



THE EFFECT OF PROCUREMENT MANAGEMENT ON PROJECT SUCCESS: IN THE CASE OF ETHIOPIAN AIRLINES

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Statement of Declaration

I, the undersigned, hereby declare that this research project entitled “***The Effect of procurement management on Project Success: in the Case of Ethiopian Airlines Group***” is carried out by myself with the close guidance and support of my advisor Dr. Abraraw chane. I have followed all ethical standards while conducting the research and have duly and properly acknowledged all references and sources. The study is original and has not been used as a requirement for partial fulfillment for any sort of educational qualification at this university or any other.

Biniyam Amensa

Signature

Date

Statement of Certification

This is to certify that this research project by Biniyam Amensa, entitled “*The Effect of procurement management on Project Success: in the Case of Ethiopian Airlines Group*” submitted as partial fulfillment of the requirements for the degree of Master of Arts in Project Management complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

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Abstract

The main objective of this study is to examine the effect of Procurement Management on Project success in the case of Ethiopian Airlines. Many researches did not focus on this particular title, and also the researcher personally observed failures of projects due to misuse of procurement process; which was why this researcher motivated to undertake this research. Explanatory Research Design with Quantitate Research approach was employed. Both Primary and secondary Data were used during this research work. Primary Data was collected via self-administered questionnaires from the population of Ethiopian Airlines Employee in Addis Ababa (project managers and procurement heads) by using non-probability sampling approach particularly purposive sampling technique. As secondary Sources, different literatures related with the topic under study were used .The constructs in this study were developed by using measurement scales adopted from prior studies. The instrument was evaluated for reliability and validity. Data was analyzed using SPSS Version 20. The result of this study showed that all of the procurement management variables used in this research have significant effect on project success. And relatively procurement planning has greater effect, followed by procurement conducting process and procurement controlling process. Depending on the result, it was concluded that procurement management has significant effect on project success. Finally it was recommended to give due attention to all of the stages of procurement management and giving project procurement management training to both procurement staff and project managers. The researcher recommends future researchers to consider better sample size, other variables that are not included here and other projects in other wide organizations to get more reliable result.

Key Words: *Project, project management, Procurement management, PMBOK, Ethiopian Airlines, Project Success, procurement management dimensions.*

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Table of Contents

Statement of Declaration	i
Statement of Certification.....	ii
Abstract.....	iii
Acknowledgment.....	iv
List of Tables	vii
List of Figures.....	vii
Acronyms	viii
Chapter One - Introduction	1
1.1. Background of the study	1
1.2. Statement of the problem	2
1.3. Research objective	3
1.3.1. General Objective	3
1.3.2. Specific Objective	3
1.4. Research question	3
1.4.1. Main Research Question.....	3
1.4.2. Specific Research Question	3
1.5. Research Hypothesis	4
1.6. Significance of the study.....	4
1.7. Scope of the Study.....	4
1.8. Limitations of the study	4
1.9. Organization of the study.....	5
Chapter Two: Review of Related Literature	6
2.1. Theoretical Review.....	6
2.1.1. Project	6
2.1.1.1. Project management.....	6
2.1.1.2. Project management process groups	7
2.1.1.3. Project management knowledge areas.....	7
2.1.2. Project procurement Management	7
2.1.2.1. Procurement planning.....	9
2.1.2.2. Conducting Procurement	10
2.1.2.3. Controlling Procurements	10

2.1.2.4. Closing procurement	11
2.1.3. Project Success	12
2.1.4. Procurement management and a project's success	13
2.2. Empirical Review	14
2.3. Conceptual Framework	16
Chapter Three: Review Research Methodology	17
3.1. Research Approach.....	17
3.2. Research Design.....	17
3.3. Population and Sampling	18
3.4. Data types and sources.....	18
3.5. Data collection Instruments	19
3.6. Data Analysis Methods.....	19
3.7. Reliability Test.....	20
3.8. Validity Analysis	21
3.9. Normality of the Data.....	21
3.10. Ethical Consideration.....	22
Chapter Four: Data Presentation, Analysis and Interpretation	23
4.1. Respondent Profile.....	23
4.2. Descriptive Analysis (mean and standard deviations).....	25
4.3. Inferential Analysis	27
4.4. Regression results used to test the hypothesis.....	28
4.5. Summary of the Hypothesis Test.....	31
Chapter Five: Summary, Conclusion and Recommendation.....	33
5.1. Summary of Major Findings.....	33
5.2. Conclusion	34
5.3. Recommendations	35
5.4. Limitation of the Study and Suggestions for future research.....	36
Reference.....	a
Appendixes - Research Instrument	g

List of Tables

Table 3. 1 : Reliability Coefficient of the Study Variables.....	21
Table 3. 2. :Skewness and kurtosis for normality of data	22
Table 4 1: Demographic profile of respondents.....	24
Table 4 2: Procurement Planning descriptive.....	25
Table 4 3: Procurement Conducting process Descriptive	25
Table 4 4: Procurement Controlling Process Descriptive	26
Table 4 5: Project Success Descriptive	26
Table 4 6: Correlations Test.....	27
Table 4 7: Collinearity Statistics	28
Table 4 8: Model Summary.....	29
Table 4 9: ANOVA.....	29
Table 4 10: Result of regression analysis	30

List of Figures

Figure 2. 1. Conceptual Framework.....	16
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Acronyms

CSCMP- Council of Supply Chain Management Professionals

ET: Ethiopian Airlines

IT: Information Technology

MRO: Maintenance Repair and Overhaul

PM: Project Manager

PMBOK: Project Management Body of knowledge

PMI: Project Management Institutions

PMO: Project Management Office

Chapter One - Introduction

1.1. Background of the study

Organizations have used various project management methodologies to initiate the necessary changes to meet structural goals and objectives since the mid-nineteenth century. This is an element of almost every project, whether internal or external, offshore or onshore, and it comes with its own set of issues. However, ascribed to the tough nature of project events, challenges related with managing project's constraints of budget, quality and schedule the changes are distinctive and dynamical. Many projects fail due to poor handling of project constraints.

External forces such as government laws, environmental forces, society, pressure groups, financial markets, labor markets, technology, client influence, investor, and so on, as well as internal forces such as changes in operational processes, management vogue, resource allocation, skills, and internal conflicts, are among the issues. Many project management professionals in various industries believe that if project and line managers can define what constitutes project success and hence the criteria that ensure a successful project outcome, they will be able to improve their performance. Symbolizing those variables, on the other hand, can help a project succeed. According to Erling et al. (2006), there is no clear indication of a link between project success and actual project success. Different groups have different perspectives on success and failure, as well as the factors that impact them.

Despite the fact that project management has been one of the fastest expanding sectors since its inception, it faces numerous problems (Mnguni, 2012). Campbell (2015) bolsters the preceding assertion by emphasizing that a scarcity of skilled project management people and resources represents a significant danger to organizations' ability to implement strategic projects, create change, and deliver innovation. If effective project management is required, the project manager should be familiar with the organization and culture of the company in which the project is being done (Tebele and Jowah , 2014).

The acquisition of products or services by a purchasing from the body outside of the project team, utilizing finances is referred to as procurement. Despite the fact that Ethiopian Airlines is working to improve their procurement methods, the process is nevertheless plagued by secrecy,

inefficiency, corruption, and cost-cutting. Huge sums of money are squandered in all of these instances.

In the airline industry, there are large initiatives, and the business is always undergoing technological improvements. As a result, it has been forced to deal with the ongoing process of acquiring new equipment and materials for its operations. As a result, procurement is a critical aspect of airline company management. The goal of this study is to determine and validate the impact of procurement management on project success.

1.2. Statement of the problem

Searching for and growing sellers, as well as bringing in highly valued talent, is becoming a fundamental ability of the firm (CSCMP and Wendy Tate, 2014). Salish and Semanik (2007) also states, employing best practices in procurement ensures that the organization and ultimately the procurement professional make correct decisions. This means that an organization must develop plans that are in alignment with its goals and best interests.

The success of a project is decided by the possessor's determination of criteria such as resource allocation, safety, quality, cost, and time. The goal of project management is to achieve goals and objectives by strategically allocating resources to satisfy the project's quality, cost, and schedule, scope, and safety requirements (P. Hersey and K. Banchard, 1982).

According to the findings of Yimam (2011)'s study, the majority of contractors' procurement management processes are ineffective. His goal was to determine the level of maturity of project management processes and practices in Ethiopia's construction industry. Furthermore, according to a study conducted by Karlsson (2011) on Ethiopian construction projects, planning processes are frequently overlooked in Ethiopian projects.

