

**STAKEHOLDER INVOLVEMENT IN THE CONSTRUCTION  
OF CONDOMINIUM HOUSES - THE CASE OF 40/60 HOUSING  
PROJECT IN ADDIS ABABA**

A thesis submitted to the Graduate program of the Department of Management and the College  
of Business and Economics, of Addis Ababa University

In partial fulfillment of the requirements for the Degree

**Master of Business Administration**

**In Management**

(MBA)

By

Hagos GebremariamWeldu

**Addis Ababa University**

Addis Ababa

June ,2020

**STAKEHOLDER INVOLVEMENT IN THE CONSTRUCTION  
OF CONDOMINIUM HOUSES - THE CASE OF 40/60 HOUSING  
PROJECT IN ADDIS ABABA**

A thesis submitted to the Graduate program of the Department of Management and the College  
of Business and Economics, of Addis Ababa University

In partial fulfillment of the requirements for the Degree

**Master of Business Administration**

**In Management**

(MBA)

By

Hagos GebremariamWeldu

Advisor: Dr. TilahunTeklu

**Addis Ababa University**

Addis Ababa

June, 2020

## Approval of Board of Examiners

**Advisor**

Signature

Tilahun Teklu(PhD) \_\_\_\_\_

**Internal Examiner**

Dr. Meskerem Mitiku \_\_\_\_\_

**External Examine**

Dr. Mesfin W \_\_\_\_\_

## Statement of Certification

This is to certify that **Hagos G/mariamWeldu** has carried out his research work on the topic entitled “**Stakeholders’ involvement in the construction of Condominium houses: the case of 40/60 housing project in Addis Ababa**” under my guidance. The work is original in nature and suitable for the award of MBA Degree in Management.

**Advisor: TilahunTeklu (PhD)**

Signature \_\_\_\_\_

Date \_\_\_\_\_

## Statement of Declaration

I, Hagos G/mariamWeldu, have carried out independently a research work on: “**Stakeholders’ involvement in the construction of Condominium houses: the case of 40/60 housing project in Addis Ababa**” in partial fulfillment of the requirements of MBA degree in Management with the guidance and support of my research advisor. This study is my own work that has not been submitted for any degree or diploma program in this university or any other higher learning institution.

Hagos G/mariamWeldu

Signature \_\_\_\_\_

Date \_\_\_\_\_

## Acknowledgement

There are several people who have helped me in one way or another to achieve the completion of this thesis. It would have not been possible to complete my thesis without the guidance, support and advice of my advisor TilahunTeklu (Dr.) So, I am deeply grateful to my advisor TilahunTeklu (Dr.), for his precious comments, guidance and unreserved support in reviewing the draft at all the various stages and in giving me constructive suggestions throughout the year.

My deep sense of gratitude also goes to W/roSeblewengel Yonas, contract administration expert in the 40/60 saving houses development project head office for providing me essential data & information. I would like also to thank all the project managers of contractors, project coordinators of the consultants and the branch managers of the client for their willingness to respond to the questionnaire and I would like also to thank all other staff members in the different sites of 40/60 saving houses development project for their assistance in distributing and collecting the questionnaire. My sincere gratitude also goes to my dear friend Tewelde F/tsion for helping me in formulating the proposal and the thesis and particularly in interpreting the results of the analysis.

Lastly but not least I would like to thank my beloved wife Gidey G/Michael for encouraging me to complete my study and for taking care of our kids properly. I would like also to thank to my dear brother Tadesse G/mariam for encouraging me to complete my study and for making financial support to our family.

## Table of content

Statement of Certification .....	ii
Statement of Declaration .....	iii
Acknowledgement.....	iv
Table of content.....	v
List of figures .....	ix
List of tables .....	ix
List of abbreviations .....	x
<b>ABSTRACT .....</b>	<b>1</b>
<b>CHAPTER -ONE .....</b>	<b>1</b>
<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1. Background of the study.....	1
1.2. Statement of the problem .....	3
1.3. Research Questions .....	3
1.4. Objective of the study.....	4
1.5. Significance of the study.....	5
1.6. Scope of the study .....	5
1.7. Limitations of the Study.....	5
1.8. Definition of Significant Terms.....	6
1.9. Organization of the Study .....	7
<b>CHAPTER -TWO .....</b>	<b>8</b>
<b>2. LITERATURE REVIEW .....</b>	<b>8</b>
2.1. Theoretical review .....	8

2.1.1.	Stakeholders in the construction industry .....	8
2.1.2.	Project Performance .....	8
2.1.3.	Project success metrics .....	9
2.1.3.1.	The project S-curve .....	10
2.1.3.2.	Milestone Analysis .....	11
2.1.3.3.	Earned Value Management .....	11
2.2.	Empirical review.....	14
2.2.1.	Influences of stakeholder involvement on the performance of construction projects.....	14
2.2.2.	Stakeholder Involvement in Project identification and Performance of housing Projects	14
2.2.3.	Stakeholder Involvement in Project initiation and Performance of housing Projects .....	15
2.2.4.	Stakeholder Involvement in Project Planning and Performance of housing Projects .....	15
2.2.5.	Stakeholder Involvement in Project Implementation and Performance of housing Projects	15
2.2.6.	Stakeholder Involvement in Project Monitoring and Evaluation and Performance of housing Projects .....	16
2.3.	Conceptual Framework.....	17
<b>CHAPTER -THREE.....</b>		<b>19</b>
<b>3.</b>	<b>RESEARCH METHODOLOGY .....</b>	<b>19</b>
3.1.	Introduction .....	19
3.2.	Research Design .....	19
3.3.	Population of the study.....	19
3.3.1.	Unit of analysis.....	19
3.4.	Sampling Technique and Sample Size.....	20
3.4.1.	Sampling Technique.....	20
3.4.2.	Sample Size, n .....	21
3.4.3.	Unit of observation .....	22

- 3.5. Data collection tools and procedures .....22
  - 3.5.1. Data collection tools .....22
  - 3.5.2. Data CollectionProcedure .....22
- 3.6. Description of Variables in the study.....23
- 3.7. Measurement and Scaling Techniques .....24
- 3.8. Pilot study .....24
- 3.9. Validity and Reliability of measurement.....24
  - 3.9.1. Validity/accuracy.....24
  - 3.9.2. Reliability/consistency .....24
- 3.10. Data Analysis andPresentation .....25
- 3.11. Research Ethical Consideration.....26

**CHAPTER -FOUR.....27**

**4. DATA ANALYSIS, INTERPRETATION AND DISCUSSION..27**

- 4.1. Introduction.....27
- 4.2. Demographic Characteristics .....27
- 4.3. Reliability Analysis .....28
- 4.4. The Analysis of Stakeholder Involvement Level.....30
  - 4.4.1. Descriptive statistics .....30
    - 4.4.1. 1. Stakeholder’ involvement in project identification ..... 30
    - 4.4.1.2. Stakeholder’ involvement in project initiation ..... 30
    - 4.4.1.3. Stakeholder’ involvement in project planning..... 31
    - 4.4.1. 4. Stakeholders’ involvement in project implementation ..... 31
    - 4.4.1. 5. Stakeholders’ involvement in project monitoring & evaluation..... 32
    - 4.4.1.6. Success/performance of 40/60 saving houses development project..... 32
  - 4.4. 2. Inferential statistics.....34

4.4.2.1. Comparing Levels of Stakeholder Involvement .....	34
4.4.2.3. Multiple Regression Analysis .....	35
4.6. Discussion .....	37
<b>CHAPTER -FIVE.....</b>	<b>41</b>
<b>5.    SUMMARY, CONCLUSION &amp; RECOMMENDATION .....</b>	<b>41</b>
5.1.    Summary .....	41
5.2.    Conclusion.....	42
5.3.    Recommendation.....	43
5.4.    Suggestions for Further Research .....	43
References .....	43
Appendix A .....	46
Appendix B:.....	47
Appendix C:.....	48
Appendix D: .....	49
Appendix E:.....	51
Questionnaire.....	52

## List of figures

Figure 1: Project S-Curves.....	11
Figure 2: Typical Graph of EVM Showing PV, EV, and AC (Coulter et al., 2002) .....	13
Figure 3: Conceptual framework (EMILY MANDALA, 2018).....	18

## List of tables

Table 1: Population of the study .....	19
Table 2: 40/60 Project sites names & with their lot No (source: AASHDE).....	20
Table 3: Sample size table for determining the minimum sample sizes required to achieve the specified confidence levels and margins of error. ....	21
Table 4: Operationalization of variables in the study .....	23
Table 5: Cronbach's alpha values & its corresponding reliability (source: Cortina, J.M., 1993).....	25
Table 6: Demographic Characteristics of respondents.....	28
Table 7: Summary of reliability analysis .....	29
Table 8: Stakeholders' involvement in project identification.....	30
Table 9: Stakeholder Involvement in project Initiation .....	30
Table 10: Stakeholder Involvement in project planning.....	31
Table 11: Stakeholder Involvement in project Implementation.....	31
Table 12: Stakeholder Involvement in project evaluation & monitoring .....	32
Table 13: Project performance/success.....	32
Table 14: Rating of project performance by stakeholder type .....	32
Table 15: Summary of Descriptive Statistics.....	33
Table 16: Model Summary.....	36
Table 17: ANOVA.....	36
Table 18: Coefficients.....	37

## **List of abbreviations**

AASHDE Addis Ababa Saving Houses Development Enterprise

AC Actual Cost

BCWP Budgeted cost of work performed

BCWS Budgeted cost of work scheduled

EV Earned value

EVME Earned value Management

GTZ German Technical Cooperation

HDPO Housing Development Project Office

IHDPI Integrated Housing Development Programme

PIM Project management institute

PV Planned value

SPSS Statistical Package for Social Sciences

WBS Work breakdown structure

## ABSTRACT

Delay, cost overrun, dissatisfaction of beneficiaries are some of the problems witnessed in the 40/60 saving and housing development project. The purpose of the study was to *determine the influence of stakeholders' involvement in the five project management phases on the performance of 40/60 saving houses development project in Addis Ababa*. The research used quantitative research design approach. The target populations of the study were 157 contractors, 10 consultants and one client. A sample size of 100 contractors, 10 consultants and one client were used using stratified and random sampling techniques. Descriptive and inferential techniques of analysis were applied. It was found that the mean stakeholders' involvement level in planning phase was *statistically significantly different* from the remaining four phases while the means of stakeholder' involvement level in the remaining four phases of the project management process were not statistically significantly different. Moreover, the involvement level of the three stakeholders (contractors, consultants and client) was compared and there was a *significant difference* in the mean involvement level between client and the other stakeholders in the project planning phase of the project management. However, no significant difference was found between contractors' and consultants' level of involvement. To determine the influence of the stakeholders' involvement on the performance of the 40/60 housing project, a regression analysis was run. But the result of the analysis could not help one to arrive to the conclusion that any stakeholders' involvement in the five project management phases influences/does not influence the success of 40/60 saving houses development project due to two critical reasons: (1): the stakeholders were not involved in all the five project management phases. (2): the performance/success of all sites was found to be poor. The findings in this study will be helpful for researchers doing similar studies.

**Key words:** *Stakeholders' involvement, Project management phases, Success/performance of 40/60 saving houses development project*

# CHAPTER -ONE

## 1. INTRODUCTION

### 1.1. Background of the study

The housing sector in Addis Ababa has been a long-standing problem. For more than 100 years Addis Ababa has been unable to provide enough and sufficient housing, particularly for its poor citizens. In the beginning of 2000 E.C, 4 million citizens stood against an accumulated housing shortage of 233'000 units Addis Ababa. To solve this problem, the Ethiopian government collaborated with the German Technical Cooperation (GTZ) to address the housing issue through a city-wide mass housing program (Sascha, n.d.). This program was called the Integrated Housing Development Programme (IHDP).

The Integrated Housing Development Programme (IHDP) was led and financed by a government for low-and middle-income households in Ethiopia. Arkebe Oqubay, the then state minister, was the driving force behind the programme during his time as Mayor of Addis Ababa between 2003 and 2005. The main goal of the Mayor was to build low-cost housing in Addis Ababa. A proposal was made by the Mayor to the German Technical Corporation (GTZ) office to which they responded by setting up an office in Addis Ababa and started the design of the pilot condominium housing project in Bole Gerji site.

A 750 residential units along with office and commercial units were included in the pilot project. On behalf of the city government, GTZ managed the project and it was extremely successful in terms of time and cost. Later on the city government suggested building 40,000 houses every year, but GTZ preferred taking an advisory role instead of directly involving with project design and implementation. To achieve this ambitious target, GTZ suggested that the city government create a new office specifically for housing development, which they did in 2005 by establishing the Addis Ababa Housing Development Project Office (HDPO).

