2 | 5 | 3.67 | 1.017 |
| Q3.Our resource allocation process is dynamic, it can be changed in real time | 21 | 3 | 5 | 3.90 | .768 |
| Q4.The resource allocation system is capable of resolving leashes easily | 21 | 2 | 5 | 3.86 | .854 |
| Q5Is the resource allocation process is visible and transparent | 21 | 2 | 5 | 3.81 | .928 |
| Q6.Is it responsive enough for change in budget, requirement and skills | 21 | 3 | 5 | 4.19 | .750 |
| Average Mean Score | 21 | 2.333333 | 5 | 3.873333 | 0.921 |

Table 4.6: shows that the Average mean score of Resource Allocation Factors is (3.8733) with a Std. Deviation of (.921) which indicates that Resource Allocation factors are considered as **High Level Factor of Multiple project Management**. The standard deviation .921 is less than one, shows there was an agreed consistency in respondents' opinion of the Resource Allocation factors.

Respondent asserted majorly that the resource allocation is more dynamic responsive enough for change in budget, requirement and skills.

Table 4. 7 Respondent answers for Organizational Culture.

4.3.1.3. Organizational Culture Analysis

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|-------|----------------|
| Q1. Members in my organization had a strong sense of contribution to project development | 21 | 3 | 5 | 4.33 | .856 |
| Q2. The working environment encouraged team members to communicate with each other for a mutual goal within our organization | 21 | 2 | 5 | 4.05 | .865 |
| Q3. There was a strong cohesiveness under working as a team | 21 | 3 | 5 | 3.90 | .889 |
| Q4. There was a clear reward policy for outstanding performance | 21 | 2 | 5 | 3.90 | 1.091 |
| Q5. Individual working from different department share a common views | 21 | 2 | 5 | 2.86 | .854 |
| Q6. we have ethical value to differentiate right from wrong | 21 | 2 | 5 | 4.19 | .981 |
| Q7. it is easy to reach to an agreement even in a difficult situation | 21 | 2 | 5 | 3.67 | .856 |
| Q8. we have a chance to introduce our idea before management decision made | 21 | 2 | 5 | 3.14 | 1.014 |
| Average Mean Score | 21 | 2.25 | 5 | 3.755 | 0.92575 |

Table 4.7: shows that the Average mean score of Organizational Culture Factors is (3.755) with a Std. Deviation of (0.92575) which indicates that Organizational Culture factors are considered as **High Level Factor** of Multiple project Management. The standard deviation .921 is less than one, shows there was an agreed consistency in respondents' opinion of the Organizational Culture factors.

A variable which states **a member has a strong sense of contribution to project development** is a major significant to Organizational Culture.

Table 4. 8 Respondent answers for Project Management Process.

4.3.1.4. Project Management Process Analysis

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|----|----------|---------|------|----------------|
| Q1. When leading each project, I followed our established project management process | 21 | 3 | 5 | 4.14 | .727 |
| Q2. I had a way to integrate my projects and that helped me manage them more effectively | 21 | 2 | 5 | 4.19 | .814 |
| Q3. I understood that all projects under my responsibility had interdependency among them | 21 | 3 | 5 | 4.48 | .680 |
| Average Mean Score | 21 | 2.666667 | 5 | 4.27 | 0.740333 |

Table 4.8: shows that the Average mean score of Project Management Process Factors is (4.27) with a Std. Deviation of (0.740) which indicates that Project Management Process factors are considered as **Very Highly** determinant factor of Multiple project Management. The standard deviation .740 is less than one, shows there was an agreed consistency in respondents' opinion of the Project Management Process factors.

A variable which states **Knowing the interdependencies of projects** is a major significant variable to Project Management Process.

Table 4. 9 Respondent answers for Competency of Project Manager.

