ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

ASSESSMENT OF EFFECTIVENESS OF PROJECT PLANNING AND EXECUTION IN AN URBAN DAIRY FARM PROJECT: INCASE OF HOLETA AGRICULTURAL RESEARCH CENTER DAIRY PROJECT

BY: METI BEZABHI TEMESGEN

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF ARTS IN PROJECT MANAGEMENT

ASSESSMENT OF EFFECTIVENESS OF PROJECT
PLANNING AND EXECUTION IN AN URBAN DAIRY FARM PROJECT:
INCASE OF HOLETA AGRICULTURAL RESEARCH CENTER DAIRY PROJECT

BY: METI BEZABHI TEMESGEN (SGS/0102/2014B)

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF ARTS IN PROJECT MANAGEMENT

DECLARATION

I, the undersigned, declare that the study entitled "ASSESSMENT OF EFFECTIVENESS OF PROJECT PLANNING AND EXECUTION IN AN URBAN DAIRY FARM PROJECT: INCASE OF HOLETA AGRICULTURAL RESEARCH CENTER DAIRY PROJECT." is my original work and study that all sources of materials used for the study have been acknowledged. I have conducted the study independently with the guidance and comments of the research advisor. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Declared by Name: METI BEZABHI

Signature: _____

Date: December, 2024

Place: Addis Ababa, Ethiopia

ENDORSEMENT

This is to certify that Meti Bezabhi has done the study on the topic "ASSESSMENT OF EFFECTIVENESS OF PROJECT PLANNING AND EXECUTION IN AN URBAN DAIRY FARM PROJECT: INCASE OF HOLETA AGRICULTURAL RESEARCH CENTER DAIRY PROJECT". The study is authentic and has not been done before by any other researcher.

Advisor: Maru Shete (PhD)

Signature: _____

Date: _____

APPROVAL OF BOARD OF EXAMINERS

This is to certify that the thesis prepared by Meti Bezabhi Temesgen entitled: "ASSESSMENT OF EFFECTIVENESS OF PROJECT PLANNING AND EXECUTION IN AN URBAN DAIRY FARM PROJECT: INCASE OF HOLETA AGRICULTURAL RESEARCH CENTER DAIRY PROJECT" and submitted in partial fulfillment of the requirements for the Degree of Master of Art in Project Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

APPROVED BY THE BOARD OF EXAMINERS

Dean Graduate studies _____Signature_____ Date _____

Advisor_____ Signature_____ Date_____

Internal Examiner_____ Signature_____ Date _____

External Examiner_____ Signature_____ Date_____

AKNOWLEDGMENT

Firstly I want to express my deepest gratitude to the almighty God for his unconditional support. Secondly, I would like to appreciate my advisor Maru Shete (PhD) for his effort on supporting me, commenting my work and giving valuable advises. Thirdly I want to thank Holeta Agricultural research center dairy farm workers and steak holders that participate in the data collection for this thesis.

Table of Contents

LIST OF TABLES AND FIGURES

ACRONYMS

HARC   HOLETA AGRICULTURAL RESEARCH CENTER

IAR   AGRICULTURAL RESEARCH

EIAR   ETHIOPAN AGRICULTURAL RESEARCH

EVM   EARNED VALUE MANAGEMENT

KPIs   KEY PERFORMANCE INDICAORS

ABSTRACT

The study aims to evaluate the effectiveness of project planning and execution in urban dairy farming practice in Holeta agricultural research canter. The study was conducted from target population of the study key stakeholders, including dairy farmers (workers), project managers, agricultural experts, and government officials found in Holeta Agricultural Research Canter Dairy Farm Project using purposive sampling technique. Data were collected from 35 stakeholders using Quantitative and Qualitative Methods Surveys: Structured questionnaires and Semi-structured interviews were conducted with key stakeholders to gain deeper insights into the planning and execution processes. Focus Groups: Organize focus group discussions were used to gather collective perspectives.

The gathered data was analysed using both qualitative and quantitative methods. Descriptive statistics (e.g., mean, median, standard deviation) were used to summarize the survey data. Inferential statistics (e.g., correlation analysis,) was employed to examine relationships between variables such as planning practices and productivity levels using SPSS version 20.

The data analysis of dependent and independent variables reveals that the effectiveness of project planning and execution is influenced by key factors such as stakeholder's engagement have significant positive impact on successful completion of project deliverable.

There is key relationship between independent and dependant variables like: stakeholder engagement with project deliverable, resource allocation and task tracking, task tracking and completion of deliverable, risk management and quality standards and communication and stakeholder satisfaction. Overall, the study concludes that while the project successfully achieved most of its objectives, it faced significant challenges during implementation.Therefore, strengthening project implementation due attention in order to meet project goal.

KEY WORDS: Planning and Execution, assessment, effectiveness

CHAPTER ONE

1, INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Project planning and execution are fundamental pillars of project management that determine the success or failure of a project. Organizations across industries, from construction and engineering to software development and healthcare, rely on structured project management approaches to ensure efficiency, cost control, and timely delivery of objectives. A well-planned and effectively executed project not only meets stakeholder expectations but also minimizes risks, optimizes resource allocation, and enhances overall organizational performance (Kerzner, 2017).

According to Antvik and Sjöholm (2007) the planning processes are highly important, and project execution without proper development of a project plan often causes delays, high cost and general execution problems in the project. The lack of an implemented project plan has caused problems in all project management areas and has made it impossible for the management team to have the required control of project activities

Project planning is the strategic phase that involves defining project objectives, scope, deliverable, schedules, budgets, and resources. It establishes the foundation upon which project execution is built. Key elements of project planning include stakeholder identification, risk assessment, work breakdown structure (WBS), scheduling (using tools like Gantt charts or Critical Path Method), budgeting, and resource allocation (PMI, 2021). Studies suggest that projects with a well-defined planning phase are more likely to succeed than those that jump directly into execution without a structured approach (Nicholas & Steyn, 2020).

On the other hand, project execution is the operational phase, where project plans are transformed into actions. This phase involves managing resources, tracking progress, coordinating teams, and addressing unforeseen challenges.

Execution requires strong leadership, continuous monitoring, adaptive decision-making, and stakeholder communication to ensure that project objectives are met within the specified constraints of time, cost, and quality (Turner, 2016). However, poor execution can lead to project failures, cost overruns, delays, and dissatisfaction among stakeholders (Flyvbjerg et al., 2003).

With the increasing complexity of projects in today's dynamic business environment, organizations must integrate effective project management methodologies such as Agile, Waterfall, Lean, and Hybrid models. These methodologies help streamline processes and enhance collaboration between teams.

The use of technology, such as project management software (e.g., Microsoft Project, Jira, Trello), artificial intelligence (AI), and automation, has also revolutionized project execution by improving efficiency and decision-making capabilities (Serrador & Pinto, 2015).

Despite the availability of best practices and advanced tools, challenges persist in project planning and execution. Scope creep, poor communication, inadequate risk management, and insufficient resource allocation are some of the common barriers that impact project success. Research suggests that organizations that continuously improve their project management practices through lessons learned, feedback loops, and adaptive strategies are more likely to achieve long-term project success (PMI, 2021).

1.1.1. EFFECTIVENESS OF PROJECT PLANNING AND EXECUTION IN AN URBAN DAIRY FARM PROJECTS

Project planning and execution are imperative components of any successful strive, particularly in sectors such as urban agriculture where resources are often limited and stakes are high.

Effective project planning requires defining objectives, setting achievable milestones, and allocating resources efficiently.

Execution involves the implementation of these plans, adapting to challenges, and ensuring that the project stays on track. Assessing the effectiveness of these processes is crucial for understanding their impact and for making improvements in projects.

Effective project planning and execution are crucial for the success of urban dairy farms. Project planning involves defining objectives, allocating resources, and establishing timelines, while execution entails the implementation of planned activities to achieve the desired outcomes (Kerzner, 2017). In the context of urban dairy farming, this process must consider various factors including animal health, feed availability, waste management, and market access (Moran, 2012).

This process involves several key aspects, including resource mobilization, communication management, task execution, quality control, and continuous progress monitoring. Ensuring these elements are well-managed helps in achieving the project's objectives efficiently. For instance, a study by Kusek and Rist (2004) highlights the importance of a robust monitoring and evaluation system in tracking project progress and making necessary adjustments. Additionally, Kerzner (2013) emphasizes the significance of quality control measures to meet the required standards, which is essential for maintaining project credibility and stakeholder satisfaction.

Effective communication and stakeholder engagement, as discussed by Bourne (2016), are also vital in addressing concerns and gathering feedback throughout the project lifecycle, thereby fostering a collaborative environment. By integrating these strategies, urban dairy farm projects can achieve sustainable success and long-term benefits for the community.