The Mayor then created a steering committee, which consisted of the Bureau Heads of the Addis Ababa City Administration and representatives from MH Engineering and GTZ. Later, the HDPO assumed full management of the programme and a Board of Governors containing all members of the former steering committee, except the GTZ representative, was created (UN-HABITAT, 2010). Supply of houses was not the only goal of that program; but its ultimate

desire was to use IHDP as a means to reduce urban poverty, which was the main concern of the city. It also aimed to create huge employment opportunity, promote affordable payment modality, promote urban renewal to reduce slum areas, provide basic infrastructure facilities, facilitate mortgage access, promote targeted subsidy to women and disable residents, promote economic use of urban land and introduce cheap construction technology (UTAFITI SERA POLICY BRIEF, December 2017).

A construction project is commonly considered successful when it is completed within the agreed budget, on schedule, with the desired quality and in the safest manner, in accordance with stakeholder's satisfaction and with required specifications (Werku, 2016). As can be seen from the above, stakeholder's satisfaction and the other requirements for any construction project to be successful can only be attained if stakeholders are allowed to be involved in the different phases of construction project. Stakeholders' involvement is the process in which the needs, concerns and values of the stakeholders are included into the decision-making (Creighton, 2005) and as to (Nyandika & Ngugi, 2014), stakeholders' involvement is mandatory in developmental projects. Minor decisions and emergency events are generally not appropriate for stakeholder involvement, but complex situations with far-reaching impacts deserve stakeholder participation. And when it is done proactively, rather than in response to a problem, it helps to avoid problems in the future. A rating scale is used to measure stakeholders' involvement level (Amirhossein, Vaughan & Bambang, 2015, Olander & Landin, 2005 & EMILY, n.d) and in this research the researcher will use a five degree Likert scale to measure the stakeholders' involvement level in the five phases of project management .

Amirhossein, Vaughan & Bambang (2015) and EMILY (n.d) have studied the influence of stakeholders' involvement on performance of different construction projects in Kenya. But the researcher could not get any similar study made in Ethiopia. So, this study will fill the gap by determining the influence of stakeholders' involvement on performance of 40/60 saving and housing development project in Addis Ababa.

## **1.2. Statement of the problem**

Most of the time a construction project is considered successful when it is completed within the agreed budget, on schedule and with the highest quality, in accordance with the required specifications, to stakeholders' satisfaction and in the safest manner. Fitness for purpose for occupiers, functionality, absence of claims, profitability to contractors, and court proceeding have also been used to measure project performance (UN-HABITAT, 2010). But, the 40/60 saving and housing development project has become one of the most controversial projects ever seen in Addis Ababa. Delays, cost overrun, dissatisfaction of beneficiaries due to incomplete delivery of the houses are some of the problems witnessed in this project (Abebe, 2018). Previous research studies in the construction sector (Amirhossein et al., 2015; Olander and Landin 2005) highlighted that stakeholder involvement is important in improving the effectiveness of project outcomes. It is known that there are many stakeholders involved in the construction of condominium houses. Stakeholders are all those who are required to participate in achieving project goals and objectives and whose involvement and support are important to its success (Amirhossein et al., 2015). Stakeholders provide the required resources and control the interaction and flow of resources in the network. They also have strong impact on the survival of an organization, and therefore proper management and participation of main stakeholders should be a key part of any project management plan (Werku, 2016). To determine which stakeholders to be involved in the process of any project, stakeholder analysis is conducted, which is the process for identifying stakeholders by their relative importance or salience number (Yang, 2013). Based on this analysis, the main contractor, the consultant and the client are recognized as important stakeholders and yet there are some other stakeholders which are not always considered important and failing to include them in the decision-making processes may result in a failure to the project. Therefore, for simplicity reason, the researcher considered only those stakeholders which have high relative importance or salience number (i.e. the client, contractors and consultants) in conducting his study.

## **1.3. Research Questions**

Basically this research checked whether stakeholders' involvement in the five project management phases influences the performance of 40/60 saving houses development project or not and more specifically this study tried to answer the following important research questions.

- 1) Is there any difference in the involvement level of stakeholders in the project management phases of 40/60 saving houses development project?
- 2) Which stakeholder/s has/have significant involvement level?
- 3) Does stakeholders' involvement in project identification influence the performance of 40/60 saving and housing development project?
- 4) Does stakeholders' involvement in project initiation influence the performance of 40/60 saving and housing development project?
- 5) Does stakeholders' involvement in project planning influence the performance of 40/60 saving and housing development project?
- 6) Does stakeholders' involvement in project implementation influence the performance of 40/60 saving and housing development project?
- 7) Does stakeholders' involvement in project monitoring and evaluation influence the performance of 40/60 saving and housing development project?

#### **1.4. Objective of the study**

The general objective of this research is to check whether stakeholders' involvement in the five project management phases influences the performance of 40/60 saving houses development project and more importantly this research will deal with the following specific objectives.

- 1) To compare the involvement level of stakeholders in the project management phases of 40/60 saving houses development project.
- 2) To determine the stakeholder/s with significant involvement level.
- 3) To determine the influence of stakeholders' involvement in project identification on the performance of 40/60 saving and housing development project.
- 4) To determine the influence of stakeholders' involvement in project initiation on the performance of 40/60 saving and housing development project.
- 5) To determine the influence of stakeholders' involvement in project planning on the performance of 40/60 saving and housing development project.
- 6) To determine the influence of stakeholders' involvement in project implementation on the performance of 40/60 saving and housing development project.

- 7) To determine the influence of stakeholders' involvement in project monitoring and evaluation on the performance of 40/60 saving and housing development project.

### **1.5. Significance of the study**

Currently the construction of condominium houses in general and the construction of 40/60 saving and housing development program in particular is manifested by schedule and budget overrun, dissatisfaction of beneficiaries due to incomplete delivery of the houses etc. This indicated that the various stakeholders in the construction of condominium houses were not being properly involved. So this research will be an important input for the client (the government) to consider the stakeholder management issue while starting to construct huge public construction projects like 40/60 saving houses development project and it will also be a stepping-stone for other researchers doing similar studies.

### **1.6. Scope of the study**

This study is basically concerned on stakeholders' involvement in the five phases of project management, namely: project identification, project initiation, project planning, project implementation and project monitoring and evaluation. These five variables were selected because they are the five phases of project management. The target of this research was to determine the influence of stakeholders' involvement on the performance of 40/60 saving and housing development program. To do these questionnaires were distributed for branch managers, project managers & project coordinators involved in the construction of 40/60 saving houses development program in Addis Ababa.

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

In the construction of 40/60 saving houses development program, there are many stakeholders involved from project identification to project monitoring and evaluation process. So, to perfectly determine the influence of stakeholders on the performance of 40/60 saving houses projects, it would have been nice to include all the stakeholders in the study. But, due to practical reasons like inability to reach all stakeholders and shortage of time and money, the researcher considered only the three key stakeholders (main contractors, consultants and the client) in the analysis that could have definitely undermined the result of the study.

## 1.8. Definition of Significant Terms

**Project identification:** This is used in this study to refer to the effective development of a preliminary proposal through stakeholders' analysis, scanning the external environment and preliminary project approval.

**Project initiation:** This is a phase in project management life cycle and involves development of a feasibility plan, terms of reference, documenting a project case and problem analysis.

**Project planning:** This is a project management phase that elaborates on the use of schedules financial planning, resource specification, schedule planning and resource planning and subsequently reporting on the progress of the project.

**Project Implementation:** This is a stage in project management that involves the execution of various activities through team development, allocation of resources, update project schedule and execution of task assignments.

**Monitoring and Evaluation:** In this study, monitoring and evaluation is used in this study to refer to the process of collecting information, analyzing information, reporting, correcting errors and direction provision while undertaking ongoing project.

**Performance of housing projects:** In this study, housing projects performance is used to refer to 40/60 condominium housing construction projects completion in the times scheduled, budgeted cost, attaining the set objectives and achieving users satisfaction.

**Stakeholder:** The term stakeholder in this study refers to any group or individual who can affect or is affected by the achievement of the 40/60 saving houses development project objectives.

**Stakeholder involvement:** is the process in which the concerns, needs and values of the parties/members are incorporated into decision-making.

**Stakeholder relative importance/salience number:** the degree to which managers give priority to competing stakeholder claims based on their importance, legitimacy and urgency.

## **1.9. Organization of the Study**

This research deals with the determination of influence of stakeholders' involvement on performance of condominium houses with special focus to the construction of 40/60 saving houses development program in Addis Ababa. The first chapter deals with introduction which consists of background of the study, statement of the problem, objective of the study, significance of the study, scope of the study, limitation of the study, definition of significant terms and organization of the study. The second chapter deals with literature review. Previous studies related to the influence of stakeholders' involvement on performance of construction projects were reviewed. The third chapter which is really the most important one deals with the research design that was employed in conducting the research. The fourth chapter deals with the analysis, interpretation and discussion of results and the fifth chapter deals with the summary, conclusion, recommendation and suggestion for further research.

# CHAPTER -TWO

## 2. LITERATURE REVIEW

### 2.1. Theoretical review

#### 2.1.1. Stakeholders in the construction industry

The stakeholder concept was first developed from academic researches done in the US in the 1960s and it defined stakeholders as those parties who have enough impact to the survival of the organization (Rose, 1995). Later, Freeman (1984) extended this definition and described that stakeholder is an organization or a group or individual who can affect or is affected by the achievement of the organization's objectives.

According to Olander (2007), in the construction industry, from the initial planning to the final operation and maintenance, specific parties are involved whose expectations can affect the outcomes of, or may be affected by, both negatively and positively the implementation of the project. These groups include:

- ✚ Client
- ✚ Project Management team
- ✚ Consultant and designing team
- ✚ Contractor
- ✚ Subcontractor
- ✚ Supplier
- ✚ Employees
- ✚ Local communities
- ✚ Funding Bodies
- ✚ Government authorities

#### 2.1.2. Project Performance

Performance measurement is defined as the process of evaluating success relative to a defined goal. It provides a sense of where we are and more importantly where we are going (Rose, 1995). But there has been no consensus among various authors on the correct definition and the standard measures of project performance (Amirhossein et al., 2015). Therefore, Project success is a subject in management of project that has been discussed among authors without reaching to an agreement

and as a result the definition of project performance remains vague and differs from one author to another. In addition, the variation in the definition of project performance also leads to variations in the measures of project success among different authors.

The construction industry is dynamic in its nature. The concept of project performance has remained ambiguously defined in the construction industry. Project success means different to different people. While some authors consider time, cost and quality as the predominant targets, others suggest that success is something more complex (Albert, n.d.). But according to Mohammed, 2002, the basic components and criteria to measure project performance are cost, time, scope and quality.

According to David (1999), project performance can be explained using two success concepts: The first one is project management success and the other is product success. The first concept focuses upon the successful accomplishment of the project time, cost and quality, which can be measured in terms of meeting the project budget, schedule, and conformance to functional and technical specifications respectively. The later concept deals with the effects of the project's final product with three key components which are; meeting project goal, meeting project purpose and satisfying stakeholders. On the other hand, there are other criteria for evaluating project performance from the micro point of view and macro point of view (Jeffrey, 2016). The micro pointview is from the perspective of developers and the contractors which consists of completion time, cost, quality, safety and profitability; whereas the macro pointview is from the perspective of the owners, users, stakeholders, and the general public which consists of overall goals of functionality and benefits.

### **2.1.3. Project success metrics**

There is consensus among construction researchers and experts that one of the principal barriers to promote improvement in construction projects is the lack of appropriate project success measurement. For improvement to occur in the construction industry, checking and monitoring performance, verifying changes and effects of improvement actions, understanding the variability of the processes, and in general having objective information available in order to make effective decisions are important (Luis and Alfredo, n.d.). Therefore, one of the most significant challenges with running a project has to do with maintaining an accurate monitoring and control system for its implementation.

