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Assessing factors influencing the effectiveness of lease finance projects: The case of Development Bank of Ethiopia

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ABSTRACT

The objective of this study is to identify and investigate factors that influence the effectiveness of lease finance projects at the Development Bank of Ethiopia (DBE). Building on previous research, seven key factors were identified that can affect project effectiveness, specifically within the context of investment and business projects. These factors include project specific factors, project planning-related factors, procurement and contract-related factors, project manager-related factors, project owners/clients-related factors, organizational related factors, and business environment-related factors. To achieve this objective, descriptive and explanatory research designs were employed. The research approach is quantitative, and survey based primary data is employed. The study primarily utilized self-administered questionnaires to gather information. A total of 112 out of 125 questionnaires were completed by DBE staff at the head office and four district offices in Addis Ababa. The collected data was analyzed using descriptive statistical techniques, specifically mean and standard deviations, and multiple linear regressions. The results of the regression analysis showed that the identified factors explained 87.2% of the variation in the effectiveness of project implementation in lease-financed projects at DBE, as indicated by the R^2 value. Furthermore, all factors examined in the study were found to be significant predictors of project implementation effectiveness. It was concluded that project-specific factors, such as project planning-related factors, procurement and contract-related factors, project manager-related factors, project owners/clients-related factors, organizational-related factors, and business environment-related factors significantly predict the effectiveness of project implementation in lease-financed projects at the Development Bank of Ethiopia. Based on these findings, the study recommends that DBE can enhance the effectiveness of lease financed projects by incorporating the identified factors into project implementation.

KEY WORDS

Project, Project Implementation, Lease Financing, Development Bank, Ethiopia

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1. Background of the study

Projects play a vital role in the economic and social development of the global, regional and national economy (Niyazi & Sabriye, 2018). Projects are the building blocks in the design and execution of strategies for an organization, providing an organizational focus for conceptualizing, designing, and creating new or improved products, services and organizational processes. Projects are the concrete manifestations of development plans and programs in a specific place and time (Kadiho et al., 2021).

Lease financing is currently considered one of the most effective project finance tools in many capital-intensive industries as well as among micro enterprises and new firms in developing countries (IFC, 2017). Leasing is referred to as asset-based financing (Burgess, 2002). It is a means of delivering finance through a contract where the lessor provides an asset to the lessee to use for a specified period with specified payments. As lessors retain ownership of the assets they lease throughout the life of the contract, these leased assets are therefore an inherent form of collateral in such agreements (compared to traditional bank lending, which is either unsecured or makes use of different types of collaterals, typically not physical assets like equipment found in leases(*ibid*).

Effective project management relies on the identification of factors affecting the effectiveness of project implementation (Ika et al., 2012; Nauman et al., 2010; Söderlund et al., 2010). Knowing the factors influencing the effectiveness of project implementation helps to predict project sustainability, diagnose challenges, and prioritize resource allocation (Khang & Moe, 2008). The effectiveness of project implementation in lease finance projects may be affected by various factors such as project- specific factors, procurement, and contract- related factors, project manager-related factors, organization-related factors, or project owners/clients-related factors. Therefore, it is important to identify and analyze these factors and then choose suitable approaches to deal with them (Kwak & Anbari, 2009) systematically and quantitatively. Hence, DBE needs to understand the critical factors that influence the effectiveness of project implementation in the case of lease finance projects. This is vital not only for monitoring purposes or assessing the project status but also for guiding project managers and policymakers in identifying potential problems and allocating the necessary resources to ensure the effectiveness of the implementation of lease finance projects.

As a powerful stimulus for business, lease financing can help companies upgrade production assets, accelerate the introduction of new technologies, reduce the time it takes to launch new products, and simplify the supply of innovative equipment and its maintenance. In other words, lease financing serves as an important tool for upgrading the industrial potential of enterprises and increasing the efficiency of investments and innovation. Development Banks are well known for financing long-term loans in the form of project and lease finances for new projects and existing expansion projects (Development Bank of Ethiopia, 2016). The development Bank of Ethiopia (DBE), as one of the development institutions in the country, is a financial institution established to support the economic development of the country by providing project finance. The bank provides medium- and long-term loan finance to encourage private sector investment in commercial agriculture, agro-processing, manufacturing, and mining industries for projects that support the socio-economic development of the country. The selected sectors financed by the bank are government priority areas. In addition to project financing, DBE has taken on a significant role in financing Small and Medium Enterprises through its Lease Financing program to enable them to acquire capital goods and machines (DBE, 2015). Therefore, DBE's support is mainly focused on the national goal of accelerating the progress of the country's development efforts to bring sustained economic growth. To meet this core objective, projects financed by the bank should be successful and achieve the objectives for which they are established.

In the realm of project leasing finance, many projects are falling into the failure category. According to the annual performance report of the Bank (2019) project success is assessed through various dimensions, such as employment creation, tax contributions to the government, generation of foreign currency, utilization of local raw materials, promotions of agro-processing, and transfers of technology to the local economy. To achieve these objectives, the Development Bank of Ethiopia (DBE) requires the successful implementation of projects. However, many projects are unfortunately ending up in the failure category (DBE, 2019). The increase in failed projects is adding to the sunk costs of the country. The fixed investments of these projects are specific to their intended purposes,

making them difficult to liquidate or requiring high switching costs. Additionally, the failure of these projects depletes the funds available for loans, which could have otherwise been used to finance other projects that are important for the economic growth of the country.

2. Statement of the problem

The implementation of most projects in developing countries is integrated with normal operational activities in functional organizations that have low project management capacity. Projects are typically initiated to enhance organizational capabilities, meet new demands, seize new opportunities, or overcome challenges arising from frequent changes in the organization's environment. Therefore, it is likely that problems may arise during project implementation. Sadi and Sadiq (2006) suggest that completing projects within budget, on time, and with high quality is an indicator of efficiency. However, the project implementation process is influenced by various variables and unpredictable factors stemming from multiple sources. In addition to cost, time, and quality criteria, the effectiveness of implementing bank financed projects can be affected by factors such as organizational capability, resource availability, uncertainty conditions, contractual relationships, changes in macro-economic variables, socio-political changes, and internal project weaknesses, in addition to the poor credit management system of the bank as noted in the theoretical literature. These factors impact the effectiveness of project implementation (Memon et al., 2011).

According to Guy and Henneberry (2019), companies utilizing lease finance in their projects complexity of lease finance must be highly aware of factors impacting project effectiveness. This awareness is necessary due to the risky and complex nature of lease finance projects, as well as pressures from regulations, capital markets, and stakeholders. In lease finance projects, investments are significant and long-lasting, involving numerous agencies, institutions, and individuals. Identifying and measuring factors affecting project implementation effectiveness in this industry is a complex process with multiple levels (Gallardo, 2017).

According to the corporate balanced scorecard of DBE (2022), promoting the national development agenda through project financing is the bank's mission. To fulfill this mission, projects financed by the bank must be successfully operated. However, the failure of projects financed by DBE poses a significant challenge to achieving the bank's mission. It has been observed that DBE financed projects often fail to meet their goals due to various issues such as imperfect project design, poor stakeholder management, delays between project identification and start-up, delays during project implementation, cost overruns, and coordination failures (Belay 2017; Ifa, 2018). Furthermore, it is common to see foreclosure advertisements from DBE in various media outlets following project failures to service their debts. The situation has tarnished the public perception of DBE's finance, with many incorrectly attributing project failures to the bank's credit management system (DBE, 2020).

