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**PROJECT MANAGEMENT PERSPECTIVES ON THE FAILURES OF
GOVERNMENT HOUSING PROJECTS IN GHANA.**

Andrews Kyeremeh

A thesis submitted in partial fulfilment of the requirements of the University of
Sunderland for the degree of Doctor of Philosophy

March 2025

DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma at the university or other institute of higher learning, except where due acknowledgment has been made in the text.

DEDICATION

With profound gratitude and humility, I dedicate this PhD thesis first and foremost to God Almighty, whose grace and wisdom have guided me throughout this journey.

To my beloved wife, Freda Oppong Agyeman, your unwavering support has been the wind beneath my wings, propelling me towards heights I never thought possible. Your patience, understanding, and encouragement have been the pillars upon which this achievement stands. This work is as much yours as it is mine, a testament to our partnership and shared dreams.

With all my love and deepest appreciation, I dedicate this thesis to you, my beautiful wife, my rock, my inspiration, my everything. May it serve as a symbol of what we can achieve together and inspire us towards even greater horizons.

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My sincere thanks go to the Ghana Scholarship Secretariat for funding my entire education, making this academic pursuit possible.

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ABSTRACT

Background: Affordable housing projects (AHPs) in Ghana have faced significant challenges, resulting in frequent project failures. This research identified key factors contributing to these failures and proposed a model to guide government institutions and stakeholders in improving AHP execution.

Methods: A qualitative case study approach, grounded in social constructivism, was used to analyse six AHPs across Ghana: Wa, Asokore Mampong, Cape Coast, Kpone, Koforidua, and Saglemi. These cases were selected for their representativeness and ability to provide insights into management challenges. Data were collected through interviews, observations, and document reviews, and were analysed thematically. Data saturation was achieved when no new themes emerged.

Findings: The study revealed project management deficiencies that contributed to AHP failures, including poor stakeholder engagement, insufficient funding, political interference, and lack of skilled contractors. The results supported established frameworks on managing agency risks and stakeholder engagement for successful public projects.

Implications: This study introduced the Integrated Sustainable Affordable Housing (ISAH) Framework to address affordable housing challenges in developing countries. The ISAH Framework provided a structured approach to improve the planning, implementation, and long-term sustainability of housing projects. It also offered empirical evidence supporting the application of agency theory in managing public projects, with relevance for other developing countries.

Conclusion: The study provided insights into the project management challenges causing AHP failures in Ghana, validating the connection between management weaknesses and public project failures. Policy recommendations were offered to strengthen management competencies and institutional capacity, improving affordable housing outcomes in Ghana and similar contexts. The research highlighted gaps in project management practices and offered directions for future research and policy development.

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LIST OF ABBREVIATIONS

| | |
|-------|--|
| AHP | Affordable Housing Project |
| CSO | Civil Society Organisation |
| GDP | Gross Domestic Product |
| GNA | Ghana News Agency |
| IoT | Internet of Things |
| IRR | Inter-rater Reliability |
| ISAH | Integrated Sustainable Affordable Housing |
| ISSER | Institute of Statistical, Social and Economic Research |
| KPI | Key Performance Indicator |
| NDC | National Democratic Congress |
| NHF | National Housing Fund |
| NPP | New Patriotic Party |
| PMIS | Project Management Information System |
| PPP | Public-Private Partnership |
| PRA | Participatory Rural Appraisal |
| SSNIT | Social Security and National Insurance Trust |
| TDC | Tema Development Corporation |
| USD | United States Dollar |
| GH | Ghana |
| PMP | Project management practices |
| PMI | Project Management Implementation |

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Shelter is a fundamental human need, and 'housing' satisfies this requirement (Pohl et al., 2022). The provision of appropriate accommodation for a country's population is a challenge, but if achieved, it can more widely foster stability, combat poverty, and promote economic development (Moore, 2019).

From a global perspective, there is a massive shortage of housing that requires urgent attention. The current housing deficit stands at nearly 40%, and projections indicate that by 2030, the world will need an additional 96,000 homes per day to accommodate the increasing housing demand. Currently, there are 100 million homeless people, according to UN-Habitat's 2020 report. The issue is particularly severe in Sub-Saharan Africa. For instance, in Ghana, only 5% of the population can afford a house (Rahimian et al., 2017), 60% require financial aid (GREDA, 1998), and 35% face permanent homelessness (Twumasi-Ampofo et al., 2014). Although commercial banks and financial institutions have developed mortgage financing solutions to address this issue, Ghana's need for more affordable housing presents a significant economic and social challenge.

Rapid urbanisation has led to a swelling urban population that outpaces the supply of new housing units (Arku et al., 2016). With over 70% of Ghana's urban population living in slums and informal settlements, the country faces a housing deficit of over 1.7 million units that disproportionately affects low-income groups (UN-Habitat, 2020). Some of the main causes of this shortage are restricted credit facilities, high borrowing costs, inadequate structures, and poor housing policies (Gbadegesin & Aluko, 2010).

Earlier governments endeavoured to solve this by creating organisations like the Affordable Housing Project (AHP), which envisioned building thousands of houses in Ghana. However, most of these projects faced abandonment and failed to achieve their predetermined aims and objectives (Kwofie et al., 2020). Problems like inadequate funding, transparency, poor management techniques, low stakeholder

participation, and political meddling frequently lead to the failure of housing interventions (Kwofie et al., 2020).

While extensive research has generally argued about project management weaknesses in AHPs (e.g., Charan & Murty, 2018; Damoah et al., 2020; Mok et al., 2015; Ogunberu et al., 2018; Suresh & Sivakumar, 2019; Wah, 2020), there remains a gap in understanding the specific practices that are failing and how these undermine project success in the Ghanaian context. Many studies rely on theoretical or policy analyses, which call for better practices without delving into the empirical investigation of the root causes behind the failures in housing delivery (Amah et al., 2022). Furthermore, no study has comprehensively reviewed all key project management processes using a robust qualitative method approach to diagnose the issues.

This study aims to bridge these gaps by conducting an in-depth assessment of how deficient project management practices across all knowledge areas contribute to AHP failure in Ghana. Adopting established best practice frameworks, the research empirically evaluates shortcomings in scope, time, cost, quality, resource, communication, risk, procurement, and stakeholder engagement elements of these projects. Quantitative data provides generalisable rankings and measurements, while qualitative insights explain how mismanagement manifests in reality.

1.2 Affordable Housing in Ghana

The concept of affordable housing varies globally, with no universal definition or implementation. UN-Habitat popularised the idea that housing is affordable if it costs less than 30% of a family's income (UN-Habitat, 2010). However, this threshold is applied inconsistently across countries. For instance, Canada previously used a 25% criterion, while India typically employs a 40% limit (Greenberg, 2022; Gholipour et al., 2020). The World Bank's 1975 study defined affordable housing as units built to minimal but adequate standards for people with modest incomes, a concept that has evolved over time (UN-Habitat, 2011a).

Definitions of affordable housing differ between developed and developing nations. In the United Kingdom, it's described as housing meeting specific standards and made available at affordable prices to eligible groups not served by the market (Bradley, 2023). The United States focuses on providing reasonably priced homes

for middle- and lower-class families, with housing costs not exceeding 30% of household income (Hecht, 2006; United States Department of Housing and Urban Development, 2014). Australia emphasises affordability for low- and middle-income residents, considering both quality and location (Monyratanak & Lee, 2019).

In developing countries, the concept of affordable housing takes on different characteristics. Research in China by Zarghamfard et al. (2023) and Htun (2022) found that legal restrictions limit affordable housing occupancy to low-income individuals. Yadanar (2019) notes that the public sector is the primary provider of affordable housing in these contexts. The author also highlights key differences between affordable and commercial housing, including supplier type, funding sources, value drivers, quality requirements, and sales processes.

The diversity in defining and implementing affordable housing stems from variations in national economies, policy priorities, and housing market dynamics (Ciardiello et al., 2021). Factors such as economic conditions can influence how a population is classified as low-income, affecting the description of affordable housing in different countries (Oladapo, 2021; Obi et al., 2020).

The Affordable Housing Project (AHP) in Ghana aims to address the housing requirements of low-income individuals and their families within the nation's housing sector (Adabre and Chan, 2020). It is a governmental initiative aimed at providing society with essential and sustainable housing options to address the issues of market-rate accommodation. The project entails the construction of affordable housing for the underprivileged and low-income individuals, addressing the housing needs of Ghanaians, particularly in metropolitan regions where the need for shelter is significant (Damoah et al., 2020).

The objectives of the AHP are to ease the burden of inadequate, affordable shelter on low-income earners and their families, address demand/supply mismatch for shelters for people in the slums and informal sectors, enhance the quality of living and contribute to the integral development. Furthermore, this project also can have a positive impact and promote a higher degree of spending in the construction industry and economic activity.

The Kuffour administration of Ghana commenced the execution of affordable housing initiatives in the public sector in 2006 (Damoah et al., 2020; Adabre and Chan, 2020). The initiative encompasses 4,720 residential units distributed across

several locations in the nation, including Saglemi, Nungua Borteyman, and Kpone in the Greater Accra Region; Asokore-Mampong in the Ashanti Region; Koforidua in the Eastern Region; Wa in the Upper West Region; and Tamale in the Northern Region (Buabeng, 2019).

Ongoing projects include the completion of more than 1,200 rooms in 389 one-bedroom apartments, 736 two-bedroom apartments, and 52 trading stores on 50-acre land in Asokore-Mampong. It also involves the completion of 1,502 housing units at Saglemi, near Ningo-Prampram, made up of 744 single room and 792 two-bedroom, self-contained apartments.

Despite these ambitious plans, the successful implementation of these projects to fulfill their intended objectives continues to be a challenge. Construction delays, funding problems, and inadequate infrastructure have all impeded their effectiveness in fulfilling their intended purpose. This forms the basis for the study, which aims to investigate the challenges affecting the implementation of AHP in Ghana from a project management perspective.

1.3 Research Motivation

The global housing crisis continues to escalate, with an estimated 1.2 billion people lacking access to safe and affordable urban housing in 2017, a figure projected to reach 1.6 billion by 2025 (World Resources Institute, 2017). The United Nations Human Settlements Programme (UN-Habitat) further predicts that approximately 3 billion people will require adequate housing by 2030. Despite concerted efforts by governments worldwide to address this pressing issue, particularly for lower and intermediate-income groups, housing projects frequently fall short of their objectives, resulting in substantial financial losses and impeding socioeconomic development (Abbasi et al., 2014; Patanakul, 2014; Damoah & Kumi, 2018). A critical factor contributing to the high failure rate of housing projects is the prevalence of poor project management practices (Almutairi and Almunifi, 2020; Fromsa et al., 2020). Ineffective planning, inadequate risk management, insufficient stakeholder engagement, and suboptimal resource allocation have been identified as key deficiencies in the management of housing initiatives (Hwang and Ng, 2013). These shortcomings often lead to cost overruns, delays, quality issues, and ultimately, project failure (Yap et al., 2020). The consequences of these management failures extend beyond immediate financial losses, affecting the lives

of millions who depend on these projects for shelter and stability. Furthermore, repeated project failures erode public trust in government initiatives and deter private investment in the housing sector, creating a vicious cycle that exacerbates the housing shortage (Ahadzie et al., 2014). Even though previous scholars (de Carvalho et al., 2015; Suk et al., 2017; Unegbu et al., 2022; Fernandes and O'sullivan, 2023) have made significant contribution to the project management literature, extant literature tends to focus on few selected project management practices such as scope management (Nibyiza, 2015), risk management (El-Sayegh, 2014), stakeholder management (Eyiah-Botwe et al., 2015; Chinyio & Olomolaiye, 2015) and schedule management (Suresh & Sivakumar, 2019), neglecting important practices such as integration, cost, quality, resource, communication, procurement management practices. It is therefore unclear the extent to which these contemporary project management practices are employed and their contribution to project success, particularly housing projects in developing countries. Thus, considering the high failure rate associated Affordable Housing Project in Ghana, this study attempts to bridge the gap by offering a comprehensive examination of the extent to which all the project management practices are individually employed in housing projects in Ghana.