1.1.2. EFFECTIVENESS OF PROJECT PLANNING AND EXECUTION IN AN URBAN DAIRY FARMS OF ETHIOPIA.

Dairy farming in Ethiopia is a crucial part of the agricultural sector, significantly contributing to the livelihoods of urban and per-urban populations. Urban dairy farm provides fresh milk and

dairy products to urban markets, playing a crucial role in food security, nutrition, and income generation. Efficient project planning and execution are essential to enhancing the productivity and sustainability of urban dairy farms.

 Proper planning involves setting clear objectives, recognizing required resources, and developing meticulous plans that address urban farming challenges.

Execution requires applying planed efficient resource allocation, monitoring, and continuous evaluation to ensure goals are met. Urban dairy farms in Ethiopia face various challenges that impact dairy projects. These contain lack of finance, land and infrastructure, regulatory compliances, animal health and management, feed supply and market access are certain problems. To address these challenges, plan strategies with define project scope, resource allocation; budget, quality control, monitoring and evaluation strategy, define milestone and timeline, risk management are some of explanations that can diminish by project planning.

Urban dairy farming, the practice of raising dairy cattle within or near urban areas has emerged as a vital component of agriculture. This agricultural practice addresses food security, enhances livelihoods, and promotes environmental sustainability in rapidly urbanizing regions (FAO, 2021). In Ethiopia, urban dairy farming has become increasingly significant, particularly in cities like Holeta, due to its potential to supply fresh milk to urban populations and provide income for local farmers (Gashahun & Tegegne, 2019).

1.1.3. EFFECTIVENESS OF PROJECT PLANNING AND EXECUTION IN AN URBAN DAIRY FARMS OF HOLETA AGRICULTURAL RESEARCH CENTER.

Holeta, located in the Oromia region of Ethiopia, is an area with significant potential for dairy farming due to its favourable climate and agricultural tradition. Despite this potential, the local dairy industry faces numerous challenges that hinder its development and efficiency.

Holeta Agricultural Research Canter was established in 1966 under institution of IAR now EIAR. The canter is located in Holeta town and has two sub-canters focus on horticulture and dairy farm.

In Holeta, the integration of traditional dairy farming practices with modern project management techniques can significantly enhance productivity and sustainability. Previous studies have highlighted the importance of strategic planning and continuous monitoring in overcoming challenges such as limited space, disease outbreaks, and fluctuating market prices (Tegegne, 2015). Moreover, the application of innovative technologies and best practices in urban dairy farming can lead to improved milk yield and quality, thus contributing to the overall economic development of the region (Nigussie et al., 2020).

Urbanization has profoundly reshaped traditional agricultural practices, particularly in regions like Holeta Town, Ethiopia, where urban dairy farming plays a crucial role in local economies and food security. As urban areas expand, the dynamics of agricultural production, including dairy farming, face unique challenges and opportunities. Effective project planning and execution become paramount in piloting these complexities to ensure sustainability, productivity, and economic viability. Understanding the effectiveness of project planning and execution in urban dairy farms is not merely an academic pursuit but a practical necessity. It involves assessing how well-conceived plans translate into operational realities amidst urban constraints such as land scarcity, regulatory frameworks, and environmental considerations. By examining these aspects, this study aims to provide insights into enhancing the efficiency and resilience of urban dairy farming project systems in Holeta Town.

1.2. STATEMENT OF THE PROBLEM

Urban dairy farming in Holeta, Ethiopia, has the potential to significantly contribute to local food security, economic development, and employment. Despite its benefits, urban dairy farming faces numerous challenges that impede its growth and sustainability.

These challenges include inadequate project planning, inefficient resource management, poor infrastructure, and limited access to markets and veterinary services (Tegegne, 2015; Nigussie et al., 2020). Firstly, many urban dairy farmers in Holeta lack the necessary skills and knowledge in project planning and management.

This deficiency often leads to poor organization, inadequate budgeting, and suboptimal use of resources, which in turn affects the productivity and profitability of dairy farms (Gashahun & Tegegne, 2019). Secondly, the urban setting poses unique constraints, such as limited space for livestock, high costs of feed, and environmental regulations that complicate waste management practices (Moran, 2012).Furthermore, the execution phase of dairy farming projects frequently encounters obstacles such as disease outbreaks, insufficient veterinary care, and fluctuating market prices, which can devastate farm operations if not adequately managed.

The lack of effective monitoring and evaluation mechanisms also means that farmers are often unable to track progress and make informed adjustments to their practices (FAO, 2021).These issues highlight the critical need for a systematic assessment of project planning and execution in urban dairy farming. This problem is particularly evident in developing countries, where urbanization pressures, regulatory challenges, and limited infrastructure further complicate project implementation.

By identifying the gaps and inefficiencies in current practices, it is possible to develop strategies and recommendations to enhance the effectiveness of urban dairy farming projects in Holeta. This study aims to address these issues by providing a comprehensive analysis of the factors influencing the success and sustainability of urban dairy farms, ultimately contributing to the improvement of urban agricultural practices in the region.

Gaps in Project Planning for Urban Dairy Farming

Project planning is essential for defining objectives, resource allocation, scheduling, and risk management. However, in many urban dairy farm projects, poor planning practices result in inefficiencies that impact project success. The following challenges exist:

Lack of Feasibility Studies: Many urban dairy projects commence without comprehensive feasibility assessments, leading to unexpected obstacles such as inadequate infrastructure, poor market access, and supply chain inefficiencies (Kerzner, 2017).

Weak Financial Planning: Urban dairy farms often struggle with insufficient budget forecasting, leading to financial shortfalls that disrupt operations. Without a robust cost control framework, projects are prone to budget overruns (Fleming & Koppelman, 2016).

Limited Stakeholder Engagement: Ineffective communication between farmers, government agencies, and consumer's results in misaligned project objectives, resistance to change, and poor collaboration (Freeman, 1984).

Inadequate Risk Management: Project plans frequently fail to anticipate risks such as disease outbreaks, feed supply shortages, and climate fluctuations, leading to project failures (Smith et al., 2019).

Challenges in Project Execution

Even when project plans are developed, execution often falls short due to operational inefficiencies and lack of adaptive strategies. The primary execution challenges in urban dairy farming projects include:

Project Delays and Scheduling Issues: Many urban dairy farm projects experience timeline deviations due to poor task sequencing, delays in procurement, and inefficient workflow management (Johnson & Patel, 2020).

Regulatory Compliance Issues: Urban dairy farms must comply with environmental regulations, waste management policies, and food safety standards, yet poor planning leads to violations and legal hurdles (Mbatha et al., 2018).

Inconsistent Performance Monitoring: Many projects lack systematic Monitoring & Evaluation (M&E) frameworks, making it difficult to track performance and adjust strategies accordingly (Chowdhury et al., 2022).

Impact of Poor Project Management on Urban Dairy Farms

The consequences of ineffective project planning and execution in urban dairy farming include:

Low Productivity: Inadequate planning results in low milk yield, poor herd health, and inefficient labor utilization, leading to lower profitability (Njarui et al., 2016).

Financial Losses and Unsustainability: Poor financial planning leads to uncontrolled costs, debt accumulation, and eventual project failure (Fleming & Koppelman, 2016).

Market Instability: Without structured supply chain management, dairy projects face product surpluses or shortages, leading to price instability and economic losses (Gonzalez et al., 2021).

Comprehensive feasibility assessments to ensure projects are viable before execution. Based on these issues, this study aims to bridge the gap in project management knowledge for urban dairy farming by analysing the effectiveness of planning and execution methodologies. By identifying best practices, common pitfalls, and strategic improvements, the research will contribute to the development of more sustainable and efficient dairy farm projects in urban environments.

1.2.1. GAP IDENTIFICATION

I have tried to read various literatures concerned with project planning and execution for urban dairy farms in Holeta Ethiopia. The knowledge gap in project planning and execution for urban dairy farming in Holeta, Ethiopia, encompasses several critical areas. Firstly, there is a need to understand how to integrate urban-specific constraints such as limited space, environmental regulations, and high operational costs into project planning effectively.

Strategies for resource allocation, risk management, and timeline setting must be tailored to these unique challenges. Secondly, there is insufficient knowledge about optimal resource management strategies, including how to efficiently allocate resources such as feed, water, and land use in densely populated urban areas to maximize productivity and minimize environmental impact.

Thirdly, comprehensive risk assessment and mitigation strategies specific to urban dairy farming are lacking, which involves identifying and mitigating risks such as disease outbreaks, market

fluctuations, and regulatory changes proactively. Furthermore, there is a gap in understanding effective monitoring and evaluation frameworks tailored to urban dairy farming projects, essential for tracking progress, evaluating performance, and making data-driven adjustments. Additionally, students need to develop skills in stakeholder engagement and collaboration to build effective partnerships with local communities, government agencies, and other stakeholders.