By recognizing the seriousness of the problem and the need to rebuild its image, the bank began implementing a variety of projects through lease financing. Despite the benefits of lease financing, there are concerns about the effectiveness of lease-financed projects, particularly in terms of project implementation. To achieve effective and efficient project management practices in lease finance projects, it is crucial to identify and critically examine factors influencing the effectiveness of project implementation.

According to Christopher and Debadyuti (2017), to ensure effective implementation, the organization must first understand the factors affecting project implementation effectiveness, systematically and quantitatively assess these factors, anticipate potential effects, and choose appropriate methods to address them. Another study by Assem and Zraunig (2018) concluded that projects have a specific set of factors that, when addressed and prioritized, increase the likelihood of successful implementation. Despite knowing that certain tasks would positively impact others for effective project implementation; it can be challenging to get the project team to focus on these key areas (Solomon, 2021).

Despite the increase in the use of multidisciplinary projects to deliver on companies' strategies, project implementation appears to be one of the most difficult aspects of a manager's job (Bolles, 2012). The implementation of most projects in developing countries is combined with normal operational undertakings in functional organizations that have low project management capacity. Additionally, lack of access to finance is the biggest obstacle affecting project implementation among

micro enterprises and new firms in developing countries (IFC, 2017). As a result, obtaining the necessary funds to finance a project from readily available sources is becoming an important issue (Haron et al., 2013). Project financing is the raising of funds on a limited-recourse or non-recourse basis to finance economically separable capital investment projects in which providers of funds primarily look to the cash flow from the project as the source of funds to service their loan (Zinat, 2010).

Therefore, this study aimed to identify the factors that affect the effectiveness of project implementation at the Development Bank of Ethiopia. While some research exists on major causes of project delay (Belay, 2017; Ifa, 2018; Solomon, 2021), project success criteria (Biniam, 2018), and causes of project failure (Alex, 2018) in DBE financed projects, no research focused on identifying factors affecting the effectiveness project implementation in lease finance projects at the Development Bank of Ethiopia and how this knowledge could lead to more successful projects. Thus, the present study aims to examine the factors that affect the effectiveness of the project implementation in lease finance projects at the Development Bank of Ethiopia.

In line with the problem statement, the study seeks to address the following basic research questions:

- What factors affect the effectiveness of project implementation in lease-financed projects at the Development Bank of Ethiopia?
- How effective is project implementation in lease-financed projects at the Development Bank of Ethiopia?
- How do identified factors affect the effectiveness of project implementation of lease- financed projects at the Development Bank of Ethiopia?

3. Review of Related Literature

2.1 Theoretical literature review

Muiruri & Ngari (2014) note that a theoretical framework guides research, assists in identifying the variables to be measured, and determines what statistical relationships to look for in the context of the problems under study. Several theories have been developed by different scholars to explain the effectiveness of project implementation. These include Theory of Project Implementation, Critical Chain Project Management Theory, Performance Measurement Theory, and Stakeholder Theory.

According to Nutt (1986) implementation is a process or a series of steps taken by responsible organizational agents to plan the change process to elicit the compliance needed to install changes. Project managers use the theory of project implementation to make predetermined changes in organizations by creating environments in which the changes can thrive (Kamau &Muturi, 2015). Building on this theory, Pinto and Prescott (1990), argue that successfully implementing a project is a difficult and complex exercise. The project manager is required to dedicate more effort and time to financial, human, and technical variables if they intend to achieve project success.

Kamau and Muturi (2015) further argue that several factors can influence project implementation if not handled carefully. These factors include inflation, which increases project costs, bureaucracy in government institutions, poor performance of contractors (due to inadequate qualifications and skills), changes in the scope of work, frequent changes in leadership, changes in pre-contract consultants, an ineffective and inefficient project finance structure, variations in designs and political influence. The theory of project implementation emphasizes several critical success factors in project implementation. Some of these factors include management support, procurement, project schedule planning, personnel, trouble shooting and monitoring.

Critical Chain Project Management is an extension of the Theory of Constraints, which is based on the premise that all repetitive production systems have constraints. If a repetitive production system is to improve its performance, it should focus on improving constraining factors. Critical Chain Project Management (CCPM) is defined as "a method of planning and managing projects that emphasizes the resources (people, equipment, and physical space) required executing project tasks" (Goldratt, 1997:5). Goldratt's ideas on critical chain project management are rooted in his earlier creation, the Theory of Constraints (TOC). It is named after the essential element; the longest chain of dependent resourced tasks in the project. The goal

of this method is to protect the project's duration and completion date from the impacts of individual task structural and resource dependency, variation, and uncertainty (Radosavljevic & Bennett, 2012).

Critical chain project management (CCPM) is a method of planning and managing projects that emphasizes the resources (people, equipment, physical space) required to execute project tasks. The critical chain method differs from more traditional management philosophies based on the PERT algorithm and critical path management. These traditional methods focus on rigid scheduling and task order, while the critical chain method prioritizes keeping resources leveled and allows for more flexibility in start times. CCPM aims to improve project performance by minimizing project changes and reducing the cost of project overruns. It seeks to bring a more positive outcome by changing the project control and management system, as well as the project plan. One of its objectives is to enhance the performance of the project team and supporting staff. By addressing resource constraints early on and utilizing buffers for effective project control, CCPM can help minimize potential issues (Radosav & Bennett, 2012). It guides the current study because of its focus on planning and managing project resources.

Mbugua et al. (1999) and Love et al (2000) have identified a distinction between performance indicators, performance measures and performance measurement. According to Mbugua et al. (1999), performance indicators specify the measurable evidence necessary to prove that a planned effort has achieved the desired result. In other words, when indicators can be measured with some degree of precision and without ambiguity, they are called measures. However, when it is not possible to obtain a precise measurement, it is usual to refer to performance indicators. Performance measures are the numerical or quantitative indicators (Sinclair & Zairi, 1995).

On the other hand, performance measurement is a systematic way of evaluating the inputs and outputs in manufacturing operations or construction activity and acts as a tool for continuous improvements (Sinclair & Zairi, 1995; Mbugua et al. 1999). In response to calls for continuous improvement in performance, many performance measurements have emerged in management literature. The methods of measurement of performance can be in terms of technical performance, commercial performance, and overall performance. The areas of measurement are at the planning & design level, the marketing level, manufacturing level etc., and for the overall performance are at the level of a firm or strategic business unit. Furthermore, Cordero (1990) proposes a model of performance measurements in terms of outputs and resources to be measured at different levels. Outputs are measured to determine whether they help to accomplish objectives (effectiveness) and resources are measured to determine whether a minimum number of resources is used in the production of outputs (efficiency). This theory links inputs to outputs in the measurement of performance, and hence it helps in identifying relevant input and output related factors that influence the success of projects.

However, in his model, Cordero (1990) failed to reflect the interests of stakeholders, their needs and expectations. If construction organizations are to remain competitive in the long run, they need to develop and better understand their relations with their customers, suppliers, employees, lenders, and the wider community, as suggested by Love et al. (2000). Hence, performance measurement must incorporate the interests of the stakeholders, both economically and morally.

In stakeholder theory, the concept is that stakeholders are those who have stakes, interact with the organization, and thus make its operation possible (Blair & Buesseler, 1998). This theory explains how organizations function with respect to various constituencies with whom they are closely connected. The development of stakeholder theory has focused on defining the stakeholder concept and categorizing stakeholders into groups that help understand individual stakeholder relationships.