Additionally, despite efforts by different governments to address its growing housing deficit of 1.8 million units (Ghana Statistical Service, 2019), construction projects continue to face significant challenges due to multiple barriers impeding effective project management. These interconnected obstacles include a severe shortage of skilled project managers (Ahadzie et al., 2014), chronic underfunding and inefficient resource allocation (Kwofie et al., 2016), excessive political interference and bureaucratic processes (Damoah & Kumi, 2018), inadequate stakeholder engagement (Agyekum et al., 2017), limited access to modern project management tools and technologies (Ofori-Kuragu et al., 2016), widespread corruption in the construction sector (Damoah & Kumi, 2018), and unique geographical and infrastructural constraints (Adinyira et al., 2018). While these barriers have been identified to contribute to a high failure rate of construction projects, exacerbating the housing crisis and hindering socioeconomic development, the same cannot be said of the Affordable Housing Project. This systemic failure to address the root causes of poor project management in the affordable housing sector necessitates a comprehensive approach to tackle each barrier while recognising their interconnected nature, without which Ghana's affordable housing sector will

continue to underperform, failing to meet the growing demand for adequate housing and potentially worsening the socioeconomic conditions of its most vulnerable populations. Thus, this study attempts to identify the barriers and challenges that impede effective project management implementation in affordable housing projects in Ghana.

Methodologically, there is a predominance of quantitative approaches in assessing the impact of project management practices on project success in Ghana's housing sector (Damoah et al., 2020; Owusu-Manu et al., 2021; Ahadzie & Amoa-Mensah, 2011). While these studies provide valuable insights into correlations between practices and outcomes, they may not fully capture the nuanced mechanisms by which these practices contribute to success or failure. As Ragab & Arisha (2018) argue, there is a need for qualitative approaches to explain and interpret phenomena without relying solely on quantitative methods. This qualitative gap in the literature presents an opportunity for research that could offer a more comprehensive understanding of the complexities involved in Ghana's housing project management.

In light of these research gaps, there is a clear need for a qualitative study that comprehensively examines the full spectrum of project management practices in Ghana's affordable housing sector. Such research could provide valuable insights into the specific mechanisms by which these practices influence project outcomes, the barriers to effective stakeholder management, and the interconnected nature of project management knowledge areas in this context. This approach would not only contribute to the academic literature but also offer practical insights for improving the success rate of affordable housing projects in Ghana and potentially other developing countries facing similar challenges.

1.4 Research Aim and Question

1.4.1 Research aim

This study aims to explore the factors contributing to the failure of affordable housing projects in Ghana from a project management practices perspective. The specific objectives are:

1. To examine project management practices in affordable housing project delivery in Ghana.

2. Assessing the challenges facing project management implementation in affordable housing projects in Ghana.
3. To propose effective project management practices framework for improving the success rate of affordable housing projects in Ghana.

1.4.2 Research questions

The following research questions were formulated as a guide to achieve the stated research objective.

1. How have project management practices been employed in affordable housing project delivery in Ghana?
2. What challenges impede effective project management implementation in affordable housing projects in Ghana?
3. How can project management practices be developed to improve the success rate of affordable housing projects in Ghana?

1.5 Organisation of Study

This study is structured into eight chapters, each focusing on different aspects of the research on affordable housing project failures in Ghana from a project management perspective. The organisation of the study is as follows:

Chapter One provides an overview of the research background, highlighting the challenges of affordable housing projects (AHPs) in Ghana. It outlines the research problem, motivation, objectives, and questions guiding the study. Additionally, it presents the significance of the research.

Chapter Two reviews relevant literature on affordable housing project delivery in Ghana, including theoretical perspectives, project management practices, and challenges faced in their implementation. It also identifies gaps in existing research and justifies the study's focus.

Chapter Three describes the research design, philosophy, and approach adopted for the study. It explains the qualitative case study method, data collection techniques (interviews, observations, and document analysis), and data analysis procedures. Issues of validity, reliability, and ethical considerations are also discussed.

Chapter Four presents an in-depth analysis of selected affordable housing projects in Ghana, including Wa, Asokore Mampong, Cape Coast, Kpone, Koforidua, and Saglemi. It provides contextual background and discusses project-specific challenges.

Chapter Five presents the findings based on thematic analysis of data collected and the responses to the research questions. It examines the extent to which project management practices have been applied in AHPs and identifies key challenges affecting their success.

Chapter Six interprets the findings and discusses the overall outcome of the study and provides a concise conclusion.

Chapter Seven introduces the Integrated Sustainable Affordable Housing (ISAH) Framework, a model developed to improve project planning, execution, and long-term sustainability. It revolves around best practices for implementing AHPs in Ghana and other countries. It outlines the future use of the ISAH framework in relation to AHPs.

Chapter Eight summarizes the key findings, contributions to knowledge, and policy recommendations. It discusses the study's limitations and suggests areas for future research to enhance the success of affordable housing projects in Ghana and other developing countries.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The previous chapter provided an in-depth look at the research topic from a project management viewpoint, specifically affordable housing projects in Ghana. Contextual information, a description of the research issue, research goals, and research questions were all provided in this chapter. The significance of the study and a brief overview of the methodology used. The literature on affordable housing projects has extensively examined the impact of such initiatives on various aspects, including housing stability, neighbourhood revitalisation, and economic development. Studies have consistently highlighted the positive effects of affordable housing projects on reducing homelessness, improving residents' quality of life, and fostering social integration. However, the literature on affordable housing projects highlights various gaps in project management practices. One common gap is the lack of effective stakeholder engagement and communication strategies, which can lead to misunderstandings and delays in project implementation. Additionally, studies have identified a lack of robust monitoring and evaluation mechanisms, making it difficult to assess the long-term impact and sustainability of these projects.

This chapter provides a thorough overview of the relevant literature, discussing the subject from a variety of theoretical and empirical angles. The conceptual examination discusses the precise definitions of housing, housing modes, and affordable housing. In addition, a general review of low-cost housing options in Ghana is provided. This section also provides some helpful perspectives on what constitutes a successful or unsuccessful endeavour. The study elucidates project management processes and investigates a variety of project management approaches used in low-cost housing projects. This chapter provides a literature review on the difficulties inherent in applying standard project management methodologies to affordable housing initiatives. The chapter elaborates on stakeholder functions, stakeholder management, and the difficulties of this field. The theoretical review discusses stakeholder theory and agency analysis. The chapter finishes with a summary and a discussion of the study's supporting evidence.

2.2 Overview of Affordable Housing Projects

2.2.1 Concepts of Affordable Housing

The definition, target demographic, and stakeholder responsibilities related to affordable housing provision vary by country context, as highlighted in reports from the Inclusive Business Action Network (IBAN) (Ciardiello et al., 2021). More specifically, there is no universal consensus on what constitutes "affordable" pricing, the income thresholds used to determine eligibility, or the exact roles of government agencies, private developers, financial institutions, and community groups within affordable housing delivery frameworks globally. These components differ across national and local settings based on economic factors, policy priorities, and housing market dynamics. Because of the wide range of political, economic, and societal factors that impact the supply and demand for housing worldwide, there is no one overarching definition of what constitutes cheap housing.

Affordable housing is often defined as a function of family income and housing costs, an approach popularised by UN-Habitat. According to UN-Habitat (2010), housing is considered unaffordable if it exceeds 30 percent of a family's monthly or yearly income. By this definition, when housing costs surpass the 30 percent threshold of family earnings, it can negatively impact their ability to meet other fundamental needs such as healthcare, education, and food. This standard deems that spending more than that sustainable proportion of income on accommodations prevents households from adequately affording essential non-housing expenses. Therefore, the 30 percent benchmark serves as UN-Habitat's key guideline to assess whether prevailing housing conditions across contexts are economically accessible or present affordability issues for inhabitants

There has been inconsistency in how countries apply the 30% threshold. According to Greenberg (2022) before the 1980s, Canada had a 25% family income criterion. Gholipour et al. (2020) also said that in India, a 40% limit is typical. Expenditures on housing (including rent, taxes, insurance, and utilities) should not exceed one-third of a household's total yearly income in Ghana, as defined by the UN-Habitat (Gog/Mwrwh, 2015). A 1975 World Bank study defines "affordable housing" as dwelling units built to minimal but adequate standards and specifications, priced to allow people with modest incomes to afford them. The UN-Habitat (2011a) report demonstrates how the concept has evolved over time by describing these homes

as mass-produced, low-cost houses that are up to code. Oladapo (2021) and Obi et al. (2020) noted that factors like variations in national economies could influence the classification of a population as low-income. Given the diversity of national economies, it is likely that the LCH description will vary from country to country.

2.2.2 *International Perspectives on Affordable Housing*

According to the United Kingdom Department for Communities and Local Government (2013), "affordable housing" is defined as "housing that is built to meet specific standards and quality criteria and made available at prices that are affordable to eligible groups that are not served by the market" (Bradley, 2023). Housing cooperatives and government agencies work together to provide these homes. In the United States of America, there is a trend toward catering to middle- and lower-class families by building and selling homes at more reasonable prices. Housing costs, including utilities, should take up no more than 30% of a household's income, as stated by Hecht (2006) and the United States Department of Housing and Urban Development (HUD) (2014). Low- and middle-income Australians should be able to afford housing that meets their basic needs in terms of quality and location, as defined by Monyratanak & Lee (2019). From the perspective of industrialised countries, LCH is any kind of housing that is aimed at meeting the needs of those with low to moderate incomes.

To better understand what constitutes cheap housing in a developing nation, Zarghamfard et al. (2023) and Htun (2022) performed research in China. They came to the conclusion that low-income people are the only ones who can lawfully occupy inexpensive housing because of legal restrictions on who may live there. Yadanar (2019) claims that the public sector is the most common source of LCH. The author argues that there are key differences between affordable and commercial housing, including the kind of supplier, availability of development funds, value drivers, quality requirements, and sales processes. Table 2.1 summarises the differences in characteristics.

Table 2.1: Differences between Low-Cost Housing and Private Housing

| Variables | Private housing | Low-cost Housing |
|----------------------|-------------------------|------------------------------|
| Developer | Real Estate Developer | Government |
| Project Fund | Private Fund | Housing Provident Fund /Loan |
| Construction style | High taste living level | Basic living level |
| Allocation mechanism | Market mechanism | Direct allocation |

Source: Adapted from Jingchun (2011)

Housing that is constructed and made accessible to those in the low and low-medium income groups is what is meant by "affordable housing" in Malaysia (Mpingana et al., 2023; Masram & Misnan, 2019). The homes in question are built to the lowest quality and safety standards and have no more than three bedrooms and a floor area of 60 to 63 square meters. To help with the severe housing shortage, these homes are being offered at low prices. Housing units may be classified as either government-run or privately managed.

2.2.3 Affordable Housing in African Context

There is a striking degree of consistency in the perspectives of people living in African countries that are still in the process of developing. Mkhwanazi et al. (2019) definition of affordable housing in South Africa, which states that such housing units include social housing and low-income housing since their overall costs are within the means of a certain income bracket. Setiawati et al. (2020) designated these residences as affordable housing for people with low to moderate incomes. According to Awuah & Abdulai's (2021) study on housing in Ghana, affordable housing is defined as housing that falls below the current market rate and is within the financial reach of low-income earners.

