



College of Business and Economics
Department of Business Administration

**FACTOR AFFECTING PROJECT PERFORMANCE OF 20/80
CONDOMINIUM HOUSING ON ADDIS ABABA CITY ADMINISTRATION
BOLE ARABSA SITE**

A Thesis Submitted to Addis Ababa University College of Business and Economics, Graduate Studies in Partial Fulfillment of the Requirements for the Degree of Master of Business Administration

BY

Yohannis Wolde

Advisor Name: Tewodros Wuhib (ASS.PRO)

SEPTEMBER, 2021

ADDIS ABAB, ETHIOPIA

Declaration

I hereby declare that the thesis entitled ‘‘Factors affecting the performance of 20/80 condominium housing projects in Addis Ababa, Bole Arabsa project’’ is my own original work and has not been submitted for any degree in any other University. It is offered for the award of the degree of Master of Business Administration from Addis Ababa University.

Name: Yohannis Wolde

Advisor Name: Tewodros wuhib (ASS..PRO)

Signature: _____

Signature: _____

Statement of Certification

This is to certify that the thesis prepared by Yohannis Wolde entitled: ‘’Factors affecting the performance of 20/80 condominium housing projects in Addis Ababa, Bole Arabsa project’’ and submitted in partial fulfillment of the requirements for the degree of Master of Business Administration from Addis Ababa University compiles with the regulations of the university and meets the accepted standards with respect to originality and quality.

Approved by: T

Internal Examiner: _____ Signature _____ Date _____

External Examiner: _____ Signature _____ Date _____

Advisor: Tewodros wuhib (ASS.PRO) Signature _____ Date _____

Chair of Department or Graduate Program Coordinator

Acknowledgments

First of all I want to thank the Almighty God for his limitless blessing in my life and bringing me to this end through many ups and down. Then I would like to express my sincere appreciation and gratitude goes to my advisor, Tewodros wuhib (ASS.PRO) for his deep, valuable guidance and counsel throughout the whole process of the study.

I would also like to thank staff of Addis Ababa city Housing construction office and also contractors and consultants I didn't forget your rationality. Last but not least, I would like to extend my deepest love, respect and appreciation to my families and all my friends for their support, understanding and encouragement.

Table of Contents

	Page
Acknowledgments.....	i
Table of Contents.....	ii
List of tables.....	v
List of figures.....	vi
Acronyms.....	vii
Abstract.....	viii
CHARTER ONE.....	1
INTRODUCTION	1
1.1 Background of the Study.....	1
1.2 .Statement of the problem	2
1.3. Research question.....	3
1.4. Objectives of the Study:	3
1.4.1. General Objective of the study:	3
1.4.2. Specific objective	4
1.5. Scope of the Study.....	4
1.6. Significance of the Study	4
1.7. Limitation of the study	5
1.8. Organization of the paper.....	5
1.9. Definition of Operational terms	5
CHAPTER TWO	8
LITERATURE REVIEW	8
2. Theoretical review	8
2.1. The Theory of Performance	8
2.2. Performance Management Concept	8
2.3. Performance Management Philosophies	9
2.4. Performance Management in housing Construction	10
2.5. Empirical Review	13

2.6. Conceptual frame work	15
2.6.1. Project management Actions	15
2.6.2. Project Procedure.....	15
2.6.3. Project Characteristics	15
CHAPTER THREE	17
METHDOLOGY	17
3.1. Research Design.....	17
3.2. Target population and sample method	17
3.2.1. Population of the study	17
3.3. Sampling technique	17
3.4. Data Type and Source	18
3.5. Method of data collection and instrument.....	18
3.6. Method of Data Analysis.....	18
3.7. Ethical Consideration	19
3.8. Reliability	19
CHAPTER FOUR.....	20
Introduction.....	20
4.1. Response Rate	20
4.2. Descriptive statistics of the respondents	20
4.2.1. Demographic analysis of the respondents	21
4.2.1.1. Analysis of Respondent Gender	21
4.2.2 Analysis of Respondent age	21
4.2.3. Analysis of Respondent Work Experience.....	22
4.2.4. Analysis of the respondent level of Education	22
4.3. Descriptive statistics.....	23
4.3.1. Descriptive analysis of project characteristics.....	23
4.3.2. Descriptive analysis of project management action	24
4.3.3. Descriptive Analysis of project procedure	25
4.3.4. Descriptive analysis of the dependent variables (project performance).....	25
4.3.5 Descriptive Analysis Summary for Independent variables.	26
4.4. Correlation analysis of the factor affecting project performance.....	26

4.5. Classical Linear Regression Model.....	27
4.5.1. Testing for normality	28
4.5.2. Test of autocorrelation.....	28
4.5.3. Multicollinearity	29
4.6. Regression analysis	30
4.7. Discussion	32
CHAPTER FIVE	34
SUMMARY, CONCLUSION AND RECOMMNDATION	34
5.1 Introduction	34
5.2 Summery	34
5.4 Conclusion.....	35
5.5 Recommendation.....	36
Reference	37
APPENDIX.....	42

List of tables

Table 3.1 Sample Size Determination	18
Table 3.2 Reliability Statistics	19
Table 4. 1 A response rate of the respondent.....	20
Table 4.2.Respondent Gender.....	21
Table 4.3 Age of the respondent.....	21
Table 4. 4. Respondent Work Experience in years	22
Table 4.5.Respondent level of Education	22
Table 4.6. Descriptive analysis of project characteristics.....	23
Table 4. 7.Descriptive Statistics of project management action	24
Table 4. 8.Descriptive Statistics of project procedure	25
Table 4. 9.Descriptive Statistics of project performance	25
Table 4. 10 summary for independent variable	26
Table 4. 11.correlation analysis interpretation.....	26
Table 4. 12 correlation analysis	27
Table 4. 13.Model Summary ^b	28
Table 4. 14. DW-statistics and limiting cases of autocorrelation	29
Table 4.15. Collinearity statistics.....	30
Table, 4.16 Model Summary	30
Table 4. 17 ANOVA ^a	30
Table 4. 18 Coefficient	31

List of figures

Figures 2. 1. conceptual framework.....	16
Figure 4- 1.Histogram.....	28

Acronyms

IHDP	Integrated housing development program
KPI	Key performance indicator
QPMS	Quality performance management system
DW	Durbin Waston
SPSS	Statistical package for social science

Abstract

The aim of this study is to identify the main factors affecting the performance of 20\80 condominium housing project on Addis Ababa city Administration Bole Arabsa site. The study adopts explanatory research design with quantitative method. The study considered the total population of 179 respondents in Bole Arabse project. These respondents were selected using census method. Primary data was collected through questionnaire. The questionnaires were analyzed using descriptive statistics, correlation and regression with the support of statistical software program namely Statistical Package for Social Science (SPSS version 21) for analyses and summarization purposes. The findings of the study shows that project procedure are the dominant factors that affect performance. Whereas project characteristics and project management action has the next dominant factors.

The Correlation results indicate that Project characteristics and project procedure had strong relationship with project performance and also project management action had a moderate relationship. And also the Regression analysis implies the independent variable explain 65 % of the variation of the dependent variable (project performance). The multiple correlation coefficients(r), with a value of 0.806, represent the correlation ratio indicating the existence of link between project performance and its main factors. So the stakeholders of the project (owners, conductor's consultants) should implement proper planning, evaluating, monitoring, upgrading of manpower skills and avoid delay of payment to solve low performance of the project.

Key word: Project Characteristics, Project Management action, Project Procedure, Project Performance

CHARTER ONE

INTRODUCTION

1.1 Background of the Study

The Integrated Housing Development Program (IHDP) is a government-led and financed housing provision program for low-and middle-income households in Ethiopia. The program Launched in 2004 (1996 E.C) by State Minister Arkebe Oqubay, the Mayor of Addis Ababa. The initial goal of this program was to make 400,000 condominium units, create 200,000 jobs, promote the development of 10,000 micro and small enterprises, improve the capacity of the construction sector, renew inner-city slum areas, and promote homeownership for low-income households (UN-HABITAT 2011).

Most of the houses in Addis Ababa are below quality standard and lack of adequate space. The extent of provision for water supply, electricity, and drainage is very minimal also it doesn't fulfill average sanitation standard. The life and health of people living in housing of such poor quality and with such insufficient provision for water, sanitation, and drainage are under continuous threat (Azeb 2007) . Studies have shown that without major improvements in housing markets and in the growth and improved provision of infrastructure and service, it is expected that the population living in such environmental enlarge very rapidly (Robert 1997)

The Key performance indicators in construction industry framework consist of three main groups: time, cost, and quality (Deter 2000). In the realm of project management, the schedule, cost and quality achievement is also referred to as the iron triangle. Out of these three aspects, it is the achievement of schedule and cost compliances that the project management is attending to most of the time. This results in a half-hearted attempt to achieve quality at project sites. In order to achieve the schedule and cost objectives, project quality is sometimes overlooked. Out of the commonly used project performance criteria the quality compliance has come second next to schedule compliance (Iyer and Jha 2005). Lower quality consequences may be in terms of loss in productivity, additional expenditures by way of rework and repair, re-inspection and retest in the short term. In the long term, poor quality can hurt reputation, and if the company continues in the same way it might have to close its shop for want of new projects. If a number of construction

companies of a country start neglecting the quality aspects in their projects, this also starts reflecting on the reputation of the country.