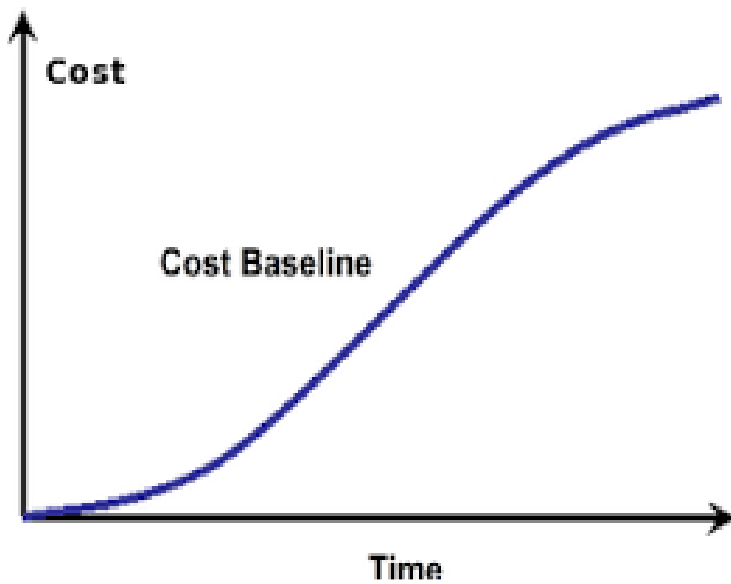
The degree of success is related to the extent of variation of the project attributes from the established control baselines. Three methods have been developed to evaluate overall performance for better project controls (Jeffrey, 2016): the project S-curve, milestone analysis and earned value Management (EVM).

#### ***2.1.3.1. The project S-curve***

S-curves have been used in project management worldwide for nearly 100 years. Records of their practical application in project management can be traced back to 1928. They are plotted cumulative effort of project against time (Agata, Piotr & Slawomir, n.d.). The S-Curve is used to provide a snapshot of the project status and its performance at a given point in time. The main benefit of an S-Curve is that it combines the budget information with the schedule information (a plot of budget versus time) to provide a graphical presentation that quickly identifies trends, enabling the project manager to take corrective measures when it is needed (Lekunze, 2001).

Controlling the status of a project using S-curves becomes a simple tracking problem. Comparing the cumulative project cost to date with the anticipated spending patterns at the end of each given time period (week, month, or quarter) can easily be done using S-curves. Any significant variations between actual and planned budget spending reveal a potential problem area. Simplicity is the main benefit of S-curve analysis. Since the projected project baseline is already established, the only additional data shown plotted is the project budget expenditures (Jeffrey, 2016).

The S-curve also provides real-time tracking information. That is the budget expenditures can be constantly updated and the new values plotted on the graph. Project information can be visualized immediately and updated continuously. So S-curves give easy-to-read information of the status of a project in a timely manner (Jeffrey, 2016). But, S-curves are a far going generalization of the modeled project and interpreting them with no regard to the relationships between project tasks and reasons for variations can lead to wrong decisions (Agata et al., n.d.).



**Figure 1:** Project S-Curves

### ***2.1.3.2. Milestone Analysis***

According to Jeffrey (2016) another method for monitoring project progress is milestone analysis. A milestone is a stage of the project that represents a significant accomplishment on the road to the project's completion. Completion of a deliverable, a calendar date, or an important activity on the project's critical path can all be milestones. In general, milestones are road markers that we find on our way along the project's life cycle.

### ***2.1.3.3. Earned Value Management***

Earned value management is a project management technique for measuring project success and progress. It has the ability to combine the three attributes of success. These are scope, time, and costs. EVM is able to provide accurate forecasts of project performance problems in a single integrated system, which is an important contribution for project management (Coulter & Coulter, 2002).

This methodology measures project performance with an integrated schedule and budget, which is based on the project work breakdown structure (WBS) (Jeffrey, 2016).

According to the PMBK, EVM is a method for integrating scope, schedule, and resources for measuring project performance. EVM compares the amount of work or effort that was planned with what was actually earned and spent to determine if cost and schedule performance are as planned.

Jeffrey, 2016, stresses that unlike Project S-curve and Milestone analysis, EVM recognizes that it is necessary to jointly consider the impact of time, cost, and project performance on any analysis of current project status. Putting the other way any monitoring system that only compares actual against budgeted cost numbers ignores the fact that the client is spending that money to accomplish something in the project. Therefore, EVM stresses the importance of analyzing the time element in project status updates. Time is a key because it becomes the basis for determining how much work should be performed at certain milestone points.

EVM can also allow the project team to make future projections of project status based on its current state. According to Coulter et al., (2002) the following essential features are included in the implementation of any EVM:

- A project plan that identifies work to be accomplished
- A valuation of planned work, called planned value (PV) or budgeted cost of work scheduled (BCWS)
- Pre-defined metrics to quantify the accomplishment of work, called earned value (EV) or budgeted cost of work performed (BCWP)

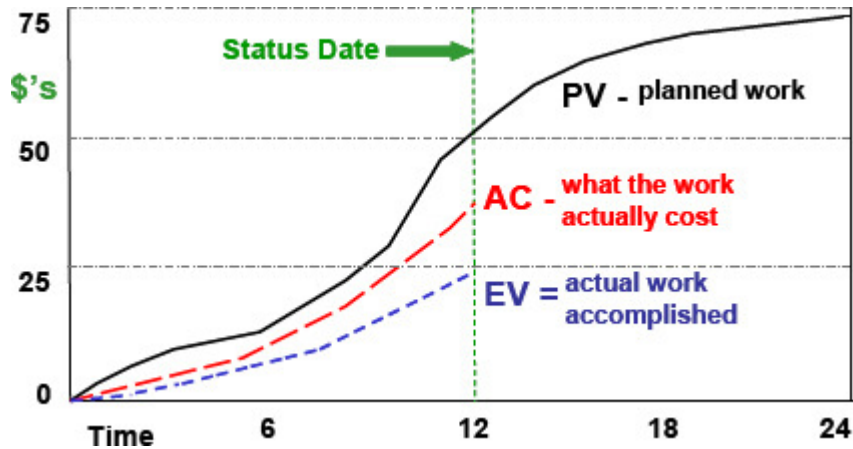


Figure 2: Typical Graph of EVM Showing PV, EV, and AC (Coulter et al., 2002)

Four different scenarios are available in the graph of EVM (PM Newsletter, 2007).

#### Scenario A

EV is below PV, this indicates that the project is tracking behind the plan. EV is above the AC, this indicates a cost underrun. Hence, this is good news on the cost front but bad news on the schedule front.

#### Scenario B

EV is above PV, this indicates that the project is tracking ahead of the plan. EV is below AC, this indicates a cost overrun. Hence, scenario B is the reverse of scenario A, with good news on schedule and bad news on costs.

#### Scenario C

EV is above PV, this indicates that the project is tracking ahead of the plan. EV is also above the AC, this indicates Cost under run. Hence, scenario C is good on both cost and schedule.

#### Scenario D

EV is below PV, this indicates that the project is tracking behind the plan. EV is below AC, this indicates a cost overrun. This is a double curse with bad news on both fronts – cost & schedule.

According to Luis et al., (n.d) it is also important to note that traditional performance parameters measured in projects, namely costs and schedule, are not appropriate for continuous improvement since they are not effective in identifying causes of productivity and quality losses. These parameters do not provide an adequate vision of the potential for improvement and the information obtained usually arrives too late to take corrective actions. Almost all non value-adding activities become invisible within traditional control systems since attention is given in the

conversion activities ignoring the flow activities. For this reason EVM incorporates performance measures that promote continuous improvement in company processes and makes visible non value-adding activities. This means the projects S-curve and milestone analysis are traditional performance metrics whereas the earned value management (EVM) is a modern one.

## **2.2. Empirical review**

### **2.2.1. Influences of stakeholder involvement on the performance of construction projects**

According to Rose (1995), the practices and activities performed by major stakeholders have undeniable impacts on project outcomes.

As noted by PMI (2013), in order to obtain project success, a project manager needs to facilitate the contribution of stakeholders in various project phases. Hence, if the key parties of the contract are not committed to properly carry out their responsibilities, it adversely affects the final project quality level. On the same manner Deming (1986) declared that the stakeholder's perspective of quality levels is critically important, and therefore involving the main stakeholders during the important stages of project lifecycle improves the quality.

### **2.2.2. Stakeholder Involvement in Project identification and Performance of housing Projects**

Stakeholders have a role in the outcome of the project. It could be an ownership, interest, or a right. Rights can either be legal or moral ownership in some particular conditions. Stakeholders take advantage for having their expectations understood and managed through appropriate open communication line on one hand and ensuring that the stakeholders understand and provide support to the project on the other hand (Sekou, Abdul, Baker, Abdul Aziz, 2019).

Valid and legitimate stakeholders need to be identified and their influence, power and proximity understood to deal with their potential impact on the project (Curley and Ricky, 2006). Identification of stakeholders is a part of the project execution process which consists of assigning groups and individuals who are affected by the project. The design of adequate and appropriate strategies can enhance the positive influence of stakeholders. Failing to establish a full connection between risks related to stakeholder's involvement and project likely leads to project failure (Malunga & Banda, 2004)

### **2.2.3. Stakeholder Involvement in Project initiation and Performance of housing Projects**

The initiation processes is the process of determining the scope and the nature of the project (Sekou et al., 2019). If this phase is not performed well, the project success will be probably compromised in meeting the community expectations (Nijkamp et al., 2002). The initiation stage which is the starting point of project planning encompasses the following activities: selection of the best given project corresponding to the need of the community or organization, recognizing the benefit of the project, assigning project manager, defining the needs and requirements into realistic goals, financial, social and economic analysis of the costs and benefits, identifying source of funding, stakeholders analysis which includes project team support, project chart, costs, tasks, deliverables and schedule etc. (Sekou et al., 2019).

### **2.2.4. Stakeholder Involvement in Project Planning and Performance of housing Projects**

Stakeholder involvement in project planning activities defines the project's work requirements, quality and objective, the specification of resources needed and their allocation, the definition of schedule, evaluation of various risks and determination of delivering methods. The advantage of stakeholder involvement during the planning stage is that it allows project managers to strengthen the project implementation process or its outcome (Sekou et al., 2019). The benefits of participation of stakeholders in the planning process includes: distrust reduction in project outcomes, commitment improvement on project objectives and improvement on credibility performance, logical networking of activities, and estimation of the project budget and formalization of the approval process.

### **2.2.5. Stakeholder Involvement in Project Implementation and Performance of housing Projects**

According to a research conducted by Lekunze (2001), project plans are translated into project activities at the implementation stage. They further stated that implementation of the project involves translating the objective of the project into specific output of the project. Therefore, the involvement of stakeholders in the implementation phase of the project is a fundamental aspect in project management. Project implementation enhances coordination of the available resources and employees so as to execute the project plan. Hence, stakeholder involvement results to transformation of project objectives and policies hence leading to logical arrangement of project activities of a successful project.

Duncan (1996) mentioned that stakeholder involvement in project implementation is necessary to transform the planned programs and objectives of a project into realistic well-structured tasks and activities to achieve the project goals. And according to Sui et al., 1996, the performance of project largely depends on the attitudes of different stakeholders. Hence, during the implementation, if the main stakeholders of the project are not committed to execute their responsibilities, the overall performance of the project will be adversely impact. Similarly Olander & Landin (2005) & Slevin & Pinto (1987) mentioned that the stakeholder's participation is highly important to project success, and therefore taking account their claims and interests during the project implementation stages is largely required to achieve project objectives. Furthermore, it is noted that, the association between project performance and stakeholder's involvement has a bilateral effect. In other words, while stakeholders can exert some influence on project performance, developing projects can also affect stakeholders. For example, implementing construction projects can improve the livelihood of communities but the pollution and destruction of the environment can also negatively affect some stakeholders.

#### **2.2.6. Stakeholder Involvement in Project Monitoring and Evaluation and Performance of housing Projects**

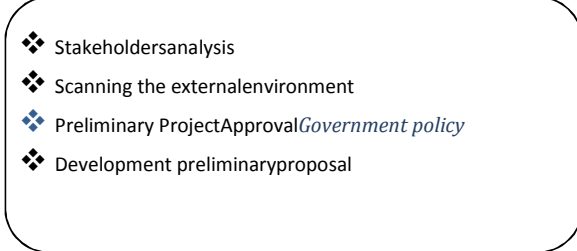
Project monitoring is accurately controlling and assessing a process. It compares the planned works with actual results to determine the progress and performance. The process of determining the real situation of a project is called evaluation of project and this evaluation is necessary to find out if the project is being operated properly or not (Sekou et al., 2019). Coulter et al. (2002) found that there is a positive and strong relationship between stakeholder involvement during the monitoring & evaluation stage and the performance of projects. Similarly Lekunze (2001) found that involvement of stakeholder through monitoring and reporting in development projects contributes to identify hindrances and challenges surrounding the projects. Lekunze (2001) further noted that top management in organizations can use stakeholder involvement in monitoring as an opportunity to influence and support project success. Hence, constructive and well-informed stakeholder in project monitoring is useful to the organizations as it will significantly improve the performance of the project.