Freeman defines a stakeholder as any group or individual who can affect or is affected by the achievement of the firm's objectives, establishing the boundaries of what constitutes a stake. He argues that a stakeholder has some form of capital, either financial or human, at risk, and, therefore, has something to lose or gain depending on the firm's behavior. Waddock et al. (2002) adds a tie or connection that creates a bond of some sort. A stakeholder theory of the organization requires an understanding of the types of stakeholders influence and how organizations respond to those influences. Each firm faces a unique set of stakeholders, which combine into distinct patterns of influence. Ambler and Wilson (1995) demonstrate that firms do not simply respond to each stakeholder individually;

they respond to the interaction of multiple influences from the entire stakeholder set.

2.2 Empirical Evidence and the Hypotheses

According to previous studies, project-specific factors can be defined as the factors that are specifically related to a particular project (Frever, et al., 2018). Project specific factors include: the location and site conditions (e.g., access roads, ground conditions, right of way, challenging terrains, other unforeseen conditions, etc.) of the project; technical complexity (design, type, size, nature) of the project, scope, or objectives of project; and the uniqueness of the project activities. For example, if a project is urgent, time is a critical factor. The size, value, and uniqueness of a project's activities can be difficult for a project manager who is used to planning and coordinating common and simple activities (Aniel & Vildana, 2010). Assem and Mario (2018), in their study, found that the nature of a project significantly influences the successful completion of projects. Besides, numerous authors confirmed that there is a strong positive linkage between project-specific factors and the effectiveness of project implementation (Christopher & Debadyuti, 2017; Behailu, 2018; Frever et al., 2018).Accordingly, the first hypothesis (H1) is formulated as follows:

> **Hypothesis 1**: *Project specific factors have a significant effect on the effectiveness of project implementation of lease finance projects in DBE.*

Planning plays a major role in successful project implementation Frese (2013) contends that project planning requires excellent forward planning, which includes detailed planning of the process implementation stages and milestones, task timeliness, fallback positions, and re-planning. What this means is that initial planning is not enough. Projects often take wrong turns, or initial solutions prove unfounded thereby necessitating re-planning and going back to the drawing board. A project plan may thus be subjected to review from time to time as and when necessary. Frese (2013) emphasizes that planning requires an interactive process that requires agile re-thinking as the known environment shifts. According to Brown and Hyer (2010), planning also encompasses the aspects of forecasting techniques to help in the process of predicting costs and cash flows (financial disbursements). According to Kerzner (2009), project planning related factors include: resource planning, project schedule planning, application of project planning tools, risk mitigation plan, project monitoring and evaluation plan, assigning of tasks and responsibility monitoring, and updating plans.Saqib, et al (2008), in their study, found that project planning-related factors significantly influence the successful implementation and completion of projects. Besides, numerous authors confirmed that there is a strong positive linkage between project planning related factors and the effectiveness of project implementation (Aniel & Vildana, 2010; Assem & Mario, 2018). Accordingly, the second hypothesis (H2) is formulated as follows:

> ***Hypothesis 2****: Project planning-related factors have a significant effect on the effectiveness of project implementation of lease finance projects in DBE.*

Procurement and contract-related factors are essential in determining effectiveness of projects implementation. Problems can arise when necessary equipment is not provided or when equipment is delivered with incorrect specifications, making the project's acquisition method critical to its success (Imran, 2017). According to Belassi and Tukel (2006), effective procurement and tendering methods significantly contribute to the success of project implementation. Similarly, in their study, Assem and Mario (2018) found that effective contract formulation and contract administration are essential in determining the effectiveness of project implementation. Therefore, the third hypothesis (H3) is formulated as follows:

> ***Hypothesis 3****: Procurement and contract-related factors have a significant effect on the effectiveness of project implementation of lease finance projects in DBE.*

The effectiveness of project implementation depends on the client's experience, type (private or public), size, influence, ability to make timely decisions, clear and precise goals, risk attitude, and ability to participate in different phases of the project (Frever, et al., 2018). The client can be public or private and client-related aspects include client type and experience, project organization expertise, client characteristics, project funding, client confidence, a

well-defined scope, client project management, and owner risk aversion (Do &Tun, 2008; Garbharran, 2012). The project should be completed according to the client's specifications. Therefore, it is important to effectively engage with the client, keep them updated frequently, and make any necessary changes for successful project completion. Client experience, the client's ability to brief the project, the client's decision making capabilities, and the client's ability to clearly define roles are all important considerations for project completion. Another study found that client-related factors were positively connected to the effectiveness of project implementation in investment projects in Lithuania (Gudienė et al., 2013). Accordingly, the fourth hypothesis (H4) is formulated as follows:

> ***Hypothesis 4:*** *Project owners/clients related factors have a significant effect on the effectiveness of project implementation of lease finance projects in DBE.*

Organizational influence is the characteristics or attributes of an organization and the impact they have on the people and work completed within, including project management. This can be tangible, like office space, etc. or intangible, like organizational culture. According to Ramakrishna, et al (2012), organization related factors include: top management support and commitment to the projects, organizational culture (shared attitudes, values and beliefs in performing the jobs) in project implementation (e.g., innovative thinking, acting proactively, no fear to take responsibilities etc.), organizational structure for facilitation of project implementation (e.g., information flow, supervision, etc.), organizational financial resource capability, the human resource capability of the organization, and the organizational leadership capability and experience.

According to Saqib, et al (2008), the success of a project can be achieved by top management support and commitment to the projects. The results show that the variable that most influences project success is 'organizational culture', followed by 'change management', and 'top management support'. The results also indicate that a culture of flexibility and a climate that supports innovation tend to positively influence project performance. Christopher and Debadyuti (2017) also found that the variable that most influences the effectiveness of project implementation is organizational culture, followed by change management and top management support. The results also indicate that a culture of flexibility and a climate that supports innovation tend to positively influence project performance. Likewise, Frever et al. (2018) agreed in this context that organization related factors are the most essential in determining the effectiveness of project implementation, regardless of industry. Based on the above, the following hypothesis (5) is suggested:

> ***Hypothesis 5****: Organization related-factors have a significant effect on the effectiveness of project implementation of lease finance projects in DBE.*

The project manager is a significant stakeholder in projects. Several studies have highlighted the importance of project manager factors (Frever et al., 2018). The effectiveness of project implementation can be achieved through the competent work of a project manager. Competence is a critical factor that affects a project's planning and implementation (Christopher & Debadyuti, 2017). The factors related to the performance of a project manager include leadership, organizational skills, coordinating skills, experience, authority, and trust (Chua et al., 1999; Frever et al., 2018).

Project manager skills impact scheduling, project planning, and communication (Christopher & Debadyuti, 2017). The engagement and dedication of project managers are crucial for project completion, especially when overseeing multiple projects simultaneously. The project manager is responsible for ensuring that the project is managed effectively and efficiently. Therefore, the project manager must be proficient in project management. According to Garbharran, et al (2012), project management competency, project-related experience, leadership ability, technical capabilities (with contractors and subcontractors), and reporting abilities are crucial for the effectiveness of project implementation. Another study found that project manager-related factors, especially project manager expertise, have a positive association with the effectiveness of project implementation (Assem & Mario, 2018). Based on the above literature, the following hypothesis (6) is suggested:

> ***Hypothesis 6:****Project manager related factors have a significant effect on the*

effectiveness of project implementation of lease finance projects in DBE

Business environment-related factors are those external to the company and therefore outside the control of management. As defined by Delis (2005), external determinants are variables that are not related to company management but reflect the economic and legal environment that affects the operation and implementation of projects. In general, they do not depend on the company's performance but could directly affect the success of a company or even its survival. Since some of these external factors could be influenced by society, their impact may vary from time depending on changes in public interests, market fluctuations, policy changes, etc. External factors are attributed to the macro environment, which may include economic, political, legal, physical, technological and socio-cultural factors (Aniel & Vildana, 2010).