In spite of the expected contribution, 20/80 condominium projects in Addis Ababa city Administration fails according to performance indicators. In addition, performance measurement systems are not effective and efficient to solve this problem. Construction projects performance problem appears in many aspects in the projects. They fail in time, cost and quality performance.

Therefore, this study intends to identify the factors affecting the performance of 20/80 condominium housing projects in Addis Ababa, Bole Arabsa project.

1.2 .Statement of the problem

The Addis Ababa housing development project office aim is to construct standard and quality houses affordable to low and middle-income groups to make them owners of their House in the year 2025. The city government formulated vast public housing program called Integrated Housing Development program (IHDP) to reduce residential housing problem. It can be formulated by saving of the residence and subsidiary of government. It indicate scarce of the resource specially finance, land and manpower. The city government allocated budget to manage the construction process. But it doesn't achieve their goal because of project characteristics, project management action and project procedure problem.

(Atkinson 1999) reveals that client's will be not satisfied if the end product fails to meet their price, quality, time frame, functionality and delivery performance standard. In view of this, the consultants will not develop the skills and knowledge, or make the effort to design and manage processes, unless the client meets their required employment conditions. More so, the contractors and suppliers may not continue to deliver good products and resources to clients or to any company that fails to give them an opportunity to earn a reasonable return on the investment of their time and capital.

According to (Lukas 2008) 800,000 peoples waiting their condominium house Hence if the performance of the condominium housing project is not assessed properly and made remedial measures for the challenges by the concerning it may take 55 years to provide only for those registered house seekers. On an average end-user pay more than 45,000 birr for basic

maintenance and replace cost. End-users are paying very high price for the houses due to inefficiencies of housing management and poor project performance by Addis Ababa Condominium Housing Agency (Fetene 2008).

According to (H. B. Gemeda 2012) most of constructions projects in Ethiopia are characterized by time overrun cost overrun and poor quality construction due to poor performance of the contractor and weak project participant commitment. Completion of the project is taking more than 200% additional time since the construction is started. End users are waiting more than 10 years to get the houses. (H. B. Gemeda 2012) Further indicated the households are subject to unexpected maintenance costs and economical issue at large. Poor quality of sanitary system, poor quality of door and window, poor quality of water pipes need an extra maintenance and replacement cost because of poor housing management (Adamu 2012).

Therefore, this study was intended to identify the factors affecting project performance of 20/80 condominium house projects in Bole Arabsa site by including key performance indicators and by using enough samples from condominium projects that are under construction.

1.3. Research question

1. How project management actions related factors affect project performance of 20/80 condominium housing project in Addis Ababa Bole Arabsa site?
2. What is the challenge of project procedure on project performance of 20/80 condominium housing project in Addis Ababa Bole Arabsa site?
3. How project characteristics influence on project performance of 20/80 condominium housing project in Addis Ababa Bole Arabsa site?

1.4. Objectives of the Study:

1.4.1. General Objective of the study:

The general objective of the study is to identify the major factors affecting project performance of the 20/80 Condominium-housing in Addis Ababa city government housing project Bole Arabsa site.

1.4.2. Specific objective

1. To identify the influence of management actions on project performance of 20/80 condominium housing project in Addis Ababa Bole Arabsa site
2. To determine the influence of project procedure on project performance of 20/80 condominium housing project in Addis Ababa Bole Arabsa site
3. To analyze the influence of project characteristics on project performance of 20/80 condominium housing project in Addis Ababa Bole Arabsa site

1.5. Scope of the Study

The study was determined to examining the performance problems outfacing 20/80 condominium housing project in Addis Ababa. Some condominium projects are done by the city government; this study is terminated to condominium projects under construction. This is due to the fact that the researcher can reach contractors and consultants in the projects which are under construction. For this reason, the study was conducted in Bole Arabsa sites. Regardless off the number of data collection instruments, questionnaire was used to cover the larger sample. This study has used contractors, and consultants as respondents.

1.6. Significance of the Study

The study was set to assess factors providing substandard of performance of project on Addis Ababa city administration 20/80 condominium houses at Bole Arabsa site that will support in identifying solutions to avoid project delay, upgrade project quality life, and ensure sustainable development and improving community living standard. It is also believed that this study will explore possible sources of performance defects and it gives significant benefit to fulfill client's satisfaction on condominium housing construction of Addis Ababa city administration. Finally the finding of this study was support those partners of the project like, city government, contractors, consultant and households to determine productive solution on the project performance problem of Addis Ababa city housing project.

1.7. Limitation of the study

This study was exhausted with an objective of identifying factors affecting project performance of 20/80 condominium housing on Addis Ababa Bole Arabsa site. Despite the number of condominium construction projects in Addis Ababa, this study has used only one condominium projects site in Addis Ababa. Although different condominium projects were constructed in the city, this study has used only projects that are currently under-construction to easily access the targeted respondents.

1.8. Organization of the paper

This study has organized into five chapters. The first chapter is the introductory part of the study which consists of background of the research, statement of the problem, research question, objectives, significance, scope and limitation of the study. The second chapter deals with related review of literature (theoretical and empirical review) relevant to this study. The third chapter discusses the research methodology and also properly data type design and instrument. The collected data from the subject of the study are carefully analyzed and interpreted in chapter four. The fifth chapter presents summary, conclusions and recommendations on the findings of the study.

1.9. Definition of Operational terms

Condominium: it is a Single, individually owned housing unit in a more unified building. The condominium owner holds sole title to the unit, but owns the land and common property (elevators, halls, roof, stairs, green area etc.) jointly with other unit house holders, and shares the maintenance and repair expenses on the common property with them. Housing owner pays property taxes only on his or her unit, and may mortgage, fee or sell it just like any other personal assets. And also the word condominium divides into the prefix —con|| means sharing and —dominium|| which means, ownership. It simply means sharing with others. (Condominium Proclamation No. 370/2003).

Condominium housing: is a name given to the form of housing tenure where each resident household owns their individual unit, but equally shares rights and responsibility for the communal areas and services of the building, such as hallways, heating systems, green area and

elevators. Individual ownership over is not allowed on plots of land. All of the land on a condominium site is owned by all home owners (UN-HABITAT 2011).

Project: it is a temporary Endeavour undertaken to create a unique product, service, or result. The temporary nature of projects indicates that a project has a definite beginning and conclusion. The conclusion is reached when the project's objectives have been achieved or when the project is finished because its objectives will not or cannot be met, or when the need for the project no longer occur. A project may also be terminated if the client (customer, sponsor or champion) wishes to lapse the project (Kenzier 2004).

Performance: The accomplishment of a given construction projects against the contractual cost, time and quality standards.

Project Performance: It is an overall project performance in meeting the expectation of customers or clients to the condition of customers in time scheduled, quality specified and budget allocated. Quality is expectation of the client the project to meet based on the specification. It is a project time expected to complete the project activities. It is a budget allocated to complete the project (Barrett 2000)

Time: It is the length of time that extends the project duration (Atkinson 1999)

Cost escalation: changes in the cost or price of particular goods or services in a given economy above a period.

Quality: fitness for purpose (Newton 2007) .

Key performance indicator (KPI): is a type of performance measurement which evaluates the success of an organization or of a particular activity in which it engages.

Time overruns: is defined as the extension of time beyond planned completion dates.

Cost overruns: is the difference between the original cost estimate of project and actual construction cost on completion of works.

Owner: Organization for whom the construction project is being undertakes.

Contractor: A natural or juridical person under contract with an owner to construct the construction projects.

Project characteristics: project characteristic is defined in terms of project scope, nature of project and complexity of project. Project scope refers to the type of project, the number of stories and the sophistication of the project.

Project Procedure: Project procedure comprises the concept of procurement form and the method of tendering. The fragmental nature of the construction industry, the fact that no two construction projects are identical and the resulting ephemeral nature of the project organization places great dependence on the project team in setting up the construction process and bringing the project to a successful conclusion.

Project Management Actions: The management action is primarily concerned with decision making for planning and controlling organizational endeavor. The managerial subsystem can be seen as spanning the entire organization by relating the organization to the environment, setting the goals, developing comprehensive strategic and operational plans, designing the structure and establishing control process.