4.3.1.5. Competency of Project Manager Analysis

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|----|---------|---------|------|----------------|
| Q1. I was able to effectively develop a project plan and project schedule | 21 | 4 | 5 | 4.67 | .483 |
| Q2. I knew the business perspective of my projects | 21 | 3 | 5 | 4.33 | .658 |
| Q3. My teams respected me as their leader | 21 | 2 | 5 | 3.90 | .889 |
| Q4. I was organized. I knew where my project documents were. I was in the top of them | 21 | 2 | 5 | 4.38 | .865 |
| Q5. I understood the technical aspect of my project | 21 | 2 | 5 | 4.38 | .805 |

| | | | | | |
|---|----|----------|---|----------|----------|
| Q6. I solved projects in such a way that the solutions benefited all of my projects as much as possible | 21 | 3 | 5 | 4.14 | .793 |
| Q7. I was able to effectively develop a project plan and project schedule | 21 | 3 | 5 | 4.24 | .768 |
| Average Mean Score | 21 | 2.714286 | 5 | 4.291429 | 0.751571 |

Table 4.9: shows that the **Average mean score** of Project Manager Competencies factors is **(4.291)** with a Std. Deviation of (0.751) which indicates that Project Manager Competencies factors are considered as **Very Highly determinant** factor of Multiple project Management. The standard deviation .740 is less than one, shows there was an agreed consistency in respondents' opinion of the Project Manager Competencies factors.

A variable which states **respondent know on how to effectively develop a project plan and project schedule** is a major significant variable to Project Manager Competencies

4.4. Results Related to Measurement criteria for Organizational Performance

Table 4. 10 Respondent answers for Economic Measure of Organizational Performance

4.4.1. Economic Measure of Organizational Performance Analysis

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|-------|----------------|
| Q1. The Projects that i lead achieved the forecasted Profitability | 21 | 3 | 5 | 4.43 | .676 |
| Q2. The margin of productivity of my projects are fitted with the plan | 21 | 2 | 5 | 4.19 | .814 |
| Q3. Our project contribute the planned sales amount | 21 | 2 | 5 | 4.38 | .865 |
| Q4. Our project scale up the market share of ethiotelecom | 21 | 2 | 5 | 3.81 | .928 |
| Q5. The return on investment of our project are considered viable | 21 | 3 | 5 | 4.33 | .856 |
| Average Mean Score | 21 | 2.4 | 5 | 4.228 | 0.8278 |

Table 4.10: shows that the **Average mean score** of Economic Measure of Organizational Performance factors is **(4.228)** with a Std. Deviation of (0.8278) which indicates that Economic

Measure of Organizational Performance factors are considered as **Very Highly** determinant factor of Organizational Performance. The standard deviation .8278 is less than one, shows there was an agreed consistency in respondents' opinion of the Economic Measure of Organizational Performance factors.

A variable which states **achieving the forecasted profitability** is a major significant variable to Economic Measure of Organizational Performance.

Table 4. 11 Respondent answers for Operational Measures of Organizational Performance.

4.4.2. Operational Measure Of Organizational Performance analysis

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|----|----------|---------|----------|----------------|
| 6. My productivity increases because I simultaneously led multiple projects | 21 | 2 | 5 | 3.81 | .873 |
| 7. I used the knowledge i have gained from managing one projects to mange multiple projects | 21 | 2 | 5 | 4.14 | 1.014 |
| 8. The team cohesiveness are seen amazing among groups | 21 | 2 | 5 | 3.95 | 1.024 |
| 9. our customer are loyal to our service we sought | 21 | 2 | 5 | 3.76 | .995 |
| 10. The team members morale value enhanced from project to project | 21 | 2 | 5 | 4.33 | .856 |
| 11. My customers are all satisfied by my service | 21 | 2 | 5 | 3.62 | .973 |
| 12. Leading multiple project improved my administration capacity | 21 | 3 | 5 | 4.33 | .856 |
| Average Mean Score | 21 | 2.142857 | 5 | 3.991429 | 0.941571 |

Table 4.11: shows that the **Average mean score** of Operational Measure of Organizational Performance factors is **(3.99)** with a Std. Deviation of **(0.94)** which indicates that Operational Measure of Organizational Performance factors are considered as **High level** factor of Organizational Performance. The standard deviation .94 is less than one, shows there was an agreed consistency in respondents' opinion of the Operational Measure of Organizational Performance factors.