According to Assem and Mario (2018), the project's political context, its relationship with the local community, the general economic environment, its location and the physical conditions in which it will be built, are the most important external factors that are essential in determining the effectiveness of project implementation. Based on the study of Maina, Charles and Gathenya (2014) economic factors affect the effectiveness of project implementation in manufacturing firms. Assem & Mario (2018) found in their study that macro-environmental factors significantly influence the successful completion of projects. Additionally, numerous authors have confirmed a strong positive linkage between external business environmental factors and the effectiveness of project implementation (Christopher & Debadyuti, 2017; Behailu, 2018; Frever, et al., 2018; Surafel, 2021). Based on the above literature, the following hypothesis (7) is suggested:

Hypothesis 7: *Business environment related factors have a significant effect on the effectiveness of projects implementation of lease finance project in DBE*.

4. Conceptual framework

A conceptual framework is a research instrument that helps a researcher to develop awareness and understanding of the situation under inquiry and to communicate. It is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Kombo & Tromp, 2009). Hence, the conceptual framework helps the researcher to detect clearly the variables of the study; assists in the selection of applicable research design; and provide a general framework for data analysis. Figure 1 present the conceptual framework of the study which developed based on the review previous literature on factors affecting the effectiveness of the project implementation in investment projects.

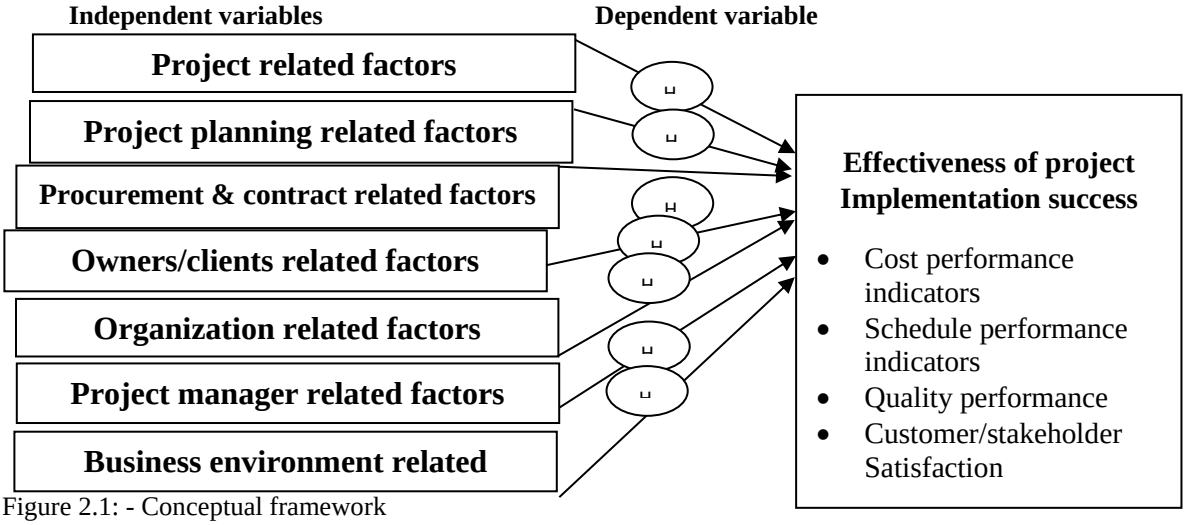


Figure 2.1: - Conceptual framework
Source: Compiled by Researcher from Literature (2023)

3. Research Methodology

3.1. Research design and research approach.

Regarding research design, the literature has identified three main types of research design: descriptive, explanatory, and exploratory. This research utilized both descriptive and explanatory research design. The descriptive research design was used to demonstrate the level at which identified factors are implemented in lease finance projects in Addis Ababa. The explanatory research design was employed to investigate the impact of critical success factors on the effectiveness of the project implementation in lease finance projects at the Development Bank of Ethiopia, thus the study employed explanatory research design.

In general, literature has identified three types of research approaches: qualitative, quantitative, and mixed research approaches (Saunders et al, 2009). For this study, a quantitative research approach was chosen. Quantitative analysis techniques allowed for the exploration, presentation, description, and examination relationships and trends within the data (Saunders et al, 2009). Statistical testing of relationships among variables was necessary, requiring a quantitative approach, to test hypotheses and determine the relationships among the study variables.

3.2. Target population

The population of the study includes employees of DBE in Addis Ababa who work in lease finance projects. According to data from the human resource department of DBE (2023), DBE has 125 staff members in the lease finance wing of the bank at the head office and four district offices in Addis Ababa, which constitute the target population of the study. Due to the small number of study population, this research was implemented as a census survey, and questionnaire was distributed to all employees regardless of their position, educational status, or the type of work they are involved in. Therefore, the researcher did not need to apply sample determination and selection techniques (Creswell, 2003). This was justified because the total number of the population is small enough to reach and access all of them.

3.3. The data and data analysis

For this study, both primary and secondary sources of data were utilized. Primary data refers to information collected fresh and for the first time, making it original in nature. The study primarily used questionnaire as the main instrument for collecting primary data. Additionally, secondary data was gathered by reviewing various literature to identify factors affecting the effectiveness of the project implementation. This secondary data was collected from published materials, such as reports, manuals, and other relevant sources to enhance the study's findings.

Questionnaire was chosen as the primary data collection instrument due to its convenience and ease of administration when dealing with a large sample (Kombo et al., 2002). Questionnaires have advantages such as being free from interviewer bias, cost-effective for large and geographically diverse samples, allowing respondents time to provide thoughtful answers, reaching respondents who are not easily accessible, and enabling the use of large samples for more reliable results. To gather more information, questionnaire was administered to Development Bank of Ethiopia staff to gather their views on the identified factors affecting project implementation effectiveness in the lease financing project in Addis Ababa. The questionnaire was carefully designed to collect target information, that address research objectives, and connect to the overall research problem.

In this study, the collected and processed primary data from the questionnaire analyzed using descriptive statistics and multiple linear regression analysis. Descriptive statistics, such as mean scores, percentages, frequency distributions, and standard deviations, were calculated to describe the characteristics of the variables of interest in the study. Graphs, tables, and other components were also used to present the collected data. Additionally, inferential statistics, specifically correlation and multiple regression analysis, were employed to explain influence of factors that affect the effectiveness of project implementation in lease finance projects at the Development Bank of Ethiopia.

4. Data presentation, analysis, and interpretations

4.1. Descriptive Analysis of Critical Success Factors

Project specific factors were identified, and a set of questions were presented for the respondents to rate the extent of the influence of these identified project specific factors on the effectiveness of project implementation of lease-financed projects in DBE on a five-point scale. The results of their ratings are shown in Table 4.1.

As shown in Table 4.1, the response rate indicates an average mean value of 3.96 with a standard deviation of 0.59 for project scope, demonstrating a high level of rating from respondents on items relating to location and site condition, with a mean value of 4.04, and a standard deviation of 0.576. Project scope or objectives, technical complexity, and the uniqueness of project activities were also rated highly with mean values, of 3.96, 3.94 and 3.89, respectively.