CHAPTER TWO

LITERATURE REVIEW

2. Theoretical review

2.1. The Theory of Performance

The Theory of Performance develops and relates six original concepts (italicized) to form a framework that can be used to explain performance as well as performance improvements. To perform is to produce valued results. A performer can be an individual or a group of people engaging in a synergetic effort. Developing performance is a journey, and level of performance describes position in the journey (Don Elger 2010). Existing level of performance depends holistically on 6 components: context, level of knowledge, levels of skills, level of identity, personal factors, and fixed factors. Three axioms are proposed for effective performance improvements. These involve a performer's mindset, immersion in an enriching environment, and engagement in reflective practice. Performing at a higher level produces results that can be classified into categories: (i) quality increases; results or products are more effective in meeting or exceeding the expectations of stakeholders; amount of waste goes down, (ii) capability increases; ability to tackle more challenging performances or projects increases, (iii) capacity increases; ability to generate more throughput increases, (iv) knowledge increases ; depth and breadth of knowledge increases, (v) skills increase; abilities to set goals persist, maintain a positive outlook, etc. increase in breadth of application and in effectiveness and (vi) identity and motivation increases; individuals develop more sense of who they are as professionals; organizations develop their essences.

2.2. Performance Management Concept

Performance is created by a company through environmental reporting, following the way of creating value. Performance is a multi-dimensional concept. On the most fundamental level, (Motowidlo 1993) make a distinction between task and contextual performance. Task performance relate to an individual's proficiency with which he or she performs activities which contribute to the organization's 'technical core'. This contribution can be both direct (e.g., in the case of production workers), or indirect (e.g., in the case of managers or employees personnel).

Contextual performance refers to actions which do not contribute to the technical center but which support the organizational, social, and psychological environment in which organizational aim are pursued. Contextual performance includes not only behaviors such as helping coworkers or being a reliable associate of the organization, but also making suggestions about how to progress work procedures.

2.3. Performance Management Philosophies

Performance management philosophers Edwards Deming, Joseph Juran and Philip Crosby have developed different philosophies on how to describe manage and develop performance.

Deming (1998) emphatically stated that managerial practices are in need of a radical overhaul and he has developed “14 points” constitutes the core of his program for achieving performance excellence. The Deming philosophy is an all-or-nothing proposition; none of the 14 points can be viewed in isolation and companies cannot be selective in the ones they wish to implement. His 14 points include; produce constancy of purpose towards enhancement or improvement of product and service, with the aim to become competitive, stay in business and provide jobs; Adopt the new philosophy, top management and everybody; Cease dependence on inspection to achieve quality; End the practice of awarding business on the basis of price tag; Improve constantly and forever the system of production and service; Institute training on the job; Teach and institute leadership; Drive out fear. Create trust. Create a climate for innovation; Break down barriers between departments; Eliminate slogans, exhortations and targets for the workforce; Eliminate work standards (quotas); eliminate barriers that rob people of pride of workmanship; promote education and self-improvement for everyone; and Take action to accomplish transformation.

(Juran 1998) defines performance as “fitness of the project”. It classified into four groups: quality of design, quality of conformance, availability and field service. Quality of design targeted on market research, the product concept and design specifications. Quality of conformance includes technology, manpower, and management. Availability focuses on reliability and logistical support. Field service quality comprises promptness, competence, and integrity. Juran provides ten essential stages explaining his perspective: Create awareness of the need and opportunity for quality improvement; Set goals for continuous improvement; Build on

organization to achieve goals by establishing a quality council, identifying problems, selecting a project; Give everyone training; Carry out projects to solve problems; Report progress; Show recognition; Communicate results; Keep a record of successes; and Incorporate annual improvements into the company's regular systems and processes, and thereby maintain momentum.

The fundamental nature of Crosby's quality philosophy is embodied in what he calls the "Absolutes of Quality Management" and the "Basic Element of Improvement". Crosby's approach is summarized in five points for quality management (Cabe 1998): Quality means conformance to requirements, not elegance; There is no such thing as a quality problem; problems must be identified by those individuals or departments that cause them; There is no such thing as the economics of quality; it is always cheaper to do the job right the first time; The only performance measurement is the cost of quality; and The only performance standard is "Zero fault".

2.4. Performance Management in housing Construction

The construction industry play a great role to stimulate the growth of one's country economy and also it referred to as an engine of growth. The construction industry is described by mostly restricted, fragmented and heavily structured system. The skills, reliability and direction of professionals and practitioners in the industry have developed in an environment of specialization, differing traditions, contains large number of parties as clients like, contractors, consultants, stakeholders, shareholders and others and often opposing interests at integration, to manage the components and risk of construction. It is mandatory to developing a best performance system on the first step towards improving performance in construction industry.

According to (Nee 1996) a performance system consists of the performance policy, organization structure, Procedures, Processes, training and performance manual. The performance policy shall be relevant to the organization's goals and the expectations and needs of its customers. It must state goals and objectives that are measurable and pertinent to the organization's functional plan and the expectations and needs of its customers. The documented quality system should be designed to carry out goals and objectives of the performance policy. The first objective in establishing a performance system should be to convince the internal needs of the organization.

Therefore it should be profitable, well-matched or adaptable with accepted good practice within the industry concerned and favorable to the organization. There are two types of systems for implementation of quality: centralized and decentralized systems.

According to (Ashford 1989) Centralized systems lay stress on the practice of quality control or the operational techniques and activities that are used to fulfill requirements for quality. On a centralized system, the quality related operations would be the responsibility of a quality control department with its own management hierarchy independent of production departments. The difference between centralized and de-centralized systems is that in the latter the responsibility for controlling performance is placed firmly on the shoulders of those actually doing the work. This follows the principle that production management has an obligation to make things fulfill with designation, a duty which should not be allowed to refinish or to share with others.

According to (Evans 1992) the purpose of the performance manual is to provide a sufficient description of the quality management system which is serving as a permanent suggestion in the implementation, maintenance and repair of that system. To the extent that each company is exceptional, it follows that every company's performance manual should be an original document. The manuals could be in five sections; control, policy, organization, instruction and project performance assurance.

Control the manual to the reader, establishes its domination and describes the method approve to keep the manual up-to -date and to inform users of changes that have been formed. The Company Policy states the objectives and creates the principles with in which the company quality systems are expected to comply. Company Organization describes the activities of the company and sets out its management structure. It defines the duty and responsibilities attached to the principal managerial posts and establish the status and duties of the company quality assurance manager. Company instructions expected and identified all company instructions, which disclose to the management of quality and cross-reference them to the relevant items of standards. Project performance Assurance sets out the procedures for the assignment of performance assurance engineers to projects and outlines their duties. It then characterized the preparation of project performance practice and project procedures (Evans 1992)

According to (CIB 2002) the major task of project management in construction is primarily to coordinate professionals in the project team to enable them to make their best possible contribution to the project efficiently. In addition to knowledge of project management and general Management, managing construction projects requires an understanding of the design and construction process (Henderickson 2015). Both the ability to communicate and the ability to manage team are also very important for continuous successful management of construction projects (Chen,Partington and qiang 2009).

According to (Jacksons 2004) Construction management (CM) involves the planning, scheduling, evaluation, and controlling of construction tasks or activities to accomplish specific objectives by effectively allocating and utilizing appropriate labor, material, and time resources in a manner that reduce costs and maximizes customer/owner satisfaction.

2.5. Empirical Review

(Chua 1999) have elaborated a hierarchical model for construction project success for different project objectives. They find that the project performance is convinced or concerned by four main project aspects, namely, project characteristics, contractual project participants, conceptual arrangement and interactive processes.

(Arditi D. 1998) find that management commitment to continuous performance improvement, management leadership in promoting high process quality; quality training of all personnel; efficient and effective teamwork to upgrade quality issues at the corporate level; and cooperation between events taking part in the project are generic factors that affect process quality.

(Ledbetter 1994) has developed a performance management system (QPMS) that trace labor costs in three main types: normal work, rework (deviation correction) and quality management work (prevention and appraisal). He has assumed that the cost of quality to be the sum total of quality management and rework. He finds QPMS to be important to promoting and create awareness and improving the understanding of the quality process. In addition it is facilitating good communication: minimizing the overall cost of quality and directing the management to the areas where continuous quality improvements could be made.

(K. & Jha 2005) identified factors that affect the performance of construction projects. They identified that lack of management commitment to continual quality improvement; lack of quality training of staff; management leadership and efficient team work among stakeholders are factors in affecting the quality performance of the projects.

(Enshassi 2009) material and equipment cost rarely affect the quality of the construction projects. The rate of material ordered and delivered late to construction sites are also other constraints of the projects' quality. In addition to these factors this study has stated that contractual relationships between consultants and contractors are affecting the quality of the projects. (Enshassi 2009)) further stated payment delay from owners to contractor affects the performance of construction project.

(Jamaludin 2014) Identified the factors affecting the cost and quality of construction. They include dishonest practices and kickbacks; poor planning; low level of competition and competitors; absence of coordination between designers and contractors; poor financial control on site; material and time wastage on site; previous weak experience of contractor and frequent design changes.