Lastly, there is a need to educate students on the adoption of innovative technologies and best practices in urban dairy farming, including advancements in automated feeding systems, precision farming, sustainable waste management, and digital tools for data analysis. Addressing these gaps through education, training, and research initiatives can better prepare students to contribute effectively to the planning, execution, and management of urban dairy farming projects in Holeta and similar urban settings.

1.3. OBJECTIVE OF THE STUDY

1.3.1. GENERAL OBJECTIVE

The main objective of this study is to evaluate the effectiveness of project planning and execution of urban dairy farming projects in Holeta agricultural research canter.

1.3.2. SPECIFIC OBJECTIVE

1. To assess the current state of urban dairy farming in Holeta agricultural research canter

2. To evaluate the relationship between project planning and execution processes employed in Holeta agricultural research canter urban dairy farming project

3. To examine the association of project planning and execution on effectiveness of project.

1.4. RESEARCH QUESTIONS

1. What is the current state of urban dairy farming in Holeta agricultural research canter?

2. How is urban dairy farming projects planned and managed in Holeta agricultural research canter?

3. What impact does project planning and execution have on the productivity and sustainability of urban dairy farms in Holeta agricultural research canter?

4. What are the best practices in urban dairy farming in Holeta agricultural research canter, and how can they be leveraged for future projects?

1.5. SIGNIFICANCE OF THE STUDY

The significance of this study lies in its potential to provide valuable insights and practical recommendations that can enhance the effectiveness of urban dairy farming projects in Holeta.

 The key areas include:

Improvement of Dairy Farming Practices, by assessing current practices and identifying gaps, this study will help urban dairy farmers adopt more efficient and sustainable methods.

Economic Development, enhancing the productivity and profitability of urban dairy farms can contribute to economic development.

Sustainability, the studies focus on sustainable practices, such as define project scope and resource use, and promote environmental sustainability. By identifying and recommending eco-friendly practices, the study can help mitigate the environmental impact of urban dairy farming.

Knowledge Contribution, the study will contribute to the body of knowledge on urban agriculture and dairy farming, providing a reference for researchers, students, and practitioners. It can serve as a foundation for further research and innovation in the field.

Best Practices and Recommendations, by identifying best practices and successful case studies, the study will offer actionable recommendations that can be adopted by current and future urban dairy farmers. These recommendations can help improve project planning and execution, leading to more successful dairy farming ventures.

Overall, the study's findings can significantly impact urban dairy farming projects in Holeta by addressing existing challenges, enhancing productivity and sustainability, and contributing to broader economic and social development goals.

CHAPTER TWO

2, Literature Review

Urban dairy farming has become a pivotal element of urban agriculture, particularly in developing countries. It provides an essential source of fresh milk, generates income, and enhances food security for urban populations. This literature review examines the current state of urban dairy farming, its challenges, and the importance of effective project planning and execution to ensure its sustainability and productivity.

2.1. Theoretical Literature Review

A theory as defined by Mugenda (2003) is a set of concepts and interrelations that are assumed to exist among those concepts. It provides the basis for establishing the hypothesis to theories — a reasoned set of prepositions, which are derived from and supported be tested in the study. A theoretical framework is a collection of interrelated ideas based on by data or evidence (Kombo and Tromp, 2006).

2.1.1. Project Planning and Execution in Dairy Farming

The Project Management Life Cycle (PMBOK Guide) consists of five key phases: Initiation, Planning, Execution, Monitoring & Controlling, and Closure (PMI, 2021). Each phase plays a critical role in ensuring successful implementation, particularly in agricultural projects where external variables such as weather, resource availability, and market fluctuations impact outcomes.

Kerzner(2003) discussed that Project plan must be systematic, flexible enough to handle unique activities, disciplined through reviews and controls, and capable of accepting multifunctional inputs.

The Project Life Cycle (PLC) Model describes the phases that a project undergoes, typically divided into four stages: Initiation, Planning, Execution, and Closure (Kerzner, 2017). This model provides a structured approach to project management and ensures that each stage is systematically executed to meet project goals.

Planning is an arranged goal that will be achieved. (Jemima, N. 2015). Planning, in general, can best be described as the function of selecting the enterprise objectives and establishing the policies, procedures, and programs necessary for achieving them. Planning is concerned with the future. According to Jemima, whether documented (as should ideally be the case) or not, a project plan should address the following areas with regard to the project;

• The scope of the project i.e., time and cost – within what time do you want to complete your construction and working within what budget?

• Objectives of the project – what kind of structure are you setting up and what will be the necessary requirements that need to be put in place to ensure that the project meets its intended objectives?

• Milestones – what activity or stage of the project will signify substantial progress?

• A work schedule and breakdown structure – given the different tasks, it is important to clearly indicate when each of these tasks will be carried out and the systematic sequence that the different tasks will follow.

• Progress tracking – with respect to the schedule, one should be able to track the progress of the project based on actual output against planned output and determine whether the project is on course or lagging.

Systems theory, introduced by Bertalanffy (1968), views a project as a system of interconnected components that work together toward a common goal. In project planning, this theory helps in understanding how different elements (e.g., stakeholders, resources, technology) interact and affect the project's execution.

Freeman's Stakeholder Theory (1984) highlights the importance of managing relationships with project stakeholders, including clients, employees, suppliers, and regulators. Successful project planning involves stakeholder identification, engagement, and communication to align expectations and reduce conflicts during execution.

Kerzner (2003) discussed that Planning, in general, can best be described as the function of selecting the enterprise objectives and establishing the policies, procedures, and programs necessary for achieving them.

Agile project management is increasingly being applied in agriculture to enhance flexibility and responsiveness to environmental uncertainties. The Scrum framework, which involves iterative planning, continuous feedback, and adaptive execution, has been shown to improve efficiency in farming projects by allowing quick adaptation to changing conditions (Highsmith, 2009).

Effective project planning and execution are critical for the success of urban dairy farms. Project planning involves setting clear objectives, allocating resources efficiently, and establishing realistic timelines (Kerzner, 2017). In urban dairy farming, this includes ensuring adequate feed supply, maintaining animal health, and managing waste effectively. Execution involves implementing these plans and adapting to changes and unforeseen challenges (Kerzner, 2017).

Studies have shown that many urban dairy farmers lack the necessary skills in project planning and management, leading to suboptimal use of resources and reduced productivity (Gashahun & Tegegne, 2019). Moran (2012) emphasized the importance of strategic planning and continuous monitoring to overcome these challenges. The integration of traditional farming practices with modern project management techniques can significantly enhance productivity and sustainability in urban dairy farming (Tegegne, 2015).

The Stakeholder Theory (Freeman, 1984) emphasizes that project success depends on effectively engaging all key players, including farmers, government agencies, and consumers. Studies show that early stakeholder involvement in project planning leads to better decision-making, smoother implementation, and reduced resistance to change.

2.1.2. Integration of Traditional and Modern Practices

Project planning and execution play a crucial role in determining the success of agricultural projects, including urban dairy farming. Theories such as the Triple Constraint Theory (scope, time, and cost) suggest that balancing these three constraints leads to successful project outcomes (Atkinson, 1999). In urban agriculture, additional constraints such as environmental regulations, land availability, and resource limitations must also be factored into planning.

The integration of traditional dairy farming practices with modern project management techniques holds promise for enhancing urban dairy farming. However, there is a lack of studies that investigate how these two approaches can be effectively combined. The potential benefits of adopting innovative technologies and best practices in the urban dairy farming context need to be systematically assessed to provide actionable insights for farmers (Nigussie et al., 2020).

The Resource-Based View (RBV) of strategic management argues that competitive advantage is derived from the effective utilization of resources (Barney, 1991). In urban dairy farming, resources such as land, feed, and skilled labor must be optimally allocated to enhance efficiency and sustainability.

The Systems Theory emphasizes that a project functions as a system with interrelated components, including planning, execution, monitoring, and evaluation (Bertalanffy, 1968). Urban dairy farming projects must integrate production, waste management, distribution, and market linkages to operate efficiently.

Freeman's Stakeholder Theory (1984) suggests that successful projects require effective engagement of all stakeholders, including farmers, government agencies, and consumers. Stakeholder alignment is critical in urban dairy farming to ensure policy support, market access, and sustainability.

2.2. Empirical Literature Review

A study by Pinto and Slevin (1988) found that well-structured planning significantly improves project success rates by reducing uncertainty and improving coordination. Their research

emphasized that defining objectives, stakeholder engagement, and risk assessment are crucial planning elements.