### **2.3. Conceptual Framework**

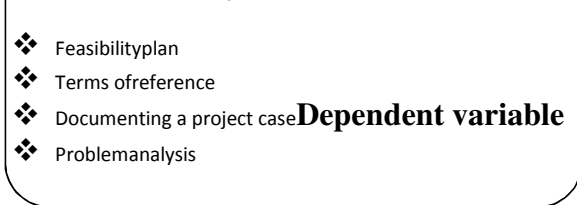
A conceptual framework is a sort of a map or set of ideas that structures the research. It guides the researcher on his/her enquiries (Kothari, 2004). It is the researcher position on the problem statement and it provides the direction needed for the study. It can adapt a model used in previous studies and do some necessary changes. By use of the conceptual framework a researcher can show the study's direction and show the relationship of the different study constructs that are investigated in the study. The independent variables are involvement of stakeholders in identification of project, initiation of project, planning of project as well as project implementation and monitoring and evaluation. The dependent variable is performance of housing projects.

## Independent variables

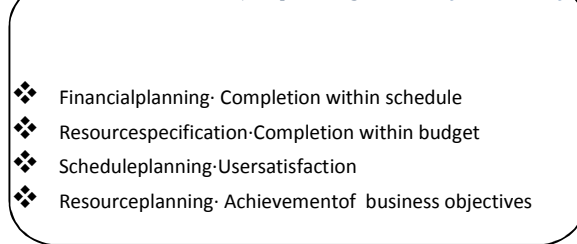
*Stakeholders' involvement in Project identification*



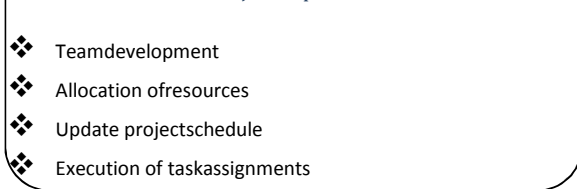
*Stakeholders' involvement in Project initiation*



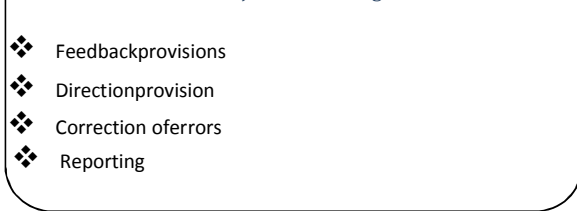
*Stakeholders' involvement in Project planning*



*Stakeholders' involvement in Project implementation*

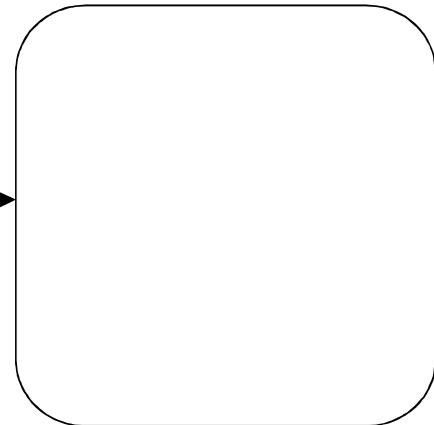
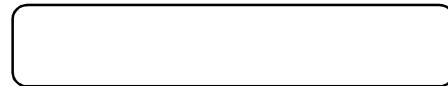


*Stakeholders' involvement in Project monitoring & evaluation*



**Dependent variable**

*Performance of housing projects*



**Figure 3: Conceptual framework (EMILY MANDALA, 2018)**

# CHAPTER -THREE

## 3. RESEARCH METHODOLOGY

### 3.1. Introduction

This chapter deals with the methods that were used in the research to come up with the objective of the study. This chapter includes research design, population of the study, sampling technique and sample size, data collection tools and procedures, description of variables in the study, measurement and scaling techniques, validity and reliability of measurement, data analysis and presentation and research ethical considerations.

### 3.2. Research Design

In this study quantitative design approach was used.

### 3.3. Population of the study

Target population is the sum total of elements about which inferences are to be made (Cooper, & Schindler, 2006). The targeted population for this research were all the key construction stakeholders (i.e. contractors, consultants and client) involved in the construction of 40/60 saving and housing development program in Addis Ababa.

**Table 1: Population of the study**

No of Contractors	No of Consultants	Client (AASHDE)
157	8	1

The contractors and consultants belong to private sector and the client belongs to the public sector. The target populations of the study were 157 contractors, 8 consultants & 1 client.

#### 3.3.1. Unit of analysis

The unit of analysis for the study was companies (that is contractors, consultants and the client) involved in the construction of 40/60 saving houses project in Addis Ababa.

**Table 2:40/60 Project sites names & with their lot No (source: AASHDE)**

<b>Project No</b>	<b>Branch No</b>	<b>Project site name</b>	<b>Lot No</b>	<b>No of branch managers</b>	<b>No of project managers</b>	<b>No of project coordinators</b>
1	1	EhilNigd	1	1	39	5
2		Asko	1			
3		HinstaAkrabi	1			
4		Tourist	1			
5		Bole Bulbula	1 2			
6	2	Meri Loke	1	1	49	3
7		Bole Ayat 1	1 2 3 4			
8	3	Bole Beshale	1	1	27	1
9	4	Bole Ayat 2	1	1	42	2
10		Semit	1			
<b>Total</b>				<b>4</b>	<b>157</b>	<b>11</b>

According to the contract administration of AASHDE, every contractor was expected to have one project manager per project and every consultant was expected to have one project coordinator per project. In a similar fashion the client assigns one branch manager per branch. Therefore, we had a total of 157 project managers from the contractors, at least 10 project coordinators from the consultants and 4 branch managers from the client involved in the construction of 40/60 saving houses program.

### **3.4. Sampling Technique and Sample Size**

#### **3.4.1. Sampling Technique**

Both stratified sampling and proportional simple random sampling techniques were used to select sample from the target population. Because the population from which a sample was drawn did not constitute a homogeneous group, the target population was classified in to the stratum of contractors, consultants and Government offices (specifically the Addis Ababa Saving Houses Development Enterprise (AASHDE)). According to Creswell (2014) stratification ensures the representation of different groups in the population.

Next proportional simple random sampling technique was used to select sample from each stratum.

### 3.4.2. Sample Size, n

There are two approaches for determining the size of sample. The first approach is to specify the precision of the estimation desired and then to determine the sample size necessary to ensure it and second approach uses Bayesian statistics to weigh the cost of additional information against the expected value of additional information. The first approach is capable of giving the mathematical solution, and as such a frequently used technique of determining, n. The limitation of this technique is that it does not analyze the cost of gathering information versus the expected value of information. The second approach is theoretically optimal, but it is seldom used because of the difficulty involved in the measuring the value of information (Kothari, 2004). In this study the researcher used the first approach. So in determining of sample size through the first approach based on precision rate and confidence level, the researcher has specified the precision that he wants in respect of his estimates concerning the population parameters.

Here the researcher was interested to include all the consultants and the client in his sample because they are small in number. But the sample of contractors was determined from a standard table.

**Table 3: Sample size table for determining the minimum sample sizes required to achieve the specified confidence levels and margins of error.**

Population size	Number of samples needed for a confidence level of 95%			Number of samples needed for a confidence level of 99%		
	At 5% margin of error	At a 2.5% margin of error	At a 1% margin of error	At 5% margin of error	At a 2.5% margin of error	At a 1% margin of error
10	10	10	10	10	10	10
20	19	20	20	19	20	20
50	44	48	50	47	49	50
100	80	94	99	87	96	99
500	217	377	475	285	421	485
1,000	278	606	906	399	727	943
10,000	370	1,332	4,899	622	2,098	6,239
100,000	383	1,513	8,762	659	2,585	14,227
500,000	384	1,532	9,423	663	2,640	16,055
1,000,000	384	1,534	9,512	663	2,647	16,317

From the table above for a population of 157, confidence level 95% and margin of error 5%, 100 samples were selected. Therefore, the researcher had a total of 114 sample size in his study.

### **3.4.3. Unit of observation**

The unit of observation was individuals (project managers, project coordinators & branch managers in this case). **100** (Hundred project managers from the contractors), **10** (ten project coordinators from the consultants) and **4** (four branch managers from the client) side were included in survey.

## **3.5. Data collection tools and procedures**

### **3.5.1. Data collection tools**

According to Kothari (2004) questionnaire is one of the most common data collection tools employed in research works. Kothari (2004) also explains that questionnaires are used extensively to gather data on current conditions, practices, opinions and attitudes quickly and in a precise way. Questionnaires also provide a relatively cheap way of obtaining information. In this research the primary data collection tool was a closed ended questionnaire. The questionnaire was taken from EMILY (2018) with some modifications. The questionnaire had seven sections. The first section comprised of questions that focused on the respondents' socio-demographic information. The second section, up to the sixth sections focused on the independent variables (which are involvement of stakeholders in identification of project, involvement of stakeholders in initiation of the project, involvement of stakeholders in planning of the project, involvement of the stakeholders in implementation of the project, stakeholders' involvement in project monitoring and evaluation). Finally the seventh section focused on the dependent variable (performance of 40/60 housing projects).

### **3.5.2. Data Collection Procedure**

Collection of primary data from the respondents was achieved through utilization of questionnaires. The researcher had already got a research permit from the Addis Ababa Saving Houses Development Enterprise (AASHDE). A letter of consent was given to the participants (114 managers & coordinators) explaining the nature of the research and how to fill the questionnaires. Questionnaires were administered through personal delivery. The researcher used personal visits and phone calls, whenever necessary,

to follow up the respondents ensuring that they completed and dropped.

### 3.6. Description of Variables in the study

Table 4: Operationalization of variables in the study

Variables		Indicators of the variable	Symbol of the variable	Operational definition	Expected sign
<b>Independent variables</b>	Stakeholders' involvement in project identification	<ul style="list-style-type: none"> <li>✓ Stakeholders analysis</li> <li>✓ Scanning the external environment</li> <li>✓ Preliminary Project Approval</li> <li>✓ Development preliminary</li> </ul>	X1	Not at all=1 Low level=2 Moderate level=3 Great extent=4 Very great extent=5	+ (Positive)
	Stakeholders' involvement in Project initiation	<ul style="list-style-type: none"> <li>✓ Feasibility plan</li> <li>✓ Terms of reference</li> <li>✓ Documenting project case</li> <li>✓ Problem analysis</li> </ul>	X2	>>	+ (Positive)
	Stakeholders' involvement in Project planning	<ul style="list-style-type: none"> <li>✓ Financial planning</li> <li>✓ Resource specification</li> <li>✓ Schedule Planning</li> <li>✓ Resource planning</li> </ul>	X3	>>	+ (Positive)
	Stakeholders' involvement in Project implementation	<ul style="list-style-type: none"> <li>✓ Team development</li> <li>✓ Allocation of resources</li> <li>✓ Update project schedule</li> <li>✓ Execution of task assignments</li> </ul>	X4	>>	+ (Positive)
	Stakeholders' involvement in Project monitoring & evaluation	<ul style="list-style-type: none"> <li>✓ Feedback provisions</li> <li>✓ Direction provision</li> <li>✓ Correction of errors</li> <li>✓ Reporting</li> </ul>	X5	>>	+ (Positive)
<b>Dependent Variable</b>	40/60 housing project Performance	<ul style="list-style-type: none"> <li>✓ Completion within schedule</li> <li>✓ Completion within budget</li> <li>✓ User satisfaction</li> <li>✓ Achievement of business objectives</li> </ul>	Y	Poor=1 Bad=2 Moderate=3 Good=4 Excellent=5	

### **3.7. Measurement and Scaling Techniques**

The researcher used both nominal scale and a five degree Likert scale. Nominal scale was used on the respondents' demographic information whereas Likert scale was used to get responses from respondents on the influence of each of the five independent variables and the success of the dependent variable.

### **3.8. Pilot study**

The validity of data collection instruments and the reliability of data were determined by the usage of pilot test. That was conducted before collecting all the data necessary for the analysis. Cooper & Schindler, 2006, stated that problems that can be encountered in the study later can be eliminated in advance by the use of pilot study. According to Melody (2007) 10% of the sample size is used for pilot study when conducting a research. Accordingly the researcher used 12 (which is 10% of 114) respondents for his pilot study.