Two variables found majorly significant variable towards Operational Measure of Organizational Performance are; **the team member's morale value enhanced from project to project & Leading multiple project improved my administration capacity**

4.5. The effects of multiple project management on organizational Performance

To see the causal and effect relationship among dependent and independent variables As we have noted on the research design we employed multiple linear regressions model(MLR) and correlation coefficient.

4.5.1. Multiple Linear Regression

Using multiple linear regressions Model, we can easily fit the model to see the interdependence of variables. But before that we need to check for the **normality** of our samples distribution. Hence, our normality plot clearly signifies **the distribution is normal** and we can processed with parametric method of data analysis

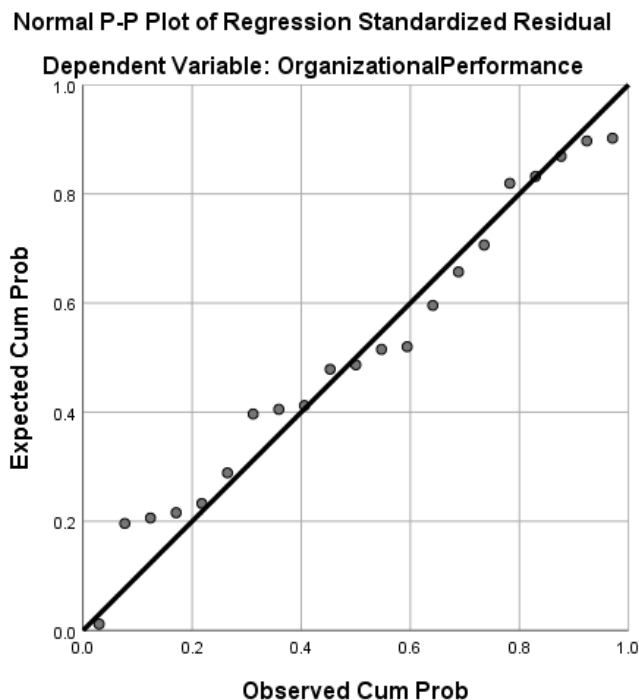


Table 4. 12 Regression model, dependent variable: Organizational Performance

| Model Summary | | | | | |
|---|----------------------|-----------------------|-------------------------------|---------------------------------------|---------------------|
| | R | R² | Adjusted R² | Standard Error of the Estimate | |
| | .912 ^a | .831 | .775 | .22341 | |
| ANOVA | | | | | |
| | Sum of Square | Df | Mean square | F | Significance |
| Regression | 3.681 | 5 | .736 | 14.748 | .000 ^b |
| Residual | .749 | 15 | .050 | | |
| Total | 4.429 | 20 | | | |
| Coefficient | | | | | |
| Predictor | B | Standard Error | Std. Coeff. Beta | T | Significance |
| (Constant) | -.347 | .696 | | -.499 | .625 |
| Organizational culture | .175 | .152 | .135 | 1.150 | .268 |
| Project Assignment | .191 | .123 | .250 | 1.551 | .142 |
| Resource Allocation | .158 | .104 | .217 | 1.518 | .150 |
| Project management process | .091 | .101 | .116 | .900 | .382 |
| Project Manager Competency | .460 | .150 | .503 | 3.067 | .008 |
| * Predictors: (constant), organizational culture, project manager assignment , resource allocation project management processes, competencies | | | | | |
| Dependent Variable: Organizational Performance | | | | | |

☞ As the figure in Adjusted R² = 0.775 the model explains 77.5% of the variance in the Organizational Performance (F(5, 15) = 14.748, p < 0.000).