(Chan and Kumaraswamy 1996) stated that poor site management, unforeseen ground conditions and weak decision making involving all project teams are problems and changes from original design arise during the construction phase are leading to problems in cost and time performance. (Okuwoga 1998) stated that cost and time performance has been identified as main problems in the construction industry globally.

(M 1999) remarked that project complexity, client type, working experience and communication of contractor, consultant and management team are highly correlated with the time performance; whilst project complexity, both client characteristics and contractor characteristics are highly interrelated with the cost performance.

(Mallawaarachchi 2015) identified that factors that affect quality of the construction performance especially on the housing projects such as lack of technical and professional skills and resources to perform task, lack of committed employee and management team and poor performance of education and training to drive the quality improvement process.

According to (Mane 2015) Other impacts that affecting performance of construction industry included project managers competence, less monitoring and feedback, lack of on-site project manager, inadequate project team capability, poor planning and evaluation techniques, poor/bad information and communication channels, absence of early and continuous client/consultant consultation by contractor and inefficient project managers experience.

Finally they identified the government must focused on collaborative with real estate developer to create competitiveness, proper planning, avoid miss management of material and develop construction performance between construction project participants.

2.6. Conceptual frame work

For the study, the researcher uses the Project characteristics, Project management action and Project procedure as independent variables and project performance as dependent variables

2.6.1. Project management Actions

Project management action is a key for project success. (Hubbard 1990) Suggested that by using the management tools, the project managers would be able to plan and execute their construction projects to maximize the project's chances of success. Then, in project management include employee handling, control mechanisms, feedback capabilities decision making effectiveness, monitoring, project organization structure, plan and schedule followed, and related previous management experience.

2.6.2. Project Procedure

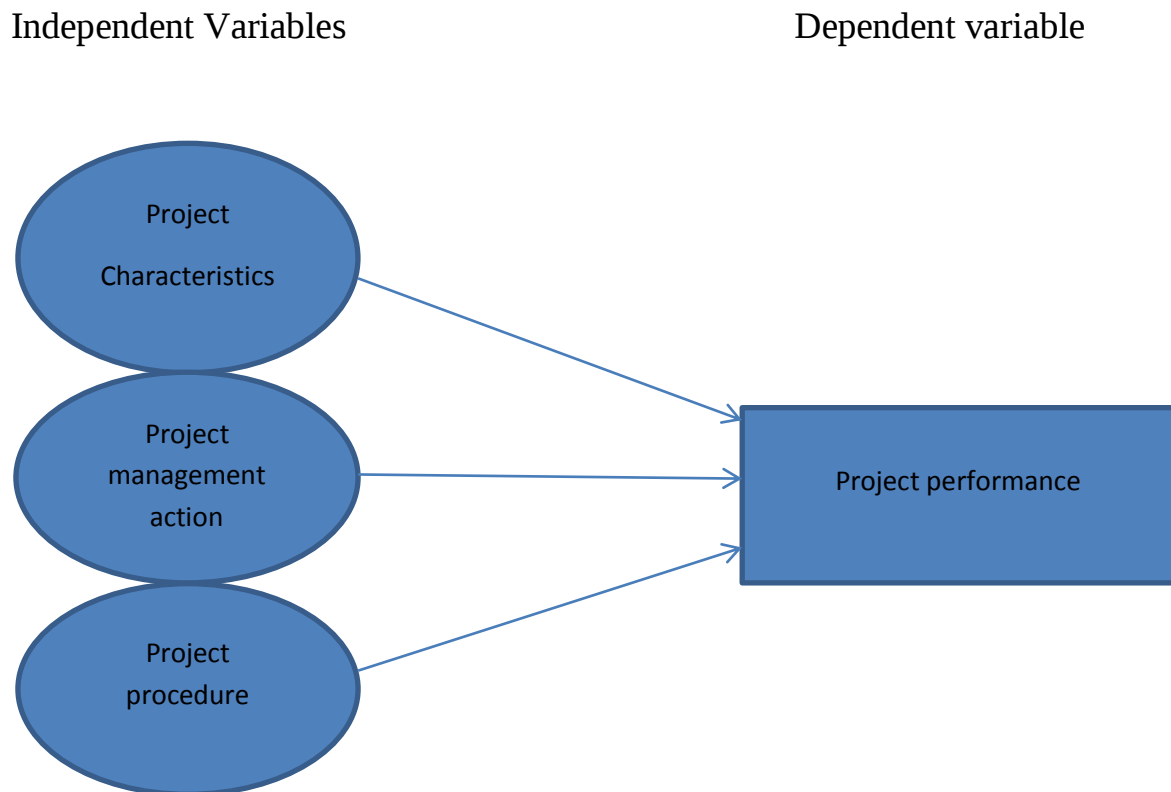
Project procedure comprises the concept of obtaining form and the method of tendering. The fragmental nature of the construction industry, the fact that no two construction projects are indistinguishable and the resulting passing nature of the project organization places great dependence on the project squad in setting up the construction process and taking the project to a successful conclusion. To ensure success, the selection of the most appropriate organization for the design and construction of the project needs early and exact consideration. In the main, the construction team will be appointed under competition through competitive tendering process. Sometimes the head contractor may be appointed by negotiation on the basis of a fee. In case when the design and construction is done as a comprehensive package, both may be let by competition (Iyer and Jha 2005).

2.6.3. Project Characteristics

(Chuan 2006) defined in terms of project scope, nature of project and complexity of project. Project scope refers to the type of project, the number of stages and the complexity of the project. Nature of the project defines whether it is a new works project or a refurbishment project. Some projects are more costly to build than others. Refurbishment or repair works tend to have a higher unit cost than new works. Project complexity can be measured in terms of site access, design build ability, design coordination, site conditions, and quality management.

Sophisticated clients (those having built projects before) and particular clients (repeated similar buildings) have a better chance of success with their projects than novices. Other aspects of the client, such as the nature of client (i.e. whether they are from the public or private sector), simplicity of project mission, their capability in terms of ability to brief, make decision, explain roles, etc. have been shown to influence the performance of a project.

Figure 2.1 conceptual framework



Source: Adapted from (Puspassari 2005)

CHAPTER THREE

METHDOLOGY

3.1. Research Design

Designing a study helps the researcher to plan and implement the study in a way that help the researcher to obtained purposeful results, thus maximize the chances of obtaining information that could be associated with the real situation (Burns 2001). This study was employed explanatory research method; it was organized to figure out the factors affecting project performance of 20/80 condominium housing project in Addis Ababa. The case of Explanatory research design support the researcher to plan design and implement the study was help the researcher to obtain intended results, thus increasing the chances of obtaining information that can be associated with the real situation (Burns 2001). Exploratory research design is unlimited to one specific paradigm but may use either qualitative or quantitative approaches. It was conducted on one selected area of Bole Arabsa site. The data uses in this study were quantitative in nature which was collected from primary and secondary sources.

3.2. Target population and sample method

3.2.1. Population of the study

Target population is said to be a specified group of people or object for which questions can be asked or observed made to develop required data structures and information (Hair 2010). Therefore, for this study, the target populations were taken from Arabsa site project The total number of populations are 179 at of which 173 contractors and 6 consultants.

3.3. Sampling technique

The study was used Census method to assess the factors affecting project performance of condominium housing in Bole Arabsa site Thus, the target populations of the study 179 consultants and contractors of Bole Arabsa site. According to (Watson 2001) If the population is small, usually 200 or less, it may be preferable to do a census of everyone in the population rather than a sample. In line with this, the total number of consultants and contractors of Bole Arabsa site becomes the sample size for the study.

Table 3.1 Sample Size Determination

Arabsa site	Population size		Total	Sample size		Total
	Contractor	consultant		contractor	consultant	
Project 7	52	2	54	52	2	54
Project12	66	2	68	66	2	68
Project 13	55	2	57	55	2	57
	173	6	179	173	6	179

3.4. Data Type and Source

The research were use both primary and secondary data source. According to (Biggam2008) primary data is the information that the researcher finds out by him/herself regarding a specific topic. The main advantage with this type of data is consistent; better accuracy and update information to meet the research questions and objectives. Also this data will be collected from the selected contractors and consultants. The Secondary data will be obtained from published and unpublished materials such as magazines, reports and websites.

3.5. Method of data collection and instrument

In order to achieve the objectives of the study, the researcher used quantitative research methods through questionnaire to cover larger target groups. The questionnaires were prepared using Close Ended 5 Point Likert-Scale approaches (i.e., from “Strongly Disagree to Strongly Agree”). For the 5-point likert scale the respondents were asked to indicate their level of agreement with the ratings of Strongly Disagree (1), Disagree (2), neutral (3), Agree (4) and Strongly Agree (5).