### **3.9. Validity and Reliability of measurement**

#### **3.9.1. Validity/accuracy**

Validity expresses the degree to which a measurement measures what it intends/proposes to measure (Kothari, 2004). There are four main validity tests for a questionnaire, namely; face validity, content validity, construct validity and criterion validity (Hamed, n.d.) But, this reference suggests that from the four types of validity tests it is the content validity that is highly recommended to conduct in any research. Further, Hamed (n.d.) defines content validity as the extent that the measurement items are relevant and representative of the target construct. In this study the researcher used detail literature review and tried to get support from experts so as to make the content validity of the measurement meaningful.

#### **3.9.2. Reliability/consistency**

Reliability refers to the degree to which the results obtained by a measurement and procedure can be replicated/repeated. Though reliability importantly contributes to the validity of a questionnaire, it is however not a sufficient condition for the validity of a questionnaire. Lack of reliability may arise from divergence between observers or instruments of measurement such as a questionnaire or instability of the attribute being measured, which will invariably affect the

validity of such questionnaire (Kothari, 2004). According to Cortina (1993) Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are in a group. It is considered to be a measure of scale reliability. Hence the researcher used the following table to check the reliability of the scale. As can be seen from the table below an alpha ( $\alpha$ ) value  $\geq 0.6$  is considered to be acceptable.

**Table 5: Cronbach's alpha values & its corresponding reliability (source: Cortina, J.M., 1993).**

<b>Cronbach's alpha</b>	<b>Internal consistency</b>
$0.9 \leq \alpha$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.6 \leq \alpha < 0.8$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

### 3.10. Data Analysis and Presentation

A closed ended questionnaire was used to generate quantitative data. Excel spread sheet & Statistical Package for Social Sciences (SPSS) were used for analyzing the data. The researcher used both descriptive and inferential statistics in his analysis.

Descriptive statistics include the frequency distribution, mean (measure of central tendency), standard deviation (measure of dispersion) and percentages. But inferential statistics involves the use of multiple regression analysis. The researcher has used the following multivariate regression analysis in testing the influence of the explanatory variables (independent variables) to the dependent variable.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \dots \dots \dots (*)$$

Where: Y = Performance of 40/60 housing projects

$\beta_0$  = Constant

$X_1$  = Involvement of stakeholders in Project identification

$X_2$  = Involvement of stakeholders in Project initiation

$X_3$  = Involvement of stakeholders in Project planning

$X_4$  = Involvement of stakeholders in Project implementation

X5 = Involvement of stakeholders in project monitoring and evaluation  
 $\varepsilon$  = Error term

And according to Shahrzad and Hamidreza ( n.d) the performance of any project in terms of time, budget, and user satisfaction and over all achievement of business objectives is given by the model below.

$$PP = 0.21CS + 0.23CB + 0.37BO + 0.19US \dots\dots\dots (**)$$

Where:

PP=Project performance

CS=Completion with in schedule

CB= Completion within budget

BO=Achieving overall business objective

US=User satisfaction

From (\*) and (\*\*) one can see that:

$$Y=PP \dots\dots\dots (***)$$

### 3.11. Research Ethical Consideration

Ethics is regarded as a code of conduct that governs humanity and significantly affects its wellbeing (Cooper et al., 2006). Ethical issues need to be taken into consideration so as to make the study credible. So, in the process of involving the participants in the research, the researcher has considered the basic principles of research ethics such as getting the necessary permission prior to distribution of the questionnaires, getting consent from the participants, ensuring voluntary participation and taking care of the confidentiality/identity of the research respondents. Apart from that, since a good research is conducted with honesty, objectivity and integrity (Kothari, 2004), the researcher was obliged to fulfill these criteria.

# CHAPTER -FOUR

## 4. DATA ANALYSIS, INTERPRETATION AND DISCUSSION

### 4.1. Introduction

The objective of the study was to determine the influence of stakeholders' involvement in the five project management phases on the performance of 40/60 saving houses development project in Addis Ababa. Survey data was analyzed using Excel and SPSS version 23. The research used quantitative approach for data analysis. The research questions were answered through closed ended survey questionnaire. Out of 114 targeted respondents, 77 properly completed the survey questionnaire, a 67.5% response rate. According to Kothari (2004), a response rate above 50% is adequate for descriptive analysis as well as making inferences about the target population. Hence both descriptive and inferential statistics were computed from the results to draw substantive conclusions.

### 4.2. Demographic Characteristics

Before discussing the data related to the stakeholders' involvement level and its influence on the performance of 40/60 saving houses project, a summary of demographic characteristic of the respondents is presented below. Description of the demographic characteristics of the target population gives some basic information about gender, age, educational status, work experience and work responsibility of the respondents.

Totally, 77 respondents participated in the survey and based on the demographic profiles, the majority of respondents (81.8%) were male while their female counterparts constituted of only 18.2%. Majority (74%) of the respondents were in the age group of 26 to 35 years old while about 15.6% were in age group between 36 to 45 years old. Majority of the respondents (74%) were Bachelor's degree holders and (23.4%) were Master's degree holders. Most respondents (49.3%) worked 11 to 15 years while 27.3% of the respondents worked from 6 to 10 years. Majority (85.7%) of the respondents was project managers of the contractors; of course it was assumed 87.7% of the sample to be project managers of the contractors.

**Table6: Demographic Characteristics of respondents**

<b>1. Gender?</b>		Frequency	Percent
Valid	Male	63	81.8%
	Female	14	18.2%
<b>2. Age group?</b>			
Valid	Below 25 years	5	6.5%
	26 to 35 years	57	74%
	36 to 45 years	12	15.6%
	46 to 55 years	3	3.9%
<b>3. What is your highest level of Education?</b>			
Valid	Master's degree	18	23.4%
	Bachelor's degree	57	74%
	Diploma	2	2.6%
<b>4. What is your level of service in the industry?</b>			
Valid	Less than 5 years	18	23.4%
	6 to 10 years	21	27.3%
	11 to 15 years	38	49.3%
<b>5. What is your position?</b>			
Valid	Project Manager of a contractor	66	85.7%
	Project Coordinator of a consultant	8	10.4%
	Branch manager of a client	3	3.9%

### 4.3. Reliability Analysis

Cronbach's coefficient alphas were computed for each dimension to determine the internal consistency of the instruments used in the study. Table 7 illustrates the Cronbach's Alpha values for the variables. According to Cortina(1993),the value of 0.60 is considered as the lower limit of acceptability for Cronbach's alpha. As depicted in Table 6, all the independent variables had an excellent consistency/reliability (since $\alpha \geq 0.9$ ) and the dependent variable had an acceptable consistency (since  $\alpha \geq 0.6$ ). In general the reliability of the research instrument was acceptable.

**Table 7: Summary of reliability analysis**

<b>S.N</b>	<b>Variable</b>	<b>Indicators of the variable</b>	<b>Cronbach's Alpha (<math>\alpha</math>)</b>	<b>N of Items</b>
1	Y	<ul style="list-style-type: none"> <li>✓ Completion within schedule</li> <li>✓ Completion within budget</li> <li>✓ User satisfaction</li> <li>✓ Achievement of business objectives</li> </ul>	0.629	4
2	X1	<ul style="list-style-type: none"> <li>✓ Stakeholders analysis</li> <li>✓ Scanning the external environment</li> <li>✓ Preliminary Project</li> <li>✓ Approval Development preliminary</li> </ul>	0.958	4
3	X2	<ul style="list-style-type: none"> <li>✓ Feasibility plan</li> <li>✓ Terms of reference</li> <li>✓ Documenting project case</li> <li>✓ Problem analysis</li> </ul>	0.908	4
4	X3	<ul style="list-style-type: none"> <li>✓ Financial planning</li> <li>✓ Resource specification</li> <li>✓ Schedule Planning</li> <li>✓ Resource planning</li> </ul>	0.962	4
5	X4	<ul style="list-style-type: none"> <li>✓ Team development</li> <li>✓ Allocation of resources</li> <li>✓ Update project schedule</li> <li>✓ Execution of task assignments</li> </ul>	0.922	4
6	X5	<ul style="list-style-type: none"> <li>✓ Feedback provisions</li> <li>✓ Direction provision</li> <li>✓ Correction of errors</li> <li>✓ Reporting</li> </ul>	0.909	4

## 4.4. The Analysis of Stakeholder Involvement Level

### 4.4.1. Descriptive statistics

#### 4.4.1.1. Stakeholder' involvement in project identification

**Table 8: Stakeholders' involvement in project identification**

Position	Mean	N	Std. Deviation	Median
Project manager in a contractor	1.6970	66	.94413	1.0000
Project coordinator in a consultant	1.6250	8	.74402	1.5000
Branch manager of client	2.6667	3	1.15470	2.0000
Total	1.7273	77	.94083	1.0000

As can be seen in Table 8 above, the branch managers of the client were involved with mean involvement level of 2.6667 which is relatively higher than that of project managers of the contractors and project coordinators of the consultants and with relatively higher standard deviation (1.1547).

#### 4.4.1.2. Stakeholder' involvement in project initiation

**Table 9: Stakeholder Involvement in project Initiation**

Position	Mean	N	Std. Deviation	Median
Project manager in a contractor	1.7273	66	.90376	1.0000
Project coordinator in a consultant	1.5000	8	.75593	1.0000
Branch manager of client	2.6667	3	1.15470	2.0000
Total	1.7403	77	.90906	1.0000

As can be seen in Table 9 above, the branch managers of the client were involved with mean involvement level of 2.6667 which is relatively higher than that of project managers of the contractors and project coordinators of the consultants and with relatively higher standard deviation (1.1547).

#### 4.4.1.3. Stakeholder' involvement in project planning

Table 10: Stakeholder Involvement in project planning

Position	Mean	N	Std. Deviation	Median
Project manager in a contractor	1.8485	66	1.02646	1.0000
Project coordinator in a consultant	1.3750	8	.74402	1.0000
Branch manager of client	4.3333	3	1.15470	5.0000
Total	1.8961	77	1.11903	1.0000

According to Table 10 above, the branch managers of the client were involved with mean involvement level of 4.3333 in project planning which is higher than that of project managers of the contractors and project coordinators of the consultants and with relatively higher standard deviation (1.1547).

#### 4.4.1. 4. Stakeholders' involvement in project implementation

Table 11: Stakeholder Involvement in project Implementation

Position	Mean	N	Std. Deviation	Median
Project manager in a contractor	3.3788	66	.95700	3.0000
Project coordinator in a consultant	3.1250	8	.35355	3.0000
Branch manager of client	2.3333	3	.57735	2.0000
Total	3.3117	77	.92138	3.0000

Table 11 above shows that the project managers of the contractors, project coordinators of the consultants and the branch managers of the client were involved with mean involvement level of 3.3788, 3.1250 and 2.3333 respectively in project implementation. It was found that the contractors and consultants were more involved in the project implementation phase than the client.

#### 4.4.1. 5. Stakeholders' involvement in project monitoring & evaluation

**Table 12: Stakeholder Involvement in project evaluation & monitoring**

Position	Mean	N	Std. Deviation	Median
Project manager in a contractor	3.1818	66	.78268	3.0000
Project coordinator in a consultant	3.2500	8	.70711	3.0000
Branch manager of client	4.0000	3	.00000	4.0000
Total	3.2208	77	.77159	3.0000

Table 12 shows that it is the branch managers of the client who were involved better than that of project managers and project coordinators in project monitoring and evaluation.

#### 4.4.1.6. Success/performance of 40/60 saving houses development project

**Table 13: Project performance/success**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Poor	43	55.8	55.8	55.8
Bad	33	42.9	42.9	98.7
Moderate	1	1.3	1.3	100.0
Total	77	100.0	100.0	

It was found that 55.8% of the respondents rated the performance to be poor and 42.9% of respondents rated it to be bad. It was only 1.3% of the respondents who rated it moderate.

**Table 14: Rating of project performance by stakeholder type**

Position	Mean	N	Std. Deviation	Median
Project manager in a contractor	1.4394	66	.52999	1.0000
Project coordinator in a consultant	1.5000	8	.53452	1.5000
Branch manager of client	1.6667	3	.57735	2.0000
Total	1.4545	77	.52679	1.0000

As to Table 13, the success of the 40/60 saving houses project according to the three important stakeholders is poor.

The summary of descriptive statistic of means and standard deviations given in Table 15 were obtained from the independent and dependent variables. All independent variables were measured on a 5-point Likert scale (1= Not at all to 5= Very great extent) and in a similar way the dependent variable was measured on a 5-point Likert scale (1=Bad to 5=Excellent).

From the table we see that stakeholders' involvement in the three phases of project management (i.e. project identification, project initiation and project planning) is low level and in the two phases of project management (i.e. project implementation and project evaluation and monitoring) the stakeholders' involvement is above average.