☞ The statistics shows the test are found insignificant

The multiple linear regression formula can be fitted as below;

$$\text{Organizational Performance} = -0.347 + (0.175) \text{ Organizational Culture} + (0.191) \text{ Project Assignment} + (0.158) \text{ Resource Allocation} + (0.091) \text{ Project Management Process} + (0.460) \text{ Competency of Project Manager}$$

Interpretation:-

- a. As one unit increase in organizational culture, it will impact the organizational performance to increase by 0.175 units
- b. As one unit increase in Project Assignment, it will impact the organizational performance to increase by 0.191 units
- c. As one unit increase in Resource Allocation, it will impact the organizational performance to increase by 0.158 units
- d. As one unit increase in Project Management Process, it will impact the organizational performance to increase by 0.091 units
- e. As one unit increase in Competency of Project Manager, it will impact the organizational performance to increase by 0.460 units

4.5.2. Pearson correlation

We use this to assess the degree of association among dependent and independent variables. Moreover, we are going to analyzing the three hypotheses we made to test empirically.

Table 4. 13 The correlation between five independent and one dependent Variable

| | Organizational Performance | Organizational culture | Project Assignment | Resource Allocation | Project management process | Project manager Competency |
|----------------------------|----------------------------|------------------------|--------------------|---------------------|----------------------------|----------------------------|
| Organizational Performance | 1.00 | | | | | |
| Organizational culture | .282 | 1.00 | | | | |
| Project Assignment | .760** | 0.10 | 1.00 | | | |
| Resource Allocation | .703** | .316 | .503* | 1.00 | | |
| Project | .384* | .337 | .374* | .379* | 1.00 | |

| | | | | | | |
|----------------------------|--------|------|--------|--------|------|------|
| management process | | | | | | |
| Project manager Competency | .807** | .029 | .684** | .545** | .094 | 1.00 |

** . Correlation is significant at the 0.01 level (1-tailed).

* . Correlation is significant at the 0.05 level (1-tailed).

Table illustrates the correlations between all variables in this study. The results show that **the competency of multiple-project managers** has the highest correlation with the Dependent variable at the value of coefficient **0.807 at sig 0.01 level**, the **second highly correlated** with the dependent variable is **Proper project assignment at value of coefficient 0.760 at sig 0.01 level**, and thirdly we found **resource allocation** is the 3rd most correlated with organizational performance.

Project management process also got significantly correlated with OP at the value of 0.384 at sig 0.05. The correlation of Organizational Culture and organizational performance is smallest (0.282) among the five independent variables.

4.5.2.1. Test of the hypothesis using correlation coefficient

The spearman correlation coefficient reveals that, among the three hypothesis of our study, Hypothesis 1 and 2 claims are supported, which means Project Assignment and Resource Allocation are both a significant predictor of the Dependent Variable Organizational Performance. Whereas Hypothesis 3 is not supported, which means organizational Culture is not a significant predictor of Organizational Performance.

4.6. Results of Qualitative data

We structured our qualitative data in purpose of answering our research questions and seeking the conceptual information on the area. We planned it, through employing open-ended in-depth interview of VAS program officials and through a direct observation made at the work place at the main office in ethiotelecom enterprise division. The data collection tool for interview containing open-ended questions that was disseminated to top managers aiming to fill the gaps we encountered at the primary data collection tools.

The interview is constructed in order to answer the top four questions framing our study objectives and research questions for the use. Hence, in analyzing the interview we follow thematic analysis by follow and identifying the pattern of the main responses or else “themes”

Considering, the first question was to know ethiotelecoms multiple project management practice at glance level. Secondly the study dares to know the chronic challenges towards the effectiveness of multiple project management. Thirdly, the overall effect of MPM on organizational performance and finally identifying the successful measurement criteria and tools for organizational performance by ethiotelecom.