3.6. Method of Data Analysis

Data collects were check for the completeness and consistency edit and then enter in to Statistical Package for Social Science (SPSS) version 21 software for the descriptive analysis, correlation and regression analysis. The descriptive parts of the study used the Mean, frequency and percentages for the variables. Following the required explanatory diagnostic tests for data collects, correlation and regression analysis were conduct to identify factors affecting project

performance of 20/80 condominium project on Bole Arabsa site. The interpretation of the study was based on the result of the correlation and the regression.

3.7. Ethical Consideration

Research ethics refers to the type of agreement that the researcher enters into with his or her research participants. Respectively phase in the research succession posing ethical issues. Ethical considerations play a role in all research studies and all researchers must be sensitive and attend to the ethical considerations related to their research. Therefore, the researcher communicates officially, honestly and smoothly. The purpose of the study was clear and understandable for all participants. Any communication with the concerned bodies like respondent, office staffs and others were accomplished at their voluntarily agreement without harming and threatening the personal and institutional wellbeing.

3.8. Reliability

Test The level of reliability of the instrument that is the consistency of the variables is tested by the Cronbach's alpha statistics. Cronbach's alpha is an index of reliability associated with the variation accounted for by the true score of the underlying construct (Nunnally 1978). Cronbach's Alpha can only be measured for variables which have more than one measurement question and that result show 0.5 is a sufficient value, while 0.7 is a more reasonable Cronbach's alpha. The results were extracted presented in table 3.2 and Cronbach's Alpha values were more than 0.7. The table 3.2 results implying that constructs are consistent to measure the variables.

Table 3.2 Reliability Statistics

Variables	Cronbach's alpha	Number of item
Project characteristics	0.859	5
Project management action	0.941	5
Project procedure	0.921	6
Project performance	0.853	4

CHAPTER FOUR

Introduction

This chapter presents data analysis and presentation of the results. The chapter begins with the result of data collected through structured questioner from consultant and contractors of the projects and presentation of respondent result. The results presented for descriptive statistics of the respondent and the data analysis was conducted using mean, correlation and Regression by using SPSS.21.

4.1. Response Rate

Response rate describes the total number of the questionnaire distributed to the respondents and those properly filled out and returned.

Table 4.1 A response rate of the respondent

Description	Respondents
Target population	179
Distributed Questionnaire	179
Returned questionnaire	173
Response rate	96.3

Source: collected survey data (2021)

Table 4.1.shows 179 questionnaire disseminated to the target population, 173(96.3%) were returned and used for the purpose of analysis.

4.2. Descriptive statistics of the respondents

In this section, they have to provide information on demographic characteristics of respondents including, age, and gender, length of work experience, marital status, and level of education.

4.2.1. Demographic analysis of the respondents

4.2.1.1. Analysis of Respondent Gender

Table4.2. Respondent Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	149	86.1	86.1	86.1
Female	24	13.9	13.9	100.0
Total	173	100.0	100.0	

Source: SPSS output (2021)

As shown in table 4.2, 86.1% (149) of the respondents are male and the rest 13.9% (24) are female. This implies that male respondent is dominant on number at the project place.

4.2.2 Analysis of Respondent age

Table4.3 Age of the respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
18-35 years	41	23.7	23.7	23.7
36-45 years	70	40.5	40.5	64.2
46-55 years	54	31.2	31.2	95.4
Above 55 years	8	4.6	4.6	100.0
Total	173	100.0	100.0	

Source: SPSS output (2021)

Table 4.3 indicate 23.7% (41) of the respondents were in the age group between 18-35, 40.5% (70) of the respondents were between 36-45; 31.2% (54) of the respondents are between 46-55 and 4.6% (8) of the respondents are 55 and above years of age. This data shows that the majority 63.3% of the respondent's and workers of the project are young. And lesser 4.6 of the respondents are in the age group of 55 and above.

4.2.3. Analysis of Respondent Work Experience

Table 4. 4. Respondent Work Experience in years

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than 5 years	20	11.6	11.6	11.6
5-10 years	61	35.3	35.3	46.8
Above 10 years	92	53.2	53.2	100.0
Total	173	100.0	100.0	

Source: SPSS output (2021)

Table 4.4; indicate the respondent's work experience by year. 11.6% (20) of the respondents fall to the category of less than 5 years; 35.3% (61) are 5-10 years; 53.2% (92) are above 10 years. This shows that the majority of the respondents are more experienced. And the minimum of respondents are less experience.

4.2.4. Analysis of the respondent level of Education

Table 4.5. Respondent level of Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Diploma/ TVET	5	2.9	2.9	2.9
Degree	114	65.9	65.9	68.8
Masters	54	31.2	31.2	100.0
Total	173	100.0	100.0	

Source: SPSS output (2021)

As mentioned on the above table 4.5, 2.9% (5) of the respondents have Diploma/TVET, 65.9% (114) of them are bachelor's degree holders, and 31.2% (54) of the respondent's earned a Master's degree. This implies that 86.1% of the respondents have had a bachelor's degree and above level of education, suggesting that the project place is organized with well-educated workforce.

4.3. Descriptive statistics

This section presents the respondents' responses on the three major factors affecting project performance (project characteristics, project management action and project procedure) and project performance. Descriptive statistics include mean and standard deviation. The mean determines the average agreement or disagreement of the respondents on each statement. And the highest value of the mean denotes the respondents' agreement on the quantified statement corresponding the factor items and the lower the mean value suggests the respondent's disagreement. And standard deviation denotes the deviation of the observation from the mean (Dawit, 2020).

4.3.1. Descriptive analysis of project characteristics

Table 4.6. Descriptive analysis of project characteristics

Project characteristics	N	Mean	Std. Deviation
Being a low quality project	173	3.53	.624
Ownership of the government	173	3.62	.733
Projects that give low attention to quality	173	3.33	.631
Project time frame is not appropriate to complete the project as per the schedule, budget and specification.	173	4.22	.798
Inflexibility of the project to changes in the economic environment	173	3.35	.597

Source: SPSS output (2021)

The above table 4.9 indicates the mean and standard deviation of the project characteristics. From the stated result, Project time frame is not appropriate to complete the project as per the schedule; budget and specification had the highest mean value of 4.22 and SD, 0.79. Projects

that give low attention to quality has lowest mean value of 3.33 and SD, 0.63 among this result in appropriate project time frame are the major factors that affect performance.

Being a low quality project and owner ship of government score 3.53 and 3.62 of mean and 0.624 and 0.733 standard deviation and finally Inflexibility of the project to changes in the economic environment has score mean of 3.35 and 0.59 standard deviation.

4.3.2. Descriptive analysis of project management action

Table 4. 7.Descriptive Statistics of project management action

Project management action	N	Mean	Std. Deviation
Expected profit rate of project by the contractor	173	3.51	.615
Demotivated employees due to lower payments	173	3.62	.749
Not providing trainings to the employees	173	3.34	.623
Tasks are not sequenced according to the schedule of the project.	173	4.20	.801
Project team leader's experiences and technical skills	173	3.45	.710

The above result indicates that projects are not sequenced according to the project schedules. This is indicated by mean value of 4.20 depends on the result respondents agree that the project is not conducted according to the schedules in project planning. Demotivation of employees due to lower payment has a mean value of 3.62 and 0.749 of standard deviation. Lack of scheduling and demotivated employees were the main factors that affect project performance. Expected profit rate of project by the contractor, Project team leader's experiences and technical skills and not providing trainings to the employees put on the final line by the result of their mean.

4.3.3. Descriptive Analysis of project procedure

Table 4. 8.Descriptive Statistics of project procedure

Project procedure	N	Mean	Std. Deviation
Delay in claim approval and payment to contractor	173	4.12	.798
Delivery of the important project materials by the client	173	3.16	.733
Conformance to specification	173	3.53	.631
Quality assessment system in the project	173	3.33	.624
Control mechanism	173	3.48	.652
Performance of different parties involved in the project	173	4.02	.813

Source: SPSS output (2021)

As it is indicated in table 4.8 above, among the project procedures delay in claim approval and payment to contractors has a mean value of 4.12 and also it is the main factor that is affecting the project performance especially time suspension and less quality because costs of materials growth that contractors forces to use low cost materials. Performance of different parties involved in the project has the second high mean value and conformance of specification has third line on the mean value of 3.35 and standard deviations of 0.631. Control mechanism, Quality assessment system in the project and Delivery of the important project materials by the client has the lower mean value.

4.3.4. Descriptive analysis of the dependent variables (project performance)

Table 4. 9.Descriptive Statistics of project performance

	N	Mean	Std. Deviation
Timely achievement	173	3.37	.640
On budget completion	173	3.93	.853
Stake holders acceptance	173	3.62	.733
Good quality standard	173	2.89	.604

Source SPSS 21

Table 4.9 shows on budget completion has a highest mean of 3.93 and stakeholders acceptance has the second mean of 3.62 and timely achievement and good quality standard has the lower

mean value the result indicate majority of the respondent agree with on budget completion and stake holders acceptance are the major indicator of project success.