According to the information gathered from the Human Resource Officer assigned to the researcher during physical contact before contacting the respondents, Ethiopian Airlines is now working on more than 100 active projects to meet the company's strategic strategy Vision 2025. Project managers are responsible for both internal and external projects. However, there are often visible gaps in successfully performing project management operations, which can be linked to gaps in the procurement management process (Samuel N., 2019).

Different researchers have done research on the area of practice of procurement in the case of different organizations; and also its effect on project performance, but to the best knowledge of the researcher not this much were done on its effect on overall success of the project. Also some of who did on it, they did not use satisfactory research method to arrive at the result. In the study of Khisa.N.R (2015) it was done by only using descriptive without testing the hypotheses using regression or other further method.

And also the student researcher has personally observed some projects fail to achieve the planned goal most of the time, due to the misuse of the project monetary resources by procurement personnel's. The main issue here the problem of Corruption. This issue can happen at different level of procurement process starting from supplier selection, awarding contract and even during contract administration. Thus, this research is to evaluate the effect of procurement management on the success of the project and fill both theoretical and practical gaps.

1.3. Research objective

1.3.1. General Objective

The main objective of this study is to examine the effect of project procurement management in project success of Ethiopian Airlines.

1.3.2. Specific Objective

In order to achieve the general objective of the study in detail, the research has addressed the below specific objectives:

- To examine the effect of procurement planning on the success of the project.
- To examine the effect of Procurement conducting process on the success of the project
- To examine the effect of procurement controlling process on the success of the project.

1.4. Research question

1.4.1. Main Research Question

What is the effect of Project procurement management on the success of the project?

1.4.2. Specific Research Question

What is the Effect of procurement planning on the success of the project?

What is the Effect of Procurement conducting process on the success of the project?

What is the Effect of procurement controlling process on the success of the project?

1.5. Research Hypothesis

The hypotheses were developed based on the reviewed theoretical and empirical literatures on the relationship between procurement management process and project success. And Null hypotheses were used to test if the relation really exists between dependent and independent variable.

H01- Procurement planning has no significant effect on project success.

H02- Procurement conducting process has no significant effect on project success.

H03- Procurement controlling process has no significant effect on project success.

1.6. Significance of the study

It is expected that the findings of this study will support the various authors and researchers in literature review and the findings of this study will be utilized by policy makers and academia that is related to this study.

1.7. Scope of the Study

Ethiopian Airlines has around 150 offices outside of Addis Ababa, including regional and international offices. Only respondents from the main hub, where the majority of the project would be performed, were used in this study. Furthermore, this research only looked at three major divisions, which will represent the company's core parts with more projects and the procurement department as a supporting department. IT, MRO (Maintenance Repair and Overhaul), and Facility Planning were the three departments chosen, as previously stated.

Conceptually, only three variables from project procurement management were used. i.e. Procurement planning, procurement conducting process and procurement controlling process.

Methodologically Explanatory and Descriptive Research Design with Quantitative Research approach was employed.

1.8. Limitations of the study

The student researcher has considered the main hub of Ethiopian Airlines which is Addis Ababa branch. But ET has branches other than the one considered for this research purpose. And additionally some of the respondents selected were of high profile employees and failed to give a

time to respond appropriately. If all other branches either home country based or abroad were considered and also due attention were given to responding to the interview it would have yield better result

1.9. Organization of the study

The research report is organized in five chapters: Chapter one focused on the background of the study, problem statement, objective of the study, significant of the study and limitation of the study. In chapter two, a range of literatures review was captured, to gather relevant information concerning procurement management and project success. In chapter three, details of methodologies that were followed to achieve the results are outlined. It includes the study design, sampling, sampling technique, source and type of data and data analysis. Chapter four contains results and discussion from the study that will be supported with findings from other research works. Chapter five focuses on summary, conclusions and recommendation.

Chapter Two: Review of Related Literature

2.1. Theoretical Review

2.1.1. Project

Projects are a type of activity that uses resources and has a beginning and end date. Project management is one of humanity's oldest and most cherished achievements. The builders of pyramids, the architects of ancient buildings, the masons and craftspeople of the Great Wall of China, and other wonders of the world may all be used to explain this (Peter 2001).

Project Management Body of knowledge (PMBOK6 Guide), The Project Management Institute (2017): “A project can be a short-term undertaking to create a single product or service.”

The Complete idiot’s Guide to Project Management, second Edition, Macmillan/ Alpha (2000) by Sunny and Kim Baker: “A project can be defined as a set of tasks with a beginning and an end that are constrained by time, resources, and desired outcomes.”

Kerzner. H. (1997).: “A project can be any set of activities or tasks that have the following characteristics: have a specific goal that must be met according to predetermined guidelines; have a specific aim that must be met according to predetermined guidelines; have a specific goal that must be met Have established start and end dates; Set budget limits (if necessary) and Utilize resources (i.e., money, people, and equipment)”.

2.1.1.1. Project management

Project Management Body of knowledge Guide (PMBOK@6), The Project Management Institute (2017): “The application of knowledge, skills, tools, and procedures to project activities in order to meet or exceed stakeholder expectations and wants.”

Sunny B. and Kim B. (2000) in their book called “The Complete idiot’s Guide to Project Management” defined it as: “...a discipline that involves combining systems, processes, and people to accomplish a project within the time, financial, and quality constraints that have been set.” According to Van Nostrand (1997), Project management is a systems approach that aims to make better use of existing resources by allowing work to flow both horizontally and vertically within an organization.”

2.1.1.2. Project management process groups

According to (PMBOK6), PMI (2017); a Project Management process group can be a logical grouping of project management processes to achieve specified project goals. Project phases have no bearing on process groups. The following 5 Project Management Process Groups are used to categorize project management processes: Initiating process group; planning process group; Executing process group; Monitoring and controlling process group and Closing process group.

2.1.1.3. Project management knowledge areas

A Knowledge Area is a known aspect of project management explained by its knowledge requirements and specified in terms of its basic procedures, practices, inputs, outputs, tools, and techniques, according to (PMBOK6), (PMI) (2017). Despite the fact that the knowledge areas are intertwined, they are discussed separately from the perspective of project management. The ten knowledge areas described in this handbook are used in a number of different projects. They are [Project Integration Management, Project Scope Management, Project Schedule Management; Project price Management; Project Quality Management; Project Resource Management; Project Communications Management; Project Risk Management; **Project procurement Management** & Project Stakeholder Management]

2.1.2. Project procurement Management

Van Weele and Rozemeijer (1996, p.22), defined procurement as “all activities essential in order to acquire the product from the provider and transport it to actual use location. It encompasses the purchasing functions, quality control, traffic and transportation, the store, inbound inspection, and assurance. Several companies include salvage and environmental management in their purchasing operations in addition to supplies. Lysons (2000) defines procurement as "the buying of goods or services for the day-to-day operations of a corporation" and believes that it is a critical component of any organization's ability to function effectively and efficiently.

Procurement management has its roots in management theories, particularly classical management theory, which provides a rational and scientific foundation for the management of organizations arising from the industrial revolution, which created a need for cost-effective designing, organizing, influencing, and dominating all work activities. Administrative

Management theory looks at companies as wholes and focuses on how to make them more practical and cost-effective. Kerzner (2006) argues that a manager's primary responsibilities should include creating, organizing, commanding, coordinating, and dominating in order to increase production and re-evaluate structure potency and effectiveness.

The procurement function is managed using management theory; to conduct procurement planning, which is the management function of planning, solicitation development, and supplier selection, which relates to the organizing function of management, and contract management and administration, which relates to the control aspects of management in the process of acquiring inputs for value adding in organizations (Thai, 2005).

Project procurement management, according to PMBOK (2013), "includes the actions necessary to obtain product, services, or outcomes from sources outside the project team". Project procurement Management embraces the management and management processes desirable to grow and administer agreements like contracts, purchase orders, memorandums of agreements (MOAs), or internal service level agreements (SLAs).

Procurement management entails two types of tasks: establishing and controlling modifications to contracts with suppliers and consumers, and ensuring the project team performs its contractual agreement commitments (Akhter, 2014).

Procurement management, according to Depaoli et al. (2013), is one of the most significant aspects of project management since it encompasses a wide range of activities such as designing, organizing, leading, acting, staffing, and controlling. He also emphasizes the need of cultivating and maintaining positive connections between internal departments and suppliers in order to effectively order, receive, review, and approve all procurement items required for project execution. The project management book of knowledge not only agrees with the author, but also delves into the phases of procurement procedures to determine the risks and obstacles that procurement management entails.