According to Ayo et al. (2019), "affordable housing" is defined in Nigeria's National Housing Policy (NHP) document as "housing made available for purchase at prices that are affordable to low and middle-income groups within the country." These homes are built, financed, and managed by the government either directly through housing agencies or indirectly through outsourcing, both of which are subject to government scrutiny. To facilitate the construction of affordable housing in numerous African nations, including Ghana, the joint venture-led method has recently emerged as a feasible solution. In the context of developing countries, the

word "affordable housing" seems to convey the same meaning as when used in affluent countries.

2.2.4 Technological Approaches to Affordable Housing

As described by Kumar (2019), Kieti (2020), and Wan Mohamad et al. (2019), the term "affordable housing" refers to a notion that incorporates cost efficiency via budgeting and procedures, as well as the use of suitable technology. Appropriate technology is the process of building using local materials and labour while incorporating modern knowledge and techniques to ensure the lifespan, efficiency, and strength of the finished product. However, within the bounds of this study, it is determined that this specific concept of cheap housing is inappropriate for implementation. Analyses suggest that "affordable housing" refers to two approaches, one that addresses the housing needs of a specific population, and another that effectively utilises emerging technologies.

2.2.5 Affordable Housing in Ghana

The current investigation is connected to the original premise. The word "affordable housing" may be defined in the context of this study by considering the study's geographical scope (Ghana) and the National Housing Policy of 2012, as mentioned by Ebekozi et al. (2022). For this definition, "affordable housing" refers to multi-unit residential complexes that are subsidised by the government and are located in one or more cities. These developments are tailored to the budgets of their intended residents, allowing them to improve their quality of life as their incomes grow. This definition outlines the types of private sector homes that are not offered for sale, rent, or other financial gain to those in the low and lower middle-income ranges. People from low- and intermediate-income brackets are projected to get the most benefits from this initiative.

2.2.5.1 Establishment of affordable Housing in Ghana

Numerous governments across the globe have made addressing the housing needs of their citizens, especially those with lower and intermediate incomes, a top priority. Fordham (2019), Siqueira-Gay et al. (2019), and Un-Habitat (2011a; 2011b) all suggest that without government assistance, a sizable segment of this population would be unable to build their own houses or make reasonable requests for housing. One of the intervention options to meet the housing requirements of these

populations is the development of cheap homes. In order to meet the needs of those who cannot afford to buy or rent a home at the going market cost, governments in several nations have introduced the notion of affordable housing. This is consistent with the findings of Zakaria & Kuusaana (2020) and Bishop et al. (2020). Many synonyms for "affordable housing" exist. These include "social housing," "subsidised housing," "low-income housing," "public housing," and "low-medium-cost housing." Affordable housing, low-income housing, and low-cost housing are all phrases that are often used interchangeably, as shown by the work of Chen et al. (2023).

According to Greenberg (2022), the term "affordable housing" lacks specificity because it encompasses a variety of housing types managed by either a government agency or a non-profit organisation, such as "public," "community," "non-profit," "social," and "high need" housing. He proposed classifying low-cost housing as either public or private in order to improve clarity. This research supports the idea that affordable housing should be delivered through the public sector so that a more nuanced and contextualised definition of "affordable housing" may be developed. Therefore, before going into an assessment of its providers and the process of its supply, it is crucial to establish a precise definition of affordable housing within the scope of this research. Single-story homes, such as those in Figures 2.1 as well as multi-story buildings of varying heights, may all contribute to the delivery of affordable housing.



Figure 2.0.1: Model of Affordable Housing in Ghana

Due to the inability of earnings to keep up with the growing cost of housing, the problem of affordable housing in Ghana remains a major socio-economic issue, despite the country's developing economy. It's becoming more difficult to find a place to live, especially in urban areas. A 2015 study by the Ministry of Water Resources, Works, and Housing predicts that population growth in Ghana will result in an additional two million urban households by 2020. Annang et al. (2021) states that before the epidemic, the government estimated a need for an additional 2 million dwellings. About 60% of the employed population now needs some kind of housing assistance, and 35% of the working population still can't afford housing, even with the government's planned subsidies. The World Bank reported in 2021 that the consequences of the COVID-19 epidemic caused Ghana's GDP to increase by 0.4% in 2020. Since March 2020, the government of Ghana has been implementing measures to lessen the severity of the pandemic's effects. This led to a 3.1% increase in GDP for the first quarter of 2021 (International Monetary Fund, 2021).

However, oil contributed to a 4.6% increase in GDP. In response to the continuing situation, the government of Ghana has created the Ghana CARES “Obaatan Pa” project. It is hoped that enterprises functioning inside the nation will get sustainable financial assistance from this project. Tamale, Accra (Borteyman), Tema (Kpone), Kumasi (Asokore Mampong), Koforidua (KF), Wa (WF), Prampram (Sagelmi), and Sagnarigu (SAR) are just some of the places where the government has proposed affordable housing initiatives in the past year. The failed housing projects in Borteyman, Kpone, and Sagelmi are expected to be completed by 2022, as stated by Mensah, (2024). In addition, it is planned to build 150 new apartments for government employees.

2.2.5.2 Ghana's Financial Services and Housing Market

Ghana's financial services are primarily led by the banking industry, with pension, insurance, and capital markets still developing. The International Monetary Fund (2021) identifies difficulties in obtaining long-term wholesale financing as a major issue. Domestic credit to the private sector is 10.9% of GDP, but this is lower than in sub-Saharan Africa. The Bank of Ghana reported an average loan rate of 20.1% in 2020. Nine of Ghana's 23 banks offer official mortgage products, with typical LTV ratios of 80% and 15-year repayment terms. The central bank's monetary policy rate averaged 15.25% in 2020, while the Bank of Ghana reported an average annual loan rate of 22% for commercial purposes (IMF, 2021).

In addition, mortgage finance is challenging for homeowners due to stricter eligibility requirements and extensive due diligence processes (Korah et al., 2019). Mortgage companies are selective about which gated communities to finance, and banks are often found in major cities (Ehwi, 2020). The National Housing and Mortgage Fund is working with Stanbic Bank, Republic Bank, and the Ghana Commercial Bank to expand mortgage availability and support housing market growth (Gyamfi-Yeboah, 2020). The Public Servants' Housing Loan Scheme is available only to those working in the public sector. Mortgage debt accounted for only 2.5% of the household debt-to-GDP ratio in 2019, with non-bank entities making loans to individual and family borrowers (Bank of Ghana, 2020).

In terms of affordability, low household earnings significantly contribute to the housing affordability crisis in Ghana. The Bank of Ghana reported a 77.4% drop in revenues after COVID-19, but fewer than 5% reported income increases (BoG, 2020; Ghana Statistical Service, 2019). Factors contributing to this issue include rising land prices, higher mortgage rates, insufficient use of cost-effective construction materials, and outdated building codes and regulations (Institute of Statistical, Social, and Economic Research, 2020). The National Mortgage and Housing Finance Initiative in Ghana offers mortgage loans for public sector employees at interest rates between 10% and 12%, below the standard market rate of 28%. The scheme aims to provide affordable housing options for those with limited financial resources. The program's pricing structure aims to make quality housing accessible to low-income families, reducing poverty and improving living conditions. The success of the housing initiative depends on effective management, maintenance, partnerships with local governments, and private sector organisations. The World Economic Forum recognises the importance of affordable housing solutions worldwide for sustainable development and inclusive growth (World Economic Forum, 2021).

2.3 Affordable Housing Project Delivery

A project cannot be completed successfully without the input of many people, the use of many methods, and the culmination of many steps. Significant effort was put forth by both the governmental and business sectors (Utomo & Anisah, 2021). The process of project delivery involves organising and synthesising all processes and components involved in the design and building of a facility to achieve the intended

outcomes after the project's completion. The aforementioned idea is associated with the cost-effective method of project delivery, which covers every stage of development from initial planning to finishing building (Obi et al., 2020). There is a predetermined order of activities that must be carried out in order for a project to be considered "delivered." It has been proposed by Kwofie et al. (2020) that this is a cyclical process with phases including commencement, planning and design, execution, monitoring and control, and closure.

Oswald et al. (2020) identify eight stages pre-feasibility, feasibility, design, procurement, implementation, commissioning, handover, and operation that make up the cycle's operational lifecycle. Several countries have implemented these operating stages in their construction frameworks, ensuring they align with the unique characteristics of each local environment (Stegbauer et al., 2020). Here is a sample of the Royal Institute of British Architects' (RIBA) Plan of Work. The provided design illustrates a functional angle on the project delivery cycle as it relates to the phases of project delivery. The above plan lays out a thorough structure for the design and administration of construction projects, with a special emphasis on the execution of cost-effective projects in the United Kingdom. Successful project delivery relies on everyone involved having a thorough understanding of the requirements for completing the project, as shown in Figure 2.2. The "plan of work" details the necessary steps for each stage of the project delivery process, from initial strategy formulation through final handover and closure. Changes have been made to bring this document up to date with standard procedures in the building trade.

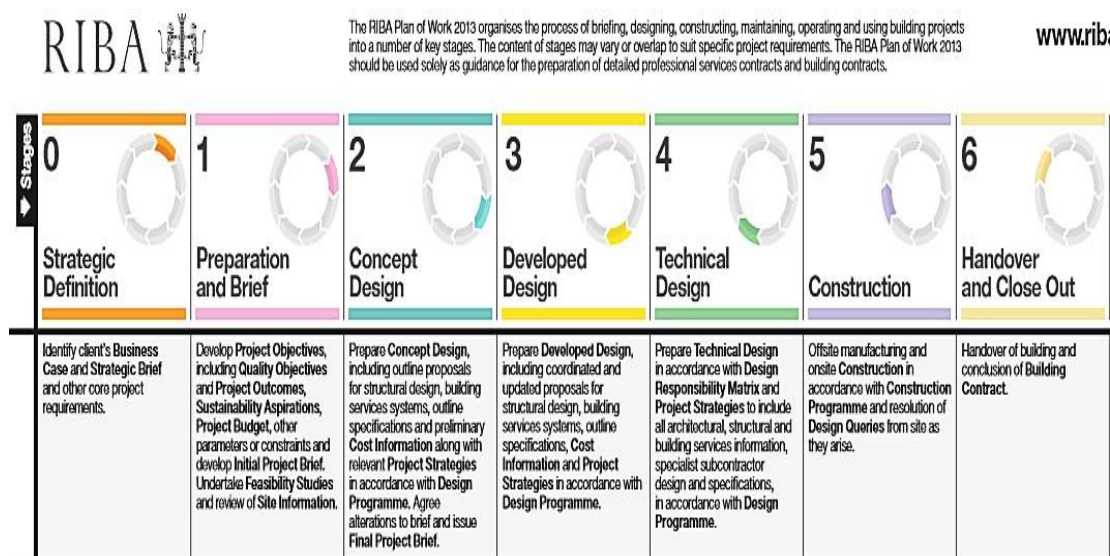


Figure 2.0.2: RIBA Plan of works
Source: Royal Institute of British Architects (2013)

This method is also used to create low-cost home developments. Using the RIBA plan of work and the insights of the members of the Chartered Institute of Housing in the United Kingdom, Kavaarpuo & Sarfeh (2022) developed a contextualised guideline for the execution of affordable housing projects. In Figure 2.3, we see how the aforementioned guideline highlights considerations at each of the three critical stages of implementing an affordable housing project. Project and housing managers in the United Kingdom need to understand the basics in order to carry out successful affordable housing projects.

| INITIATION STAGE | DESIGN STAGE | CONSTRUCTION STAGE |
|--|--|--|
| <ul style="list-style-type: none"> •Housing Need •Potential Sites •Sustainability considerations •Feasibility studies •Development finance •Community involvement •Site acquisition •Engage project team consultants | <ul style="list-style-type: none"> •Preparing Brief and Cost Budget •Sustainability considerations •Building Approval •Design Drawings and Construction Specifications •Bills of quantities | <ul style="list-style-type: none"> •Procurement •Pre-contract planning •Contract Agreement •Construction Techniques and Method •Contract Administration •Completion and handover •Defect liability period |

Figure 2.0.0.3: Essentials in Low-cost housing project delivery

Source: Harris and Matthews (2009)

The RIBA plan of work was first developed for use in the United Kingdom's building industry, but it has now found widespread use around the globe. Ghana is among the countries that have adopted the RIBA plan of work for the execution of construction projects. There seems to be no material difference between the RIBA plan of work and the plan of work developed by the Ghana Association of Engineers and Planners, notwithstanding the fact that the RIBA plan of work was recently revised. The planned work schedule comprises five main stages: pre-design (Design 1), design (Design 2), construction bids and awards, and post-construction. The critical steps at each level are documented in Table 2.2. This method is used in a wide variety of building projects, such as those aimed at providing low-cost housing in Ghana and elsewhere in Africa. The optimisation of costs, awareness of environmental impact, and safety in the built environment have all led to changes within the Royal Institute of British Architects (RIBA). However, the plan of action

has not altered much, despite the fact that the building environment has evolved significantly over the years.