The respondents merely says ethiotelecom has not much experienced on managing multiple project management, but the recent times the advanced organizational structure changes the way of performing projects. since then various portfolio management are drafted and applied to manage multi-tasking projects in any standard.

Lack of visibility across all of your projects, inconsistencies in deliverables and processes, what projects to prioritize for your team, tracking shifting priorities and reassigning work, stakeholders are mis-aligned are the top **challenges** that are proposed by the respondents.

Respondents are agreed that reversing the challenges to the right way may be the beneficial advantage of multiple project management affecting Organizational performance positively. Finally ethiotelecom top managers, they believe organizational performance success criteria like customer satisfaction and achieving planned sales. The direct observation we have made also approve the validity of the above statements.

4.7. Summary and Discussion of Findings

Addressing the **Main objectives** and research question of our study, we asserted that multiple project management certainly impacts the organizational performance. We come to know this through fitting multiple linear regressions (MLR) among independent variables and dependent variable organizational performance. Even from Pearson correlation coefficient we realized that four variables among 5 independent variables are a significant predictor of organizational performance except the variable organizational Culture.

Answering the **first specific objective** of our study, we come up with the analysis of factors that are identified as determinants of multiple project managements based on our theoretical review. it can be summarized as Project Manager Assignment factors with the mean score of 4.2025 are considered as **Less significant factor** , Resource Allocation factors with the mean score of 3.8733 are considered as **Less significant factor** ,Organizational Culture factors with the mean score of 3.755 are considered as **Less significant factor** ,Project Management Process factors with the mean score of 4.27 are considered as **Highly significant** ,Project Manager Competencies factors with the mean score of **4.291** are considered as **Highly significant affects the multiple project management.**

Coming to the **second specific objectives of our study**, based on our interview report we can sum up the right away **multiple project management practice** of ethiotelecom. The interview signals that, ethiotelecom exhibited less experience on managing multiple project management, but the recent times the advanced organizational structure changes the way of performing multiple projects. Since then various portfolio management are drafted and applied to manage multi-tasking projects in any standard under the control of Project Management Office.

Finally addressing the **third specific objectives** of the study, we found the factor analysis of **measurement criteria of organizational performance** at ethiotelecom, stems from our construct between the two measurements; **Economic Measure** of Organizational Performance factors (profit, sales, ROI for share holders and other financial metrics) are considered as **highly significantly** influenced Organizational Performance with the mean score of **(4.228)**. However, **Operational Measure** of Organizational Performance factors (customer satisfaction, organization social capital and fame, customer loyalty, integrity, and competitive advantage

derived from resource productivity) are found as **Less significant** factor of Organizational Performance with the mean score of **(3.99)**

In the case of analyzing challenges of multiple project management our interview respondent mentions nine significant challenges. These are: Lack of well-prepared contracts with much detail and clear- documentation; Lacking clear roles and responsibilities among team members; Lack of strict quality control measures; Not breaking down development into phases or clear millstones; Lack of professional communication support; Being unable to resolve conflicts; Lack of Cost Control; Use of poor initial testing techniques; Lack of transparency and integrity in the procurement process.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

From the findings of the mixed approach of the study result we can consolidate responses to conclude, we noticed there is an agreement among research participants which is supporting the claims that, multiple project management has a significant impact upon the organizational performance.

Answering the **main question** of our study which is analyzing the effect of MPM on OP. The result tells that, our causal and effect analyses that are made using **MLR** and Pearson correlation reveals that the multiple project management factors are significantly predicted the organizational performance by affecting the operational and economic measures of ethiotelecom performance.

After analyzing the influencing factors of MPM that we purposely choose framing the theoretical framework upon the literature review we have made, we come up with our solid empirical justification. Hence, the findings of our study asserted that ethiotelecom VAS **multiple project management** is more focused and stays majorly significant on operational perspective, not in organizational factors. These operational factors (Project management Process and Competencies of project manager) are found to be the most influential **factors** on determining multiple project management effectiveness. Organizational level factors like organizational culture, project Assignment and Resource allocation has got a slight impact upon the MPM effectiveness.