Project procurement management is divided into four processes by the PMBOK (2012); which are procurement planning, conducting procurement, Controlling procurement and closing procurement which embraces (Procurement planning, solicitation planning, proposal solicitation, source selection, contract administration and contract close out) if defined in relatively detail

wording. The literature of this study basis on these four processes (i.e. Planning Procurement, conducting procurement, controlling procurement and Closing Procurement)

2.1.2.1.Procurement planning

The process of recording project procurement decisions, agreeing on a strategy, and locating possible vendors is known as procurement planning. Its key value is that it assists in making or purchasing decisions, as well as determining whether to acquire from outside the project, what to acquire, and how and when to get it. This external procurement of products and services is done only once or at certain points throughout the project (PMBOK® GUIDE, 2008).

This process includes the following according to PMBOK® Guide, 4th Edition:

Determining the need; Procurement statement of work creating, specifications, and WBS ; Preparing WBS dictionary, if necessary; make or buy analysis; Placing out the major milestones and schedule; Deciding if long lead procurement is needed; Cost approximating, including life-cycle estimate; Finding out if qualified supplies exist; Finding the source selection factors; Making a listing of possible project/procurement risks (i.e., a risk register); creating a procurement plan and Gaining authorization and endorsement to proceed.

Brown and Hyer (2010) defined planning as the process of determining the goal, defining the scope, identifying critical client user demands, important procurement activities, estimating product and service delivery schedules and costs, assigning tasks, and substituting activities. Planning answers the question, "What does the organization expect from the project's successful completion?" What kind of framework do you think you'll get? Frese et al, (2003) asserts that planning necessitates magnificent preparations, which include expanded programming of the process implementation stages and milestones, task timeliness, retreat positions, and re-planning.

What and when to acquire, when do we need the item, where will it be procured, when does the resource get delivered, which procurement method is appropriate, what is the effect of late/prior purchase on the user unit, and who will be involved in the procurement are some of the primary questions asked during the planning process(Basheka, 2008). It also entails modifying the type of contract that will be utilized in order to prevent or mitigate risks, which may include shifting risks to the seller (PMBOK, 2013).

Deme A, (2009) says good procurement planning before starting a procurement process highly contributes to project success.

2.1.2.2. Conducting Procurement

Conducting Procurements is the procedure of gaining seller responses, choosing a seller, and granting a contract. Its main advantage is that it aligns the interests of internal and external stakeholders through formalized contracts (PMBOK, 2013).

After the requirements are recognized in addition a procurement plan has been ready, a request form for each element to be procured will be sent to suppliers to commence the procurement process. The procurement conducting process includes: evaluating and confirming specifications, confirming qualified sources, reviewing their past performance, revising of team or partnership agreements and creating the solicitation package (Kezner, 2009). The main objective of solicitation procedure is to get feasible responses from potential suppliers so as to fulfill the requirements of acquired product/service for the project. Secondary objective of this process is to make sure that all sellers are treated impartially and all of them get balanced chance (Fleming, 2003).

After the procurement plan is authorized and the class of the activity is chosen, the next step is finding suppliers; to obtain an acceptable response from the seller and based on this information to get criteria select the supplier for which Procurement documents are utilized to solicit tenders from potential sellers (PMBOK, 2000). And procurement documents are: Requests for information (RFI), Requests for proposals (RFPs), Requests for quotation (RFQ), Invitations for bid (IFB) and Invitation to negotiation (ITN) where these documents are denoted as a bid document a way of solicitation. Solicitation involves obtaining responses (bids and proposals) from potential sellers on in what way project requirements can be achieved (PMBOK, 2000).

2.1.2.3. Controlling Procurements

Controlling procurements refers to the process of managing procurement relationships, monitoring contract performance, and making contract amendments as needed. Its primary advantage is that it ensures that both the seller's and buyer's performance meets procurement requirements in line with the legal agreement's conditions. Controlling Procurements contains

application of the suitable project management procedures to the contractual affiliation(s) and amalgamation of the results of these courses into the overall project management.

Controlling Procurements furthermore has a financial management element that includes monitoring outflows to the seller. The Controlling Procurements process examines and record how fine a supplier is performing or performed in the past, grounded on the contract and establishes remedial actions when desired. This performance appraisal may be used as a measure of the supplier's fitness for doing similar work on upcoming projects also comprises managing any premature termination of the contract work in according to the termination article of the contract (PMBOK, 2013).

2.1.2.4.Closing procurement

Closing procurements is the procedure of conclusion of every single project procurement .It involves confirming all deliverables and works were acceptable according to the contract. Closing procurements furthermore involves administrative actions such as settling outstanding claims, updating documents to mirror final results and attaining such information for future utilization. Closing procurements addresses every contract pertinent to a project phase or the project. (PMBOK, 2012)

Closing the contract is frequently an unnoticed function of the project manager. It both declares what has been done and gives a chance to deal with outstanding issues and final payments to all parties. Issues to be well thought-out during closing a contract are: existence of clear understanding of when the project is finished after the contract is closed, make sure recording of the materials utilized during the project and keep all this record (Wysocki, 2014)

According to kerzner H.(2009) contractual closure is then monitored with administrative closure, which includes: Documented proof that the yield was accepted; reflecting the seller on their general performance; Recording supplier's performance (record keeping will be helpful for forthcoming sources assortments when evaluating contractor's previous performance) ; Detecting room for improvement on upcoming contracts ; keeping all essential project documents ; Carrying out a lessons-learned evaluation and Recognizing best practices.

Fleming (2003) argues that because the Seller has just completed all deliverables doesn't really mean that procurement is concluded. There are habitually outstanding issues which need to be

addressed. For example, it can be the systematic closing of each procurement, keeping of all files and in specific to the settlement of all unsettled claims and residual claims the Suppliers might have on the buyer.

2.1.3. Project Success

Originally, project success was defined as whether or not the project's final result was functional. The triple restriction of time, cost, and quality emerged as a result. Success criteria should be set at the start of the project or before commencing a new phase of the project, according to PMBOK (PMI, 2013). This can increase deliverable acceptance, as well as customer and stakeholder satisfaction. (PMI, 2013). According to Wateridge (1998), unless success criteria are agreed upon before to the start of the project, the project team may take various paths, which may indirectly prepare the road for failure.

According to PMI (2004), the most important success factor is meeting project scope on time and on budget. Project success is judged against the project's overall objectives, whereas project management success is judged by traditional performance criteria such as executing projects on schedule, on budget, and to scope and quality standards (Cooke-Davies, 2002).

The "iron-triangle" of money, time, and quality was the focus of many studies on project success (Cooke-Davies, 2002). (Papke-Shields et al., 2010). These performance parameters are still thought to be very important and are routinely used in practice to evaluate project success (Scott-Young and Samson, 2008; Papke Shields et al., 2010).

As a result, it has become the de-facto technique for defining and measuring project success, with project managers generally believing that a successful project is defined by these three criteria alone (Shenhar and Dvir, 2004). (2007). Any attempt to depart from or supplement the three criteria that make up the Iron Triangle is frequently regarded as a flaw that must be addressed or avoided in the first place (Shenhar and Dvir, 2007; Turner and Bredillet, 2009).

Some researchers, quoting Shenhar at a PMI meeting, argue that the three traditional elements of time, cost, and quality are purely efficiency-based, and that the focus should be changed to more business-oriented results and customer satisfaction. Even though sustainability may be considered as a new concept to explore in relation to the Iron Triangle as a planning tool, given that project management entails modifications, is a new questioning idea. According to Silvius

and Schipper (2011), current project management standards do not adequately address sustainability challenges or provide project managers with the tools they need to integrate sustainability concepts into project planning and execution.

According to Andersen et al. (2006), a project is regarded successful if it is finished within the limitations of its performance goals, within the budgetary constraints, and on time. The traditional “hard” technical skills of project managers have received a lot of attention; but, (Zhang, L., and Fan, W., 2013) have thrown little light on the “soft” skills, particularly social competences in the construction setting. The project's overall success and achievement of its objectives are dependent on the cooperation of the entire project team and the project manager's leadership (Cech and Chadt, 2015).

2.1.4. Procurement management and a project's success

Different scholars have mentioned the importance of effective procurement management for the project success. A holistic and comprehensive approach to procurement procedures is critical for successful construction project governance (Cox and Thompson, 1997, Eriksson, 2008b). According to Alexandria M. (2020), well-executed procurement management gives a number of project benefits. Procurement management may assist boost assurance and quality, regulate prices, and reduce total project risks when carefully planned and managed.