4.3.5 Descriptive Analysis Summary for Independent variables.

Table 4. 10 summary for independent variable

	N	Mean	Std. Deviation
Project characteristics	173	3.61	.406
Project management action	173	3.50	.307
Project procedure	173	3.70	.458

Source SPSS 21

The result indicates that project procedure have the highest mean value 3.70 and SD, 0.45 compared to the other factors. As a result, project procedure the dominant factors that affect performance. Whereas project characteristics and project management action has less mean value 3.61 and 3.50 respectively compared to the other.

4.4. Correlation analysis of the factor affecting project performance

As stated by, (Senthilnathan, 2019), the correlation coefficient may be a scale to live measure the strength of linear association between variables. A positive correlation coefficient indicates that a rise in the first variables would correspond to arise within the second variables, thus implying an instantaneous relationship between the variables. And a negative correlation indicates an inverse relationship whereas one variable increases the second variable decreases. (Taylor,1990). So that they can interpret the parametric statistics as follows:

Table 4. 11.correlation analysis interpretation

Labeling system	Positive	Negative
Low/weak correlation	≤ 0.35	≤ -0.35
Moderate correlation	0.36 to 0.67	-0.36 to -0.67
Strong/high correlation	0.67 to 1	-0.68 to -1

Table 4. 12 correlation analysis

		Correlations			
		PC	PM	PRO	PP
PC	Pearson Correlation	1	.387**	.897**	.730**
	Sig. (2-tailed)		.000	.000	.000
	N	173	173	173	173
PM	Pearson Correlation	.387**	1	.477**	.497**
	Sig. (2-tailed)	.000		.000	.000
	N	173	173	173	173
PRO	Pearson Correlation	.897**	.477**	1	.793**
	Sig. (2-tailed)	.000	.000		.000
	N	173	173	173	173
PP	Pearson Correlation	.730**	.497**	.793**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	173	173	173	173

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

Source: SPSS output (2021

The above table, 4.12, shows the link between the three major factors that affect projects and the dependent variable project performance in Bole Arabsa 20/80 condominium project site. As supported by Taylor, (1990), the result indicates each the factors had a positive relationship with project performance. Project characteristics, project management action and project procedure had a moderate and strong relationship with project performance with a Pearson correlation value of 0.730, 0.497, 0.793 and sig.0.000 which is a smaller amount than 0.01. The result indicates that Project characteristics and project procedure had strong relationship with project performance and also project management action had a moderate relation ship

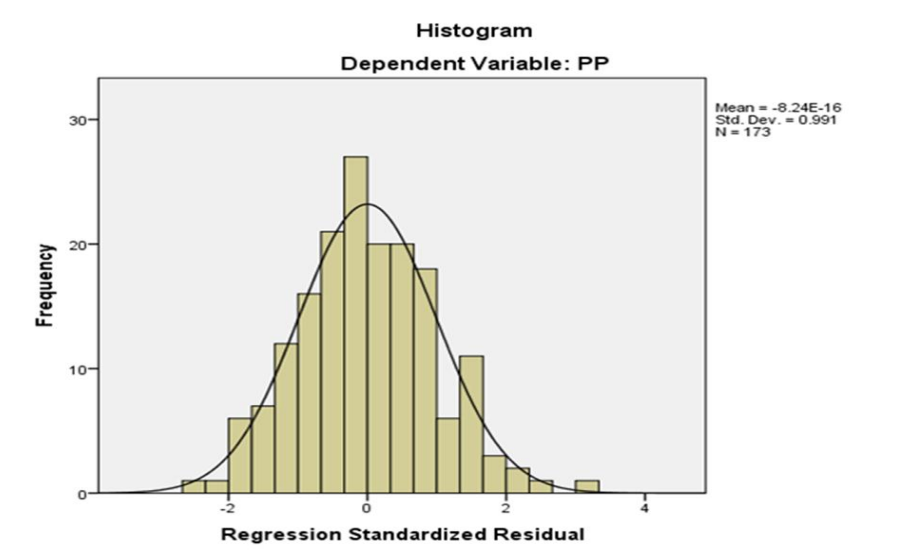
4.5. Classical Linear Regression Model

This section deals with the tricky assumption of multiple linear regression models, such as normality, autocorrelation, and multicollinearity test.

4.5.1. Testing for normality

Multiple regressions assume that variables have normal distributions (Darlington, 1968). This implies that errors are normally distributed, and that a plot of the values of the residuals will approximate a normal curve (Keith, 2006). It is incredible that a histogram of sample data will produce a perfectly smooth normal curve just like the one displayed over the histogram. As long as the data is approximately normally distributed, with a ultimate within the middle and fairly symmetrical, the statement of normality has been met. A visible examination of the histogram showed project performance were approximately normally distributed like a bell curve or the data points close to the diagonal for the independent variable (PC, PM and PRO).

Figure 4- 1.Histogram



4.5.2. Test of autocorrelation

Table 4. 13.Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.806 ^a	.650	.644	.21568	1.873

a. Predictors: (Constant), PRO, PM, PC

b. Dependent Variable: PP

Source: SPSS output (2021)

Autocorrelation is one of the classical regression model assumptions. Autocorrelation refers to the degree of correlation between the values of the identical variables across different observations within the data. To check the existence of autocorrelation they will use Durbin-Watson (DW) test. And also the DW test must lie between 0-4. (Creel, 2006).

Table 4. 14. DW-statistics and limiting cases of autocorrelation

Labels of autocorrelation	The acceptable limit of DW
No autocorrelation	$DW \approx 2$
Perfect positive autocorrelation	$DW \approx 0$
Perfect negative autocorrelation	$DW \approx 4$

Source: Creel (2006)

On the table 4.13 Durbin Watson (DW) test results from the model summary 1.87 indicate that there is no autocorrelation problem.

4.5.3. Multicollinearity

Multicollinearity is used to define the condition when a high correlation is detected between two or more predictor variables. Such high correlations cause problems when trying to draw extrapolations about the relative contribution of each predictor variable to the achievement of the model. According to (Andy 2006) Multicollinearity exists when there is a strong correlation between two or more predictors in a regression model. Multicollinearity poses a problem only for multiple regressions because simple regression requires only one predictor.

The results are in presented in the table 4.15 of collinearity statistics two values are given. Tolerance and VIF Tolerance is an indicator of how much of the variability of the measured independent variables is not described by the other independent variables in the model. If this variable is very small (less than 0.10), indicate the multiple correlation with extra variable is high, suggesting the possibility of Multicollinearity. The other value given is the VIF (variance inflation factor), which is just the inverse of the tolerance value (1 divided by tolerance). The multicollinearity statics linked the tolerance value greater than 0.1 and VIF value significance below 10. So that table 4.14 shows that there was no Multicollinearity problem in the model.

Table 4.15. Collinearity statistics

Model	Collinearity Statistics	
	Tolerance	VIF
PC	.194	5.161
PM	.764	1.309
PRO	.176	5.679

a. Dependent Variable: PP

Source SPSS 21

4.6. Regression analysis

Table, 4.16 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.806 ^a	.650	.644	.21568

Source: SPSS output (2021)

The score of R^2 has the value of 0.65 or 65% this implies the independent variable explain 65 % of the variation of the dependent variable (project performance). The multiple correlation coefficients(r), with a value of 0.806, represent the correlation ratio indicating the existence of link between project performance and its main factors.

Table 4. 17 ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	14.604	3	4.868	104.653	.000 ^b
Residual	7.861	169	.047		
Total	22.465	172			

a. Dependent Variable: PP

a. Predictors: (Constant), PRO, PM, PC

Source: SPSS output (2021)

The regression analysis explains the extent to which the independent variables predict the effect of factors on project performance. Test F shows the role of the independent variable to explain the evolution of the dependent variable. The results of the analysis show the F-ratio 104.653 in the ANOVA table, the model reaches statistical significance (sig. =.000, $p < 0.05$) shows the regression model is valid and can be used to analyze the dependent between variables.

Table 4. 18 Coefficient

Coefficients^a					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.622	.209		2.979	.003
PC	.117	.092	.132	1.277	.203
PM	.189	.061	.161	3.089	.002
PRO	.471	.086	.598	5.511	.000

a. Dependent Variable: PP
Source: SPSS output (2021)

As shown in Table 4.18, the constant of a regression model can be interpreted as the average expected value of the dependent variable when the independent variable equals zero. The constant beta value result shows an intercept of the estimate or constant is equal to approximately 0.622. And also there will be an increment in Project performance by 0.189 and 0.471 when Project management action and Project procedure increases by 1 unit respectively (excluding Project characteristics because the result of p-value is greater than 0.05 which is 0.203 implies that there is no significant relationship with Project performance).