Considering the project performance/success of 40/60 saving houses development project it was found to be poor performance.

**Table 15: Summary of Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Stakeholder Involvement in project Identification	77	1.00	4.00	1.7273	.94083
Stakeholder Involvement in project Initiation	77	1.00	4.00	1.7403	.90906
Stakeholder Involvement in project planning	77	1.00	5.00	1.8961	1.11903
Stakeholder Involvement in project Implementation	77	1.00	5.00	3.3117	.92138
Stakeholder Involvement in project evaluation & monitoring	77	1.00	4.00	3.2208	.77159
Project performance/success	77	1.00	3.00	1.4545	.52679
Valid N (listwise)	77				

## 4.4. 2. Inferential statistics

### 4.4.2.1. Comparing Levels of Stakeholder Involvement

According to David (2000) there are statistical measures for making multiple comparisons. The statistical methods for dealing with multiple comparisons usually have two vital steps.

- 1) An overall test to see if there is good evidence of any differences among the parameters that we want to compare.
- 2) A detailed follow-up analysis to decide which of the parameters differ and to estimate how large the differences are.

To select the statistical test, the nature of data has to be determined and normally distributed data are tested by parametric tests while skewed data are tested by parametric tests (David, 2000). Two tests are available for normality of data: (1). Kolmogorov-Smirnov and (2). Shapiro-Wilk. Kolmogorov-Smirnov works best for data sets greater than 50 and Shapiro-Wilk Works best for data sets less than 50.

In the Appendix B: Table B-1, the test of normality showed that the data were not normally distributed ( $\text{Sig} < 0.05$ ). That means the sample data were statistically significantly different from normally distributed data.

On the other hand, David (2000) has put a summary of parametric and non parametric tests to be used while comparing parameters (Appendix A, Table A-1). Therefore, after observing the data at hand the researcher decided to use Kruskal-Wallis test to determine if the involvement levels among the three stakeholder groups in the five project management process were significantly different and the Mann-Whitney test was conducted to check where there is a significant difference among stakeholders in the mean ranking of their responses.

The results of the Kruskal-Wallis test in Appendix C:Table C-1 suggested that there was statistically significant differences in means of stakeholders' involvement level in project planning phase of the project management (since  $\text{Sig} < 0.05$ ). But this test did not specify the stakeholder with significant involvement level. After wards, the Mann-Whitney test was performed and the results shown in Appendix C:Table C-2 suggested that there was a statistically significant difference in the mean involvement level of client and the other stakeholders in the project planning phase of the project management. However, no significant difference was found between contractors' and consultants' level of involvement.

#### 4.4.2.3. Multiple Regression Analysis

The researcher has used the following multivariate regression analysis in testing the influence of the explanatory variables (independent variables) to the dependent variable.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$$

Where: Y =Performance of 40/60 saving housesproject

$\beta_0$  =Constant

X1 = Involvement of stakeholders in Projectidentification

X2 = Involvement of stakeholders in Projectinitiation

X3 = Involvement of stakeholders in Projectplanning

X4 = Involvement of stakeholders in Projectimplementation

X5 = Involvement of stakeholders in project monitoring andevaluation

$\varepsilon$  = Errorterm

According to David (2000) inference from a given sample is not safe if the following issues are encountered in the data: (1) if a non-linear relationship exists (2)if influential observations exist (3) if strongly skewed residuals in a small sample exist and (3) if a non-constant variation of the data points about the regression line exist. If the above assumptions are not fulfilled, it is common to work with some transformations of data in order to satisfy the regression assumptions. Therefore, before running the linear regression analysis, the researcher tested the first two important problems of the assumptions: non-linearity and the presence of influential observations. The first assumption that was checked was the linearity test. To test the linearity assumption a graph of the predicted value against residuals was plotted using SPSS. A plot of the predicted value against residuals can help to infer whether the relationships of the predictors to the outcome is linear (David, 2000). Therefore, in Appendix E, Table E-1, the graph of the predicted value against residuals shows that the assumption of linearity of data was fulfilled because a pattern was observed. The second assumption that the researcher checked was whether influential variables exist. According to SisayRegassa(2018) no independent variable is a perfect linear function of one or more other independent variables in linear regression analysis. This

assumption is tested by multicollinearity test. VIF is one of the tests performed for multicollinearity test.

Accordingly the VIF (high variance inflation factor) of each independent variable with the other independent variable was found to be below 5 (see in Appendix D, from tables D-1 to D-5). VIF is a method of detecting the severity of multicollinearity (a common rule of thumb is that if  $VIF < 5$ , the multicollinearity is not severe (SisayRegassa, 2018). So, the researcher was lucky that the data was free of multicollinearity problem. After checking the assumptions of multiple linear regressions, the data was analyzed using SPSS version 23, and the following results were found.

**Table 16: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.150 <sup>a</sup>	.022	-.046	.53887

As shown in Table 15 above, the regression analysis gave an R square value of 0.022. The R square value is used to show the variation between the dependent that could be explained by the independent variables. This indicates that the stakeholders' involvement in all phases of project management collectively explained only 2.2% percent of the variance in success/performance of 40/60 saving houses development project.

**Table 17: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.474	5	.095	.327	.895 <sup>b</sup>
	Residual	20.617	71	.290		
	Total	21.091	76			

The analysis of variance (ANOVA) is used to determine whether the model is a good fit for the data. For this study the ANOVA result given in Table 16 above has a result of  $F_{\text{calculated}}=0.327$  which is less than  $F_{\text{critical}}=2.33$  and significance level 0.895 which is too much greater than 0.05. Therefore, the stakeholders' involvement in all the five phases of project management collectively does not predict the success/performance of 40/60 saving houses development project in Addis Ababa significantly.

**Table 18: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.591	.318		<b>5.002</b>	.000
	Stakeholder Involvement in project Identification	.112	.125	.200	<b>.897</b>	.373
	Stakeholder Involvement in project Initiation	-.160	.132	-.277	<b>-1.210</b>	.230
	Stakeholder Involvement in project planning	.011	.071	.024	<b>.157</b>	.875
	Stakeholder Involvement in project Implementation	-.058	.097	-.102	<b>-.595</b>	.553
	Stakeholder Involvement in project evaluation & monitoring	.037	.117	.055	<b>.319</b>	.751

Table 17 given in the above shows that the p-value of the t-test for each predictor, because the  $t_{critical}=1.991$ , which is found from table, is greater than all  $t_{calculated}$  given in the table, we can see that each of the stakeholders' involvement does not contribute to the model. But this analysis does not allow one to conclude that the stakeholders' involvement in all the five phases of project management do not influence the success/performance of 40/60 saving houses project statistically significantly due to the following critical reasons:

- ✓ The stakeholders were not involved in all the five phases of project management.
- ✓ The success/performance of the 40/60 saving houses project at all sites was found to be poor

#### 4.6. Discussion

It was found that all the critical groups (stakeholders) were involved with an involvement level much less than the average in the first three project management phases (i.e. project identification, project initiation and project planning). This can be observed from the mean and

median scores shown in [Table 8](#),[Table 9](#)&[Table 10](#). Similarly a study made by Amirhossein et al., (n.d) found that the involvement level of contractors and designers was low level in establishing the project where the key objectives are normally to identify the projects, determine the scope, goals and objectives and establishing a mechanism to achieve the identified objectives, selecting the project team and defining project resources and their limitations. Amirhossein et al., (n.d) further stressed that it is the lack of attention paid by these groups to the importance of understanding the role of key stakeholders and the significance of their inputs into the decision-making (DM) process. Additionally, it is the type of project delivery adopted by project owners (client), in many cases that determine the stages where both designers and contractors can get engaged in project. Therefore, the client needs to carefully select the right contract type to improve the effective involvement level of contractors and consultants (Amirhossein et al., n.d.). However, the research found that the involvement level of the two stakeholders (project managers of contractors & project coordinators of consultants) in project implementation and project monitoring & evaluation are relatively above average, [Table 11](#)&[Table 12](#). But the involvement level of the branch manager of the client was found to be lower than average in the implementation phase but higher than the average in the monitoring and evaluation phase.

According to PMI (2013) correctly identifying key stakeholders and analyzing their needs and requirements, is a necessary part of the project identification phase, and that the ability to correctly identify and manage stakeholders can mean the difference between success and failure. But this study found that contractors, consultants and clients (owners) are not highly engaged in the project identification process. This issue may be the result of lack of knowledge and information about the project and its features.

Generally, descriptive analysis of the survey data revealed that the involvement level of the three key stakeholders in the project identification, project initiation and project planning phases of projects were considerably lower than average ( see [Table 15](#)).

However, [Low et al. \(1996\)](#) confirm that the quality of the construction project is largely dependent on the attitudes of contractors. Sometimes the contractor's objectives do not align with the strategic project objectives, which might result in conflict amongst different parties and affect

the final quality outcomes. However, interacting with contractors in the early phases of a project can help prevent such conflict. Contractors are sometimes assigned to carry out the project from beginning to the end. In that case they will get engaged in the conceptual and planning phases but they are more a developer in this instance, rather than a contractor. Another reason for the low level of contractors' contributions could be the issue of competitiveness. Involving contractors in the very initial stages might result in the project losing the competitive edge during the tendering process. Such early involvement can also create a misconception amongst contractors that they have already been pre-selected to be the company finally undertaking the construction phase. The main objective of this research was to check whether stakeholders' involvement in the five project management phases influences the performance of 40/60 saving houses development project in Addis Ababa. Using descriptive statistics the study found that the involvement level of stakeholders in the first three project management phases (i.e. project identification, project initiation and project planning) were below average and the involvement level of stakeholders in project implementation and project monitoring & evaluation were found to be above average. In addition the success/performance of the 40/60 saving houses project was found to be poor. Using inferential statistics, it was found that the mean stakeholders' involvement level in planning phase was statistically significant while the means of stakeholder' involvement level in the remaining four phases of the project management process were not significantly different. Moreover, the involvement level of the three stakeholders was compared and there was a statistically significant difference in the mean involvement level between the client and the other stakeholders in the project planning phase of the project management. However, no significant difference was found between contractors' and consultants' level of involvement.

And finally a linear regression analysis was performed after testing the assumptions of linear regression analysis. The regression analysis gave an R square value of 0.022 (Table 16). The R square value is used to show the variation between the dependent that could be explained by the independent variables. This indicates that the stakeholders' involvement in all phases of project management collectively explained only 2.2% of the variance in success/performance of 40/60 saving houses development project. This means 97.8% of the variance in success/performance of 40/60 saving houses development project is not due to the stakeholders' involvement in all phases of project management!. So, the assumption that the stakeholders' involvement of the

three critical parties affects the success/performance of 40/60 saving houses development project was not witnessed in the results of the analysis.

The analysis of variance (ANOVA) was also used to determine whether the model was a good fit for the data. For this study the analysis gave an F value of 0.327 which is less than F-critical=2.33 and significance level 0.895 which is too much greater than 0.05 (Table 17). Therefore, the stakeholders' involvement in all the five phases of project management collectively did not predict the success/performance of 40/60 saving houses development project in Addis Ababa significantly.

The significance level (p-value) of the t-test for each predictor is  $>0.05$  (Table 18). But, even though the significance level (p-value) of the t-test for each predictor was found to be  $>0.05$ , it is not possible to generalize the significance/non-significance of the independent variables on the dependent variable because:

- ✓ The stakeholders were not involved in all the five phases of project management.
- ✓ The success/performance of the 40/60 saving houses project at all sites was found to be poor.

However, a similar study made by Nyandika & Ngugi (2014) found that the stakeholders' involvement in all the five phases of project management were statistically significant at 5% significance level.

# CHAPTER -FIVE

## 5. SUMMARY, CONCLUSION & RECOMMENDATION

### 5.1. Summary

This research has evaluated the level of stakeholders' involvement during the five different phases of project management. It highlights the weaknesses and strengths of the three stakeholder groups in the different phases of the project management. It was found that the three groups were involved below average in the first three phases of project management. Results revealed that all the three stakeholder groups had the lowest level of contribution in the first three phases of project management. The low level of involvement of contractors and consultants in the first three phases of project management could be the result of the project delivery method adopted. So, to enhance their involvement the client needs to engage them as early as possible through, for example, use of an integrated project delivery method. But the low level of involvement of the client in the three phases of project management is difficult to justify.

The main objective of this research was to check whether stakeholders' involvement in the five project management phases influences the performance of 40/60 saving houses development project in Addis Ababa.