Table 4.1: Project Specific Related Factors

NO.	Item	Mean	SD
1.	The location and site condition (e.g., access road, ground conditions, right off way, challenging terrains, other unforeseen conditions, etc.) of project	4.04	.576
2.	Technical complexity (design, type, size, nature) of project.	3.94	.648
3.	Project scope or objectives.	3.96	.584
4.	The uniqueness of the project activities.	3.89	.559
	Grand mean	**3.96**	**0.59**

Source:(Own Survey, 2024)

Various project planning-related factors were identified from the literature, and a set of questions were presented for the respondents to rate the extent of the influence of identified project planning-related factors on the effectiveness of project implementation of lease-financed projects in DBE on five-point scale. The results of their ratings are shown in Table 4.2.

From the respondents' summary in Table 4.2, the responses indicated that project planning-related factors have a high mean value of 4.02 with a standard deviation of 0.66, indicating a high level of rating by the respondents on the items related to project planning-related factors. The project monitoring and evaluation plan is rated highly with a mean value of 4.32 and a standard deviation of 0.713. Project resource planning, schedule planning, and risk mitigation plan are also rated highly with mean values of 4.12, 4.12, and 4.03, respectively.

Table 4.2: Project Planning Related Factors

NO.	Item	Mean	SD
1.	Alignment of project goal with business strategy	4.10	.697
2.	Resource planning	4.12	.626
3.	Project schedule planning	4.12	.533
4.	Application of project planning tool.	3.85	.633
5.	Risk mitigation plan	4.03	.561
6	Project monitoring and evaluation plan	4.32	.713
7.	Assigning of tasks and responsibility	3.78	.846
8.	Monitoring and updating plans.	3.91	.717
	Grand mean	**4.02**	**0.66**

Source :(Own Survey, 2024)

The results of the ratings related to procurement and contract factors are shown in Table 4.3. As indicated in Table 4.3, the responses show that project procurement and contract -related factors received an average mean value of 3.95 with a standard deviation of 0.75, indicating that these factors are rated at a high level. The findings suggest that all project procurement and contract related factors, including project contract mechanisms, project bidding methods, project delivery systems, and contractors'/suppliers' competence and financial capabilities, received high mean values.

Table 4.3: Project Procurement and Contract Related Factors

NO.	Item	Mean	SD
1.	Project delivery system (e.g., design-bid-build, design build).	3.89	.874
2.	Project bidding method (e.g., price based competitive bidding, negotiated bidding, best value bidding).	3.94	.774
3.	Project contract mechanism (e.g. lump sum, unit price, cost plus, etc).	3.97	.753
4	Contract formulation and contract administration	3.87	.807
5	The contractors/suppliers' competence and commitment to the contract obligation.	3.90	.697
6	The contractors/suppliers' financial capabilities to undertake the works effectively and consistently	3.93	.611
	Grand mean	**3.95**	**0.75**

Source:(Own Survey, 2024)

The results regarding the factors related to the client's experience in lease-financed projects at DBE on a five-point scale are shown in Table 4.4.As depicted in Table 4.4, the response rate for client-related factors is high, with a mean value of 4.03 and a standard deviation of 0.55. Most of the respondents agreed with all the items presented under the variable, meaning all the items listed under the client's factor were highly rated, as the mean of every item ranged from 3.9 to 4.2.

Table 4.4: Client Related Factors

NO.	Item	Mean	SD
1.	Influence of client/client's representative.	4.11	.575
2.	Client's experience on similar project.	4.00	.520
3.	The project owner's ability to make timely decision.	4.04	.509
4.	Owner's clear and precise definition of project scope & objectives.	4.04	.527
5.	Owner's risk attitude (willingness to take risk).	4.11	.575
6	Client's project management knowledge.	4.03	.545
7.	Owner's financial resource	3.92	.617
	Grand mean	**4.03**	**0.55**

Source:(Own Survey, 2024)

As shown in Table 4.5, the results indicate that organization-related factors received a grand mean value of 4.03 with a standard deviation of 0.68, suggesting that these factors are rated at a high level. The findings show that all organization-related factors, such as top management support and commitment, organizational culture, organizational structure, organizational leadership, organizational financial and human resource

capabilities, also received high mean values. The results highlight the importance of organization-related factors in determining the effectiveness of project implementation.

Table 4.5: Organization Related Factors

NO.	Item	Mean	SD
1.	Top management support and commitment to the projects.	4.17	.670
2.	Organizational culture in the project implementation (e.g., innovative thinking, acting proactively, no fear to take responsibilities etc.)	4.13	.622
3.	Organizational structure for facilitation of the project implementation (e.g., information flow, supervision, etc.)	3.90	.600
4.	High quality training conducting to develop skills.	4.11	.662
5.	The organization financial resource capability.	3.98	.782
6.	The human resource capability of the organization.	3.88	.780
7.	The organizational leadership capability and experience.	4.09	.705
	Grand mean	**4.03**	**0.68**

Source:(Own Survey, 2024)

The table below shows a summary of descriptive statistics for project manager related factors. The results are presented in Table 4.6. The summary of the respondents in Table 4.6 shows that project manager-related factors resulted in an overall mean value of 3.95, with a standard deviation of 0.56, indicating a high-level of influence of the project manager and agreement among respondents on importance of these factors in determining the effectiveness of project implementation. Most respondents agreed with all factors presented, meaning that all the items listed under the project manager's factor were rated as the most important, as the mean of every item ranged from 3.8 to 4.2 with slight differences in their mean values. Among the items under this independent variable, the project manager's competence, technical capacity of the project manager, and continued involvement in the project are a few of the factors that contributed to the high mean among the respondents.

Table 4.6: Project Manager Related Factors

NO.	Item	Mean	SD
1.	Project Manager's competence.	3.97	.703
2.	Project Manager's experience.	3.97	.561
3.	Project Manager's authority.	3.85	.830
4.	Project Manager's authority to take financial decision, selecting key team members, etc.	3.98	.644
5.	Leadership skills of project manager.	3.84	.393
6	Organizing skills of project manager.	3.93	.321
7.	Project manager's commitment to meet cost time and quality.	4.08	.556
8.	Project manager's adaptability to changes in project plan.	4.02	.474
	Grand mean **3.95**		**0.56**

Source:(Own Survey, 2024)

The results regarding the impact of business environment-related factors on the effectiveness of project implementation are presented in Table 4.7.As shown in Table 4.7, the results indicate that business environment-related factors received a grand mean value of 3.98 with a standard deviation of 0.61, indicating that these factors are rated at a high level. According to the respondents' summary in table 4.7, there were no scores below 3.8.