A study conducted by Raz, Shenhar, and Dvir (2002) analyzed risk management practices in project planning. Their findings indicated that projects with proactive risk management plans had a 40% higher success rate compared to projects that reacted to risks after they emerged.

Flyvbjerg et al. (2003) examined cost overruns in infrastructure projects and found that inadequate planning, underestimation of costs, and unrealistic timelines were major contributors to budget escalations. Their empirical research demonstrated the necessity of accurate forecasting and contingency planning.

2.2.1. Urban Dairy Farming and Its Importance

Urban dairy farming is the practice of raising dairy cattle within or near urban areas, contributing significantly to food security and economic development. In many developing countries, including Ethiopia, urban dairy farming is increasingly viewed as a viable solution to meet the growing demand for fresh milk (FAO, 2021). The integration of dairy farming into urban settings helps address food shortages, supports local economies, and creates employment opportunities (Gashahun & Tegegne, 2019).

2.2.2. Challenges in Urban Dairy Farming

Despite its benefits, urban dairy farming faces numerous challenges. Limited space for livestock, high costs of feed and environmental regulations complicate waste management practices in urban settings (Moran, 2012). Disease outbreaks and inadequate veterinary services further hinder the productivity and profitability of urban dairy farms. Tegegne (2015) identified poor infrastructure and limited access to markets as significant obstacles in Holeta, Ethiopia. Additionally, fluctuating market prices and insufficient monitoring and evaluation mechanisms prevent farmers from optimizing their practices and responding effectively to challenges (FAO, 2021).

2.2.3. Best Practices and Innovative Technologies

The adoption of innovative technologies and best practices is crucial for improving the productivity and sustainability of urban dairy farms. Nigussie, Yilma, and Tesfaye (2020)

highlighted the positive impact of applying advanced dairy farming techniques, such as improved feeding practices and disease management strategies, on milk yield and quality.

The use of technology in monitoring animal health and managing resources can lead to more efficient and productive dairy farming operations.

A study conducted in India by Singh et al. (2018) found that urban dairy farms operating with modern project management techniques had a 25% higher profitability compared to traditional farms. Their findings emphasize the need for improved financial planning, market linkages, and government policy support to enhance urban dairy farming success.

A study by Smith et al. (2019) examined how risk management practices affect the success of dairy farm projects. The study found that farms implementing structured risk management plans had a 30% lower project failure rate compared to those relying on reactive decision-making.

A study conducted in South Africa by Mbatha et al. (2018) found that dairy projects with high stakeholder engagement were twice as likely to meet project goals. The research highlighted that early consultations with farmers and policymakers led to better resource allocation and fewer regulatory conflicts.

A study by Chowdhury et al. (2022) examined how monitoring and evaluation (M&E) frameworks contribute to dairy farm efficiency. The research found that projects with robust M&E systems achieved a 25% higher return on investment due to improved decision-making and performance tracking.

From a project management practice perspective, the success of urban dairy farming projects depends on applying structured methodologies in planning, scheduling, execution, risk management, and stakeholder engagement.

Empirical studies show that farms utilizing advanced project scheduling tools, risk management frameworks, and stakeholder engagement strategies consistently achieve better productivity, financial performance, and sustainability.

2.3. Conceptual Framework

Factors of Project Planning → Execution Factors → Contextual Factors

Effectiveness of Project Planning and Execution
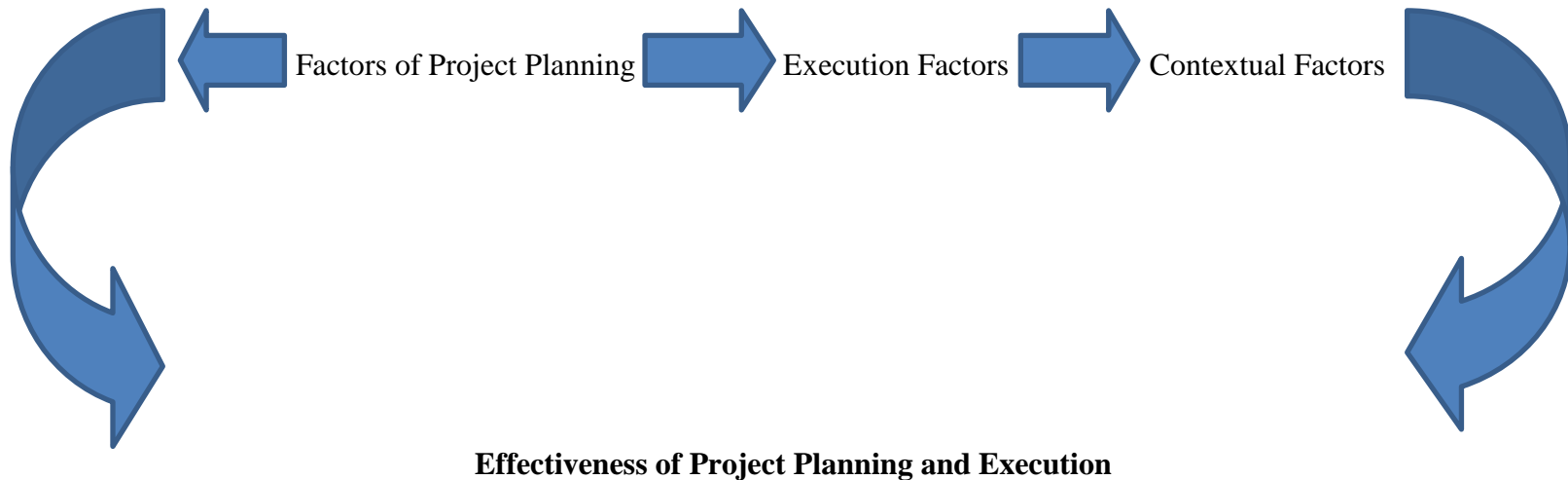
The conceptual framework for assessing the effectiveness of project planning and execution in Holeta Agricultural Research Canter integrates elements of project management theory with factors specific to urban dairy farming. This framework outlines the relationships between key components that influence project outcomes, including project planning, project execution, influencing factors, and outcomes.

The study will focus on several key variables. Independent variables include project planning elements such as clarity of objectives and goals, efficiency in resource allocation, realism of timelines and milestones, and thoroughness of risk assessment and mitigation strategies. In terms of project execution, variables include the effectiveness of implementing activities, the frequency and comprehensiveness of monitoring and evaluation, the level of stakeholder engagement, and the flexibility to adapt to changes. The dependent variables focus on outcomes like productivity, measured by milk yield and quality; sustainability, encompassing economic, social, and environmental aspects; economic impact, including local economic development and farmers'

income; and social impact, such as improvements in food security, social welfare, and employment opportunities. Moderating variables include urban constraints like space limitations, regulatory challenges, and operational costs.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Description of study area

Holeta, located in the Oromia region of Ethiopia, is an area with significant potential for dairy farming due to its favourable climate and agricultural tradition.

3.2. Study Design

The study adopted a descriptive research design descriptive research design helps in providing a detailed and comprehensive picture of the current practices and challenges in project planning and execution in urban dairy farming. Systematic approach it allows for a systematic collection and analysis of data, ensuring that all relevant aspects of the topic are covered. Baseline Information this design is effective in establishing a baseline understanding of the current state, which can be useful for future comparative studies or interventions.

The methodology for this study on the effectiveness of project planning and execution in urban dairy farming in Holeta agricultural research canter encompassed both qualitative and quantitative research approaches. This mixed-methods design provided a comprehensive understanding of the factors influencing the success of urban dairy farms.

3.3. Types and Sources of Data

Primary Data

Surveys: Structured questionnaires were administered to a sample of urban dairy farmers (workers) in Holeta agricultural research canter to collect quantitative data on productivity levels, challenges, resource management and project planning and execution phase.

Interviews: Semi-structured interviews were conducted with key stakeholders, including dairy farmers (workers), project managers, agricultural experts, and government officials, to gather qualitative insights into project planning and execution practices.

Secondary Data

Review of existing literature, reports, and case studies on urban dairy farming in Ethiopia and other similar contexts were collected to provide background information and contextual understanding.

3.4. Study Population

The target population for the study were the key stakeholders, including dairy farmers (workers), project managers, agricultural experts, and government officials found in Holeta Agricultural Research Canter Dairy Farm Project.

3.5. Sampling Frame

The sample was taken from Holeta agricultural research canter dairy farm project based on potential representation. Based on their work position and responsibilities, the purposive sampling technique was conducted.

3.6. Sampling Size

A purposive sampling technique was used to select a representative sample of Holeta agricultural research canter dairy farm. The sample size was determined based on the stakeholder's of dairy farm project and the need for statistical validity.

3.7. Method of Data Collection

Literature Review Conducted thorough review of existing literature to understand the current knowledge and identify gaps.