One of the key functions of procurement is procurement planning, which has the ability to contribute to the success of local government operations and enhanced service delivery. It is a function that initiates the acquisition/procurement process. Despite its importance; there has been very little scientific research on the extent to which procurement planning activities can contribute to efficient local governance (Basheka, 2008). Procurement planning, he added, is the key activity that sets the foundation for later procurement actions. It ‘fuels and then ignites’ the procurement process's engine. Means and methods must be devised in a decentralized framework to effectively link national and sub-national planning processes, ensuring that national priorities are roughly represented in regional and local policies. According to Mullins (2003), procurement planning is the process of assessing an entity's procurement needs, as well as the timing of their acquisition and finance, in order to ensure that the entity's operations are satisfied in a timely and efficient manner.

All parties involved must pay close attention to all provisions in the given or existing contract in order to ensure that contract management takes the correct path (Sanders, Locke, Moore, & Autry, 2007; Laratta (2009) and Saunders, 2000). Contract management practices that meet the needs of the company's stakeholders, achieve optimum conditions and value in regard to the allocation of scarce tax payer resources (best value for money), ensure rational and efficient use of funds available, stimulate valuable competition, and manage risk and potential liabilities to the buyer, thus improving service delivery.

From the standpoint of project management, it's all about fulfilling or exceeding the demands and expectations of project stakeholders. It generally entails giving careful thought to three primary project elements: time, cost, and quality (Project Management Institute, 2004). Tukul and Rom (2001) likewise came to the conclusion that the satisfaction of key project stakeholders was the most important indicator of project success. According to Bryde (2003), project performance is defined as the satisfaction of numerous stakeholders, the quality of the product, and the process of accomplishing the objectives.

Selecting the correct supplier for an assignment, as well as reviewing this supplier's performance while the contract is being implemented, according to Arajo et al. (2017), is critical to a successful project conclusion. Because of the ongoing proliferation of diverse procurement methods, the increasing technical complexity of projects (Agarchand & Laishram, 2017), and the requirement for greater value for money, the supplier selection process has grown increasingly difficult. As a result, in the context of a complicated project situation, the traditional criteria of time, money, and quality alone are portrayed extremely simplistically, and decision criteria must be revised (Naoum & Egbu, 2015, 2016). The current multidimensional view of project success (Carvalho & Rabechini Junior, 2015; Shenhar & Dvir, 2007) should also be addressed in a procurement management setting. In their study titled "The role of procurement methods in effective implementation of infrastructure projects in Pakistan," Noor, M.A., et al. (2013) discovered that procurement had a direct impact on project success. As a result, procurement management has an impact on project success, as discussed above.

2.2. Empirical Review

Abdalla (2014) with the undertaking of a research titled “**Procurement process and its effect on the effectiveness/performance of procurement functions in the organization: the case of**

Ministry of information, culture, tourism and Sports- Zanzibar” found that there were a number of obstacles in the procurement process which hinder the effectiveness or performance in the procurement functions practices in public service such as delay in signing of the contract, failure to identify the need of the organization, low knowledge of specification, low knowledge of contract ,delay in tendering process ,supplier selection process with the process existing in the procurement Act itself were some of the obstacles of the performance in the procurement functions.

In the study “**influence of procurement process on completion of road construction projects in kenya: a case of bungoma south sub-county by Khisa.N.R (2015).**” the researcher has used four independent variables (Tendering process, client selection criteria, control regulations and quality assurance.) and also moderating variables (contract strategy, risk management), and Intervening variable (economic factors, politics and government policies.) . The researcher concluded that these all variables have effect on construction project success. But the analysis was done using descriptive statistics (use of tables, frequencies and percentages) and correlation, which seems a little bit difficult to use this result as the hypotheses were not tested by regression. And, recommended that the Government should ensure that e-procurement is embraced in its ministries and public sector to ensure open and fair procurement process.

The research titled “**The effect of procurement management on project performance: a case of the Uganda millennium science initiative project by Naluyima. H. O. (2016)**” used three independent variables (procurement planning, solicitation of bids and contract management) and tested their effect on project performance. In the finding it was mentioned as follows: procurement planning significantly affects the overall project performance, solicitation of bids has no effect on project performance and contract management effects project performance. Here also the effect of procurement planning on the success of projects will be tested.

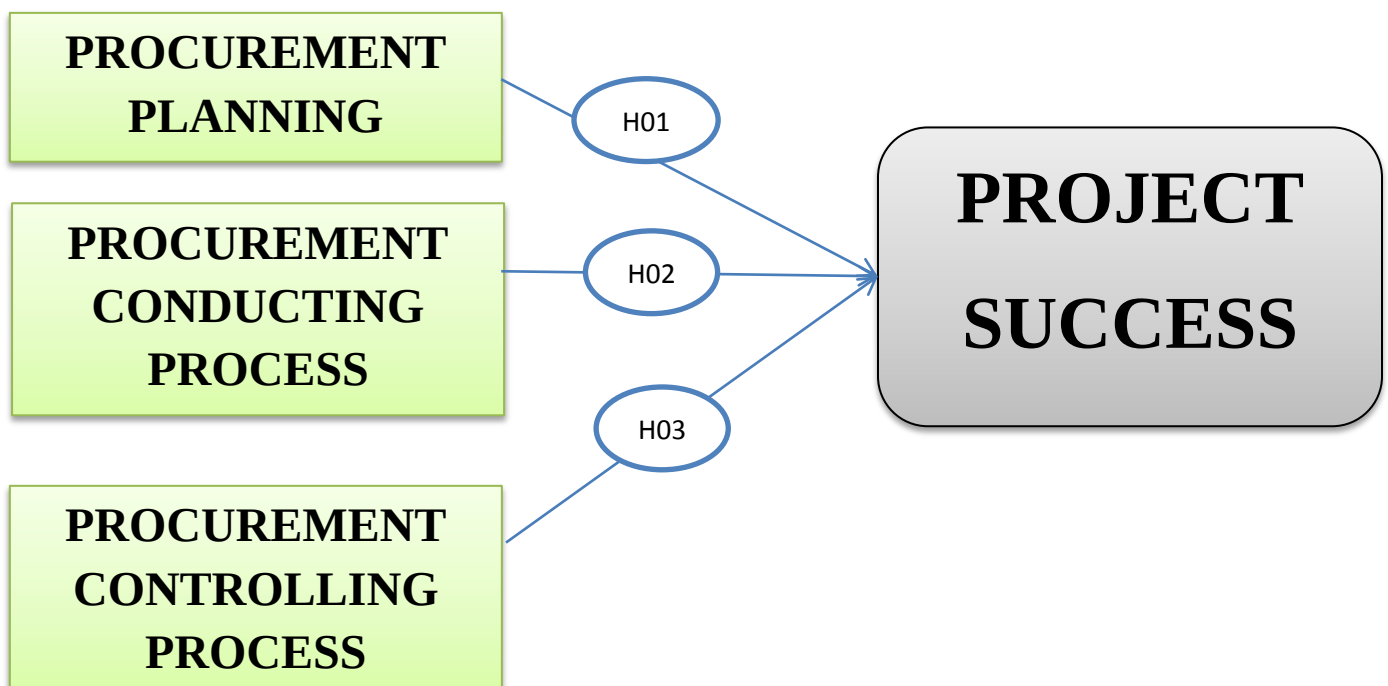
Betelhem S. (2015) examined **Ethiopian Airlines’ current purchasing policies and processes, as well as their impact on performance.** Furthermore, the findings show that ET has implemented a procurement policy and procedure manual, and that purchasing is carried out in accordance with policy. Furthermore, the policy manual has not been consistently updated to reflect current market developments. Poor supplier evaluation and selection methods have also been noted as important issues. As a result, the researcher recommended that the draft of the

altered procurement policy be updated and approved, and that the change be communicated to the entire project team.

Belay. F. (2019) with the study titled “**The effect of procurement management practice on the project performance: the case of commercial bank of Ethiopia**” used four variables of procurement management (Need Assessment, Supplier Management, Contract management and Inventory management) and tested their effect on project performance with Null hypotheses by regression. Finally, concluded that all these variables have significant effect on project performance.

2.3. Conceptual Framework

A conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. In order to examine the case according to Ethiopian context, the researcher has adopted the Procurement management dimensions from PMBOK (2013) excluding procurement closing, because the process more helpful for future than completed project. Null hypothesis were used to test their relation.



Source: Adopted from (PMBOK 2013).

Figure 2. 1. Conceptual Framework

Chapter Three: Review Research Methodology

The research strategy and technique are described in detail in this chapter. These factors include research design, data type and source, sample method and size, data collection procedure, data collection technique and analysis, questionnaire design, and questionnaire reliability.