The results of the regression equation are:

$PP = .662 + 0.189PM + 0.471PRO$ the regression equation states that a 1 unit increase in the independent variable (project management action and project procedure) the dependent variable also increases. (Excluding Project characteristics because the result of p-value is greater than 0.05 which is 0.203 implies that there is no significant relationship with Project performance).

4.7. Discussion

The discussion part includes the major results of the study concerning the research questions and major objectives by comparing the result from other studies.

Characteristics of the project is identified by using project related factors such as quality orientation, value of the project, ownership of the project, project time and flexibility of project for changes in environment. The consultants and contractors responded that project performance is lower because project time frame is not appropriate schedule, budget and specification. It is indicated that majority of the respondents agree that the owner ship of the government and being low quality of projects are a reason for lower performance of project. Inflexibility of the project to change in the economic environment has lower practices in affecting the project performance when compared to other project characteristics used in the study. Finding of this study is similar to the finding of (Chan and Kumaraswamy 1996) that project characteristics affect the performance of the projects through lower quality, higher cost and delayed project time.

Majority of the respondents agree that there is problem of tasks sequencing according to the scheduling of project has resulted on project delay, lower quality and higher cost. Demotivated employee due to low payment and expected profit rate of project by the contractors are another important factor for the lower performance of the projects especially for the quality performance. Both project managers and consultants are less experienced in managing and handling the projects. Lower experience and technical skills have resulted on lower project quality, higher time requirement and higher project cost on the client. Not providing to Employee training was also affecting the performance of projects. To compensate the costs in the construction, the companies are not providing trainings to employees because of expected profit and lower project values. This finding is consistent to the finding of (Arditi D. 1998) that project performance is affected by the management actions in the project. Similarly, (Iyer and Jha 2005) identified that project management actions have high effect on performance of the projects

Delay in claim approval and payment to contactors is the main factor that is affecting the project performance especially time delay and lower quality because costs of materials increase that forces to use low cost materials. Due to bureaucratic issues in managing the project client delay payments. The performance of the project depends on the performance of the parties involving in

the project. The associations have no experience in the complex projects and their supplies are with lower quality that affects the quality of the project. Conformance to specification is another factor in project procedure that affects the performance of the project. Contractors are required to conform even wrong specification otherwise waits for the design review. Wrong specification has resulted on longer time requirements and lesser quality. Control mechanism and quality assessment practices have resulted on higher cost of the project and lower quality in addition to time delay. The supervision of the consultants is corrupted. The consultant is less experienced and profit oriented. Client has lower responsibility for the projects. Materials from the associations are not supplied on the basis of project schedule. This all together are resulting on lower quality, time delay and cost overrun. Finding of this study is similar to the finding of (K. & Jha 2005) That project procedures used in the projects factors for both weak and strong performance of the projects.

The results of the correlation analysis of this study indicated that there was a significance positive and strong relationship between independent and dependent variables. The score of R^2 has the value of 0.65 or 65% this implies the independent variable explain 65 % of the variation of the dependent variable (project performance). The multiple correlation coefficients(r), with a value of 0.806, represent the correlation ratio indicating the existence of link between project performance and its main factors.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter provides a summary of the major findings and conclusions of the study. Questioner collected from respondent of participant in Addis Ababa 20/80 condominium housing Bole Arabs a project. The first section of the chapter begins with a summary of the empirical findings, followed by a conclusion and further recommendations.

5.2 Summery

The main objective of this study was to investigate the factors affecting project performance of Addis Ababa 20/80 condominium housing on Bole Arabsa project . In this paper, three independent variables of factors that affect project performance (Project characteristics, project management action and project procedure have been investigated. To conduct this study, the required data were obtained through questionnaires from crews of the project. The respondents answers each question using a five-point Likert scale questions ranging from strongly Disagree (1) to strongly agree (5) .Total of 179 questionnaires were distributed and 173 was correctly filled and returned. In order to minimize the accuracy problems data collection was conducted under close supervision checked, coded, and analyzed. Re turned questionnaires analyzed using statistical package for social science (SPSS) version 21. Finally identify the following summery point.

From the analysis of demography information 149(86.1%) of respondents were male whereas 24 (13.9%) of them were female. It indicates that more respondents of the project are male. The study shows 41(23.7%) of respondents were found in the age categories between 18-35 years old followed by 70 (46.5%) of them were found in the age category of 36 to 45 years old respondents, 54 (31.2%) of respondents were found in the age between 46-55 years old respondents and the final category 8(4.6%) of the respondent were found the age above 56. From this it is possible to understand that 20-/80 condominium housing project dominated by productive age groups and they will help the country economy to be more efficient. And majority 153 (88.4%) of the respondents work experience were above five years. With regard

to educational level; most of the respondents were Degree holders 144(65.9%) and Masters comprises 54(31.2%) of the project representative. this can help the researcher to get accurate information about organizational performance.

The results of the correlation analysis of this study indicated that there was a significance positive and strong relationship between independent and dependent variables.

Regarding regression analysis, the estimated model shows that all three independent variables (Project characteristics, project management action and project procedure) have positive and significant effect on Organizational performance.

5.4 Conclusion

Based on the findings of the study following conclusions are drawn.

- The main factors that affect Bole Arabsa 20/80 condominium housing project were being poor scheduling, low quality project and ownership by the government starting from planning and evaluation. The above project characteristics factors resulted on lower performance of condominium projects on the site.
- Another factors that affect project performance of Bole Arabsa 20/80 condominium housing project were of project management actions are also affecting the performance of the projects. Tasks are not sequenced according to the schedule of the project, Lack of skill and demotivation of the employees due to lower payment, managerial skill and expected profit by contractors were important project management action factors that cause weak performance on the site.
- Delay in claim approval and payment to contractor, failure to conformance to project specifications, delivery inefficiency for important project construction materials by the client, lower performance of suppliers, contractors, consultants and client, inefficient control mechanism, and improperly implemented quality control assessments are factors affecting the performance of the projects by poor procedural action. The payment procedure is resulting on project time overrun, cost overrun and lower quality of the project.

5.5 Recommendation

From the result obtained Lack of scheduling and planning were the major problem, which affects project performance. To alleviate this problem, before starting any 20/80 condominium housing project implement proper planning. Proper planning and scheduling are continuing processes during construction and match with the resources, time, cost and quality to develop the work and to avoid cost overrun, time overrun and other performance problem and disputes.

In addition to this the Bole Arabsa 20/80 condominium project stakeholders advisable to skill up their knowledge and also reduce the communication gap between them, by evaluate the progress of the project frequently. Frequent evaluation assists them for monitoring, updating and controlling the progress through project implementation. In addition, they can solve payment problems and improve future work. The study recommended that owners should strictly audit and supervise construction of condominium housing projects to minimize time delay and poor quality of housing material.

In addition, owners are encouraged to facilitate payments to contractors in order to overcome delay, disputes and communication gap.

Furthermore the Bole Arabsa 20/80 condominium project administrative should provide updated and frequent market analysis and transparency of logistics and supply to minimize price fluctuation of building materials and also market advantage. This will enable cost estimator, forecast the cost of construction material price in future and make contingency for unexpected inflation based on previous data. Since inflation associated with time, finishing construction project with short time will make project not subjected to inflation.

Finally The Bole Arabsa 20/80 condominium project contractors must be minimize mismanagement of construction material by using Material estimation; budgeting; planning; purchasing; procurement inventory control and waste management and also the project top level administrative staffs advisable to demonstrate effective communication, by become a pro at managing stakeholder expectations and Prioritize tasks to reduce communication gap between stake holders to improve the project performance.

Reference

- Abdel-Razek. "'Factors Affecting Construction Quality in Egypt: identification and relative importance",. *Journal of Engineering Construction and Architectural Management* 5 (1998): 220-227.
- Abdel-Razek, Refaat. "How Construction Managers Would Like Their Performance to Be Evaluated." 1997.
- Adamu. "Institutional analysis on condominium management system." 2012.
- Aftab, Rahman, Abdullah and Azis. "Factors affecting construction cost in Mara Large construction." 2010.
- Akhund, Khoso, memon and Khahns. "construction factors on time overrun." 2017.
- Al-Atiq, Bubshait &. "ISO 9000 Quality standard in construction." 1999.
- Al-Atiq, Bubshait &. "Quality performance in sucess of project." 1999.
- Arditi. "Construction productivity improvement." 1985.
- Arditi D., Akan G., and Gurdamar S. "Incentive/disincentive contract: Perception of owners and contractors, *Journal of Construction Engineering and Management*, 124 (5): PP. 361-373." 1998.
- Ashford, J.L. "Management of Quality in Construction." 1989.
- Atkinson, R. "Project management: Cost, time and quality, two best guesses and a phenomenon, it's time to accept other success criteriall, *International Journal of Project Management*." 1999.
- Azeb, K. " Housing for the Poor in Addis Ababa ." 2007.
- Barrett, P. . "'Systems and Relationship for Construction Quality", *International Journal of Quality & Reliability Management*, Vol.17 No. 4/5." 2000.