 Data Collection Methods Quantitative Methods Surveys: Structured questionnaires were collected from a representative sample. Content Include questions on practices of project planning and execution and challenges faced. Sample Size: Determined based on stakeholders size and statistical validity.

Qualitative Methods was used while primarily focused on quantitative methods. Interviews: Semi-structured interviews were conducted with key stakeholders to gain deeper insights into the planning and execution processes. Focus Groups: Organize focus group discussions were used to gather collective perspectives from 11 top level administrators.

Quantitative

Methods Surveys: Structured questionnaires were collected data from a representative sample of urban dairy farmers (worker). Include questions on challenges faced during project planning and execution.

Qualitative Methods

Interviews: Semi-structured interviews were conducted from key stakeholders to gain deeper insights into the planning and execution processes. Focus Groups: Organized focus group was used for discussions to gather collective perspectives.

3.8. Data Analysis

Data gathered from the Holeta agricultural research canter was analyzed using this two methods

Quantitative Data Analysis

Descriptive statistics (e.g., mean, median, standard deviation) were used to summarize the survey data. Inferential statistics (e.g., correlation analysis,) was employed to examine relationships between variables such as planning practices and productivity levels.

Qualitative Data Analysis

Thematic analysis was conducted on interview and focus group data to identify common themes, patterns, and insights related to project planning and execution challenges and best practices.

3.9. Reliability and Validity

To ensure the reliability and validity of the study different appropriate techniques was adopted throughout the process. By using these methods we make sure that the respondents were answering the right answer.

Here are some strategies to enhance both reliability and validity:

Reliability Techniques

To accomplish high reliability of the study, the following techniques were considered:

Test-Retest Reliability

Administer the same survey instrument to the same group of respondents at two different points in time.

Measure the reliability of their responses over time.

Standardized Procedures

Use standardized procedures for data collection to minimize variations and biases. Ensure that all respondents receive the same instructions and that the survey is administered in a consistent manner.

Validation Techniques

To ensure high validity, the following techniques were considered:

Content Validity

Ensure that the survey questions comprehensively cover all aspects of the constructs being measured. We have sought feedback from experts in urban dairy farming and project management to review and validate the survey intermediary.

Face Validity

Ensure that the survey instrument appears to measure what it is supposed to measure from the perspective of respondents and experts. We have pre-test the survey with a small group of respondents to confirm that the questions are clear and understandable.

Member Checking

We have shared the results and interpretations with the participants to ensure that their perspectives are accurately represented.

Measurements of variables

3.9.1. Dependent variable

Effectiveness of Project Planning and Execution: quantifying effectiveness of project planning and execution in Holeta agricultural research canter through various performance indicators.

3.9.2. Independent variables

These are independent variables that will influence the effectiveness of project planning and execution.

These factors include:

Factors of Project Planning: Clarity of the project objective, goals and how well defined and communicated they exist. Resource allocation, sufficiency and relevance of different resources like financial, human and materials allocated for the project. Project scheduling, the diligence and realism of the project timeline and schedule.

Execution Factors: project management practices, different methodology and practices used in managing the project. There was team competence and training, level of skill and training of the project team members. Stakeholder's Engagement: Involvement and communication level with stakeholders. Risk management: Identification, assessment   and mitigation of risk throughout the project life cycle.

Contextual Factors: Environmental circumstances, external factors such as market, weather and regulatory changes. Organizational provision, support from government or research canter in terms of policies, culture and resources. Technological infrastructure, were available and effectiveness of technology and tools used in the project.

CHAPTER FOUR

4. RESULTS AND DISCUSSION

This chapter of this thesis presents the results with interpretation and discussion of the findings. Specifically, the first part of this chapter reports the quantitative (descriptive statistics results)and second part of this chapter presents the qualitative results. Here the survey data used to describe the production and efficiency variables used in the study. The source of this data's are is SPSS VERSION 20.

4.1 Quantitative Results

4.1.1Analysis Project Planning Variables

Table 4.1 shows the result summery of the project planning variables. The result of analysis variables output shows that the projects were largely successfully in meeting their objectives.

All respondents consistently agreed that primary objective were met and quality standard for deliverables were achieved, as reflected in mean scores of 1.00 and 1.11. Stakeholder engagement and the scope constraint management were also highly effective with minima disagreement (mean: 1.06, SD: 0.236).Most tasks, milestone, and project deliverables were completed as planned, with efficient resource allocation and adequate contingency fund management reported by the majority (mean: 1.11 and SD: 0.323, mean: 1.00 and SD: 0.000, mean: 1.03 and SD: 0.169, mean: 1.03 and SD: 0.236). However there are areas that need improvement, particularly in timeline and budget adherence (mean: 1.91, SD: 0.284 and mean: 1.94, SD: 0.236) indicating significant challenges in completing the project within the estimated timeframe and budget. Some variability in response suggests room for further refinement.

Table4.1Descriptive Statistics Output and Input Variables of Project Planning (n=35)

Variables	N	Minimum	Maximum	Total Mean value	Std. Deviation	Variance
1.Were the primary objectives of the project met their target	35	1	1	1.00	.000	.000
2.Were all project deliverable completed as defined	36	1	2	1.11	.319	.102
3.Was any scope drawback or constraints successfully managed	35	1	2	1.06	.236	.055
4.Were all key stakeholders engaged all the way through the project	35	1	2	1.06	.236	.055
5.Was the project completed within estimated timeline	35	1	2	1.91	.284	.081
6.Were tasks and milestones tracked and attained as planned	35	1	2	1.11	.323	.104
7.Was resources allocated efficiently throughout the project	35	1	2	1.09	.284	.081

8.Did the project have adequate resource to meet its objective	35	1	2	1.03	.169	.029
9.Was the project completed within planed budget	35	1	2	1.94	.236	.055
10.Were contingency funds used, and if so were they managed appropriately	35	1	2	1.03	.169	.029
11.Were potential risks identified and managed successfully	35	1	2	1.11	.323	.104
12. Were quality standards for deliverable met?	35	1	1	1.00	.000	.000
13.Were the project's communication needs effectively managed	35	1	2	1.09	.284	.081
14.Were changes to the project scope, schedule, time or resource managed effectively	35	1	2	1.11	.323	.104
15.Was project documentation maintained and kept up to date	35	1	2	1.03	.169	.029

The descriptive statistics in above table highlight key insights into project planning. The analysis reveals that most projects were successful in meeting their primary objectives, with a mean score of 1.00 (SD = 0.000), indicating complete agreement among respondents. The completion of

deliverable had a slightly lower success rate (mean = 1.11, SD = 0.319), suggesting minor challenges in achieving all project deliverable as defined.

Stakeholder engagement was effective, with a mean score of 1.06 (SD = 0.236), indicating positive collaboration throughout the project. Efficient resource allocation also played a significant role, as evidenced by a mean of 1.09 (SD = 0.284). However, timeline adherence (mean = 1.91, SD = 0.284) and budget compliance (mean = 1.94, SD = 0.236) were identified as key areas for improvement, indicating delays and cost overruns.

These findings align with the work of Kerzner (2017), who highlights the importance of timeline and cost control in project planning and execution. Effective planning requires not only setting clear objectives but also managing risks, resources, and stakeholder engagement to ensure timely completion.

4.1.2 Analysis Project Execution Variables

Table 4.2 shows result summery of project execution variables. In general the project execution phase demonstrated strong performance in critical areas such as role clarity, quality assurance and change management. However aspects like task tracking, risk monitoring, stakeholders communication and budget control shown minor inconsistencies, motioning opportunities for alteration in these processes.

Table4.2Descriptive Statistics Output and Input Variables Project Execution of (n=35)

Variables	N	Minimum	Maximum	Total Mean value	Std. Deviation	Variance
1.Were team roles and responsibility well-defined and clear	35	1	1	1.00	.000	.000
2.Were tasks assigned, tracked and progress monitored effectively	35	1	2	1.11	.323	.104
3.Were key performance indicators met during the project	35	1	2	1.11	.323	.104
4.Were risks monitored effectively throughout project execution phase	35	1	2	1.11	.323	.104
5.Was quality assurance conducted as planned during project execution	35	1	1	1.00	.000	.000
6.Were changes managed efficiently during project execution	35	1	1	1.00	.000	.000
7.Was ongoing communication with stakeholders managed effectively during execution phase	35	1	2	1.06	.236	.055

		1	2	1.09	.284	.081
8.Was the project budget monitored and controlled throughout execution	35	1	2	1.09	.284	.081
9.Was resource usage tracked and managed efficiently during execution	35	1	2	1.06	.236	.055
10.was all required documentation and reports prepared and archived	35	1	2	1.03	.169	.029

The result analysis variables output shows Team roles and responsibilities were clearly defined, as indicated mean score: 1.00 and SD: 0.000, signifying a strong foundation in role clarity. Similarly, quality assurance and change management during execution scored a seamless mean: 1.00, SD: 0.000 which demonstrating efficient implementation areas. Task assignment, progress monitoring and KPI fulfillment achieved a slightly higher mean score: 1.11 and SD: 0.323 which indicates these processes were generally effective; there was possibility for minor inconsistencies. Risk monitoring shadowed a similar pattern, reflecting need for improved consistency in identifying and mitigating risks.