Table 4.7: Business Environment Related Factors

NO.	Item	Mean	SD
1.	The economic situation (e.g., exchange rate, inflation, price escalation etc.) of the country	4.02	.569
2.	Stability of macro-economic environment	3.94	.605
3.	The policies, laws and regulations related to the project.	3.83	.628
4.	Political related factors (e.g., political interference, stability, security situation etc.) of country/region with in which the projects undertaken.	3.90	.747
5.	Socio-cultural related factors (e.g., customs, norms, values, languages, educational level, attitude towards social responsibility etc.) of the society within which the projects undertaken.	3.99	.608
6	X-Factor (such as corruption, lack of ethics, fraudulent practices, favoritism, etc.) factors	4.02	.585
7.	Technical and technological environment (e.g., technology availability & accessibility, method of construction etc.)	4.11	.591
8.	Physical environmental factors (e.g., harsh weather conditions, natural resource availability, etc.).	4.00	.537
	Grand mean	**3.98**	**0.61**

Source:(Own Survey, 2024)

The results regarding the effectiveness of project implementation are presented in Table 4.8. As indicated in Table 4.8, the response shows a grand mean value of 3.64 with a standard deviation of 0.70, indicating that most of the respondents agree on the implementation of the project within the stated cost, time, quality, and stakeholder's expectations. Based on the judgements, most respondents indicated that the project is implemented according to the project schedule and time, with a mean value of 3.79. This suggests that lease-financed projects are implemented as per planned project schedule and time. Similarly, the implementation of projects according to planned budget and cost is rated high with a mean value of 3.65, indicating that, by and large, the projects are implemented within the planned budget or cost.

However, the implementation of projects according to the assigned quality and standards is rated relatively lower with a mean value of 3.54, which is still considered high. This suggests that the lease finance projects in question are in high agreement that the projects are implemented according to the assigned standard quality. On the other hand, the projects implemented according to customer/stakeholder expectations are rated relatively lower with a mean value of 3.35. This suggests that the lease finance projects in question are only in moderate agreement and that the projects are implemented as per customer/stakeholder expectations.

Table 4.9: Perception of respondents on effectiveness of project implementation

NO.	Item	Mean	SD
1.	The projects are implemented as per planned project schedule and time.	3.79	.874
2.	The projects are implemented as per planned budget or cost.	3.65	.887
3.	The projects are implemented within the assigned standard quality.	3.54	.613
4.	The projects are implemented as per customer/stakeholder expectation.	3.35	.696
5.	Overall, the lease financed projects of DBE are effectively implemented.	3.68	.913
	Grand Mean	**3.6**	**0.79**

Source:(Own Survey, 2024)

4.2 Inferential Analysis

4.2.1 *Correlation Analysis*

The study also assessed the correlation between identified factors and the effectiveness of project implementation. Table 4.10 illustrates the correlation coefficient between the dependent variable, which is the effectiveness of project implementation, and independent variables such as project-specific factors, project planning-related factors, project procurement & contract-related factors, project client-related factors, organization-related factors, project manager-related factors, and business environment- related factors. Finally, the findings of the correlation result of the study are presented in Table 4.10.

In Table 4.10, the results of the correlation test obtained a significant level (2- tailed) of 0.000, which is less than 0.05. It can be concluded that all identified factors have a statistically significant positive relationship with the effectiveness of project implementation. As shown in Table 4.14, project planning-related factors have the highest positive correlation with the effectiveness of project implementation with a correlation coefficient of 0.829, indicating a very high relationship. Business environment-related factor, project-related factors, procurement & contract-related factors, project owner/client-related factors, and project manager-related factors also show a positive correlation with the effectiveness of project implementation, with a correlation coefficient of 0.794, 0.37, 0.704, 0.671, and 0.666, respectively. These relationships are high. Whereas organizational-related factors have a positive correlation with the effectiveness of project implementation with a correlation coefficient of 0.528, which is moderate.

Table 4.10: Correlation Result

		Effectiveness of Project Implementation
Project relating factors	Pearson Correlation	.737**
	Sig. (2-tailed)	.000
Project planning relating factors	Pearson Correlation	.829**
	Sig. (2-tailed)	.000
Procurement & contract related factors	Pearson Correlation	.704**
	Sig. (2-tailed)	.000
Project owner/client-related factors	Pearson Correlation	.671**
	Sig. (2-tailed)	.000
Organizational-related factors	Pearson Correlation	.528**
	Sig. (2-tailed)	.000
Project manager related factors	Pearson Correlation	.666**
	Sig. (2-tailed)	.000
Business environment related factor	Pearson Correlation	.794**
	Sig. (2-tailed)	.000

***. Correlation is significant at the 0.01 level (2-tailed)*
Source:(Own Survey, 2024)

4.2.2 Regression Analysis

Multiple linear regressions are based on the assumptions of Ordinary Least Squares (OLS). When deciding to analyze data using multiple regressions, part of the process involves checking to ensure that the data can indeed be analyzed using multiple regressions. This is important because it is only appropriate to use multiple regressions if the data meets the necessary assumptions for valid results. Therefore, in the following section, necessary diagnostic tests were conducted on the variables.

According to Myers (1990), multicollinearity refers to a high inter-correlation among predictor variables. A perfect linear relationship among independent variables can make it difficult to compute unique estimates for a regression model. The Variance Inflation Factor (VIF) was used to assess the severity of multicollinearity among explanatory variables. Generally, multi-collinearity is a concern when VIF is greater than 5, and a serious issue when it exceeds 10 (Field, 2013). The results in table 4.11 showed that the observed VIF values for all predictor variables were below 5, and the tolerance values are less than 1.0, indicating the absence of multicollinearity.

Table 4.11: Multicollinearity test for the Study Variables

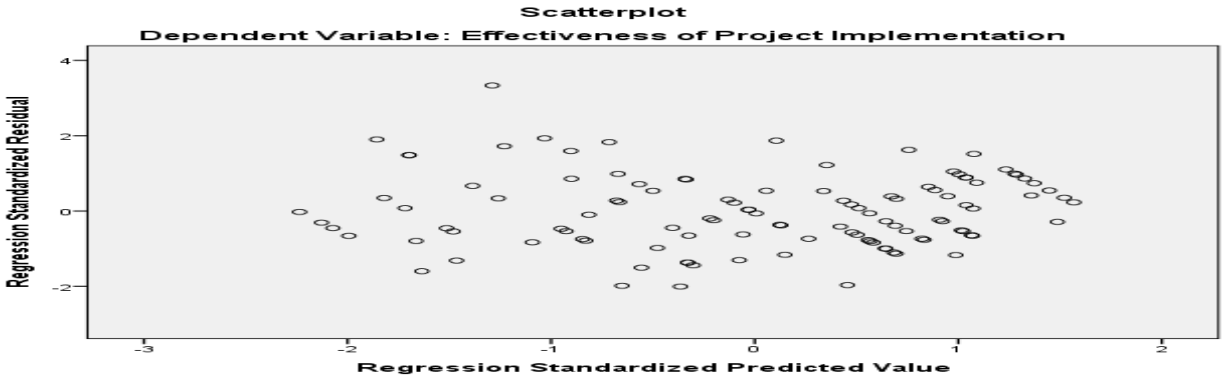
	Collinearity Statistics	
	Tolerance	**1/VIF**
Project relating factors	.448	2.233
Project planning relating factors	.597	1.674
Procurement & contract related factors	.525	1.906
Project owner/client-related factors	.379	2.640
Organizational-related factors	.762	1.312

Project manager related factors	.556	1.799
Business environment related factor	.402	2.487
Project relating factors	.448	2.233

Source: (Own Survey, 2024)

Heteroscedasticity in a study usually occurs when the variance of the errors varies across observations (Long & Ervin, 2000). On the other hand, Homoscedasticity in a study usually occurs when the variance of residuals (error term) is the same for all predictions (Tabachnic & Fidell, 2007). The most common way of checking for linearity is by creating scatter plots and visually inspecting them for heteroscedasticity. If the plot does not show an obvious pattern and the points are evenly distributed above and below zero on the X-axis, and to the left and right of zero on the Y- axis, it indicates linearity. Figures 4.1 show scatterplots of standardized residuals against linear predictive values. The figures display a horizontal band of points, indicating that heteroscedasticity was not a concern. Based on the scatterplot output, it appears that the points are dispersed and do not form a clear specific pattern. Therefore, it can be concluded that the regression model does not exhibit heteroscedasticity as a problem.