Using descriptive statistics the study found that the involvement level of stakeholders in the first three project management phases (i.e. project identification, project initiation and project planning) were below average and the involvement level of stakeholders in project implementation and project monitoring & evaluation were found to be above average. In addition the success/performance of the 40/60 saving houses project was found to be poor.

Using inferential statistics, it was found that the mean stakeholders' involvement level in planning phase was statistically significant while the means of stakeholder' involvement level in the remaining four phases of the project management process were not significantly different. Moreover, the involvement level of the three stakeholders was compared and there was a statistically significant difference in the mean involvement level between the client and the other stakeholders in the project planning phase of the project management. However, no significant difference was found between contractors' and consultants' level of involvement.

And finally a linear regression analysis was performed after testing the assumptions of linear regression analysis. The regression analysis gave an R square value of 0.022 (Table16). The R square value is used to show the variation between the dependent that could be explained by the independent variables. This indicates that the stakeholders' involvement in all phases of project management collectively explained only 2.2% of the variance in success/performance of 40/60 saving houses development project. This means 97.8% of the variance in success/performance of 40/60 saving houses development project is not due to the stakeholders' involvement in all phases of project management. So, the assumption that the stakeholders' involvement of the three critical parties affects the success/performance of 40/60 saving houses development project was not witnessed in the results of the analysis.

The analysis of variance (ANOVA) was also used to determine whether the model was a good fit for the data. For this study the analysis gave an F value of 0.327 which is less than F-critical=2.33 and significance level 0.895 which is too much greater than 0.05. Therefore, the stakeholders' involvement in all the five phases of project management collectively did not predict the success/performance of 40/60 saving houses development project in Addis Ababa significantly. Even though the significance level (p-value) of the t-test for each predictor was found to be >0.05, it is not possible to generalize the significance/non-significance of the independent variables on the dependent variable because:

- ✓ The stakeholders were not involved in all the five phases of project management.
- ✓ The success/performance of the 40/60 saving houses project at all sites was found to be poor.

## 5.2. Conclusion

Similar studies made by (Nyandika & Ngugi, 2014), Amirhossein, Vaughan & Bambang (2015) and EMILY (n.d) have found that the stakeholders' involvement in all the five project management phases were affecting the performance of construction projects statistically significantly at 5% significance level. But in this research it was not possible to generalize the influence of the independent variables on the dependent variable because:

- ✓ The involvement level of stakeholders in all the five project management phases was not high.

- ✓ The success/performance of the 40/60 saving houses project at all sites was found to be poor.

### 5.3. Recommendation

- ❖ All the key stakeholders should be involved as required starting from the very beginning in the project management of 40/60 saving houses development project.
- ❖ To enhance the involvement level of contractors and consultants the client needs to engage them as early as possible through, for example, use of an integrated project delivery method.

### 5.4. Suggestions for Further Research

The main objective of the research was to check whether stakeholders' involvement in the five project management phases influences the performance of 40/60 saving houses development project. But, even though the assessment and comparison of stakeholders' involvement level was performed meaningfully, the influence of stakeholders' involvement on the success/performance of 40/60 saving houses development project did not give meaningful results because:

- The stakeholders were not highly involved in all the five phases of project management.
- The success/performance of the 40/60 saving houses project in all sites was found to be poor.

Therefore, the researcher suggests that other researchers to conduct this type of study by mixing projects from private and public sector (because they could have a difference in performance).

## References

- 1) Abebe Sahle (2018), "Determinants of project performance: the case of 40/60 housing projects in Ayat site, Addis Ababa.
- 2) Albert, H. (2004), "Handbook of Project Management Procedures", England: TTL

- publishing Ltd.
- 3) Cooper, D. R., & Schindler, P. S. (2006), "Business Research Methods", New Delhi: Tata McGraw Hill.
  - 4) Cooper, D. R., & Schindler, P. S. (2006), "Business Research Methods". New Delhi: Tata McGraw Hill.
  - 5) Cortina, J.M. (1993). "What is coefficient alpha? An examination of theory and applications". *Journal of Applied Psychology*. **78**: 98–104. [CiteSeerX 10.1.1.527.7772](#). [doi:10.1037/0021-9010.78.1.98](#)
  - 6) Coulter, M. K., & Coulter, M. K. (2002), "Strategic management in action" (p. 7). Upper Saddle River, NJ: Prentice Hall.
  - 7) Creighton, J. L. (2005), ""The public participation handbook: Making better decisions through citizen involvement".
  - 8) Creswell, (2014), "Research design: qualitative, quantitative, and mixed methods approaches".
  - 9) Curley, M. Steve and Ricky, (2006), "Voluntary Management", Mobilization of the Community Resources, 195.
  - 10) David Baccarini (1999), "The Logical Framework Method for Defining Project Success".
  - 11) David S.Moore (2000), "the basic practices of statistitics" pp 550-552
  - 12) Duncan, W. R. (1996), "A guide to the project management body of knowledge".
  - 13) Ellen Marshall (n.d), "The Statistics Tutor's Quick Guide to Commonly Used Statistical Tests".
  - 14) EMILY MANDALA, "influence of stakeholder's involvement in project management on the performance of road construction projects in kenya: a case of bondo sub county, siaya county".
  - 15) Freeman, R.E., (1984), "Strategic Management: a Stakeholder Approach".
  - 16) Hamed Taherdoost, "Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research".
  - 17) Kothari,C.R.(2004), "Researchmethodology:Methodsandtechniques",NewDelhi:NewAge International (P) LimitedPublishers.
  - 18) Lekunze, P., (2001), "A critical Success Factors Model for Projects Rise in Planning and Implementation", Proceedings of the 7th European Conference on Information Systems Reports.
  - 19) Low Sui, Pheng, Ke-Wei, Phe, (1996), "A framework for implementing TQM in construction".
  - 20) Luis F. Alarcón and Alfredo Serpell, "PERFORMANCE MEASURING BENCHMARKING, AND MODELLING OFCONSTRUCTION PROJECTS".
  - 21) Lukas, J. A. (2012), "How to make earned value work on your project", Paper presented at PMI® Global Congress 2012—North America, Vancouver, British Columbia, Canada. Newtown Square, PA: Project Management Institute.
  - 22) Malunga, C. & Banda, C., (2004), "Understanding Organizational Sustainability through African Proverbs", Washington: Pact Publications.
  - 23) Melody A. Hertzog, 2007, "Considerations in Determining Sample Size for Pilot Studies".
  - 24) Mohammed Zain(2002) Criteria of project success: An exploratory re-examination

- 25) Nijkamp, M.L. & Tanis, C. (2002), "The project System Experience – from Adoption of Success, Novartis Foundation for Sustainable Development. (2004). Development Assistance at the Threshold of the 21st Century Report.
- 26) Nyandika, O. F & Ngugi, K . (2014), "Influence of Stakeholders' Participation on Performance of Road Projects in Kenya National Highways Authority", *European Journal of Business Management*, 1 (11), 384-404.
- 27) Olander, S., & Landin, A. (2005), "Evaluation of stakeholder influence in the implementation of construction projects", *International journal of project management*, 23(4), 321-328.
- 28) Olander, S., (2007), "Stakeholder impact analysis in construction project management" pp. 277–287.
- 29) PMI (project Management Institute), 2013.
- 30) Rose , K . H ., (1995), "A performance measurement model", *Quality Progress*.
- 31) Samuel MenzaMkutano, "PROJECT MANAGEMENT PRACTICES AND PERFORMANCE OF NON-GOVERNMENTAL ORGANIZATIONS PROJECTS IN NAIROBI CITY COUNTY, KENYA", *International Academic Journal of Information Sciences and Project Management* | Volume 3, Issue 3, pp.1-22.
- 32) Sascha Delz1, "ETHIOPIA'S LOW-COST HOUSING PROGRAM", *How Concepts of Individual Home-Ownership and Housing Blocks Still Walk Abroad*.
- 33) ShahrzadKhosravi and HamidrezaAfshari, "a Success Measurement Model for Construction Projects", *Engineering and Construction Division, Mapna Group Co*.
- 34) SisayRegassa(2018), "Applied Econometrics for Management (MGMT- MSC 5411)" pp 93
- 35) Slevin& Pinto., (1987, "Balancing Strategy and tactics in Project Implementation", *Sloan Management Review* 29. Vol1, pp. 33-34.
- 36) Sui Pheng, L., &Ke-Wei, P., (1996), "A framework for implementing TQM in construction", *The TQM Magazine*, 8(5), 39-46.
- 37) UN-HABITAT (2010), "The Ethiopia Case of Condominium Housing: The Integrated Housing Development Programme", *United Nations Human Settlements Programme: Nairobi*.
- 38) UTAFITI SERA POLICY BRIEF, December (2017). *The Integrated Housing Development Program: Identifying Strengths and Gaps*.
- 39) WerkuKoshe, K. N. Jha. "Investigating Causes of Construction Delay in Ethiopian Construction Industries", *Journal of Civil, Construction and Environmental Engineering*. Vol. 1, No. 1, 2016, pp. 18-29. doi: 10.11648/j.jccee.20160101.13.
- 40) Amirhossein Heravi a, Vaughan Coffey & Bambang Trigunarsyah, "Evaluating the level of stakeholder involvement during the project planning processes of building projects".
- 41) G Otim and HM Alinaitwe, "FACTORS AFFECTING THE PERFORMANCE OF PAVEMENT ROAD CONSTRUCTION PROJECTS IN UGANDA".
- 42) Albert PC Chain, "Framework for measuring success of construction projects".
- 43) Jeffrey K. Pinto, "Project Management achieving competitive advantage".
- 44) Agata Czarnigowska, Piotr Jaskowski& Slawomir Biruk, "project performance reporting and prediction: extensions of earned value management"

- 45) Sekou MaroufMagassouba, Abdul Malek Bin A. Tambi, Baker Ibrahim Alkhlaifat, Abdul Aziz Bin Abdullah, "Influence of Stakeholders Involvement on Development Project Performance in Guinea ".
- 46) PM Newsletter (2007), Interpreting the Results from Earned Value Performance Measurement Issue 43 – April 2007
- 47) Yang, J. " an investigation of stakeholder analysis in urban development projects: Empirical or rationalistic perspectives", International Journal of project management. <http://dx.doi.org/10.1016/j.ijproman.2013.10.011>.

## Appendix A

Table A-1: **Statistical tests for comparing parameters based on their data type (Source: David,2000)**

Comparing:	Dependent (outcome) variable	Independent (explanatory) variable	Parametric test (data is normally distributed)	Non-parametric test (ordinal/ skewed data)
The averages of two independent groups	Ordinal/quantitative	Nominal/Ordinal/quantitative	Independent t-test	Mann-Whitney test
The averages of more than three independent groups	Ordinal/quantitative	Nominal/ordinal/quantitative	One-way ANOVA	Kruskal-Wallis test
The average difference between paired (matched) samples	Ordinal/quantitative	Time/ Condition variable	Paired t-test	Wilcoxon signed rank test
More than three(3+) measurements on the same subject	Ordinal/quantitative	Time/ condition variable	Repeated measures ANOVA	Friedman test

## Appendix B:

Table B-1:Tests of Normality from SPSS-23

	Kolmogorov-Smirnov (for n>50)	Shapiro-Wilk (n<50)
--	-------------------------------	---------------------

	Statistic	df	Sig.	Statistic	df	Sig.
Stakeholder Involvement in project Identification	.313	77	.000	.746	77	.000
Stakeholder Involvement in project Initiation	.325	77	.000	.763	77	.000
Stakeholder Involvement in project planning	.308	77	.000	.771	77	.000
Stakeholder Involvement in project Implementation	.256	77	.000	.876	77	.000
Stakeholder Involvement in project evaluation & monitoring	.258	77	.000	.787	77	.000

## Appendix C:

**Table C-1: Kruskal Wallis Test Statistics using SPSS-23**

	Stakeholder Involvement in project Identification	Stakeholder Involvement in project Initiation	<b>Stakeholder Involvement in project planning</b>	Stakeholder Involvement in project Implementation	Stakeholder Involvement in project evaluation & monitoring
Chi-Square	3.289	3.367	<b>9.426</b>	5.332	4.166
df	2	2	<b>2</b>	2	2
Asymp. Sig.	.193	.186	<b>.009</b>	.070	.125