Communication with stakeholders and resource usage management during execution showed relatively high effectiveness (mean: 1.06 and SD: 0.236). However, these areas suggest opportunity for enhancing engagement and competence to achieve even more consistent result.

Budget monitoring indicates that while financial control was mostly effective, there may have been occasional gaps or changes (mean: 1.09 and SD: 0.284). Lastly, documentation and reporting scored slightly lower (mean: 1.3and SD: 0.169), underlining this as a potential area for process optimization.

These results are consistent with the findings of Bourne (2016), who emphasizes that effective stakeholder communication is critical for successful project execution. Effective communication ensures timely feedback, enabling teams to respond to risks, delays, and changes in scope.

4.1.3 Analysis Project Performance Variables

Table 4.3 shows the result summery of project performance variable. The result variable output shows that average response indicates the project successfully met the desire outcome as initially planned (mean: 1.09 and SD: 0.284). The data shows that the project was delivered within defined scope, with very slight deviation (mean: 1.03 and SD: 0.169). This advocates effective scope management throughout the project. In another hand there was a challenge in adhering to the original schedule (mean: 1.91 and SD: 0.284) this implies that the project faced delays and were not completed on time. The project strictly adhered to the approved budgets, on meeting project quality standards the mean value indicate even if the project meet the required standards, there was notable variability. Most of the variable excelled in several areas, including budget management, stakeholder's satisfaction, teamwork , risk management, communication and documenting lessons learned (mean: 1.00 and SD: 0.000).

Table4.3Descriptive Statistics Output and Input Variables of Project Performance (n=35)

Variables	N	Minimum	Maximum	Total Mean value	Std. Deviation	Variance
1.Did the project meet the desired outcomes as initially planned	35	1	2	1.09	.284	.081
2.Was the project delivered within the defined scope	35	1	2	1.03	.169	.029
3.Was the project completed according to the original schedule	35	1	2	1.91	.284	.081
4.Did the project stay within the approved budget	35	1	1	1.00	.000	.000
5.Did the project meet the required quality standard	35	1	2	1.46	.505	.255
6.Were stakeholders satisfied with the project result	35	1	1	1.00	.000	.000
7.Did the project team perform collaboratively and efficiently	35	1	2	1.06	.236	.055
8.Were risks identified and managed successfully throughout the project	35	1	2	1.06	.236	.055

9.Was the communication within the project team effective	35	1	2	1.03	.169	.029
10.Were lessons learned identified and documented at the end of the project	35	1	1	1.00	.000	.000
Valid n (list wise)	35					

This result on above table shows that the majority of projects met their desired outcomes as initially planned, with a mean score of 1.09 (SD = 0.284). The analysis shows that projects generally adhered to the defined scope (mean = 1.03, SD = 0.169), but there were challenges in meeting the original schedule (mean = 1.91, SD = 0.284).

Budget compliance was successful, as indicated by a mean of 1.00 (SD = 0.000), showing that financial resources were well-managed. Stakeholder satisfaction and collaborative teamwork scored perfect means of 1.00 (SD = 0.000), reflecting the project's success in stakeholder engagement and team efficiency. However, slight variability in meeting quality standards (mean = 1.46, SD = 0.505) suggests room for improvement in ensuring product quality.

This outcome supports the observations of Nigussie, Yilma, & Tesfaye (2020), who found that stakeholder satisfaction is a strong indicator of project success. It also aligns with the perspective of Kusek & Rist (2004), who argue that continuous monitoring and evaluation are essential to ensure timely and high-quality project deliverable.

4.1.4 Correlation Analysis of Data

The table provides a structured overview of each significant correlation, showing the project aspects, strength and direction of correlation, significance level, and interpretatio

Table4.4 Correlation Statistics Output and Input Variables of Project planning, Execution and Performance (n=35)

		Were the primary objectives of the project met their target	Were all project deliverable completed as defined	Was any scope drawback or constraints successfully managed	Were all key stakeholders engaged all the way through the project	Was the project completed within estimated timeline	Were tasks and milestones tracked and attained as planned	Was resources allocated efficiently throughout the project	Did the project have adequate resource to meet its objective	Was the project completed within planed budget	Were contingency funds used, and if so were they managed appropriately	Were potential risks identified and managed successfully
Were the primary objectives of the project met their target	Pearson Correlation	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]
	Sig. (2-tailed)		.	.	.	.	.	.	.	.	.	.
	N	35	35	35	35	35	35	35	35	35	35	35
Were all project deliverables	Pearson Correlation	.[a]	1	-.088	.685[**]	.110	.435[**]	-.110	-.062	.088	-.062	-.129

33

completed as defined	Sig. (2-tailed)			.613	.000	.529	.009	.529	.725	.613	.725	.460
	N	35	36	35	35	35	35	35	35	35	35	35
Was any scope drawback or constraints successfully managed	Pearson Correlation	[a]	-.088	1	-.061	.075	-.088	-.075	-.042	.061	-.042	-.088
	Sig. (2-tailed)		.613		.729	.667	.613	.667	.810	.729	.810	.613
	N	35	35	35	35	35	35	35	35	35	35	35
Were all key stakeholders engaged all the way through the project	Pearson Correlation	[a]	.685**	-.061	1	.075	-.088	-.075	-.042	.061	-.042	-.088
	Sig. (2-tailed)		.000	.729		.667	.613	.667	.810	.729	.810	.613
	N	35	35	35	35	35	35	35	35	35	35	35
Was the project completed within estimated timeline	Pearson Correlation	[a]	.110	.075	.075	1	-.211	-.271	.053	.804**	-.560**	.110
	Sig. (2-tailed)		.529	.667	.667		.224	.116	.764	.000	.000	.529
	N	35	35	35	35	35	35	35	35	35	35	35
Were tasks and milestones tracked and attained as planned	Pearson Correlation	[a]	.435**	-.088	-.088	-.211	1	-.110	-.062	-.298	-.062	-.129
	Sig. (2-tailed)		.009	.613	.613	.224		.529	.725	.082	.725	.460

		1	2	3	4	5	6	7	8	9	10	11
	N	35	35	35	35	35	35	35	35	35	35	35
Was resources allocated efficiently throughout the project	Pearson Correlation	.ᵃ	-.110	-.075	-.075	-.271	-.110	1	.560**	.075	.560**	.532**
	Sig. (2-tailed)	.	.529	.667	.667	.116	.529		.000	.667	.000	.001
	N	35	35	35	35	35	35	35	35	35	35	35
Did the project have adequate resource to meet its objective	Pearson Correlation	.ᵃ	-.062	-.042	-.042	.053	-.062	.560**	1	.042	-.029	.477**
	Sig. (2-tailed)	.	.725	.810	.810	.764	.725	.000		.810	.867	.004
	N	35	35	35	35	35	35	35	35	35	35	35
Was the project completed within planed budget	Pearson Correlation	.ᵃ	.088	.061	.061	.804**	-.298	.075	.042	1	.042	.088
	Sig. (2-tailed)	.	.613	.729	.729	.000	.082	.667	.810		.810	.613
	N	35	35	35	35	35	35	35	35	35	35	35
Were contingency funds used, and if so were they managed appropriately	Pearson Correlation	.ᵃ	-.062	-.042	-.042	-.560**	-.062	.560**	-.029	.042	1	-.062
	Sig. (2-tailed)	.	.725	.810	.810	.000	.725	.000	.867	.810		.725
	N	35	35	35	35	35	35	35	35	35	35	35

The correlation analysis tells several key relationships between project aspects in the Holeta Agricultural Research Canter dairy farm project. A strong positive correlation (r = 0.685, p < 0.01) exists between project deliverable and stakeholder engagement, indicating that higher stakeholder involvement contributes significantly to the successful completion of project deliverable. Similarly, there is a moderate negative correlation (r = -0.364, p < 0.05) between project timeline and communication with stakeholders, suggesting that while stakeholder communication is crucial, it may also contribute to delays due to increased coordination efforts.

Resource allocation plays a critical role in project success, as evidenced by its strong positive correlation with resource adequacy (r = 0.560, p < 0.01) and task tracking (r = 0.435, p < 0.01). This implies that effective resource allocation ensures the availability of necessary inputs and improves the tracking of project milestones. Additionally, quality standards are strongly associated with risk management (r = 0.532, p < 0.01) and change management (r = 0.532, p < 0.01), emphasizing the importance of proactive risk mitigation and flexible change management in maintaining quality standards.