The practicing of MPM may help a business hit the target by providing the know how to plan the entire capacity, by prioritizing the task and creating well suited resource allocation. We come to understand the wellbeing of MPM practicing of ethiotelecom can be leveled as moderate. Since the findings of our study reveal that factors of MPM at organizational level (organizational culture and resource allocation) are found with less mean score. This implies the practicing has a

lot to improve and needed to be systematized. Even the result of the interview identifies gaps of practicing MPM like, PMO compliance, Ethical values, Portfolio administration...

the finding on **organizational performance** reveals that, Between the economic and operational measures of organizational performance, the respondents favor the most significant **factors** is found to be an **Economic measures**. Hence, our study proposes that, Operational measures that are comprised of organizational learning, customer satisfaction, productivity, customer loyalty, cohesiveness and moral value are believed to be the less determinant factors of OP than that of Economic measure which is made up of profit, sales, ROI at Ethio telecom portfolio.

5.2. Recommendation

From the study we have seen that much has to be done on enhancing organizational culture in order to boost the proper functioning of multiple project management effectiveness which implicate on the success of overall organizational performance. This can be done by implementing tools like; by creating strong sense of working and once contribution to project development, by forming transparent and dynamic communication, through acquiring a sustainable reward policy, by cultivating a common views towards business, through building ethical value to pick the right out of wrong, creating the conducive working environment that entertain everyone's idea before making any decision.

Since companies tend to face multiple project due to their business strategy and product/service differentiation, there may be a clear cut strategy for having a best way to handle multiple project management. Hence, I will recommend any multiple project management endeavors should base these 5 frameworks;

1. Accurate Project Planning contains; risk management, resource management, time tracking, capacity planning, communications, contingency plans,...etc
2. Focus across all projects; this can be done by preparing a portfolio management tool that insisted you manage your all projects in one destination.
3. Prioritize; this can be done through valuation of the project feasibility and timeliness
4. Delegate; this can be done by assembling a project management team having the skills and experience to get the job done.
5. Communication: two way and open channels of communication can give insights to the work accomplished and the process.

For further research work, I will recommend any researcher can use this study as an input to study more on the areas of "the functionalities and challenges of multiple project management at different business sectors. This study may create a potential to observe the implication of MPM towards various sectors organizational success.

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Annex

Reliability test

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item- Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|----------------------------|-------------------------------|-----------------------------------|--------------------------------------|---------------------------------|-------------------------------------|
| Organizational_culture | 20.7290 | 4.942 | .277 | .244 | .834 |
| Resource_Allocation | 20.6120 | 3.471 | .678 | .522 | .761 |
| Project_management_process | 20.2151 | 4.161 | .405 | .356 | .826 |
| Project_manager_Competency | 20.1925 | 4.000 | .609 | .742 | .778 |
| Organizational_Performance | 20.3937 | 3.725 | .865 | .831 | .729 |
| Project_Assignment | 20.2826 | 3.544 | .688 | .627 | .758 |

Gender of Respondents

| | | Gender | | | Cumulative % |
|-------|--------|---------------|-------|-------|-----------------|
| Valid | Female | 9 | 42.9 | 42.9 | 42.9 |
| | Male | 12 | 57.1 | 57.1 | 100.0 |
| | Total | 21 | 100.0 | 100.0 | |

Qualification

| | | Your Competency Qualification | | | Cumulative % |
|-------|---------------|--------------------------------------|-------|---------|-----------------|
| | | Freq | % | Valid % | |
| Valid | First degree | 7 | 33.3 | 33.3 | 33.3 |
| | PHD | 1 | 4.8 | 4.8 | 38.1 |
| | Second degree | 13 | 61.9 | 61.9 | 100.0 |
| | Total | 21 | 100.0 | 100.0 | |