**Table C-2: Mann-Whitney U Test Statistics using SPSS-23**

Comparison of stakeholders	Test	Stakeholder Involvement in project Identification	Stakeholder Involvement in project Initiation	Stakeholder Involvement in project planning	Stakeholder Involvement in project Implementation	Stakeholder Involvement in project evaluation & monitoring
Project managers Vs Project coordinators	Mann-Whitney U	260.000	233.000	197.000	209.000	258.000
	Asymp. Sig. (2-tailed)	.938	.549	.199	.299	.908
Project managers Vs Branch managers	Mann-Whitney U	43.500	47.000	12.500	34.000	36.000
	Exact Sig. [2*(1-tailed Sig.)]	.106 <sup>b</sup>	.136 <sup>b</sup>	<b>.004<sup>b</sup></b>	.056 <sup>b</sup>	.065 <sup>b</sup>
Project coordinators Vs Branch managers	Mann-Whitney U	5.000	4.000	.500	3.500	4.500
	Exact Sig. [2*(1-tailed Sig.)]	.194 <sup>b</sup>	.133 <sup>b</sup>	<b>.012<sup>b</sup></b>	.085 <sup>b</sup>	.133 <sup>b</sup>

## Appendix D:

Tables D1-D5: Results of Multicollinearity test using SPSS-23

Table D-1

Table D-2

Model 2	Collinearity Statistics	
	Tolerance	VIF
Stakeholder Involvement in project Initiation	.633	<b>1.579</b>
Stakeholder Involvement in project planning	.624	<b>1.602</b>
Stakeholder Involvement in project Implementation	.487	<b>2.052</b>
Stakeholder Involvement in project evaluation & monitoring	.475	<b>2.104</b>

Model 2	Collinearity Statistics	
	Tolerance	VIF
Stakeholder Involvement in project planning	.630	<b>1.587</b>
Stakeholder Involvement in project Implementation	.488	<b>2.047</b>
Stakeholder Involvement in project evaluation & monitoring	.471	<b>2.122</b>
Stakeholder Involvement in project Identification	.665	<b>1.503</b>

Initiation

Table D-3

Table D-4

Model 2	Collinearity Statistics	
	Tolerance	VIF
Stakeholder Involvement in project Implementation	.486	<b>2.058</b>
Stakeholder Involvement in project evaluation &	.511	<b>1.955</b>
Stakeholder Involvement in project Identification	.288	<b>3.472</b>
Stakeholder Involvement in project Initiation	.277	<b>3.613</b>

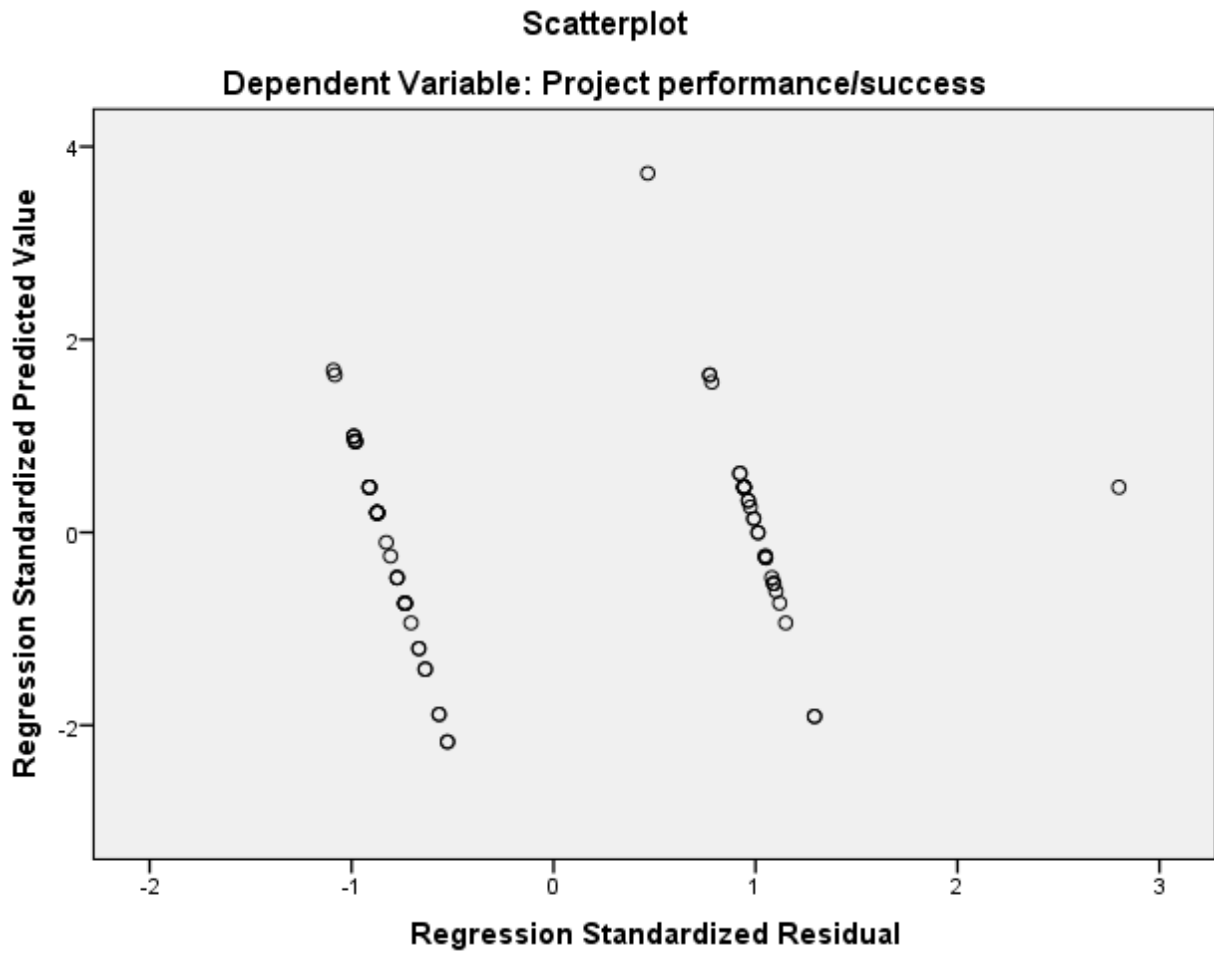
Model 2	Collinearity Statistics	
	Tolerance	VIF
Stakeholder Involvement in project evaluation &	.922	<b>1.084</b>
Stakeholder Involvement in project Identification	.285	<b>3.506</b>
Stakeholder Involvement in project Initiation	.272	<b>3.675</b>
Stakeholder Involvement in project planning	.616	<b>1.623</b>

Table D-5

Model 2	Collinearity Statistics	
	Tolerance	VIF
Stakeholder Involvement in project evaluation &	.922	<b>1.084</b>
Stakeholder Involvement in project Identification	.285	<b>3.506</b>
Stakeholder Involvement in project Initiation	.272	<b>3.675</b>
Stakeholder Involvement in project planning	.616	<b>1.623</b>

## Appendix E:

Table E-1: plot of the standardized **predicted value** against standardized **residuals** using SPSS-23



## Questionnaire

**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF BUSINESS & ECONOMICS**  
**Master of Business Administration**


**Dear Participants:-**

My name is **Hagos G/mariam**. I am **MBA** student in Management at **ADDIS ABABA UNIVERSITY, COLLEGE OF BUSINESS & ECONOMICS**. As part of my MBA project work, I am conducting a research as partial fulfillment of the requirements for the Master's Degree in Business Administration (MBA). The topic of the research that I am conducting is **“Stakeholder involvement in the construction of condominium houses\_ the case of 40/60 saving & housing projects in Addis Ababa”**.

Knowing that your response will be the main data that I am going to use to critically analyze **the influence of Stakeholder involvement on the performance of 40/60 saving & housing projects in Addis Ababa**, I kindly request you to fill the questionnaire genuinely and to the best of your knowledge. I know that you are so busy, but my study could not be fruitful without your participation. So, I beg you to take a few minutes to read the questions carefully before you answer them. And finally put your answers by **ticking (✓) or rating** (choosing the correct rate).

I assure you that the information you provide will remain confidential and it will only be used for academic purpose.

**Please do not hesitate to contact me whenever you require further clarification by:**

 **Telephone:** 09-78-10-41-61

 **Email:** vce2004@gmail.com

Yours sincerely!

## SECTION A: Personal Information

The questions in this part are related to the general information required from the respondent. So, please answer them by **ticking**(✓).

6. Gender

Male  Female

7. AgeBracket

Below 25 years  25 to 35 years   
35 to 45 years  45 to 55 years   
Above 55 years

8. What is your highest level of Education?

PHD  Masters   
Bachelors  Diploma

9. How many years of service do you have in the industry?

Less than 5 years  10 to 15 years   
5 to 10 years  15 to 20 years   
Above 20 years

10. What is your position?

Project manager of a contractor   
Project coordinator of a consultant  Branch manager of client

## SECTION B: INVOLVEMENT LEVEL OF STAKEHOLDERS

The questions in this part are related to the specific objectives of the study. Since the

questions will be used to determine the influence of stakeholders' involvement on the performance of 40/60 housing projects in Addis Ababa. Please read carefully and understand the questions and answer them to your level best by **ticking(✓)** or **rating**.

**I. Stakeholder involvement in project identification**

6. To what extent are you involved in the following aspects of project identification process in the 40/60 housing projects in Addis Ababa? (Where 1=Not at all, 2=Low level, 3=Moderate level 4 =Great extent and 5=Very Great extent)

Aspects of project identification process	Involvement level of stakeholder using a 5-point Likert scale				
	1	2	3	4	5
Stakeholder analysis					
Scanning the external environment					
Preliminary Project Approval					
Development preliminary proposal					

7. The average involvement level of project identification process in the 40/60 housing projects in Addis Ababa is \_\_\_\_\_ (skip it)

**II. Stakeholder involvement in project initiation**

8. To what extent are you involved in the following aspects of project initiation process in the 40/60 housing projects in Addis Ababa? (Where 1=Not at all, 2=Low level, 3=Moderate level, 4 =Great extent and 5=Very Great extent)

Aspects of project identification process	Involvement level of stakeholder using a 5-point Likert scale				
	1	2	3	4	5
Feasibility plan					
Terms of reference					
Documenting a project case					
Problem analysis					

9. The average involvement level in project initiation process in the 40/60 housing projects in Addis Ababa is \_\_\_\_\_ (skip it)

**III. Stakeholder involvement in project planning.**

10. To what extent are you involved in the following aspects of project planning phase in the

40/60 housing projects in Addis Ababa? (Where 1=Not at all, 2=Low level, 3=Moderate level, 4 =Great extent and 5=Very Great extent).

Aspects of project planning process	Involvement level of stakeholder using a 5-point Likert scale				
	1	2	3	4	5
Financial planning					
Resource specification					
Schedule planning					
Resource planning					

11. The average involvement level in the planning phase in the 40/60 housing projects in Addis Ababa is \_\_\_\_\_ (skip it)

**IV. Stakeholder involvement in project implementation**

12. To what extent are you involved in the following aspects of project implementation process in the 40/60 housing projects in Addis Ababa? (Where 1=Not at all, 2=Low level, 3=Moderate level, 4 =Great extent and 5=Very Great extent)

Aspects of project implementation process	Involvement level of stakeholder using a 5-point Likert scale				
	1	2	3	4	5
Team development					
Assigning and allocation of resources					
Execute project management plans					
Update project schedule					

13. The average involvement level in project implementation process in the 40/60 housing projects in Addis Ababa is \_\_\_\_\_ (skip it)

**V. Stakeholder involvement in project monitoring and evaluation**

14. To what extent are you involved in the following aspects of project monitoring and evaluation phase in the 40/60 housing projects in Addis Ababa? (Where 1-Not at all, 2-Less level, 3-Moderate level, 4 –Great extent and 5 -Very Great extent)

Aspects of project monitoring and evaluation process	Involvement level of stakeholder using a 5-point Likert scale				
	1	2	3	4	5
Feedback provisions					

Direction provision					
Correction of errors					
Reporting					

15. The average involvement level in project monitoring and evaluation phase in the 40/60 housing projects in Addis Ababa is \_\_\_\_\_ (skip it)

**SECTION C: PERFORMANCE OF 40/60 SAVING HOUSES IN ADDIS ABABA**

This part of the questionnaire is about the success/performance of 40/60 housing projects in Addis Ababa. So, please read them carefully and answer them to your level best by **ticking(✓)** for each aspect of **performance or success**

16. How do you rate the following measures of the performance of 40/60 saving houses in Addis Ababa? (5=Excellent, 4=Good, 3=Moderate, 2=Bad, 1=Poor)

Aspects of performance of 40/60 saving houses	Excellent	Good	Moderate	Bad	Poor
Completion on time					
Completion within budget					
Achieved Business Objectives					
User satisfaction					