Figure 4.1: Scatter Plot for Heteroscedasticity Test



Source: (SPSS Output, 2024)

The other assumption of multiple regressions is normality, which assumes that residuals (errors) are approximately normally distributed. To make valid inferences from regression analysis, the residuals of the regression should follow a normal distribution. A simple way to check this assumption is to plot a normal P-P plot or histogram for the dependent variable to confirm the obtained result (Ghasemi and Zahediasl, 2012). This is a graphical procedure that plots the cumulative probabilities (values ranging from 0 to 1) on the X-axis and the expected probabilities given the normal curve on the Y-axis. If the sample were exactly normally distributed, the points would lie on a straight diagonal line. Figure 4.2 shows Normal P-P plots for the dependent variables (effectiveness of project implementation), in which the points would lie on a straight line confirming that the data was normally distributed.

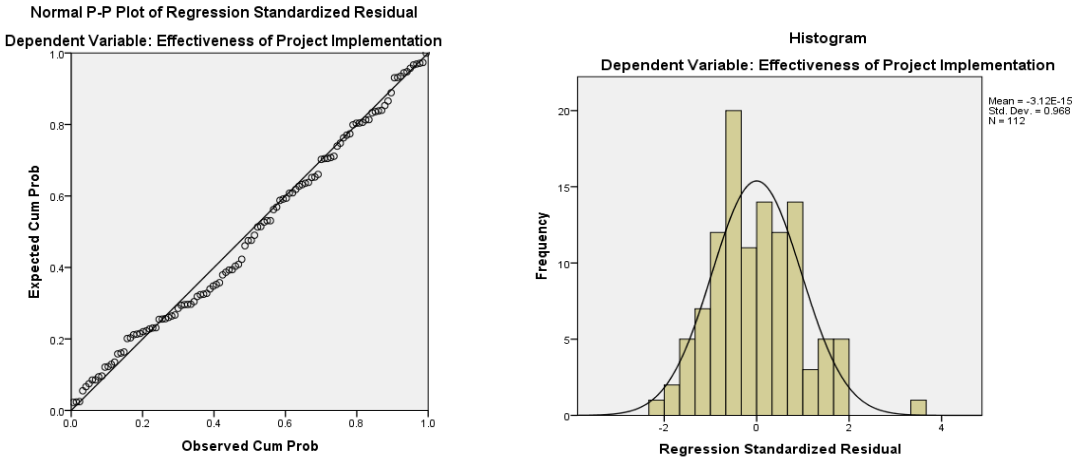


Figure 4.2: Normal P-P Plot and Histogram for Normality Test
Source: (SPSS Output, 2024)

The assumption of autocorrelation (serial correlation) is a key assumption in multiple regressions, assuming that the error terms are independent of each other. This assumption is particularly relevant with time series data, where the data are sequenced by time. The most used method to determine whether there is autocorrelation, meaning a linear correlation between the error terms for one observation, is the Durbin-Watson test. According to Cochrane, (1997) if a value of d falls within the range of 1.5 and 2.5, it indicates no autocorrelation. Therefore, the results show that there is no autocorrelation, as demonstrated in table 4.12 below.

Table 4.12: Durbin-Watson Test for Autocorrelation

Test	Dependent variable	Value
Durbin-Watson	Effectiveness of project implementation	2.004

Source: (Own Survey, 2024)

Table 4.13 below presents the model summary. The results show that the all-independent variables (project specific factors, project planning-related factors, procurement and contract-related factors, project manager-related factors, project owners/clients-related factors organizational-related factors and business environment-related factors) studied, determine 87.2% of the variation in the effectiveness of project implementation as represented by the R^2 value. The remaining 12.8% of the determinants of the effectiveness of project implementation are left unexplained by the explanatory variables used in the study.

Table 4.13: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.938[a]	.880	.872	.27399	2.044

Source: (Own Survey, 2024)

The result in ANOVA Table 4.14 shows that the sum of squares of the regression is 57.187 with 7 degrees of freedom and a regression mean square of 8.170. The residual sum of squares is 7.808 with 104 degrees of freedom and a residual mean square value of 0.075. The test for the joint significance, given by the F statistic, is108.824, indicating statistical significance. This implies that the independent variables, including project specific factors, project planning-related factors, procurement and contract-related factors, project

manager-related factors, project owners/clients-related factors organizational-related factors and business environment-related factors, were relevant in explaining the effectiveness of project implementation on lease financed projects at the Development Bank of Ethiopia.

Table 4.14: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	57.187	7	8.170	108.824	.000[b]
	Residual	7.808	104	.075		
	Total	64.995	111			

Source: (Own Survey, 2024)

The findings in Table 4.15 show the coefficients of the regression. According to the findings, all factors examined in this study (project specific factors, project planning-related factors, procurement and contract-related factors, project manager-related factors, project owners/clients-related factors organizational-related factors and business environment-related factors) are significant in predicting the effectiveness of project implementation on lease financed projects at the Development Bank of Ethiopia since the p-values were less than 0.05. The Beta values in Table 4.19 represent the extent of the relationship between the effectiveness of project implementation and identified factors. All the identified independent variables have positive Beta-values, which indicate the positive relationships between the effectiveness of project implementation and identified factors.

The findings indicate that project-specific factors have a significant effect on the effectiveness of project implementation in lease-financed projects at the Development Bank of Ethiopia, as measured by time, cost and quality. This result aligns with the hypothesis anticipated in this study. Therefore, in hypothesis testing, the study accepted the hypothesis that project-specific factors have a significant effect on the effectiveness of project implementation in lease-financed projects. The positive and significant effect on project-specific factors on the effectiveness of project implementation in lease-financed projects is consistent with previous studies. Assem and Mario (2018) found in their study that the nature of a project significantly influences successful project completion. Additionally, several authors have confirmed a strong positive link between project specific-factors and the effectiveness of project implementation (Christopher & Debadyuti, 2017; Behailu, 2018; Frever, et al., 2018).

In addition, project planning-related factors significantly influence the effectiveness of project implementation in lease-financed projects. Therefore, in terms of hypothesis testing, the study supports the null hypothesis that project planning-related factors have a significant effect on the effectiveness of project implementation in lease-financed projects. These results align with those of Kasimu (2012), who found that project planning-related factors impact the success of construction projects in Nigeria. Moreover, the finding is consistent with Ramakrishna et al. (2012), who found that project planning is as one of the key factors that affect success of real estate development projects in Ghana. Additionally, several authors have confirmed that a strong positive link between project planning- related factors and the effectiveness of project implementation (Aniel & Vildana, 2010; Assem & Mario, 2018).

From Table 4.15, it is evident that procurement and contract-related factors significantly influence the effectiveness of project implementation in lease-financed projects. Therefore, in line with hypothesis testing, this study confirms that procurement-related factor have significant impact on the effectiveness of project implementation in lease-financed projects. This finding aligns with the anticipated hypothesis in this study. The relationship between procurement and contract-related factors and the effectiveness of project implementation yields mixed results. Belassi and Tukel (2006) suggest that effective procurement and tendering methods significantly contribute to the success of project implementation. Similarly,

Assem and Mario (2018) found that effective contract formulation and administration are in determining the effectiveness of project implementation. However, other studies by Saqib et al, (2008) and Kasimu, (2012) an insignificant relationship in this regard.