Table 2.2: Critical steps to project management

| Stages | Summary of work | Description of work |
|------------------------------|--|--|
| Pre-design (Design 1) | Briefing | The action of determining and detailing a client's requirements and goals. Developing a customer and project brief, exploring potential sites, and undertaking feasibility studies are all important first stages in any project. This work is done to determine the best organisational framework for the project team and to define standard operating procedures for the project. |
| | Outline proposal | Extending the strategy brief into a full project brief, developing first offers and cost estimates, and assessing the procurement method are all part of the process. |
| Design II | Schematic Design | Create a rough sketch of the design, assess the high-level description of technical needs, and calculate rough costs. |
| | Detailed design Production Information | The project brief was completed and authorisation to build was granted. Create detailed blueprints, technical specifications, and information on required safety measures and legal requirements. Tender document approval and the preparation of production information needed for the construction contract in line with the agreed upon project schedules. Request for regulatory authorisations. |
| Tendering and award | Tender documentation and action | Commencement of tender process to the award of the contract. |
| Construction | Construction Planning supervision and practical completion | Transferring ownership of the site and entrusting the contractor with the construction contract are all part of the process. So, too, is the selection of the contractor, the transmission of information to the contractor, the review of information supplied by contractors and experts. Up to Practical Completion, the contract for the construction work must be managed. |
| Post construction | Post practical completion | Final inspections are often performed within the defect liability period so that the final bill may be paid at that time. |

Source: Compiled from Akinde (2012)

2.3.1 Project Management Practices in Affordable Housing Projects

The attainment of efficient performance and triumph at every phase of the project delivery procedure, particularly with regards to economical housing, necessitates the contemplation of specific fundamental prerequisites and the implementation of proficient project management methodologies (PMI, 2017). According to Ika et al. (2020), project management is a subfield that falls under the purview of management and organisation studies. Various definitions of project management exist, primarily originating from professional organisations in the field.

Nonetheless, these definitions all denote the same concept. According to Munro & Ika (2020), project management can be defined as the systematic approach of defining, planning, monitoring, controlling, and delivering projects in order to achieve the intended benefits. According to Tereso et al. (2019), project management can be defined as a type of implementation strategy that seeks to enhance work processes with the goal of achieving optimal performance. This involves a series of activities or processes that contribute value to the final project outcome and, consequently, to the organisation in which it is executed. The present investigation regards project management as a structured approach to attaining clearly defined objectives by means of established methodologies and instruments for the purpose of arranging, coordinating, assessing, and regulating tasks.

The topic of discussion pertains to the practice of project management. There is significant variation in project management practices across different types of projects. This citation refers to a publication by Oukennou et al. (2021). Cha & Maytorena-Sanchez (2019) assert that organisations utilise a variety of tools, techniques, and approaches to tailor project management methodologies to the unique requirements of each project, even when undertaking multiple projects simultaneously. The antecedent process groups of project management delineate the project into distinct phases. The applications encompass multiple domains of project management. The aforementioned domains are commonly known as knowledge areas in the field of project management. According to Delisle (2019), the project management body of knowledge is a comprehensive term that encompasses the amassed knowledge within the project management profession. The knowledge and practices outlined possess a high degree of applicability across

various contexts and enjoy broad consensus regarding their inherent value and utility. It is recommended that project teams utilise the knowledge areas and additional extension knowledge areas that are relevant to specific project types, as deemed appropriate.

As per Wideman (1998) assertion, the Project Management Body of Knowledge (PMBOK) disseminated by the Project Management Institute (PMI) embodies the knowledge and practices that are widely acknowledged and distinctive, or nearly so, to the domain of project management. Hodi and Hrzová (2017) have suggested that the knowledge areas of a project are crucial project management practices that play a significant role in determining the success of various projects, including affordable housing projects. The subsequent section delved into the practices of project management.

2.3.1.1 Integration management

The aforementioned pertains to the systematic approach of recognising, specifying, consolidating, harmonising, and managing the diverse procedures and undertakings encompassed in the realm of project management (Demirkesen & Ozorhon, 2017). Integration in project management encompasses unification, consolidation, communication, and integrative actions that are essential for the effective execution of a project until its completion. This approach is critical to managing stakeholder expectations and meeting project requirements, as per the Project Management Institute (PMI, 2017).

Patterson (2022) asserts that the process of developing a project charter involves the creation of a formal document that confers authorisation for the initiation of a project and endows the project manager with the requisite authority to allocate organisational resources towards project-related activities. The provision of a direct linkage between the project and the strategic objective of the organisation is facilitated. According to Bocken and Geradts (2020), the process of developing a project management plan entails defining, preparing, and coordinating all plan components, as well as integrating them into a cohesive project management plan. The process of directing and managing project work involves the act of guiding and executing the tasks that have been outlined in the project management plan (Sanghera & Sanghera, 2019). Karagoz et al. (2020) notes that the process of managing project knowledge aims to achieve a specific project objective and

requires either pre-existing or newly acquired knowledge. The process of monitoring and controlling project work involves the systematic tracking, review, and reporting of progress towards achieving the intended objectives outlined in the Project Management Plan (PMP) (Rosenberger & Tick, 2021). The process of integrated change control involves a comprehensive review of all change requests, followed by the approval and management of changes to deliverables, project documents, organisational process assets, and the project management plan. The decisions made during this process are communicated to relevant stakeholders (Harymawan et al., 2022). The ultimate stage in the PMP involves the conclusion of all tasks, as noted by Altahtoo (2020).

2.3.1.2 *Project scope management*

Project scope management involves creating a comprehensive plan outlining the tasks and resources needed for a successful project. It involves consensus with stakeholders regarding time, cost, and deliverables. The primary processes involve planning, validating, and controlling the project and product scope (Abdilahi et al., 2020; Gobov & Huchenko, 2021).

This encompasses the tasks essential to generating a comprehensive account of the tasks and resources needed to accomplish the project with success. The criteria for project success have been identified by Abdilahi et al. (2020). It is imperative to establish and reach consensus with all stakeholders regarding the project's time, cost, and deliverables at the project's outset. Abdilahi et al. (2020) emphasises the importance of guidance and direction in project management. Scope refers to the systematic process of formulating a detailed project and its corresponding product (Gobov & Huchenko, 2021). Work Breakdown Structure (WBS) breaks down project deliverables into manageable elements (Maeri et al., 2022). Validating scope involves accepting project deliverables upon completion. Control scope oversees project and product scope, handling modifications to the baseline scope (Belete, 2019; Rodrigues & Rabetti, 2021; Sanghera & Sanghera, 2019).

2.3.1.3 *Project schedule management*

According to Project Management Institute (2017), project scheduling entails the development of a comprehensive plan that outlines the delivery timelines and methods for the products, services, and outcomes specified in the project scope.

This plan serves multiple purposes, including facilitating effective communication, managing stakeholder expectations, and providing a foundation for performance reporting. The aforementioned are the procedures. The establishment of policies, procedures, and documentation for a project to proceed in an orderly manner is known as schedule management planning, as noted by Almasifar et al. (2021).

According to de Andrade et al. (2019), the process of defining activities involves identifying and documenting the precise actions that must be executed to produce the project deliverables. The process of sequencing activities involves the identification and documentation of interrelationships among project activities, as described by Nguyen et al. (2022). Estimating activity durations is the process of approximating the time required to complete a given task based on the estimated resources available (Al Rubaiei et al., 2022). The process of creating a project schedule model involves the analysis of activity sequences, durations, resource requirements, and schedule constraints, as noted by Al Rubaiei et al. (2022). Finally, the control schedule function oversees the progress of project updates and handles modifications (Maeri et al., 2022).

2.3.1.4 Project cost management

Opportunity cost is the act of relinquishing or forgoing a resource to achieve a specific objective or surrendering an item in exchange for something else. Project cost management primarily concentrates on the costs associated with the resources needed to complete project tasks (Sepasgozar et al., 2019). According to Obi et al. (2021), in order to determine the costs associated with project activities, it is necessary to develop an estimate of the expenses required for the resources involved. This involves planning for the necessary resources, including personnel, equipment, and materials, as well as determining the appropriate quantities of each resource required to complete the project activities. The primary procedures encompass the process of planning cost management, which involves the establishment of a framework that outlines the methods for estimating, budgeting, managing, monitoring, and controlling costs (Sepasgozar et al., 2019).

According to Igwe et al. (2020), the process of estimating costs involves creating a rough approximation of the budget required to successfully execute the project. According to Faten Albtoush et al. (2020), the process of determining the budget involves the consolidation of projected expenses associated with specific tasks or

work packages to establish an approved cost baseline. Cost control refers to the practice of overseeing the project's progress in order to revise the project costs and regulate modifications to the cost baseline, as noted by Hassan et al. (2020).

2.3.1.5 Project Quality management

There is a lack of consensus among various organisations regarding the definition of quality, as it is believed to be determined by the customer. Despite previous assertions, a consensus has been reached regarding the subsequent definition of quality. Faraji et al. (2022) define quality as a product or service that surpasses the consumer's requirements and expectations, offered at a price that reflects exceptional worth. Quality pertains to the set of procedures necessary to ensure that the project will meet the operational objectives for which it was created while adhering to the policy goals of the organisation. The aforementioned encompasses methodologies for devising quality plans, ensuring quality assurance, and executing quality control (PMI, 2017).

The objective is to surpass the requirements and expectations of the consumer while maintaining a price that reflects exceptional worth. The significance of quality as a project outcome is widely acknowledged in project management. Project quality management encompasses a set of procedures aimed at integrating the organisation's quality policy into the planning, administration, and supervision of project and product quality requirements, with the ultimate goal of fulfilling the objectives of stakeholders (PMI, 2017). The subsequent procedures pertain to the management of project quality: The process of planning quality management involves the identification of quality requirements for the project and its deliverables, as well as the documentation of how the project will demonstrate compliance with quality requirements and/or standards. This is according to Faraji et al. (2022). The present study discusses two key processes in quality management: managing quality and controlling quality. Managing quality involves the translation of the quality management plan into actionable quality activities that align with the organisation's quality policies and project objectives. Controlling quality, on the other hand, entails monitoring and documenting the outcomes of quality management activities to evaluate performance and ensure that project outputs are accurate, comprehensive, and meet stakeholders' expectations. (Nanayakkara et al., 2022; Jiaqi, 2020).

2.3.1.6 Project resource management

The term "resources" encompasses the acquisition, identification, and management of necessary resources for the project. According to Lemmetty et al. (2020), the resources required for a project can be categorised into two main types, physical resources, which encompass equipment, materials, facilities, and infrastructure, and team resources, which refer to individuals who have been assigned specific roles and responsibilities within the project. The management of project resources encompasses a series of procedures aimed at recognising, procuring, and overseeing the resources required to achieve successful project execution. According to Bothwell (2019), these procedures aid in guaranteeing that the project manager and project team have access to the appropriate resources at the appropriate time and location. The process of planning resource management involves the definition of strategies for estimating, acquiring, managing, and utilising physical and team resources, as stated by Zohrehvandi et al. (2020).