Burns, N. and Grove, S.K. " The Practice of Nursing Research, Conduct, Critique, and Utilization." 2001.

Cabe, Mc. "Quality management concepts principles, tools and philosophy ." 1998.

Chan Albert P.C. and Chan Daniel W.M.,. ", Developing a benchmark model for project construction time performance in Hong Kong, ." 2004.

Chan and Kumaraswamy . "Comparative study of cause of time overrun on Hong Kong construction project." 1996.

Chan DWM, Kumaraswamy MM (2002). " Compressing construction durations: ." n.d.

Chen,Partington and qiang. "construction Engineering and management." 2009.

Cheung. "Development of quality assesment." 2004.

Cho Y. J., Lee J. W. "Performance Management and Trust in Supervision." 2012.

chua. "Critical sucess factors of different project objective." 1999.

Chuan, Pheng Low Sui and. "Environmental factors and work performance of project managers in the construction industry, International Journal of Project Management, Vol. 24." 2006.

Dolaga and Rathnanami. "Cause of time over run in construction phase of buildig." 2013.

Don Elger, 2010,. "Theory of Performance, University of Idaho." 2010.

Enshassi, Adnan, Mohamed, Sherif, Abushaban, Saleh. "Factors affecting the performance of construction projects in the Gaza Strip." 2009.

Evans, J. and Lindsay,W. "'Management and Control of Quality’," 1992.

Fetene, N. (2008),. "Causes and effects of cost overrun on public building construction projects in Ethiopia. ." Addis Ababa University, 2008.

Gemeda, Hiwot B. " Thesis Effect of poor project performance on the quality of housing construction: Case of condominium houses in Addis Ababa." 2012.

Gemeda, Hiwot. B. "Thesis Effect of poor project performance on the quality of housing construction: Case of condominium houses in Addis Ababa." 2012.

Henderickson. "Excessive force in the eye of of the objective beholder." 2015.

Hubbard. " “Successful utility project management." 1990: 19-23.

Iyer and Jha. "factors affecting cost performance." 2005: 283-295.

Jacksons. "Construction management basics." 2004.

Jamaludin, S. Z., Mohammad, M. F. & Ahma, K. ""Enhancing the Quality of Construction Environment by Minimizing the Cost Variance", Procedia - Social and Behavioral Sciences." 25 (2014).

Jha, K.N. & Iyer, K.C. ""Factors affecting cost performance: evidence from Indian construction projectsInternational Journal of Project Management." 23 (2005).

Jha, Koshe and. "cause of contractors cost overrun in construction project." 2016.

Juran. "Quality management concept, principle, tools and phillosopys." 1998.

K.N, Iyer K.C and Jha. "Factors affecting cost performance." 2005: 283-295.

Keane, P. J. & Caletka, A. F. " Delay analysis in construction contracts: (2nd ed.)." 2015.

KebedeAbebe. " Key housing issues in Ethiopia Challenges of the housing situation in Ethiopia& approach in providing housing for low income families." 2011.

Kenzier, Harold and. "A system approch to plannig, scheduling and controlling." 2004.

Kumaraswamy, Dissanayaka Sunnil M. and. "Comparing contributors to time and cost performance in building projects, Building and Environment, Vol. 34." 1999.

Ledbetter. "Quality performance on success on project." 1994.

- Lema. "Development of construction contractors performance frame work." 2002.
- Long, Adams and. "developing on effective project planning and team building." 2008.
- Lukas. "Earned value analysis why it doesn't work AACE international transaction." 2008.
- M, Dissanayaka Sunnil M. and Kumaraswamy Mohan. "Comparing contributors to time and cost performance in building projects, Building and Environment." 34 (1999).
- Mallawaarachchi, H. & Senaratn,. " Importance of Quality for Construction Project Success, Proceeding of the 6th International Conference on structural engineering and construction management." 2015.
- Mane, P. P. & Patil, J. P. " "Quality Management System at Construction Project:." 2015.
- Medhanit, Bahiru and Eyerusalem. "Performance Evaluation of Housing Construction Project,Using Earned Value Analysis; the Case of 20/80Condominium Addis Ababa Bole Arabsa Site." 2020.
- Motowidlo, Borman and. "Task performance and contextual performance." 1993: 19-109.
- N, Fetene. *Causes and effects of cost overrun on public building construction projects in Ethiopia.* . Addis Ababa University., 2008.
- Navon Ronie. " Automated project performance control of construction projects." 2005.
- Nee, P.A. ""ISO 9000 in Construction." 1996.
- Newton, R. "Project Management Step by Step—How to Plan and Manage a Highly Successful Project, Pearson Business." 2007.
- Nunnally. "A Meta analysis of cronbachs alpha." 1978.
- Odusami, Iyagba & Omirin. "The relationship between project leadership team." 2003.
- Okuwoga, Adeyinka,. "Cost ñ time performance of public sector housing projects in Nigeria,." (Habitat Intl.) 22 (1998).

- Puspassari. " Factors causing poor Performance of Construction Projects." 2005.
- Robert. "The value of the worlds eco system service and natural capital." 1997.
- Rodriguez, D., Waite, G. and Wolfe, T. "The Global Corruption Report 2005 London; Pluto Press." 2005.
- Soomroo, memon and chandio (2019) n. "Causes of Time Overrun in Construction of Building Projects in Pakista." 2019.
- Tsegay Gebrehiwet, and Hanbin Luo. "Analysis of Delay Impact on Construction Project." 2017.
- UN-HABITAT. " The Ethiopia Case of Condominium Housing: The Integrated Housing." 2011.
- Watson, J. " How to Determine a Sample Size:." 2001: 1-5.
- Wendafrash, Henok. "Factors Affecting The Performance Of Construction Project : A Case Of 20/80 Condominium Project in Addis Ababa." 2018.
- Werku, K., Jha. "Investigating Causes of Construction Delay in Ethiopian Construction." 2016.

APPENDIX

**ADDIS ABABA UNIVERSITY COLLEGE
OF BUSSINESS AND ECONOMICS DEPARTMENT
OF BUSINESS ADMINISTRATION**

Dear Sir/Madam

RE: REQUEST FOR PARTICIPATION IN A RESEARCH STUDY

I am a Postgraduate student at Addis Ababa University. As partial fulfillment for the MA Program in Business Administration, **I am conducting a research study on factors affecting project performance in Addis Ababa condominium Housing 20/80 Arabsa project.** Therefore, I would appreciate if you could spend a few minutes of your time to answer the following questions. All the information provided will be purely used for academic purposes and your identity will be treated with utmost confidentiality. I value your participation and thank you for the commitment of time, energy and effort. If you have any further questions, I can be reached at the address below.

Sincerely,

Yohannis Wolde

Email: yadajhon2@gmail.com

Phone +251-965592672

Part I: Demographic Information Please mark (X) in appropriate box to your response.

1. Gender:

☐

Male

☐

Female

2. Age in years:

☐

15 – 35years

☐

36-45 years

☐

46 – 55 years

☐

Above 55 years

3. Your work experience in construction (in years)?

☐

Less than 5 year

☐

5-10 years

☐

Above 10 years

4. Level of Education

☐

Diploma/TVET

☐

Degree

☐

Masters

☐

PhD

Part 2 6. To what extent do you agree on the following statements that indicate the following factors are resulting on lower performance of condominium projects in your sites?

1= Strongly disagree 2 = Dis Agree 3 = Neutral 4 = agree 5 = Strongly agree

Project characteristics	1 Strongly disagree	2 Dis agree	3 Neutral	4 Agree	5 Strongly agree
Being a low quality project					
Ownership of the government					
Projects that give low attention to quality					
Project time frame is not appropriate to complete the project as per the schedule, budget and specification.					
Inflexibility of the project to changes in the economic environment					

1= Strongly disagree 2 = Dis Agree 3 = Neutral 4 = agree 5 = Strongly agree

Project Management Actions	1 Strongly disagree	2 Dis agree	3 Neutral	4 Agree	5 Stron gly agree
Expected profit rate of project by the contractor					
Demotivated employees due to lower payments					
Not providing trainings to the employees					
Tasks are not sequenced according to the schedule of the project.					
Project team leader's experiences and technical skills					

1= Strongly disagree 2 = Dis Agree 3 = Neutral 4 = agree 5 = Strongly agree

Project Procedure	1 Strongly disagree	2 Dis Agree	3 Neutral	4 agree	5 Strongl y agree
Delay in claim approval and payment to contractor					
Delivery of the important project materials by the client					
Conformance to specification					
Quality assessment system in the project					
Control mechanism					
Performance of different parties involved in the project (e.g. associations, contractors, consultants, and clients)					

2.7 project performance success

Project performance	1 Strongly disagree	2 Dis Agree	3 Neutral	4 agree	5 Strongly agree
Timely achievement					
On budget accomplish					
Stake holders acceptance					
Good quality standard					