3.1. Research Approach

Study design can be defined as qualitative, quantitative, or a combination of both based on the research purposes and data kinds Creswell, (2009). Qualitative research design, according to Malhotra and Birks (2009), is an unstructured primary exploratory research design that relies on small samples and is designed to generate insight and understanding. It entails gathering, analyzing, and interpreting information that cannot be properly defined or summarized in numbers Parasuraman (1991). In qualitative research, samples are typically smaller than in quantitative projects, which often involve significantly larger samples.

Quantitative research, on the other hand, is a study that uses statistical tools to arrive at conclusions. Quantitative research, according to Parasuraman (1991), is a type of descriptive or explanatory research that uses large representative samples and fairly standardized data collection processes. Malhotra and Birks (2009) define quantitative research as the application of descriptive or explanatory approaches to answer hypotheses or research questions.

Given the concepts of the preceding sections, and because the goal of this research is to investigate the impact of procurement management on project success in the case of Ethiopian Airlines, it is a quantitative research design because it employs numeric data. Furthermore, it quantitative research approach is used, since the researcher employs systematic data collection and measurement, as well as statistical techniques to analyze and get findings in order to answer the research questions and test the hypotheses.

3.2. Research Design

Many forms of research can be utilized by many researchers depending on the research goal: exploratory, descriptive, causal or explanatory research, and so on (David 1998). Exploratory research, according to Parasuraman (1991), is meant to provide first insight and provide guidance for any future research needs. He also states that the primary goal of exploratory

research is to shed light on the nature of a problem and identify any specific aims or data that require further investigation.

Descriptive research, according to Burns and Grove (2003), is designed and carried out to describe an image of a phenomenon as it occurs naturally. Its goal is to depict the current state of affairs and to characterize features of a population or phenomena in terms of those characteristics in order to produce an accurate verbal or numerical profile of a group (Kothari, 2004). Descriptive research investigates a subject in greater depth than exploratory research since it aims to identify and characterize the features of the relevant concerns (Olsen and Pedersen, 2008).

Explanatory research, often known as causal research, is an extension of descriptive research. The researcher goes beyond simply stating the qualities to investigate and explain why or how the phenomena under investigation occur. In order to explain a phenomenon, an explanatory inquiry will attempt to exhibit causes, effects, or intents (Olsen and Pedersen, 2008).

As a result, the researcher employed Explanatory and Descriptive research to explore the relation between procurement management and project success aspects, based on the above argument.

3.3. Population and Sampling

The target populations for this study were projects managers of completed projects and procurement Management staffs of different projects in Ethiopian Airlines from the Addis Ababa branch.

For the purpose of this study the respondents were selected by purposive sampling approach from 66 projects and procurement staffs that has relevant information on project, because other project teams will not have relevant information. This sampling methodology is applicable for this case study because, according to Saunder (2009), when working with a limited sample size, purposive or judgmental sampling is used. It allows utilizing judgment to choose situations that helps to answer the research question and achieve the study's objective.

3.4. Data types and sources

The researcher employed both primary and secondary data sources to get relevant information for this investigation. The primary sources are original data gathered from 72 Ethiopian Airlines employees. Any data that were acquired from any written document (websites, the bank's annual report, books, and published journals) is considered a secondary source of data.

The researchers reviewed the findings and conclusions linked to the topic in order to strengthen the study's results and findings. This allows examining what other people said about the issue, as well as how their results and recommendations relate to the research being doing.

3.5. Data collection Instruments

The main research instrument that was used for this study was questionnaire. The questionnaire for Variables under project procurement management was adapted from research paper of Nshemereirwe. P. (2015) titled “procurement management and performance of construction projects in government-aided secondary schools in Bushenyi district, western Uganda” which was Adopted from Guyana Procurement Planning Manual, September 2010 and modified by the Researcher. The questionnaire for Project success variable is adopted from Suhaib, (2017) on his study “The Impact of Project Managers’ Competencies on Project’s success”. The Questionnaire used for the study is divided broadly into two sections. These are the demographic section and the characteristics of procurement management and project success section. Under the demographic section variables such as age of the respondent, gender, marital status and highest educational level will be asked. In the second section hypothetical statement on project success was given. This section was also grouped into various dimension of procurement management outlined in the conceptual framework. The section contains three dimensions i.e Procurement Planning, Procurement conducting process and Procurement controlling used a five point Likert Scale where respondents will be asked to indicate the extent to which they agree/disagree with various statements. The Five-Point Likert’s scale having the ratings of “strongly disagree” (1) and “strongly agree” (5) was used.

3.6. Data Analysis Methods

Data analysis, according to Mugenda & Mugenda (2003), is the process of providing order, structure, and meaning to a large amount of data. In this study, inferential and regression statistics data analysis will be used to analyze the acquired data. Those data collected through questionnaires were analyzed using the Statistical Package for Social Sciences (SPSS) version 20 software. The researcher used inferential statistics (correlation and regression) to analyze the data. Pearson correlation coefficient was to assess the relationship between Procurement Management and Project success dimensions, whereas multiple regression analysis was used

to examine the extent of the influence Project Procurement management on project success dimensions.

The multiple linear regression equation is in the form of:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Project success;

X_1 = Procurement planning;

β_1 = Coefficient associated with X_1 ;

X_2 = Procurement conducting process;

β_2 = Coefficient associated with X_2 ;

X_3 = Procurement controlling process;

β_3 = Coefficient associated with X_3

α = Constant;

ε = Standard Error;

3.7. Reliability Test

The degree to which a construct's measure is constant or trustworthy is known as reliability. Cronbach's alpha coefficient was used to perform the reliability test, and items that scored higher than the acceptable value were kept.

Dennick & Tavakol (2011) if a test has more than one concept or construct, reporting alpha for the entire test may not make sense because the higher number of questions will invariably inflate the value of alpha. As a result, rather than calculating alpha for the entire test or scale, alpha should be determined for each of the concepts.

Scales with coefficient alpha between 0.6 and 0.7 suggest medium reliability, acceptable reliability, and above 0.7 suggest good reliability, according to Zikmund et al., (2000). All of the variables designed were deemed to be a good measure of internal consistency based on the above range.

The third Variable, Procurement Controlling process had 6 questions, but it was found to be inconsistent since its Cronbach's Alpha was .664. But from SPSS, using "Scale Mean if Item deleted", it was suggested that if Security question number 4 deleted, the Cronbach's Alpha will become .724. Then that action was taken and reported as in the table.

Table 3. 1 : Reliability Coefficient of the Study Variables.

Item	N	Cronbach's Alpha
Independent -(Planning)	6	.856
Independent -(Conducting)	6	.708
Independent - (Controlling)	5	.724
Dependent- (Project Success)	12	.903
Overall Variables	29	.945

Source: Own data SPSS output (2021)

3.8. Validity Analysis

Validity is the range to which variances found with a measuring instrument reproduce true differences among those being tested (Kothari, 2004). In other words, validity is the most important criterion since it demonstrates how well an instrument measures what it is supposed to assess. The content and construct validity of the research was verified to ensure that the study design content was of high quality. According to Kothari (2004), content validity refers to how well a measuring instrument covers the topic under investigation.

The content validity of an instrument is good if it has a representative sample of the universe. Most of its decisions are made based on judgment and intuition. It can also be determined by a panel of people who will judge how well the measuring device fits the standards, but there is no way to express it numerically. The content validity was validated by professionals based on this, and the data was collected from a homogeneous population, resulting in consistent and valid data.

3.9. Normality of the Data

One of the assumptions was that the data's normality should be checked before skewness and Kurtosis were used to analyze the data. According to Field,A (2005), regularly distributed data is data from one or more regularly distributed populations. The aim of hypothesis testing is to ensure that populations are regularly distributed, so if these assumptions are not met, the rationale behind hypothesis testing is erroneous.

As a result, the values of S (skewness) and K (kurtosis) as well as their standard errors were computed. At p 0.05, an absolute value for Skewness between -2 and +2 and an absolute value

for Kurtosis between -7 and +7 is expected to be significant. Because large sample sizes result in small standard errors, significant values emerge from even minor departures from normality for both skewness and Kurtosis when sample sizes are large (Field, 2005)

Table 3. 2. :Skewness and kurtosis for normality of data

Descriptive Statistics					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Planning	72	-1.862	.283	4.974	.559
Conducting	72	-.655	.283	1.431	.559
Controlling	72	-.217	.283	.087	.559
Project success	72	-.971	.283	.979	.559
Valid N (listwise)	72				

Source: Own data SPSS output (2021)

As we can see from table 3.2 above all the values of skewness are between -2 and +2 and the kurtosis are between -7 and +7. So it is normally distributed.