According to Lemmetty et al. (2020), the estimation of activity resources involves determining the requisite team resources as well as the specific types and quantities of materials, equipment, and supplies necessary to execute project tasks. The process of obtaining team members, facilities, equipment, materials, supplies, and other resources necessary to complete project work is commonly referred to as acquiring resources (Singh et al., 2019). According to Unegbu et al. (2022), developing a team involves improving project performance through competencies, team interaction, and the environment. The management team optimises performance through tracking, feedback, issue resolution, and change management. It involves verifying resource accessibility, overseeing utilisation, and implementing corrective measures (Ghorbani et al., 2022).

2.3.1.7 Project communication management

Communication refers to the process of transmitting or receiving information, whether it is intentional or unintentional. Effective communication between project teams and stakeholders is critical for ensuring that projects are completed on time and according to their planned schedules. According to Khanyile et al. (2019), the establishment of effective communication serves as a pivotal point for various entities with distinct backgrounds, experiences, and perspectives, ultimately influencing the overall success of a project. The purpose of this process is to

guarantee that the information requirements of the project and its stakeholders are fulfilled by creating artefacts and executing activities that are intended to facilitate efficient information exchange.

According to Evborokhai & Shittu (2020), project communication refers to the systematic and effective coordination of various aspects of project communication, including but not limited to the collection, creation, distribution, storage, retrieval, management, monitoring, and ultimate disposition of project-related information. On the other hand, monitoring communications involves ensuring that the information requirements of the project and its stakeholders are adequately addressed (Santalova et al., 2019).

2.3.1.8 Project risk management

A potentiality is characterised by an indeterminate outcome or state, which, upon manifestation, exerts an impact on one or more objectives of a given project. Willumsen et al. (2019) assert that risk management is a crucial process that involves the identification, analysis, and response to risk events throughout the life cycle of a project. The significance of risk management is evident in situations where the stakes are substantial, and a considerable degree of uncertainty prevails. The primary objective of project risk management is to mitigate the likelihood of failing to attain the project's goals and satisfy the stakeholders with vested interests while also recognising and capitalising on potential opportunities (Sundara et al., 2021). Risk management plays a crucial role in aiding project managers to establish priorities, allocate resources, and execute measures and procedures that mitigate the likelihood of the project failing to attain its goals. The procedures adhere to the guidelines set forth by the Project Management Institute in 2017.

The process of planning risk management involves outlining the procedures for carrying out risk management activities in a project, as described by Willumsen et al. (2019). The process of risk identification involves the identification of general risks and the documentation of their characteristics, as stated by George (2020). Conducting a qualitative risk analysis involves evaluating the likelihood of occurrence, impact, and characteristics of individual risks in order to prioritise them for further analysis (Sabbaghi, 2020). Conducting a quantitative risk analysis involves the numerical evaluation of the collective impact of identified individual risks

associated with a project, as well as other sources of uncertainty, on the overall objectives of the project (Sabbaghi, 2020).

According to Dandage et al. (2019), it is essential to engage in the process of planning risk responses, which involves the development of options, selection of strategies, and agreement on actions to address both the overall project risk exposure and individual project risks. The execution of risk responses involves the implementation of pre-established risk response plans, as stated by Jiwani & Gupta (2019). Zhu et al. (2020) suggest that it is important to monitor risks, oversee the execution of risk response plans that have been agreed upon, keep track of identified risks, identify and analyse new risks, and assess the effectiveness of the risk management process throughout the project.

2.3.1.9 Project procurement management

According to Rane et al. (2020), procurement management refers to the set of procedures that are necessary for obtaining goods and services from external sources outside of the organisation. As per PMI's guidelines from 2017, the aforementioned process entails procuring or obtaining products, services, or outcomes that are required from external sources rather than the project team. According to Rane et al. (2020), the procurement planning process establishes policies that provide guidance on the external acquisition of project materials and human resources. This domain frequently entails the involvement of the procurement function and legal department within the organisation. The processes involved in project procurement management encompass the following: The process of planning procurement management involves documenting decisions related to project procurement, specifying the approach, and identifying potential sellers, as outlined by Sanghera and Sanghera (2019). The process of conducting procurements involves obtaining responses from potential sellers, selecting a seller, and ultimately awarding a contract, as described by Ershadi et al. (2021). According to Ershadi et al. (2021), control procurements refer to the systematic management of procurement relationships, which involves monitoring contract performance, making necessary changes and corrections, and ultimately closing out contracts.

2.3.1.10 Project stakeholder management

According to Panda and Sangle (2020), a stakeholder refers to any entity or individual that has the potential to impact or be impacted by the attainment of an

organisation's objectives. Stakeholders are defined as individuals, groups, or organisations that have the potential to influence, be influenced by, or perceive themselves as being influenced by a decision, activity, or outcome of a project, according to the Project Management Institute (PMI, 2017). According to Magassouba et al. (2019), the term refers to both individuals and organisations that are actively engaged in the project or whose interests may be impacted positively or negatively by the successful execution or completion of the project. In order to achieve a favourable outcome for a project, it is imperative to identify the stakeholders involved and ascertain their respective requirements and expectations (Pedrini & Ferri, 2019).

According to Pedrini and Ferri (2019), the procedures involved in stakeholder management include stakeholder identification, documentation of their significance and influence, as well as their levels of interest. Stakeholder engagement planning is a crucial process that involves the development of strategies to engage project stakeholders based on their needs, expectations, interests, and potential impact on the project, as outlined by Magassouba et al. (2019). The objective is to oversee stakeholder engagement and facilitate efficient communication among project stakeholders to fulfil their expectations and resolve any concerns. According to Panda and Sangle (2020), the process encompasses the development of trust, conflict resolution, and the cultivation of negotiation and communication proficiencies. The practice of overseeing stakeholder involvement in a project, which involves adapting engagement strategies and plans, is referred to as monitoring stakeholder engagement (de Oliveira & Rabechini, 2019).

2.3.2 Stakeholder management practices

According to Shen & Xue (2021), a construction project involves multiple stakeholders with varying levels of involvement and stake in the project. According to de Oliveira and Rabechini (2019), and Saad et al. (2022), stakeholders can exhibit adversarial behaviour or exert either a positive or negative impact on a project, thereby necessitating appropriate management strategies. According to Oguzie et al. (2021), effective stakeholder management is a crucial factor in achieving success. Stakeholders in affordable housing projects include individuals, groups, and organisations that impact project outcomes. Their impact extends throughout

the project's life cycle and deliverables. The decision-making process is complex, and an integrated analytical framework may not fully address all parties involved.

Scally and Tighe (2022) suggest that key sectors of housing development should prioritise collaborative objectives and sustainable outcomes. Affordable housing provision involves three primary stakeholder groups, the state (government), the market (private sector), and civil society (social enterprises and NGOs). State stakeholders focus on land and infrastructure, while market stakeholders prioritise housing development, construction, and financial capital. Civil society stakeholders often contribute to financial plans, policy, and research. Five categories of resources are essential for ensuring quality, affordable housing: physical resources, intellectual resources, policy resources, construction capital, and financial resources.

The management of mega-projects poses significant challenges due to the involvement of numerous stakeholders, intricate stakeholder interdependencies, and conflicting interests. Additionally, the high project uncertainty resulting from the dynamic and growing capacity, coupled with the project's governance, high public attention, and accompanying controversy, further exacerbates the challenges in managing such projects (Oyeyipo et al., 2019). According to Rafeh et al. (2023), project schedule performance can be significantly impeded by stakeholder disagreement, indecisiveness, and inadequate coordination. Stakeholder management, as proposed by Chinyio et al. (2022), is an effective approach for eliciting stakeholder concerns and fostering robust relationships in complex contexts.

To ensure efficient stakeholder management, it is imperative to adopt a methodical approach towards stakeholder identification, engagement, analysis, and monitoring, as suggested by Jayasuriya et al. (2020). Mashali et al. (2022) assert that the identification of stakeholders, the acquisition of relevant information about stakeholders, and a comprehensive analysis of their impacts are critical. Shen & Xue (2021) have put forth a framework that encompasses a stakeholder identification process, assessment, decision-making, action, and evaluation with ongoing support as crucial factors for project success. This framework was developed after identifying 15 significant success elements for industrialised nations.

Stakeholder management is a crucial aspect of ensuring the successful completion of a project. It involves taking into account the interests, requirements, influence, and conflicts of all stakeholders involved while also enhancing their contributions and roles. Erkul et al. (2019) emphasise the importance of effectively managing the interactions between a project and its stakeholders in order to enhance efficiency. The stakeholder matrix, stakeholder circle tool (Mani et al., 2022), and social network analysis (Oyeyipo et al., 2019; Mashali et al., 2023) have been identified as essential tools for stakeholder management and sustainable project development in industrialised nations, according to research findings.

Primary stakeholders are individuals or groups essential for a corporation's survival, including shareholders, employees, customers, suppliers, and the public sector. Managers play a crucial role in generating value for these groups, ensuring sustained relationships and retention. Firms have high visibility due to their contractual relationships with primary stakeholders, requiring them to make choices, evaluate opportunities, and assess demands. Customer relationships are crucial for firms, and organisations should adopt a long-term perspective that considers innovation, quality, and service. Customer orientation aims to establish a sustainable and profitable enterprise by prioritising customer interests and considering the needs of other stakeholders. Companies can benefit from including a diverse workforce as a stakeholder group, claim Kujala et al. (2019). This may involve broadening their customer base and increasing productivity in order to increase their markets.

Kim et al. (2021) claim that good employee relations management within organisations can lead to advantages like improved performance, a competitive advantage, and rewards. A company's success depends on the performance of its employees, and the level of relationship between customers and employees affects service quality, customer satisfaction, willingness to pay, and overall company performance (Kumar & Ramachandran, 2021). Chaudhry and Ramakrishnan (2019) assert that it is the duty of corporations to maximise wealth for their shareholders. Shareholders, for their part, hope to maximise returns on their investments while minimising risks. Accountability for businesses is essential because it directly affects shareholders' value (Kaur et al., 2022). According to Mitchell (2019), it is no longer acceptable for management to put the interests of other primary stakeholder groups before maximising returns to shareholders. In the corporate environment of today,

management must be accountable to all key stakeholders. According to Hult et al. (2011), a firm's performance is highly dependent on its supplier relationships, and any disputes that may occur can negatively affect the firm's performance and customer satisfaction levels.

Ainsworth (2020) suggests that a collaborative communication approach between a firm and its supplier can improve supplier performance and foster commitment. Sun et al. (2023) argues that firms disregarding community and social interests risk losing consumer support and negatively impacting reputation. Kleinman et al. (2019) argue that regulatory restrictions impact marketing activities, leading to increased costs and changes to marketing strategies. The Broad-Based Black Economic Empowerment Act 53 of 2003 in South Africa mandates companies to adopt a distinct approach towards specific stakeholders, promoting social investment, corporate social responsibility, and racial disparities. This has led to increased pressure for companies to pledge commitments to black economic empowerment. Also, project management constitutes a secondary stakeholder for a smooth project.