The analysis also shows that tracking tasks is closely linked to meeting key performance indicators (KPIs) (r = 0.435, p < 0.01), indicating that effective task management contributes to the attainment of performance goals. Adequate resource allocation is positively associated with budget management (r = 0.364, p < 0.05), suggesting that ensuring sufficient resources can help maintain budgetary discipline. Furthermore, achiev

ing the desired project outcomes is positively correlated with stakeholder satisfaction ($r = 0.364$, $p < 0.05$), reflecting that successful project execution aligns with stakeholder expectations. Lastly, the analysis highlights a positive correlation between project timeline adherence and the careful management of contingency funds ($r = 0.364$, $p < 0.05$), suggesting that prudent use of contingency funds supports timely project completion.

These findings emphasize the interconnected nature of project planning and execution factors, where improvements in stakeholder engagement, resource allocation, and risk management have a flowing effect on overall project performance and outcome achievement.

4.2 Qualitative Result's

This is the second part of this chapter which present the qualitative result.

4.2.1 Discussion of Findings

The result indicates that the project met the desired outcomes, as reflected by only low variability in discussions. This suggests a strong alignment between project deliverable and initial goal.

Although there is no directly point to specific critical moments require pivots, significant delays in schedules and suggest policy adjustments that teams likely had to adapt and adjust plans to address the challenges well.

Collaboration and communication among project teams were highly effective, playing a critical role in maintaining efficiency throughout the project phases. There was strong control over the scope and budgets, as the project consistently adhered to parameters. However, there were challenges in adhering to timelines reveal a potential gap in handling changes, particularly related to scheduling do to different governmental policies and other factors, that should be addressed for future projects.

Stakeholders expressed complete satisfaction with the project outcomes, even if there are some current dissatisfaction on the performance of the project due to gaps in addressing actionable implementation and bridging theoretical insights with practical applications linking to advanced technologies.

There were effective risk management processes ensured that potential challenges were identified and mitigated successfully, contributing to the overall success of the project. Moving, forward, it is recommended to strengthen time management practices, standardize quality assurances, maintain flexibility to adapt to unpredictable challenges and secure supportive polices.

Interviewees provided qualitative data on the project's challenges, especially regarding delays in project timelines due to regulatory changes and policy updates.

Participants emphasized the role of risk management and flexibility, which was supported by the interviewees' observations of proactive risk mitigation strategies.

Thematic analysis of participant responses confirmed that collaborative teamwork and effective communication were essential to project success, echoing the empirical findings of Bourne (2016) on the importance of stakeholder engagement.

4.3 Discussion of quantitative and qualitative results

Both results collectively highlight the following key points

Stakeholder Engagement, The study found a positive link between stakeholder engagement and project outcomes, consistent with the views of Bourne (2016). Greater engagement enhances clarity, alignment, and buy-in from all parties.

Resource Management, Effective resource allocation is crucial for successful task tracking and milestone achievement, as seen in the positive correlation between resource allocation and tracking ($r = .435$, $p < 0.01$).

Time and Cost Management, while the project adhered to its budget, delays in timelines were observed. This is supported by qualitative data where project managers cited government regulatory changes as a primary reason for timeline deviations.

Risk and Quality Management, Projects that successfully managed risks tended to achieve better quality outcomes. This relationship is consistent with the research of Nigussie, Yilma, & Tesfaye (2020), who linked effective risk mitigation to the success of dairy farm projects.

CHAPTER FIVE

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusion

As defined in the introduction part, the study was carried aiming to addressing the objectives such as; Evaluate the effectiveness of project planning and execution of urban dairy farming projects in Holeta agricultural research canter, Assess the current state of urban dairy farming in Holeta agricultural research canter, Evaluate the relationship between project planning and execution processes employed in Holeta agricultural research canter urban dairy farming project, Analyse the association of project planning and execution on productivity and effectiveness.

The primary objective of this study was to evaluate the effectiveness of project planning and execution in urban dairy farming, focusing on the Holeta Agricultural Research Center Dairy Project.

Through a mixed-methods research approach incorporating both qualitative and quantitative data, this study explored key factors influencing the success and challenges of project implementation. The findings provided a comprehensive understanding of how well-defined planning processes, stakeholder engagement, resource allocation, risk management, and execution strategies contribute to the productivity and sustainability of urban dairy farming projects.

A purposive sampling technique was used to select a representative sample because associate prates in Holeta agricultural research canter dairy farm were minor in size.

Cross-sectional data were used. Both primary and secondary data were collected for the purpose of this study. The information was gathered from 35 based on potential representation, based on their work position and responsibilities.

The primary data was gathered through two main tools structured survey which questionnaire was used to collect quantitative data from employees and team members. The semi-structured interviews was used to collect qualitative date with project managers, supervisors, and key

stakeholders to allow more in-depth exploration of key themes on challenges encountered during project execution and perspective on project outcomes.

Secondary data was obtained from existing reports, documents, and project records at Holeta Agriculture Research Canter (HARC). Project reports, progress documents and monitoring and evaluation reports were reviewed to provide contextual insights and cross reference primary data.

To ensure validity, the instrument were reviewed by experts and refined based on feedback. Pilot testing was conducted with a small group of respondent that can help to identify potential issues with clarity and relevance.

The data analysis of dependent and independent variables reveals that the effectiveness of project planning and execution is influenced by key factors such as stakeholder's engagement have significant positive impact on successful completion of project deliverable.

There is key relationship between independent and dependant variables like: stakeholder engagement with project deliverable, resource allocation and task tracking, task tracking and completion of deliverable, risk management and quality standards and communication and stakeholder satisfaction.

The other is, weakness in risk management, task tracking, and communication delays contributed to timeline delays and budget overruns. Karzner (2017) and Kusek & Rist (2004) emphasize that addressing these issues through strong planning, better resource allocation, and proactive risk management can enhance project success.

Overall, the study concludes that while the project successfully achieved most of its objectives, it faced significant challenges during implementation.

Key Findings of the study

Stakeholder Engagement and Project Success

The study found that effective stakeholder engagement played a critical role in ensuring project deliverables was met. Projects that actively involved key stakeholders, such as farm workers, government officials, and agricultural experts, demonstrated better performance and smoother implementation. However, inconsistent stakeholder communication was identified as a contributing factor to timeline deviations and occasional project delays.

Impact of Resource Allocation on Project Performance

The allocation of financial, human, and material resources was found to be a determining factor in project effectiveness. The results indicated that projects with well-managed resource distribution experienced higher efficiency in task execution and milestone achievements. However, financial constraints occasionally led to budget overruns, requiring additional contingency planning to mitigate unforeseen expenses.

Challenges in Time Management and Schedule Adherence

A notable challenge identified in the study was the difficulty in maintaining project timelines. The analysis showed that many urban dairy farming projects in Holeta experienced delays due to factors such as regulatory changes, procurement inefficiencies, and external market fluctuations. This finding aligns with existing literature that emphasizes the importance of robust scheduling techniques and adaptive planning to ensure projects stay on track.

Risk Management and Project Sustainability

Effective risk management was identified as a key factor influencing project success. Projects that implemented proactive risk identification and mitigation strategies were more likely to achieve their intended outcomes with minimal disruptions. However, the study also revealed that some risk factors, such as disease outbreaks and fluctuating feed supply costs, were not always anticipated in the initial project planning phases. Strengthening risk assessment frameworks and incorporating adaptive strategies can enhance project resilience.

Quality Control and Project Outcomes

The study found that maintaining high-quality standards in project execution led to greater stakeholder satisfaction and improved productivity. Urban dairy farms that incorporated modern project management techniques, quality assurance protocols, and continuous performance monitoring were better positioned to meet market demands and sustain long-term operations. However, some gaps were noted in documentation practices, suggesting a need for improved record-keeping systems to track progress and lessons learned.

5.2. Recommendation

As result of this study major challenges identified in HARC dairy farm project are timeline delays, cost overrun, and risk management are the main. By strengthening risk management, cost control, stakeholder engagement, timeline adherence and communication project team can achieve batter alignment, reduce delays, and improve project efficacy. These recommendations align with the project principle of Karzner (2017), and Bourne (2016) which emphasize the importance of planning risk management in achieving project success.

- ✓ **Strength Risk Management**; develop a risk management plan that contains risk identification, risk assessment, and risk mitigation strategies. Establish a risk register to track risks throughout the project life cycle. Proactive risk management will reduce the likelihood of timeline delays, cost overruns, and scope changes.