3.10. Ethical Consideration

Throughout the research process, this study followed ethical and morally acceptable procedures. The information was gathered with the participants' complete agreement. They were told that they could stop filling out the questionnaire at any time if they didn't like it. Furthermore, it was completed anonymously, and no information was made available to anyone who was not a participant in the study. The benefits of the study were also disclosed to the participants in order to protect the participants' rights.

Finally, every references used were recognizing, all research findings have not been concealed and are free of plagiarism. Furthermore, the research was conducted with an open mind, and attitudes were expressed as they are. Nothing was tweaked or altered. As a result, the information gained is presented as is, and all of the literatures gathered for the purpose of this study are referenced.

Chapter Four: Data Presentation, Analysis and Interpretation

A total of 97 questionnaires were sent to the respondents through email with close follow up and three time reminder and 72 respondents filled and returned their questionnaire. Thus constituting 74.22% of the questionnaires are returned, while 25 of the respondents didn't respond and never returned the questionnaire and constituted about 25.78%. A response rate of 50% is appropriate for analysis and reporting, according to Mugenda & Mugenda (2003); a rate of 60% is good, and a rate of 70% or more is great. The response rate was excellent based on this statement.

The basic assumptions are Procurement Management attributes namely Procurement planning, procurement conducting process and procurement controlling process influence project success.

For studying the relationships, a multiple regression modeling strategy was recommended as a viable tool. This chapter analyzes and discusses the results of this multiple regression model. SPSS software version 20 was used to conduct the statistical analysis for this study, with the results displayed in the inference and descriptive sections. Tables were employed in the descriptive phase, and the results of multiple linear regressions were assessed in the inference part.

4.1. Respondent Profile

It is critical to examine the respondents' background information in studies like these. This is because people's social backgrounds have an impact on how they think and, to a greater extent, what they do. The demographic information included Sex, Age, educational level, position, years they have been with ET and experience with Project. The table below shows that majority of the respondents were male with total of 46 (63.9%) while the remaining 26 (36.1%) were female. Regarding the age, most of respondents were between age of 25 – 34 constituting 44.4 % and the remaining are between the age of 35-44 and 45-54 constituting 36.1% and 19.4% respectively. Majority of the respondents were MA/MSc holder which accounts for 55.6 % and the remaining 44.6 % were First Degree. Position wise project Managers takes 66.7 % and the remaining 25%, 5.6% and 2.8 % goes for Project team, procurement head and procurement staff respectively. Majority of the respondents has experience of 6- 10 years with Ethiopian Airlines which is 38.9%, while others has 1- 5 years, 11-15 years and 16-20 years constituting 13.9%, 22.2% and 25% respectively. Also their experience with project is depicted here as 1-5 years taking greater

percentage which is 52.8% and below 1 year, 6-19 years and above 10 years and percentage of 5.6%, 30.6%, and 11.1% in order.

Table 4 1: Demographic profile of respondents

Demography		Frequency	Percentage
Sex	Male	46	63.9 %
	Female	26	36.1 %
Age	18 – 24	0	0 %
	25 – 34	32	44.4 %
	35 – 44	26	36.1 %
	45 – 54	14	19.4%
	Above 55	0	0%
Position	Project Manager	48	66.7%
	Project Team	18	25 %
	Procurement Head	4	5.6 %
	Procurement Staff	2	2.8%
Years with ET	1-5 Years	10	13.9 %
	6-10 Years	28	38.9 %
	11-15 Years	16	22.2 %
	16-20 Years	18	25 %
Education	Diploma	0	0 %
	First Degree	32	44.4 %
	MA/ MSc	40	55.6%
	PhD	0	0%
Years on Project	Below 1 Years	4	5.6 %
	1 - 5 years	38	52.8%
	6 - 10 years	22	30.6 %
	Above 10 years	8	11.1

Source: Own data SPSS output (2021)

4.2. Descriptive Analysis (mean and standard deviations)

Table 4 2: Procurement Planning descriptive

	N	Mean	Std. Deviation
1. Procurement requirements were defined	72	4.03	.839
2. Time-frame of project implementation was determined	72	4.08	.900
3. Cost estimation was done, including life cycle costing	72	3.69	.973
4. The procurement plan was always integrated with the budgeting	72	3.64	1.092
5. The Process for acquiring items needed were defined	72	3.96	.971
6. Authorization to proceed was obtained from appropriate authority	72	4.54	.749
AVERAGE MEAN		3.99	.724

Source: Own data SPSS output (2021)

From the table 4.2 above we understand that, during the planning process; due attention was given to obtaining authorization to proceed, from appropriate authority(mean 4.54) among others and less attention was given to always integrating procurement plan with the budgeting(mean=3.64) relatively. And the respondent level of agreements was with interval mean value from 3.64 to 4.54 and with average mean 3.99 showing that they have an agreement on their response.

Table 4 3: Procurement Conducting process Descriptive

	N	Mean	Std. Deviation
7. All significant materials to be developed by the contractor were identified	72	3.99	.896
8. Completion criteria for the work to be performed was specified	72	3.83	.919
9. Specifications did not restrict competition	72	3.82	1.155
10. A detailed, mathematically sound scoring plan were developed	72	3.65	1.090
11. Market research and consultation were undertaken	72	3.65	.981
12. Request for proposal document via advertisement was issued	72	4.06	.963
AVERAGE MEAN		3.83	0.61

Source: Own data SPSS output (2021)

From the table 4.3 above we understand that, during the planning process; due attention was given to issuing request for proposal document via advertisement (mean 4.06) among others and less attention was given to market research and developing detailed mathematically sound scoring plan (=3.65) relatively. And the respondent level of agreements was with interval mean value from 3.65 to 4.06 and with average mean 3.83 showing that they have an agreement on their response.

Table 4 4: Procurement Controlling Process Descriptive

	N	Mean	Std. Deviation
13. Policies were put in place to deal with potential conflicts of interest	72	4.17	.732
14. Evaluation criteria, weighting and an evaluation methodology were defined	72	3.58	1.045
15. Conflict of interest documents were obtained from all members of the evaluation committee	72	3.50	.872
17. Regular audits & reviews of security processes were performed	72	3.67	.949
18. A risk assessment and management plan was developed	72	3.67	.919
AVERAGE MEAN		3.72	.627

Source: Own data SPSS output (2021)

From the Table 4.4 above we understand that, during the planning process; due attention was given to put in place Policies to deal with potential conflicts of interest (mean 4.17) among others and less attention was given to obtained conflict of interest documents from all members of the evaluation committee (mean=3.50) relatively. And the respondent level of agreements was with interval mean value from 3.50 to 4.17 and with average mean 3.72 showing that they have an agreement on their response.

Table 4 5: Project Success Descriptive

	N	Mean	Std. Deviation
19. There were no major with- cost change requests during the project	72	3.39	1.095
20. Project manager's experience helped to eliminate unnecessary resources.	72	3.92	.989
21. The project was finished on or under budget	72	3.24	.957
22. The Project decreased the cost of some activities with no effect on quality.	72	3.65	1.090
23. The project met most of the scheduled milestones	72	3.57	1.072
24. The project was finished on time	72	3.33	.979
25. The Project boosts the employees' abilities by helping to save time.	72	3.61	.897
26. The critical tasks and delivery dates were not slipping.	72	3.36	.827
27. The Project was handed upon the company's overall standards.	72	4.00	.949
28. The project deliverable always fulfills the customer requirements	72	3.58	1.045
29. The project meets its business objectives	72	4.03	.839
30. Setting alternative plans has reduced the unexpected risks possibility.	72	4.14	.924
AVERAGE MEAN		3.65	.677

Source: Own data SPSS output (2021)

From the table 4.4 above we understand that, for most projects setting alternative plans has reduced the unexpected risks possibility. (Mean 4.14) and Most projects were not finished on or

under budget (mean=3.24) relatively. And the respondent level of agreements was with interval mean value from 3.24 to 4.14 and with average mean 3.65 showing that they have an agreement on their responses.

4.3. Inferential Analysis

Before using regression analysis, the following checks were run to check that the data for the assumptions in regression analysis were correct:

Correlation Test between Study Variables

In this section the correlation between Project Success and Independent variables: Procurement Planning, Procurement conducting process and Procurement controlling process has been presented and analyzed. To verify that explanatory variables are correlated, a correlation matrix is used.

Table 4 6: Correlations Test

		Planning	Conducting	Controlling	Project success
Planning	Pearson Correlation	1	.777**	.645**	.880**
	Sig. (2-tailed)		.000	.000	.000
	N	72	72	72	72
Conducting	Pearson Correlation		1	.644**	.786**
	Sig. (2-tailed)			.000	.000
	N		72	72	72
Controlling	Pearson Correlation			1	.701**
	Sig. (2-tailed)				.000
	N			72	72
Project success	Pearson Correlation				1
	Sig. (2-tailed)				
	N				72

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

Source: Own data SPSS output (2021)

Pearson correlation analysis was used to demonstrate convergent validity, and Pearson correlation coefficients reflect the amount and direction of positive and negative correlations, as well as their intensity. Correlation is one of the most basic and useful methods for determining the relationship between two or more variables (Marczyk, Dematteo and Festinger, 2005).