Experience in years

| Experience in Years | | | | | |
|----------------------------|----|---------|---------|------|----------------|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| Career experience in Year | 21 | 1 | 15 | 6.29 | 3.690 |
| Valid N (listwise) | 21 | | | | |

Job Role

| | | job role | | | Cumulative |
|-------|--------------------------------|-----------------|-------|---------|------------|
| | | Freq | % | Valid % | % |
| Valid | Functional manager/Coordinator | 5 | 23.8 | 23.8 | 23.8 |
| | Portfolio manager/Coordinator | 3 | 14.3 | 14.3 | 38.1 |
| | Program manager/Coordinator | 5 | 23.8 | 23.8 | 61.9 |
| | Project manager/Coordinator | 8 | 38.1 | 38.1 | 100.0 |
| | Total | 21 | 100.0 | 100.0 | |

Job Position

| | | Current job position | | | Cumulative |
|-------|---------------------------|-----------------------------|-------|---------|------------|
| | | Freq | % | Valid % | % |
| Valid | Program level | 9 | 42.9 | 42.9 | 42.9 |
| | Project level | 9 | 42.9 | 42.9 | 85.7 |
| | Project Management Office | 3 | 14.3 | 14.3 | 100.0 |
| | Total | 21 | 100.0 | 100.0 | |

Project size

| | Project size | | | | |
|---|---------------------|---------|---------|------|----------------|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| How many projects are under your management | 21 | 1 | 9 | 2.71 | 2.101 |

Questionnaire

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE DEPARTMENT OF PROJECT MANAGEMENT

Dear Respondent,

First of all, I would like to thank you for the time and effort you will spend to answer this questionnaire.

I am conducting a research entitled “The Effects of Multiple Project Management on Organizational Performance; in the case of Ethio telecom VAS Portfolio” for the partial fulfillment of the completion of my post graduate degree on Project management. Gathering information from specified project managers working at project levels, program levels and Project office level. in order to get appropriate responses concerning the multiple project management practicing, analyzing factors influencing it and assessing its impact on ethio telecom organizational performance are the main concern of this study. Hence, I kindly request you to fill this questionnaire while assuring you that the information that you provide will be treated with confidentiality and shall only be used for the purpose of this academic research.

Thank you very much for your time and assistance

Kind Regards;

Kelil Aman

Note: - This Questionnaire is prepared using online Google Form to help our study for easily administration of questionnaire for the respondents. And to create simplification for data encoding to perform the data analysis at fingertips.

Section one: Demographic Questions

This section includes Names, Gender, career experience, competency qualification of respondent.

1) What is Your Name _____

2) Gender Male Female

3) Career experience _____ years

4) Your Competency/Qualification

First Degree

Second Degree

PHD

Section Two: Project Selection

This section consists the makeup's of project selection and issues related to the current roles.

1) What is your current job role

Project Manager

Program Manager

Functional Manager

Portfolio Manager

2) What is your current job division?

Project Level

Program Level

Project Management Office

- 3) How many projects are under your management?
- Only the current one
 - Below 3 projects
 - 3-20 projects
 - Above 20 projects
- 4) Do you think your current project fitted with the overall Ethio telecom business objectives
- Yes No
- 5) Will this project help Ethio telecom create revenue?
- Yes No
- 6) Do you think this project go along with planned schedule and minimized cost?
- Yes No

Section Three: Factor Analysis of multiple project management

Question phase 1: **Project Assignment**

Project manager assignment was measured based on whether projects were assigned to multiple-project managers with the consideration of 1) project priority, 2) a match between the skill levels of multiple-project managers and project requirements, and 3) some constraints.

| Questions | 5 point Likert Scale | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly disagree | Disagree | neutral | Agree | Strongly Agree |
| 1. When project were assigned to me, my manager understood the strategic importance and the project priority | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. My manager always took into account my personal competencies when he or she assigned projects to me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. There were always an appropriate number of projects assigned to me so | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| that I was able to handle them effectively | | | | | |
| 4. Whenever project assignment has done priority toward a project take into a consideration | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Question phase 2: **Resource allocation**