According to Safapour et al. (2019), secondary stakeholders are individuals or groups that have the ability to influence or be influenced by a corporation but do not engage in transactions with the corporation and are not crucial for its survival. Secondary stakeholder groups comprise entities such as competitors, media outlets, trade associations, and support groups with special interests. Despite the absence of any contractual or authoritative relationship between these groups and the firm, and notwithstanding the firm's non-reliance on these groups for its sustenance, they have the potential to engender considerable disruption to the firm (Matikainen, 2022). According to Konadu et al. (2020), stakeholder groups are formed based on shared interests among individuals. However, these groups are often comprised of subgroups and individuals who hold multiple roles and have diverse interests. As Konadu et al. (2020) note, individuals may wear different hats at different times, further complicating the dynamics within stakeholder groups. Konadu et al. (2020) posit that there is merit in conducting an empirical evaluation of the dynamics between stakeholders and managers in order to ascertain the composition of stakeholder groups.

Kreiling et al. (2020) have re-evaluated the controversy surrounding the determination of eligible groups to be incorporated into the stakeholder concept.

They concur that possessing a stake in an organisation is a justifiable requirement for being classified as a stakeholder. Additionally, they propose that the notion of having a stake in a company should be acknowledged as providing an input to the company and being a constituent of its output, thereby establishing a reciprocal connection. Kreiling et al. (2020) recommend distinguishing stakeholders based on their level of influence, importance to the firm, and vulnerability to the firm's actions. The authors concur that a limited definition of stakeholders should exclude those with significant influence and instead only include "qualified claimants" who possess the ability to exert power over the firm but lack a strong connection. Kreiling et al. (2020) propose that this definition should exclude competitors, non-governmental organisations, and the media.

According to Kreiling et al. (2020), while it is widely acknowledged that a firm can have indirect impacts on a broad range of individuals, it is insufficient to merely be affected by the firm without making a contribution or having a role within it. The limited perspective regarding the identification of stakeholders encompasses a select group of individuals, namely shareholders, customers, employees, suppliers, and occasionally the community, as well as managers, as a result of the contentious nature of self-interest, as noted by Kreiling et al. (2020). According to Kreiling et al. (2020), the literature has highlighted various stakeholder management practices, such as stakeholder identification and analysis, conflict management, dealing with illiterate stakeholders, stakeholder engagement, stakeholder empowerment, and stakeholder monitoring and control. Below provides a detailed discussion.

2.3.2.1 Stakeholder identification and analysis

The process of stakeholder analysis entails the identification of multiple groups that possess a vested interest in an organisation, followed by an examination of their impact on the organisation's efficacy and productivity. The authors, Wood et al. (2021), propose that stakeholder grouping entails the process of discerning the attributes and past activities of the stakeholders in order to establish interrelationships among the different groups. This objective could be attained by engaging with diverse stakeholder groups. According to Gregory et al. (2020), the stakeholder theory incorporates power, legitimacy, and urgency as supplementary factors to identify an organisation's stakeholders. Consequently, these groups are the only ones that an organisation should interact with. It is a prevalent practice among scholars to classify stakeholders into various categories. The African

Development Bank (2011) established definitions for primary and secondary stakeholders. The primary stakeholders of a development initiative are individuals or groups that are expected to directly benefit from it, whereas the secondary stakeholders are those who possess the ability to influence its design and implementation. Kivits et al. (2021) posit that although secondary stakeholders may possess less influence than primary stakeholders, they can still exert an effect on the organisation by virtue of the resources they furnish. Vortmann et al. (2019) classified them as either internal or external. The International Institute for Environment and Development (IIED) introduced the term "interface stakeholders" in 2005 to describe stakeholders who operate both within and outside of an organisation. Eyiah-Botwe and colleagues (2020) presented an alternative viewpoint by classifying them into two groups, key and non-key. The term "key" refers to stakeholders who assert that the project's success is contingent upon acknowledgement of their interests and requirements. Conversely, the term "non-key" pertains to stakeholders whose requirements and concerns hold little significance.

2.3.2.2 Conflicts Management

Conflict poses an additional obstacle to effective stakeholder management. Inevitably, conflicts arise within human institutions as a result of the diverse backgrounds, values, beliefs, and expectations of each member (Amankwa & Hackman, 2021). Chapman et al. (2019) assert that inadequate management of conflicts among stakeholders, stemming from divergent opinions and expectations, frequently impedes the seamless operation of projects. The management of individual differences is crucial for promoting cohesiveness and tolerance, which in turn can facilitate effective stakeholder management and lead to successful project outcomes.

2.3.2.3 Stakeholders with low literacy level

Masuku (2022) posits that the lack of literacy among stakeholders constitutes a significant impediment to the success of the energy sector in Brazil. UDDIN's (2020) study investigated the opposition to the scientific evidence of mobile phone masts in the United Kingdom. The study's findings suggest that effective stakeholder engagement, devoid of impulsive reactions, and adequate education on the health implications of telecom mast construction are critical factors for the project's success. The aforementioned suggests that in situations where stakeholders

possess restricted knowledge or are unable to read and write, productive discourse regarding the project is impeded due to their inability to comprehend and provide significant input (Bhattacharyya, 2020).

2.3.2.4 Stakeholder Engagement

According to Beam et al. (2023), stakeholder engagement entails the communication and distribution of information to stakeholders, the integration of their needs, and the resolution of any potential conflicts or grievances that may arise during the project. The lack of planning for stakeholder management in projects has been noted by Caibula and Militaru (2021) in numerous organisations. According to Saad et al. (2022), Seifu's (2020) research revealed that project managers tend to allocate less time to two areas of the Project Management Body of Knowledge, despite their significant impact on quality and communication. Therefore, it is critical for project teams to engage project stakeholders at the outset of the project and convey the significance of their perspectives in the project's implementation.

2.3.2.5 Stakeholder Empowerment

Capacity development is crucial for stakeholders to attain self-sufficiency and financial independence upon the completion of a project. This necessitates the provision of training and support to enhance their capabilities. According to Civera et al. (2019), a substantial budget allocation is necessary for capacity development and training initiatives in a project, and it is imperative to integrate these activities into the project's overall timeline. The purpose of this endeavour is to ensure that the project is executed to the requisite standard and that all parties involved possess an adequate understanding of how to effectively participate in the project's progression.

According to Beam et al. (2023), the timely training of stakeholders by consultants can enhance their preparedness for the future of a project. The provision of training sessions will serve to enhance the understanding of the project among stakeholders, thereby mitigating potential resistance that may arise from inadequate comprehension of project functionalities. According to Civera et al. (2019), comprehensive training is of utmost importance in construction projects to guarantee their successful completion. Inadequate execution of the system implementation process may result in opposition to the system, potentially jeopardising its sustained utilisation. This is due to the lack of competent technical personnel to provide support for the system following the departure of the

consultants. The development of cost-effective housing initiatives necessitates the involvement of individuals with specialised knowledge, particularly those with expertise in system design and management. Researchers have identified the lack of personnel as a factor responsible for the slow pace of project implementation in certain regions, such as Ghana (Agyekum & Amudjie, 2024).

However, in Tanzania, the proficiency of the workforce is a significant determinant of project success, as stated by Bisung Dickin in 2019. Despite the advancements made in Kenyan building projects, technical consultants remain crucial in providing the necessary expertise. Although the majority of counties assessed their engagement with project management systems as competent or satisfactory, identified a number of concerns in its baseline survey report on devolution in Kenya in relation to public financial management systems (Fetterman, 2019). Users may face challenges as a result of inadequate practical exposure to certain fundamental components of the system. Bojovic et al. (2021) suggested that frequent training of country workers is necessary to enhance their technical abilities in the construction industry, based on the findings of their research.

2.3.2.6 Stakeholder Monitoring and Control

According to de Oliveira and Rabechini Jr. (2019), effective management of stakeholder participation in projects can be achieved through monitoring the interrelationships among project stakeholders and modifying engagement strategies and plans accordingly. Zurawski (2022) suggests a comprehensive evaluation of the project's requirements and stakeholder involvement. In order to cultivate positive relationships with stakeholders, managers frequently strive to satisfy stakeholder demands at a mutually agreeable level. Mrabure and Abhulimhen-Iyoha (2020) have identified four approaches for managing stakeholders. Considering stakeholders' priorities is critical in determining their primary concerns. It is therefore critical to anticipate and handle stakeholder needs ahead of time in order to avoid turning into complaints.

According to Shaikh and Randhawa (2022), the approach is response-oriented as opposed to anticipatory, and it fails to address the requirements of the stakeholders. The researchers concluded that certain activities undertaken by the corporation, such as corporate social responsibility, did not have a significant impact on its financial performance or investor value. The aforementioned assertion was drawn

from the results presented by Phuong and Hung (2020). This exemplifies the significance of the primary stakeholder in situations where there is a surplus of resources.

2.4 Theoretical Review

2.4.1 Agency Theory

Jensen and Meckling (1976) were credited with the development of the agency theory. Panda and Leepsa (2017) proposed a theoretical framework that posits that the competing interests of a firm's shareholders, managers, and primary debt financiers shape its governance structure. Each of these stakeholders has distinct interests and goals. The shareholders aim to enhance their revenue and prosperity. The focus of the individual is on the potential dividends and share value of the company, as noted by Vitolla et al. (2020). The valuation of the shares is contingent upon the company's long-term financial outlook. The primary concern of shareholders is the long-term profitability and financial prospects of a company, as they directly impact the value of their shares. While dividends are also a concern, they are of secondary importance (Baldo et al., 2019). The managers are appointed to oversee the operations of the organisation on behalf of the shareholders. Despite the absence of ownership of shares in the company, the managers lack a direct stake in the prospective returns for shareholders or the shares' valuation.

According to Khalid et al. (2021), managers are typically bound by an employment agreement and receive fixed compensation in the form of a salary. In the absence of share ownership or remuneration tied to profits or share values, the primary concerns of company managers are typically focused on their compensation package and their position within the organisation. The principal creditors have a vested interest in the company's executives' effective financial administration to ensure that the company can discharge its outstanding debts in full and within the designated timeframe. The agency relationship, as defined by Jensen and Meckling (1976), refers to a contractual arrangement between a firm's managers and owners. In this arrangement, the owners serve as the principal and delegate managerial responsibilities to the managers, who act as agents to manage the firm on their behalf. As a part of this agreement, the proprietors are required to assign decision-making power to the managerial personnel. The proprietors anticipate that the

agents will perform their duties in a manner that prioritises the welfare of the proprietors.

In an ideal scenario, the agreement between proprietors and administrators should guarantee that the latter consistently operates in the optimal interests of the former (Shrestha et al., 2019). The attainment of an ideal contract is unfeasible, as managerial decisions made by agents have an impact on both their personal well-being and the proprietors' interests. This prompts a fundamental inquiry. What strategies can be employed to incentivize or influence managers, acting as representatives of their organisation, to prioritise the welfare of shareholders? The field of agency theory focuses on the potential issues that can arise when a principal employs an agent to act on its behalf, as well as strategies for addressing these issues. The categorisation of agency problems is a common practice in literature, often comprising two distinct types: adverse selection and moral hazard. This classification has been discussed by various scholars, such as Eisenhardt (1989). The concept of adverse selection pertains to pre-existing challenges that arise prior to the establishment of an agency relationship. These challenges encompass the ability to accurately evaluate the agent's objectives and competencies. The process of obtaining trustworthy information regarding agent candidates can prove challenging. In order to secure a contract with the principal, candidates may resort to deceptive tactics by promoting abilities that they do not genuinely possess (Chohan, 2022).

The concept of moral hazard refers to the potential difficulties that may arise following the establishment of a contractual relationship between a principal and an agent (Holmström, 1979). Specifically, it concerns the assessment and compensation of the agent's conduct when acting on behalf of the principal, as well as the measures that the principal can employ to safeguard itself against any misconduct on the part of the agent (Matinheikki et al., 2022). Anderson and Oliver (1987) posit that the utilisation of a firm's profits to pay dividends to owners and salaries to management may give rise to a potential conflict between the principal and agent. This conflict may occur when the principal demands an increase in dividends while the agent (management) aims for an increase in salaries. The principal tries to make things easier for the agency by using a variety of monitoring and control tools, such as performance-based contracts, forcing the agent to share the principal's risks through equity purchase, or building long-lasting working

relationships with the agent. This approach is contingent on the context and the distinct characteristics of the agency relationship, as per Wiseman et al. (2012).