As shown in Table 4.15, client-related factors have a significant effect on the effectiveness of project implementation on lease-financed projects. This result aligns with the hypothesis of the study. Therefore, the study confirms that client-related factors have significant impact on the effectiveness of project implementation in lease-financed projects. This finding is consistent with several studies conducted in different countries. Gudienė et al. (2013) found a positive connection between client-related factors and the effectiveness of project implementation in investment projects in Lithuania.

Similarly, organization related-factors also have a significant effect on the effectiveness of project implementation in lease-financed projects. This result supports the hypothesis of the study. Therefore, the study confirms that organization related-factors have a significant impact on the effectiveness of project implementation in lease-financed projects. Consistent with this finding, Ramakrishna et al. (2012) and Frever et al. (2018) found that design team related factors significantly contributed to the effectiveness of construction projects implementation. However, Saqib et al (2008) found that organization related-factors significantly affect the construction projects in Pakistan. Nevertheless, Frever, et al (2018) agreed that organization related-factors are the crucial in determining the effectiveness of project implementation, regardless of the industry.

The results also revealed that project manager-related factors have statistically significant impact on the effectiveness of project implementation in lease-financed projects. This outcome aligns with the study's predicted hypothesis. Consequently, in hypothesis testing, the study accepted the hypothesis that project manager-related factors have significant impact on the effectiveness of project implementation in lease-financed projects. The positive and significant effect of project manager-related factors on the effectiveness of project implementation in lease-financed projects is consistent with Assem & Mario (2018), who found that project manager expertise has a positive association with the effectiveness of project implementation. Furthermore, several authors have confirmed a strong positive link between project manager-related factors and the effectiveness of project implementation (Saqib, et al., 2008; Khang and Moe, 2008; Kasimu, 2012).

Lastly, business environmental factors have a significant effect on the effectiveness of project implementation in lease-financed projects. This result aligns with the hypothesis anticipated in this study. Therefore, in hypothesis testing, the study accepts the hypothesis that business environment-related factors have significant impact on the effectiveness of project implementation in lease-financed projects. In line with this study, Assem & Mario (2018) found in their study that the macro-environmental factors significantly influence project completion. Additionally, several authors confirmed a strong positive link between external business environmental factors and the effectiveness of project implementation (Christopher & Debadyuti, 2017; Behailu, 2018; Frever et al., 2018; Abebaw, 2021). However, this result contradicts Frever et al., (2018), who found that business environmental factors did not significantly affect construction projects in Nigeria.

Table 4.15: Regression Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-2.67	.238		-11.2	.000
Project relating factors	.164	.068	.123	2.416	.017
Project planning relating factors	.470	.081	.319	5.770	.000

Procurement & contract related factors	.168	.054	.146	3.116	.002
Project owner/client-related factors	.187	.057	.144	3.286	.001
Organizational-related factors	.165	.048	.135	3.458	.001
Project manager related factors	.151	.050	.137	3.003	.003
Business environment related factor	.266	.069	.205	3.834	.000

a. Dependent Variable: Effectiveness of Project Implementation
Source: (Own Survey, 2024)

5. Conclusions and recommendations

This study aims to identify and investigate factors that affect the effectiveness of project implementation in lease-financed projects in Addis Ababa. In order to accomplish the proposed objectives of the study, a quantitative research approach was employed. Based on the findings presented in the above section; the researcher draws some conclusions. From the findings, it was identified that almost all of the identified factors are crucial in determining the effectiveness of project implementation in lease-financed projects in Addis Ababa. The results show that the seven identified factors, namely: project specific factors, project planning-related factors, procurement and contract-related factors, project manager-related factors, project owners/clients-related factors, organizational-related factors, and business environment-related factors were rated at a high level. This indicates that these factors are critical in determining the effectiveness of project implementation in lease- financed projects.

The study evaluated the impacts of various factors on the effectiveness of project implementation in lease-financed projects at the Development Bank of Ethiopia. It was concluded that project-specific factors, project planning-related factors, procurement and contract-related factors, project manager-related factors, project owners/clients-related factors, organizational-related factors, and business environment-related factors significantly predict the effectiveness of project implementation in lease-financed projects at the Development Bank of Ethiopia. The study further identified project planning-related factors, business environment-related factors, and client-specific factors as the top three most influential factors in determining the effectiveness of project implementation in lease-financed projects.

Based on the findings and conclusions of the study, the researcher provides the following recommendations aimed at enhancing the potential of identified factors to have a greater impact on the effectiveness of project implementation in lease-financed projects in Addis Ababa. First, the bank needs to properly identify and evaluate the characteristics of the project, such as the type of construction, the project's size, location, and complexity. In addition, the study suggests the bank evaluate the project's risk profile, including technical, operational, and financial risks, to ensure that the project is suitable for lease financing.

Second, the bank needs to ensure that the projects implement effective risk management strategies, such as insurance, contractual protections, and contingency planning, to mitigate potential risks associated with the project. It also suggests that the bank properly plan the project's finances, including lease payments, operating costs, and revenue generation, to ensure that the project remains financially viable and generates a sufficient return on investment for both parties. The bank needs to establish clear and detailed contracts that outline the responsibilities, obligations, and expectations of both parties involved in the project. Furthermore, it is crucial to establish regular monitoring and evaluation of project progress, financial performance, and compliance with contractual obligations to ensure that the project remains on track and meets its objectives.

Additionally, the study suggests that the bank select an appropriate project client/owner in lease-financed projects. This ensures that the client has the necessary expertise, resources, and financial stability to effectively manage the project and achieve its objectives. Moreover, the bank needs to evaluate the client's financial stability to ensure they can meet their obligations throughout the project.

Additionally, assessing the client's experience in managing projects is crucial to ensure they have the expertise and resources needed for success. Furthermore, the bank also needs to consider the client's reputation in the industry and their track record of successful project delivery. Evaluating the client's risk tolerance is also important to ensure they are willing and able to manage the projects associated risks. Assessing the organization's management, expertise, track record, and financial stability is crucial to ensure they are capable of financing the project effectively. Furthermore, evaluating the lessee's capital structure, solvency, and liquidity of its assets and assessing the qualitative criteria of the lessee's business activity to ensure their suitability for the project is crucial. The study recommends that the bank make sure that businesses implementing lease-financed projects place a strong emphasis on the project managers' abilities to choose project teams, their educational backgrounds and work experience, their capacity to manage under political and environmental pressures, their ability to plan each project activity, their capacity to assess risks and develop contingency plans, and their evaluation of the managers' dedication to meeting time, quality, and cost targets.

5.1. Limitations and further research

Although this research provides some insights into factors that affect the effectiveness of project implementation in the DBE Lease Financing project in Addis Ababa, there is still room to expand the findings for a more comprehensive understanding. This study is limited to the DBE Lease Financing project in Addis Ababa, but it would be more accurate and inclusive if it included a wider sample from all areas of the country. Additionally , the stud's sole focus on the perceptions of the staff of DBE who are oversee lease finance projects means that it did not consider the viewpoints of the firms that implement the projects, which can be seen as a limitation. Therefore future studies should focus on service providers as well as customers/lease finance beneficiaries with a wider sample size within the same project. Furthermore, this study may not have explored all the factors that affect the effectiveness of project implementation. It is recommended that further research be conducted to uncover these other factors.

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