- ✓ **Improve Financial Management and Cost Control**; Adopt modern cost control tools and techniques, such as Earned Value Management (EVM), to track and control project costs. Establish a contingency fund to address unforeseen expenses and conduct periodic cost review.

  Implementing cost control measures will reduce budget overruns, improve financial stability and ensure that the project remains within its financial constraints.

- ✓ **Enhance Stakeholder Engagement and Alignment**; develop a stakeholder plan to ensure that stakeholders are actively involved throughout the project. This will result in better scope alignment, reduced scope creep, and increased stakeholders satisfaction and improve decision -making.

- ✓ **Improve Timeline Adherence and Task Tracking;** Adopt project scheduling tools gnat charts and the critical path method to track project timelines and identify task dependencies. Implement a milestone tracking system to progress and conduct weekly progress review meetings to identify potential delays. This will reduce delays in task completion, ensure timely delivery of project milestone, and increase project efficiency.

- ✓ **Strengthen Communication and Reporting System**; develop a communication plan that defines how and when communication will be shared with stakeholders and team members. Use collaboration platform Microsoft teams or Slack to ensure real-time communication. Establish a clear reporting structure to ensure timely decision–making and approvals. Improve communication will reduce delays in decision-making, improve stakeholders alignment, and enhance team collaboration. Real-time updates will ensure that project decision are made quickly, preventing task delays and ensuring that project milestones are met.

REFERENCES

Antvik,S & Sjöholm, H. (2007), Project Management and Methods. Stockholm: Elanders

Sverige AB

Barney, J. (1991). "Firm resources and sustained competitive advantage." Journal of Management, 17(1), 99-120.

Bertalanffy, L. (1968). General system theory: Foundations, development, applications. George Braziller.

Bourne, L. (2016). Stakeholder relationship management: A maturity model for organisational implementation. CRC Press.

Chowdhury, R., Ahmed, N., & Hassan, M. (2022). "Monitoring & Evaluation Systems in Agricultural Project Success." Journal of Rural Development and Project Management, 11(3), 55-70.

FAO.(2021).The State of Food and Agriculture 2021.Food and Agriculture Organization of the United Nations.

Fiedler, F. E. (1967). A theory of leadership effectiveness. McGraw-Hill.

Flyvbjerg, B., Bruzelius, N., & Rothengatter, W. (2003). Megaprojects and risk: An anatomy of ambition. Cambridge University Press.

Freeman, R. E. (1984). Strategic management: A stakeholder approach. Pitman.

Gashahun, T., & Tegegne, B.(2019). Urban dairy farming and its contribution to poverty alleviation: A case study of Addis Ababa, Ethiopia. Journal of Agricultural Extension and Rural Development, 11(1), 1-10.

Highsmith, J. (2009). Agile Project Management: Creating Innovative Products. Pearson education.

Jemima, N. (2015) Post Graduate Diploma – Project Planning and Management; (Uganda Management Institute) BSc. Construction Management (Hon.); (Makerere University, Kampala)-(Alexander 2010).

Mbatha, T., Ndlovu, G., & Zuma, S. (2018). "Stakeholder Engagement as a Driver of Dairy Project Success in South Africa." African Journal of Project Management, 6(2), 21-38.

Kerzner, H. (2017).Project Management: A Systems Approach to Planning, Scheduling, and Controlling. John Wiley & Sons.

Kerzner, H. (2013). Project management: A systems approach to planning, scheduling, and controlling. John Wiley & Sons.

Kerzner, H.(20017). Project management: A systems approach to planning, scheduling, and controlling (12th ed.). John Wiley & Sons.

Kusek, J. Z., & Rist, R. C. (2004). Ten steps to a results-based monitoring and evaluation system. World Bank Publications.

Lock, D. (2020). Project management (11th ed.). Routledge.

Moran, J.(2012). Managing High-Grade Dairy Cows in the Tropics. CSIRO Publishing.

Nicholas, J. M., & Steyn, H. (2020). Project management for engineering, business, and technology (5th ed.). Routledge.

Nigussie, K., Yilma, Z., & Tesfaye, A.(2020). Impact of urban dairy farming on socio-economic development in Ethiopia: The case of Holeta town. Ethiopian Journal of Animal Production, 20(1), 123-134.

Pinto, J. K., & Slevin, D. P. (1988). "Critical success factors across the project life cycle." Project Management Journal, 19(3), 67-75.

PMI. (2021). A guide to the project management body of knowledge (PMBOK® Guide) (7th ed.). PMI.

Raz, T., Shenhar, A. J., & Dvir, D. (2002). "Risk management in projects: The impact of risk management planning on project success." International Journal of Project Management, 20(2), 101-111.

Serrador, P., & Pinto, J. K. (2015). "Does Agile work? A quantitative analysis of Agile project success." International Journal of Project Management, 33(5), 1040-1051.

Tegegne, A. (2015). Challenges and opportunities of urban dairy production in Ethiopia: A case study of Holeta. Livestock Research for Rural Development, 27(2), Article 30.

Turner, J. R. (2016). Gower handbook of project management (5th ed.). Routledge.

Turner, J. R., & Müller, R. (2005). "The impact of leadership style on project success." Project Management Journal, 36(1), 49-61

.

ANNEX. Research Questionnaire

This questionnaire is completed by various stakeholders involved in the Holeta Research Center Dairy Farm Project. Respondents are kindly requested to fill the questionnaire. The information is gathered for assessing the effectiveness of Project Planning and Execution in Holeta Agricultural Research Canter For partial fulfillment of Masters of Art in Project Management from St. Marry University.

I. General information

1. Name of respondent

2. Your role in Holeta agricultural research canter

3. How long have you been involved in the project

II. Project planning

1. Were the primary objectives of the project met their target? (YES/NO)

2. Were all project deliverable completed as defined? (YES/NO)

3. Was any scope drawback or constraints successfully managed? (YES/NO)

4. Were all key stakeholders engaged all the way through the project? (YES/NO)

5. Was the project completed within estimated timeline? (YES/NO)

6. Were tasks and milestones tracked and attained as planned? (YES/NO)

7. Was resources allocated efficiently throughout the project? (YES/NO)

8. Did the project have adequate resource to meet its objective? (YES/NO)

9. Was the project completed within planed budget? (YES/NO)

10. Were contingency funds used, and if so were they managed appropriately? (YES/NO)

11. Were potential risks identified and managed successfully? (YES/NO)

12. Were quality standards for deliverable met? (YES/NO)

13. Were the project's communication needs effectively managed? (YES/NO)

14. Were changes to the project scope, schedule, time or resource managed effectively? (YES/NO)

15. Was project documentation maintained and kept up to date? (YES/NO)

III.   Project Execution

1. Were team roles and responsibility well-defined and clear? (YES/NO)

2. Were tasks assigned, tracked and progress monitored effectively? (YES/NO)

3. Were key performance indicators met during the project? (YES/NO)

4. Were risks monitored effectively throughout project execution phase? (YES/NO)

5. Was quality assurance conducted as planned during project execution? (YES/NO)

6. Were changes managed efficiently during project execution? (YES/NO)

7. Was ongoing communication with stakeholders managed effectively during execution phase? (YES/NO)

8. Was the project budget monitored and controlled throughout execution? (YES/NO)

9. Was resource usage tracked and managed efficiently during execution? (YES/NO)

10. Was all required documentation and reports prepared and archived? (YES/NO)

IV.   Project Performance

1. Did the project meet the desired outcomes as initially planned? (YES/NO)

2. Was the project delivered within the defined scope? (YES/NO)

3. Was the project completed according to the original schedule? (YES/NO)

4. Did the project stay within the approved budget? (YES/NO)

5. Did the project meet the required quality standard? (YES/NO)

6. Were stakeholders satisfied with the project result? (YES/NO)

7. Did the project team perform collaboratively and efficiently? (YES/NO)

8. Were risks identified and managed successfully throughout the project? (YES/NO)

9. Was the communication within the project team effective? (YES/NO)

10. Were lessons learned identified and documented at the end of the project? (YES/NO)

V.   Open –Ended Questions

1. To what extent were the projects objectives achieved, and how did the deliverable align with the initial goal?

2. Were there any critical moment where the team had to pivot or adjust the project plan? How was this handled?

3. How effectively did the project team collaborate and communicate during both project phase?

4. How did the project team handle changes to the project, such as changes in scope, schedule and budget?

5. How did you asses the overall quality of the project deliverables in terms of meeting or exceeding expectations?

6. How satisfied were the key stakeholders with the projects outcome and what feedback did they provide?

7. What was the most significant risk faced during the project and how were they mitigated?

8. What strategies or practices contributed most to the projects successes?

9. How did the project planning and execution impact present work and responsibility?

10. What recommendation would you give for future urban dairy farm projects from your experience?