The agency theory clarifies the relationship between the principal and the agent when the principal hires the agent to make decisions and carry out actions on their behalf (Mahaney & Lederer, 2003). Cuevas-Rodriguez et al. (2012) assert that the agency problem arises from the separation of ownership and control, primarily due to agency costs. The scholarly literature pertaining to agency theory delineates two primary concerns that it endeavours to tackle: According to Eisenhardt (1989), a primary concern is the challenge of achieving cooperation among parties who may not have identical interests. In situations where there is a disparity in information between a principal and an agent, with the latter typically possessing greater knowledge (Schieg, 2008), the party with superior information may act in a self-interested manner rather than prioritising the interests of the other party and the overall success of the project. The accomplishment of this objective is typically attained through contractual mechanisms that regulate the project, as stated by Mahaney and Lederer (2003).

According to Fayezi et al. (2012), the study on agency theory in supply management indicates that heightened monitoring enables the principal to obtain information that is less asymmetrical. Due to the presence of undisclosed information and the need for confidentiality, the principal is unable to provide a guarantee regarding the agent's utilisation of their capabilities to aid the principal's project. Additionally, it is possible that the agent may be serving other clients or principals simultaneously, as agents are capable of serving multiple principals concurrently (Unsal & Taylor, 2010).

Jensen and Meckling (1976) define agency cost as the total expenses associated with monitoring by the principal, bonding by the agent, and the residual loss that occurs due to the agent's pursuit of self-interest, resulting in a reduction in benefits for the principal. The concept of agency cost, as per Lyonnet du Moutier (2010) and Mahaney & Lederer (2003), pertains to the financial consequences that ensue when the interests of the principal and the agent are not aligned. Shleifer and Vishny (1997) have classified agency costs into four distinct categories of agent opportunism, which include overinvestment, insufficient effort, entrenchment strategies, and self-serving behaviour.

2.4.1.1 Criticism of agency theory

One of the primary critiques of agency theory pertains to its narrow focus on the agent and owner as the sole actors involved in a given project. According to agency theory, the interaction between these two elements is the sole determinant of project success or failure. Goldberg and Leclair (2021) argue that there is another significant stakeholder whose interests have a comparable impact on the outcome of a project, such as the affordable housing initiative. The adequacy of the agency theory in elucidating the predicaments of affordable housing in Ghana is deemed insufficient. Consequently, it is imperative to utilise stakeholder management theory to elucidate the involvement of additional stakeholders in affordable housing initiatives, as posited by Raimo et al. (2021).

2.4.1.2 Justification for the agency theory

By applying the agency theory to the present study, one can contend that goal incongruence is a prevalent phenomenon in projects involving public-private partnerships (PPPs). The individual designated as the project manager is selected by the proprietor to oversee their projects, as per Khoreva and Wechtler's (2020) definition. The agency theory posits that there exists a potential imbalance in the transmission of information between a principal and an agent, with one of the parties possessing superior knowledge, typically the agent. According to Khan (2022), a party that possesses a wealth of information may act in a self-serving manner rather than prioritising the interests of the other party and the overall success of the project. Hence, while project owners may possess knowledge regarding the advancement of work, details concerning potential complications and quality concerns during the implementation of outsourced work may be restricted to intermediaries.

According to Cruz and Haugan (2019), agents have the option to withhold information pertaining to work-related issues, which could potentially aid the principal in effectively overseeing the project. The aforementioned suggests that the agent or project manager, who receives compensation from the project owner, may conceal pertinent information that is crucial to the project's success due to the potential negative impact on their compensation. The issue of divergent interests between the project manager (agent) and project owner can result in project delays, elevated costs, and compromised quality, ultimately leading to increased agency costs, as noted by Bin Hidthiir et al. (2019). The agency theory offers an explanation

for the success or failure of projects based on the degree of alignment of interests among stakeholders.

2.4.2 Stakeholder Theory

In the early 1980s, Freeman (1984) proposed the Stakeholder Theory, advocating for managers to use a lexicon based on the concept of "stakeholders." Freeman and his contemporaries developed a lexicon during the 1980s and 1990s to address three interrelated issues in commerce: the dilemma of generating value and engaging in trade, the ethical implications of capitalism, and the challenge of the managerial mindset. The theory of stakeholder management posits that by considering the interactions between a business and the various groups and individuals that can influence or be influenced by it, one can enhance the likelihood of effectively addressing the aforementioned three issues. Business can be comprehended as a collection of relationships among various groups that possess a stake in the operations that constitute the business, as viewed from a stakeholder standpoint (Freeman, 1984; Jones, 1995). The subject matter pertains to the collaborative interactions among customers, suppliers, employees, financiers (including stockholders, bondholders, and banks), communities, and managers in the creation and exchange of value, as posited by Laplume et al. (2008).

Understanding a business entails acquiring knowledge of the dynamics of its relationships and their evolution over time. According to Freeman's (1984) perspective, the responsibility of managing and shaping relationships to maximise stakeholder value and distribute it lies with the executive. In situations where the interests of stakeholders are at odds, it is incumbent upon the executive to devise alternative approaches to problem-solving that take into account the needs of a diverse range of stakeholders. By doing so, it is possible to generate additional value for each stakeholder group, as per the findings of Harrison, Bosse, and Phillips (2010). In situations where tradeoffs are necessary, it is incumbent upon executives to determine the most effective means of making such tradeoffs and subsequently endeavour to enhance the tradeoffs for all parties involved (Freeman, Harrison, & Wicks, 2010).

The effective management of stakeholder relationships is not only crucial for the survival and success of businesses in capitalist systems, but it also carries ethical implications as it involves considerations of values, decision-making, and potential

impacts on a broad range of groups and individuals (Phillips, 2003). The authors, Post et al. (2002) argue that a management approach that prioritises the establishment, sustenance, and synchronisation of stakeholder relationships is more effective in generating value and preventing ethical lapses. Donaldson and Preston (1995) identified three distinct dimensions of stakeholder theory: descriptive, instrumental, and normative. According to the authors, stakeholder theory is descriptive because it aids in the delineation of a corporation's actual nature and the actions taken by managers. The descriptive stakeholder theory, as proposed by Donaldson and Preston (1995), is a version of the stakeholder theory that posits the business corporation as the focal point of both collaboration and rivalry. The present theory exhibits an exploratory nature.

The stakeholder theory variant in question posits that the significance or importance of different stakeholders to a firm or business unit may vary depending on the stage of corporate development that has been attained (Jawahar & McLaughlin, 2001). Both the instrumental and normative aspects possess a prescriptive element that is inherent to them. The instrumental stakeholder theory provides managers with guidance on how to strategically manage a company's diverse stakeholders in order to achieve the organisation's objectives. The Instrumental Stakeholder Theory, which is an alternative variant of the stakeholder theory, places the management practices of a firm's stakeholders at the core of its objectives or desired outcomes, including but not limited to profit, growth, survival, and stability. Jones (1995) initially proposed this idea. The argument posits that a company that practices stakeholder management is likely to exhibit superior performance in terms of profitability, growth, stability, and survival compared to a company that does not adopt stakeholder management, assuming all other factors remain constant. The aforementioned statement implies that the Instrumental Stakeholder Theory is contingent in nature.

Similar to the instrumental stakeholder perspective, normative stakeholder theory entails that managers are obligated to adhere to certain behaviours. The action is motivated by moral considerations rather than strategic ones. The statement posits that stakeholders possess valid concerns about a corporation and that these concerns have inherent worth. This statement suggests that it is important to consider each stakeholder group in its own right, rather than solely based on its potential impact on the interests of other groups. Normative stakeholder theory endeavours to address the inquiry of what actions are ethically appropriate for a

corporation and its executives. Donaldson and Preston (1995) assert that the normative perspective holds a fundamental advantage in offering a moral framework for business management. This observation also underscores the fundamental validity of stakeholder theory, which is based on the assumption that corporations exist to achieve goals beyond mere financial gain. The theory of stakeholder has found extensive application across diverse fields such as law, healthcare, public administration, projects, environmental policy, and ethics, as evidenced by the works of Freeman & Harrison (1984); Wicks, Parmar, and de Colle (2010).

2.4.2.1 Criticism of stakeholder theory

The scholarly community has extensively referenced Freeman's (1984) research in the field of management (e.g., Agle et al., 2008; Gibson, 2000; Wolfe & Putler, 2002). Scholars have generally agreed that Freeman is a prominent figure in the literature on stakeholder theory (Donaldson & Preston, 1995). The work of Freeman (1984) has been praised for its effective use of visual aids and straightforward approach (Fassin, 2008). Nevertheless, his contributions to stakeholder theory have also been subjected to critical evaluation. Donaldson (1989) posits that the theory is deficient in its ability to establish ethical principles and criteria for identifying stakeholders. According to Donaldson and Preston (1995) and Laplume (2008), the stakeholder theory literature exhibits a lack of organisation and frequently incorporates concepts from other disciplines without proper citation. Donaldson and Preston (1995) note that stakeholder literature often combines various theoretical frameworks without attribution, which is a notable characteristic of the field.

Like Freeman's research, Donaldson and Preston's (1995) academic contribution has also faced critical evaluation. Scholars such as Hendry (2001) have lauded the contributions of Donaldson and Preston (1995) and Jones (1995) to the advancement of stakeholder theory for their ability to offer valuable insights into the categorisation of stakeholders. However, some scholars, such as Trevino and Weaver (1999), have criticised their work, arguing that the stakeholder concept lacks empirical support and the necessary utility to qualify as a theory Bacharach (1989). The authors elucidate that in cases where managers do not typically behave as if stakeholders possess inherent value (i.e., descriptive stakeholder theory is invalid), the empirical investigation of the consequences of such behaviour (i.e., instrumental stakeholder theory) becomes less significant and less practical.

Mainardes et al. (2011) contend that a significant number of stakeholder theory studies in the literature remain theoretical in nature and are deficient in empirical substantiation. Orts and Strudler (2009) made a further critique of stakeholder theory. Orts and Strudler (2009) contend that stakeholder theory, as conceptualised by Freeman to encompass ethical considerations in business operations, can be employed to rationalise unethical managerial choices. The stakeholder theory's portrayal of stakeholders as static entities has been criticised by Freeman (2005) due to its lack of alignment with the dynamic and evolving nature of stakeholders in reality. The application of stakeholder theory in strategy has been subject to criticism for its insufficient logical rigour in addressing strategic organisational or managerial concerns, as noted by Wolfe and Putler (2002), Fassin (2008), and Sternberg (1997).

2.4.2.2 Justification of the stakeholder theory for this study

The application of stakeholder theory to this study suggests that affordable housing projects, like any other project, involve multiple stakeholders who have a vested interest in the project's outcomes and are either impacted by or exert an impact on the project Peterson (2022). The affordable housing project involves various stakeholders, such as project sponsors, who are typically foreign partners, the Ghanaian government, regulatory bodies, district assemblies, host communities, and opposition parties. Each stakeholder has distinct interests in the project, necessitating identification and efficient management to avoid potential conflicts and related challenges that may impede the project's successful implementation (Khan et al.2021).

The significance of this matter lies in accordance with the stakeholder theory, which posits that certain stakeholders, such as the opposition party leader or the minority leader in parliament, hold considerable power and influence in relation to the affordable housing project. The authors of the publication cited are Węgrzyn et al. (2022). Inadequate involvement of said stakeholders in the deliberation of their concerns may lead to project failure in the event of a change in government leadership from the incumbent to the opposition. The stakeholder in question plays a crucial role in elucidating the various competing interests that arise in projects, such as the affordable housing project. Effective management of such projects is imperative in order to avert conflicts that may impede the progress of affordable housing initiatives (Chipulu et al.2019).