Discussion of correlation between Independent and Dependent variables

According to Field (2009), Pearson correlation values of ± 1 indicate a little association, ± 3 is a moderate association and ± 5 is a large association. Based on this this:

Procurement Planning on Project Success has correlation coefficient which is **0.880** at 0.01 level of significant. That leads that the Procurement Planning has higher association with project Success. So that Procurement planning is one of the good predictors of Project success.

Procurement conducting process on Project Success has correlation coefficient which is **0.786** at 0.01 level of significant. That leads that the Procurement conducting process has higher association with project Success. So that Procurement conducting process is one of the good predictors of Project success.

Procurement controlling process on Project Success has correlation coefficient which is **0.701** at 0.01 level of significant. That leads that the Procurement controlling process has higher association with project Success. So that Procurement controlling process is one of the good predictors of Project success.

4.4. Regression results used to test the hypothesis.

Multi Collinearity test

According to the below table 4.7 all variables has a value of VIF of less than 5. From these findings, the study concluded that there were low levels of multi collinearity since all the values were less than 5 (Cohen, Cohen, West and Aiken, 2013). That means independent variables can stand alone independently.

Table 4 7: Collinearity Statistics

Model	Collinearity Statistics	
	Tolerance	VIF
Planning	.361	2.771
Conducting	.361	2.769
Controlling	.533	1.878

a. Dependent Variable: Project success

Source: Own data SPSS output (2021)

R value test

The goodness of fit of the independent variables in explaining fluctuations in the dependent variable measures is measured by R-squared. The problem with R-squared is that it will either stay the same or rise when more variables are included, even if they have no relationship with the output variables. Here's when the "Adjusted R square" comes in handy

Table 4 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.905 ^a	.819	.811	.294

a. Predictors: (Constant), Controlling, conducting, Planning

Source: Own data SPSS output (2021)

As clearly described in table 4.8 adjusted R-square values for the regression model was .811. This indicates the Independent variables: Procurement Planning, Procurement Conducting Process and Procurement Controlling process in this study explains approximately about 81.1 % of the variation in project success. The remaining 18.9 % of the variation in Project Success are explained by other variables which are not included in the model. Therefore, procurement management dimensions (Procurement Planning, Procurement Conducting Process and Procurement Controlling process) are good explanatory variables that have effect on Project Success. In other word, it is noted that 81.1 % of the changes in the project success variables could be attributed to the combined effect of the predictor variables or there is 81.1 % of variation in project success due to procurement management.

ANOVA result

According to J.H. Zar (2010).The F ratio is the ratio of two mean square values. If the null hypothesis is true, you should anticipate F to be close to 1.0 the majority of the time. A high F ratio indicates that the variation in group means is more than would be expected by chance.

Table 4 9: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	26.625	3	8.875	102.401	.000 ^b
Residual	5.893	68	.087		
Total	32.518	71			

a. Dependent Variable: Project success

b. Predictors: (Constant), Controlling, conducting, Planning

Source: Own data SPSS output (2021)

According to the ANOVA results in table 4.9, there is a statistically significant correlation between the dependent and independent variables at the 1% significant level (sig value 0.000), indicating that the independent variable: procurement planning, procurement conducting process, and procurement controlling process have an impact on project success.. However, because the results of multiple regression analysis revealed that the impact of procurement management dimensions on project performance varies, all procurement management aspects do not have an equal association with project success.

And from the above table, in terms of F-statistics (102.401) at a significant level of 0.000, which means there is a positive relationship between Procurement management and project Success.

Standardized Beta coefficient result

Standardized beta values represent the contribution of the variables in the model to the prediction of the dependent variables, allowing the variables to be ranked based on their contribution at a significance level of less than . 05 (Pallant, 2005).

Table 4 10: Result of regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.181	.238		-.758	.451
Planning	.573	.080	.613	7.136	.000
Conducting	.213	.095	.192	2.240	.028
Controlling	.197	.076	.182	2.575	.012

a. Dependent Variable: Project success (Source: Own data SPSS output (2021))

Therefore, in this case, all has significance of less than 0.05 and planning takes the higher share in contributing for project success since it has the highest standardized coefficient beta value of B=0.613 followed by Conducting process B=0.192 and Controlling Process B=0.182, by descending order.

Basically using the multiple linear regression equation is in the form of:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Project success;

α = Constant;

X_1 = Procurement planning;

X_2 = Procurement conducting process;

X_3 = Procurement controlling;

ε = Standard Error;

β_1 = Coefficient associated with X_1 ;

β_2 = Coefficient associated with X_2 ;

β_3 = Coefficient associated with X_3

From the above table finding we can develop the following regression model

$$\text{Project Success} = -.181 + .613 X_1 + .192 X_2 + .182 X_3 + \varepsilon$$

$$\varepsilon = .238 * .080 * .095 * .076$$

$$T \text{ Value} = -.758 * 7.136 * 2.240 * 2.575$$

$$R \text{ square (Adj.)} = .811, F = 102.401$$

4.5. Summary of the Hypothesis Test

From the above Table 4:10, we can understand that all variables having significance of less than .05, which indicates the null hypothesis to be rejected.

H1 – Procurement planning has no significant effect on project success.

From Table 4:10 above, Procurement Planning having standardized beta value of 0.613 implies 100% change in Procurement Planning leads to 61.3% positive change in Project Success level. Also having significance of .000 on Beta table, it was approved that the alternative variable to be true and null hypothesis rejected.

H2 – Procurement conducting process has no significant effect on project success.

From Table 4:10 above, Procurement conducting process having standardized beta value 0.192 implies 100% change in Procurement conducting process leads to 19.2% positive change in Project Success level. Also having significance of .028 on Beta table, it was approved that the alternative variable to be true and null hypothesis rejected.

H3 – Procurement controlling process has no significant effect on project success

From Table 4:10 above, Procurement Controlling process having standardized beta value 0.182, implies 100% change in Procurement Controlling process leads to 18.2% positive change in Project Success level. Also having significance of .012 on Beta table, it was approved that the alternative variable to be true and null hypothesis rejected.

Which means all Independent variables has positive effect on the dependent variable. The findings back up the literature on Procurement Planning, Procurement Conducting Process, and Procurement Controlling Process, which claims that variables have an impact on project success. The findings are also in line with previous study findings, such as Deme A, (2009), who claims that solid procurement planning prior to starting a procurement process is a critical factor in project success. Also, according to a study by Khisa.N.R (2015) titled Influence of procurement process on completion of road construction projects in Kenya: procurement management has a major impact on construction project success. And Belay. F. (2019) employed four procurement management variables in his study titled "The influence of procurement management practice on project performance," and concluded that all of these variables have a substantial impact on project performance. But against the research titled “The effect of procurement management on project performance: a case of the Uganda millennium science initiative project by Naluyima. H. O. (2016)” which indicated that solicitation of bids which is part of procurement conducting process has no effect on project performance, on the other hand agrees on its finding that says contract management which is part of procurement conducting process effects project performance.

Chapter Five: Summary, Conclusion and Recommendation

The study's overall summary, conclusion, and recommendations are presented in this chapter. The recommendations, on the other hand, were divided into two sections. It contains the major recommendation as well as suggestions for future research. It's also worth noting that the study's findings informed the suggestions.

5.1.Summary of Major Findings

The main objective of this study is to examine the effect of project procurement management on project success of Ethiopian Airlines Group. The data collected includes respondents of different age groups, educational backgrounds, positions, and years of experience in the organization and as a project manager.

The result of the respondent's demography shows that majority of the respondents were male with (63.9%) to (36.1%) ratio with female and most of respondents were between age of 25 – 34 constituting 44.4 % and the remaining are between the age of 35-44 and 45-54 constituting 36.1% and 19.4% respectively. Majority of the respondents were MA/MSc holder which accounts for 55.6 % and the remaining 44.6 % were First Degree. Upper hands of respondents were project managers. Majority of the respondents has experience of 6- 10 years with Ethiopian Airlines which was good input for their knowledge and most of them has experience with average of 3- 5 years, since they are those participated on other project previously.

According to the results of this study, the mean of the total procurement management variables is 3.84, which indicates that there is an agreement on moderately high presence of these variables. On the other hand the mean of project success was 3.65 which is positive indicator of success in their projects.