Resource allocation was measured in terms of the degree of resource sufficiency , sustainability, process, transparent, resilience and problem solving.

| Questions | 5 point Likert Scale | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly disagree | Disagree | neutral | Agree | Strongly Agree |
| 1. I had enough resources to complete my projects | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Resources stayed with me as long as there was a need for them | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Our resource allocation process is dynamic, it can be changed in real time | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The resource allocation system is capable of resolving clashes easily | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is the resource allocation process is visible and transparent | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 6. Is it responsive enough for change in budget, requirement and skills | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|

Question phase 3: **organizational culture**

Teamwork-oriented organizational culture was measured using nine questions.

Communication, a strong sense of working, reward policy, share a common views, ethical value, conflict resolution

| Questions | 5 point Likert Scale | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly disagree | Disagree | neutral | Agree | Strongly Agree |
| 1. Members in my organization had a strong sense of contribution to project development | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. The working environment encouraged team members to communicate with each other for a mutual goal within our organization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. There was a strong sense of working as a team | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. There was a clear reward policy for outstanding performance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Individual working from different department share a common views | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. we have ethical value to differentiate right | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| from wrong | | | | | |
| 7.it is easy to reach to an agreement even in a difficult situation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. we have a chance to introduce our idea before management decision made | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Question phase 4: **Project management processes**

Project management processes were measured based on the use of individual project process and interproject process

| Questions | 5 point Likert Scale | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly disagree | Disagree | neutral | Agree | Strongly Agree |
| 1. When leading each project, I followed our established project management process | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I had a way to integrate my projects and that helped me manage them more effectively | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I understood that all projects under my responsibility had interdependency among them | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Question phase 5: **Competency of multiple-project managers**

Competency of multiple-project managers was measured with regard to administrative, business, interpersonal, intrapersonal, technical, and multiple project management competencies

| Questions | 5 point Likert Scale | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly disagree | Disagree | neutral | Agree | Strongly Agree |
| 1. I was able to effectively develop a project plan and project schedule | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I knew the business perspective of my projects | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. My teams respected me as their leader | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. I was organized. I knew where my project documents were. I was in the top of them | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I understood the technical aspect of my project | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. I solved projects in such a way that the solutions benefited all of my projects as much as possible | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Section Four: Organizational Performance

Economic Measure:-Financial and market outcomes which mostly evaluates the profit, sales, ROI for share holders and other financial metrics.

Operational Measure:-Customer satisfaction, organization social capital and fame, customer loyalty, integrity, and competitive advantage derived from resource productivity

Question phase 6:

| Economic Measures Questions | 5 point Likert Scale | | | | |
|---|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly disagree | Disagree | Neutral | Agree | Strongly Agree |
| 1. The Projects that i lead achieved the forecasted Profitability | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. The margin of productivity of my projects are fitted with the plan | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Our project contribute the planned sales amount | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Our project scale up the market share of ethiotelecom | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. The return on investment of our project are considered viable | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | |
| Operational Measures Question | 5 point Likert Scale | | | | |
| 6. My productivity increases because I simultaneously led multiple projects | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. I used the knowledge i have gained from managing one projects to mange multiple projects, i | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. The team cohesiveness are seen amazing among groups | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. our customer are loyal to our service we sought | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. The team members morale value enhanced from project to project | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. My customers are all satisfied by my service | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

12. Leading multiple project improved my administration capacity

Section Five: Interview Question

For selected higher officials of the ethiotelecom in-depth interview

- 1) What is ethiotelecom's multiple project management practice looks?
- 2) What do you think the chronic challenges towards multiple project management effectiveness?
- 3) What do you think about the effect of proper and improper multiple project management on the Organizational Performance?
- 4) What do you think the successful measurement criteria and tools for organizational performance by ethiotelecom