Based on correlation analysis, all of the variables have shown strong association with dependent variable. Their pearson correlation value indicating their relation with Project success was .880 for procurement planning, .786 for Procurement conducting process and .701 for procurement controlling process.

Regression results shows that, there is low multi Collinearity with VIF less than 5, which means independent variables, can stand independently. The result of adjusted R square tells us that the

three independent variables in this study explain approximately about 81.1 % of the variation in project success; while there remaining 18.9% needs to be explained by other variables not considered in this model. The F result was high (102.401), and it indicates that the alternative Hypothesis is true. And the Standardized beta values teaches us that planning takes the higher share in contributing for project success since it has the highest standardized coefficient beta value of $B=0.613$ followed by Conducting process $B=0.192$ and Controlling Process $B=0.182$, by descending order.

From the above, results show that all the procurement management have a positive effect on project success in Ethiopian Airlines Group. Therefore, all the variables used for procurement management have a significant effect on project success.

5.2. Conclusion

As discussed in chapter one of this research, the main objective of this research is to examine the effect of project procurement management on project success of Ethiopian Airlines. From the respondents profile we can conclude that there is moderately higher percentage men project managers in relative to women. And majority of them are young generation with an average of more than five years of experience with the company. And the results have From Individual answers it was understood that projects are not finished in the budged and given time. And also it was proved that the alternative hypotheses suggested were found to be true. Each of the procurement management Variables used; Procurement planning, Procurement conducting process and procurement controlling process has an effect on project success.

However, the results revealed that procurement planning had a much greater impact than the other variables. This process evaluates whether to purchase products and services from outside the project, and if so, what to purchase, as well as how and when to obtain it (PMBOK® GUIDE, 2008).

According to this study, the procurement conducting process has the next highest impact, and its benefit is that it aligns internal and external stakeholder expectations through documented agreements (PMBOK, 2013).

According to the findings, the procurement control procedure has the least impact on project success. However, the main advantage of this method is that it assures that both the seller's and

buyer's performance fulfills procurement standards according to the legal agreement's conditions (PMBOK, 2013).

According to several studies, project success can be measured in terms of time, cost, quality, customer satisfaction, business objectives, identified risks, benefit, and other factors. The project will fail if any one of the dimensions is not met. According to the study design, success is measured as a function of time, cost, quality, and business objectives, and then examined by taking an overall average.

Finally, the study found that procurement planning has the greatest impact on project success, followed by procurement conducting process, and finally procurement controlling process. In addition, there is a strong link between procurement management variables and project success. Similarly, there is a close link between project success and overall procurement management.

5.3. Recommendations

Procurement management, when conducted in accordance with project management best practices, has a significant impact on meeting project objectives and ensuring project success. As a result of the study's findings and conclusions, the following recommendations have been made:

- Despite the fact that recommending critical success elements for a project, particularly in the aviation industry, is a difficult assignment in this day of dynamic technology; Because each project is unique, each organization is unique, and the business operating environment is frequently unique, it is recommended that a comparison research be conducted to see if there are any parallels or differences in the success variables across different projects.
- Hiring one main project manager with good experience and knowledge of project management at vice level, to overlook and coordinate the whole projects in the organization and helps to fill the field gap that individual project managers might have.
- Giving project procurement management training to project managers according to project management guideline.
- Giving project procurement management training for Procurement staff, specifically related to handling procurement of different projects, in accordance with project management guideline.

- Giving due attention to project procurement management processes and following the details accordingly for the project management guide; specially for procurement planning since it has major effect on project success.
- During planning process it is recommended to align the plan with the available budget.

5.4. Limitation of the Study and Suggestions for future research

The goal of the study is to look into the impact of procurement management on project success. In this sense, the study yielded useful data, but there are several potential limitations that are described below.

Only three procurement management variables were examined in this study, which was conducted on three sections and one additional supporting section of one organization. Furthermore, only quantitative research methods were applied. More research could be done to look for differences among countries, cultures, project types, size, and duration. There could be a number of approaches to verify the findings of this study. Future study might, for example, build on the technique contributions by looking for different metrics, a mixed research strategy, other variables, large or mixed companies with large samples, and determining other variables in procurement management and project success.

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Addis Ababa University School of Commerce

Appendixes - Research Instrument

Questionnaire for Ethiopian Airlines project teams and procurement teams

Project Management Post Graduate Program

Dear respondents,

I am attending a post graduate program in Project Management at Addis Ababa University School of Commerce (AAUSC). I am doing a research titled “**the effect of Procurement Management on Project Success in the case of Ethiopian Airlines**” in partial fulfillment of masters of art in Project Management.

This questionnaire is designed to collect information on the research topic and one completed project in which you participated. Your input in attempting the complete question will be critical to the success of this study project. As a result, the researcher would like to express his gratitude for your contribution right away.

To meet the study's goal, I respectfully urge that you answer all of the questions in the questionnaire. Any information you supply will be treated with the strictest confidentiality and used solely for academic purposes. It is not necessary to write your name. And, though you are free to stop at any time if you are uncomfortable, your contribution to the study is extremely valuable.

Thank you for your cooperation in advance!

Biniyam Amensa

Addis Ababa University

Part I: Demographic Information

Please, provide your response by putting (✓) mark in the space provided.

1. Sex: 1) Male ☐ 2) Female ☐

2. Which age group do you fall under? 1) 18 – 24 ☐ 2) 25 – 34 ☐ 3) 35 -
44 ☐ 4) 45-54 ☐ 5) above 55 ☐

3. Level of education 1) Diploma ☐ 2) Degree ☐ 3) MA/MSc ☐ 4) PhD ☐

4. Your position during the completed project you are going to talk about

1) Project manager ☐ 2) Project Team ☐

3) Procurement Head ☐ 4) Procurement Staff ☐

5. How long have you been with ET? 1) <1 yrs. ☐ 2) 1-5 yrs. ☐
3) 6-10 yrs. ☐ 4) < 10 yrs. ☐

6. Years of experience on different projects? 1) <1 yrs. ☐ 2) 1-5 yrs. ☐
3) 6-10 yrs. ☐ 4) < 10 yrs. ☐

Part II. Thinking of only one completed project that you have taken part in, please

Choose the one that comes closest to reflecting your opinion about it.!

Dimensions	Strongly disagree	Disagree	Indifferent	Agree	Strongly Agree
A. Procurement Planning					
1. Procurement requirements were defined	1	2	3	4	5
2. Timeframe of project implementation was determined	1	2	3	4	5
3. Cost estimation was done, including life cycle costing	1	2	3	4	5
4. The procurement plan was always integrated with the budgeting	1	2	3	4	5
5. The Processes for acquiring items needed were defined	1	2	3	4	5
6. Authorization to proceed was obtained from appropriate authority	1	2	3	4	5
B. procurement Conducting process					
7. All significant materials to be developed by the contractor were identified	1	2	3	4	5
8. Completion criteria for the work to be performed was specified	1	2	3	4	5
9. Specifications did not restrict competition	1	2	3	4	5
10. A detailed, mathematically sound scoring plan was developed	1	2	3	4	5
11. Market research and consultation were undertaken	1	2	3	4	5
12. Request for proposal document via advertisement was issued	1	2	3	4	5
C. Procurement controlling process					
13. Policies were put in place to deal with potential conflicts of interest	1	2	3	4	5
14. Evaluation criteria, weighting and an evaluation methodology	1	2	3	4	5

were defined					
15. Conflict of interest documents were obtained from all members of the evaluation committee	1	2	3	4	5
16. Terms and conditions of the contract , used to be always modified	1	2	3	4	5
17. Regular audits & reviews of security processes were performed	1	2	3	4	5
18. A risk assessment and management plan was developed	1	2	3	4	5
D. Project Success					
19. There were no major with- cost change requests during the project	1	2	3	4	5
20. Project manager's experience helped to eliminate unnecessary resources.	1	2	3	4	5
21. The project was finished on or under budget	1	2	3	4	5
22. The Project decreased the cost of some activities with no effect on quality.	1	2	3	4	5
23. The project met most of the scheduled milestones	1	2	3	4	5
24. The project was finished on time	1	2	3	4	5
25. The Project boosts the employees' abilities by helping to save time.	1	2	3	4	5
26. The critical tasks and delivery dates were not slipping.	1	2	3	4	5
27. The Project was handed upon the company's overall standards.	1	2	3	4	5
28. The project deliverables always fulfills the customer requirements	1	2	3	4	5
29. The project meets its business objectives	1	2	3	4	5
30. Setting alternative plans has reduced the unexpected risks possibility.	1	2	3	4	5

Thank you!