Stakeholder theory and stakeholder management play a crucial role in the success of affordable housing projects in Ghana and other developing countries. Ahadzie et al. (2022) propose a framework for sustainable, affordable housing delivery in developing countries, emphasising the importance of stakeholder engagement and collaboration. Ameyaw and de Vries (2021) identify barriers to public housing delivery in Ghana from a project management perspective, highlighting the need for effective stakeholder management strategies. Damoah, et al. (2021) investigate the causes of government construction project failure in Ghana, noting the significance of stakeholder involvement in project success.

Opoku, et al. (2020) conduct a comparative analysis of the challenges facing the delivery of affordable housing in Ghana and Nigeria, underscoring the importance of stakeholder management in addressing these challenges. Osei-Kyei, et al. (2021) identify critical success factors for implementing public-private partnership affordable housing projects in Ghana, including effective stakeholder engagement and communication. Owusu, et al. (2019) explore the challenges in the delivery of affordable housing in Ghana, highlighting the need for stakeholder collaboration and coordination.

Oyeyipo et al. (2019) investigate the factors affecting stakeholder management success in Nigerian public building projects, emphasising the importance of stakeholder identification, communication, and engagement. Magassouba et al. (2019) examine the influence of stakeholder involvement on development project performance in Guinea, suggesting that effective stakeholder management can lead to improved project outcomes.

These sources contribute to an understanding of stakeholder identification, analysis, and engagement in the context of affordable housing projects in Ghana and other developing countries. They highlight the importance of effective stakeholder management strategies in addressing the challenges and barriers to successful project delivery, and underscore the need for stakeholder collaboration, communication, and coordination in achieving project objectives.

2.5 Empirical Review

2.5.1 Project Management Practices in Affordable Housing Projects

According to earlier research, integration management significantly affects project management performance (Demirkesen & Ozorhon, 2017; Lee & Miller, 2004; Takagi & Varajo, 2019). A 5D BIM-based digital project management system unifies all processes, increasing the efficiency and efficacy of the project from design to operation and maintenance, according to Pakhale and Pal (2020). Takagi and Varajo (2019) assert that integration can enhance management and boost project success. Another study revealed that, due to the high level of integration and collaboration of these procurement methods, integrated project delivery has the greatest influence, followed by partnering and design and build (Tang et al., 2019). However, according to Raziq et al. (2020), centralisation has a negative impact on project success, whereas formalisation and integration are beneficial.

In terms of project scope management, the research of Al-Rubaiei (2021) discovered a favourable and significant connection between stakeholder involvement, project manager abilities, top management approach, and project scope management. These variables can also be investigated further to determine their impact on affordable housing projects. The results also supported the notion that project scope management benefits from stakeholder involvement, project manager expertise, and top management strategy. Moreover, Ajmal et al. (2020) noted that all project stakeholder groups in this study acknowledged that communication is one of the main reasons of project scope creep. The study is anticipated to contribute to the evaluation of the factors that contribute to project scope creep while also enhancing practitioners' and researchers' knowledge of the subject. This study is one of the first to examine the shared perspectives of different stakeholders on the obstacles to project success. In general, the research findings showed a high correlation between project performance and project scope factors (Wuni & Shen, 2020).

Existing research on project schedule management has shown that, in most cases, the integrated proactive scheduling strategy is highly effective in reducing overall costs and strengthening the project schedule (Zhang et al., 2020). Suresh and Sivakumar (2019) presented similar findings, demonstrating that variables impacting the schedule management plan significantly and advantageously

influence the effectiveness of project management. Also, Ma et al. (2019) study supported the viability and efficacy of this method for creating a timetable for construction projects affected by rework, assisting practitioners in taking action to prevent rework-related schedule delays and achieve sustainable development of such projects. The empirical experiment conducted demonstrates that by concentrating on both timetable performance and schedule adherence, project duration forecasting accuracy may be boosted (de Andrade et al., 2019).

According to empirical research on project cost management, Zhao et al. (2019) indicated that the regulatory environment is the second-most important influencing element, followed by the opinions of the project's major stakeholders. Market and industry conditions have the greatest impact on project cost. Furthermore, Ali et al. (2021) demonstrated that the project cost management system developed in this study can integrate data with other project systems, considerably accelerating and streamlining project estimation, and meeting expectations for practicability and efficacy. Also, further research indicates that financial management implementations and cost analyses of prior projects are crucial aspects of project cost management that might greatly enhance the timeliness and performance of public sector projects in Namibia (Nandjebo et al., 2021). According to Palanisamy et al. (2019), risk categories associated with project scope and evaluation, risk associated with site supervision, risk associated with knowledge sharing, and risk associated with lean construction have a greater impact on cost deviation in medium-sized construction projects.

Further, research on project quality management demonstrated that insufficient project management is the most important element affecting the timeliness of construction projects, rework caused by mistakes affects cost performance, and poor supervision affects the quality of construction projects, according to a previous study (Kamal et al., 2022). Alizadehsalehi et al. (2019) reached similar conclusions, finding that management systems offer substantial opportunities to enhance the quality of planning, comprehension, and execution of construction projects. Hence, Veselka et al (2020) findings are consistent with those of other studies and support the requirement for high data and management quality for construction projects. The results have important conceptual ramifications for clarifying the notion of relationship quality in a project management context and for assisting construction project managers in strengthening frequently shaky subcontractor relationships in

an increasingly cutthroat sector where the calibre of these relationships is a critical factor in project outcomes and competitive advantage (Martin & Benson, 2021). Saville and McElwee (2021) assert that the project management methodology can accomplish the task of executing a quality assessment. However, Ili and Velikovi (2019) pointed out that assessing and monitoring project quality is one of the main issues in project management.

Musau and Kirui (2018) concluded that project team competency, project planning, and stakeholder management significantly influence the implementation of housing development projects in Kenya when it comes to project resource management. They also concluded that project cost management does not significantly influence the implementation of housing development projects in Kenya. Again, based on in-depth case study research of both existing and newly constructed low-energy housing projects in Brighton, the United Kingdom (UK), we demonstrate that such projects are driven by the knowledge and available skills of householders and project participants, as well as local and national policies, in addition to motivations to improve existing housing conditions. (Kivimaa and Martiskainen, 2019). Regardless of the industry, Toljaga-Nikoli et al. (2020) stated that the use of project management methodologies encourages the introduction of sustainability dimensions, particularly the social aspect, because the processes in projects managed by a particular methodology are compatible with the social components of sustainability.

According to Shittu et al. (2021), research has proven that communication management has a substantial impact on the completion of construction projects in Abuja. According to a related study by Shad et al. (2019), the communication skills of project managers and team members significantly influence the project's conclusion and success. On the other hand, research demonstrates that ineffective communication significantly contributes to cost and schedule overruns in building projects (Gamil et al., 2019).

On project risk management, Buabeng (2019) came to the conclusion that identifying risk causes, recording risk, decomposing risk, and being risk-prepared are the factors that planning for risk reduction contributes to project effectiveness in affordable housing projects. Additionally, a study discovered that conducting adequate risk management exercises before project execution could significantly

enhance project results, as these activities could identify the majority of project failure causes (Amoah & Pretorius, 2020). Furthermore, Nawaz et al. (2019) found in their study the importance of risk management techniques, their usage, implication, and effect on the success of construction projects from the contractor's perspective. This study aimed to convince key project participants about the use of risk management, ultimately leading to better project outcomes. The study highlighted the need for contractors to implement effective risk management strategies and techniques to mitigate potential risks that could arise during construction projects. By doing so, contractors can minimise the likelihood of delays, cost overruns, and other negative consequences that can impact project success.

Moreover, research on project procurement management has identified several options for fostering widespread participation in public housing, as well as the success element of PPP, which includes an efficient procurement process, a robust private sector, project economic feasibility, and a sound financial package (Ahmed & Sipan, 2019). Due to the high level of integration and collaboration of various procurement methods, Tang et al. (2019) found that the influence of integrated project delivery is most significant, followed by partnering and design and build. Changelima et al. (2020) conclude that procurement planning can assist public purchasing organisations in achieving public procurement effectiveness. An overall finding from the data indicates that the targeted project outcomes are likely to be attained by an acceptable construction procurement strategy created by an experienced client team and proactively implemented by an integrated delivery team working cooperatively (Laryea, 2019).

In addition, existing research on project stakeholder management has shown that the client team, procurement strategy, and delivery systems were major factors in effective outcomes. Yet, the cooperative procurement approach served as the cornerstone for efficient project execution and productive results (Laryea, 2019). Ahmed and Sipan (2019) also stated that the successful procurement process, a strong private sector, the project's economic viability, and a sound financial package are the key success factors for PPP in terms of affordable housing and the numerous opportunities for promoting widespread participation in public housing. Also, Eriksson et al. (2019) demonstrated the significance of explicit considerations of incentives and project governance challenges in the front-end phase of a project

and reinforced the value of a learning perspective on procurement strategies for public client organisations.

2.5.2 Evaluation of PMP in affordable housing projects

According to Donaldson (2001), contingency theory posits that organisational performance can be enhanced by aligning structural factors with contextual factors. Building on this theory, Ika and Pinto (2023) conducted a series of studies rooted in contingency theory and put forth four bases for project analysis, known as NTCP. These bases include the degree of novelty pertaining to critical aspects of the project, the positioning of the project on the spectrum ranging from low-tech to superhigh-tech, the level of complexity inherent in the product, process, and project, and the urgency of the task, characterised as "normal," "fast," "time-critical," or "blitz."

Ika and Pinto (2023) also addressed the concept of project success criteria. These criteria refer to the set of conditions that must be fulfilled to determine a project's acceptability. It is important to note that this list of criteria may differ from one project to another.

The concept of the "iron triangle," "triple constraint," or "golden triangle" has been identified in literature as a means of evaluating project performance based on three essential criteria, timely delivery, adherence to budget, and quality, performance, or scope (Chatelier et al., 2022; Pace, 2019). Simultaneously, alongside the utilisation of the triangle, there exist other comparatively infrequently employed notions, such as the "virtuous square of criteria" or the "quadruple constraint" (which encompasses the contentment of the customer).

Pollack, Helm, and Adler (2018) have recently asserted that the iron triangle concept remains applicable. The authors note that there is consensus regarding two vertices of the triangle, namely time and cost. As for the third vertex, quality is the most frequently considered aspect, followed by scope, performance, or requirements. The perception criterion of satisfaction is also documented in the academic literature. Westerveld's work examines the concept of "appreciation" and its significance through a classification of six categories. These categories include project results (budget, schedule, and quality), appreciation by the client, project personnel, users, contracting partners, and stakeholders (Chatelier et al., 2022).

There is a growing trend towards incorporating benefit concepts into various aspects of business operations. These concepts include benefits to clients, organisations, and stakeholders, support for strategy, and business outcomes such as information processing benefits, effects on business operations, and impact on business performance. (Bawack and Kala Kamdjoug, 2022). Ultimately, the achievement of a project can be viewed as a complex and multifaceted construct that is contingent upon various factors, such as the criteria employed, stakeholder perspectives, the contextual environment, and the particular stage of the project's development. According to PMI's 2017 report, the extent to which professional project management practices are adopted is a significant determinant of project success.

2.5.3 Project management factors that lead to the failure of AHP's

The failure of affordable housing projects is a complex issue that requires a comprehensive understanding of various project management factors. Empirical literature has been instrumental in shedding light on these factors and their impact on project outcomes. By analysing case studies, conducting surveys, and examining data from previous projects, researchers have identified key factors such as inadequate planning, insufficient funding, a lack of stakeholder engagement, and ineffective communication that contribute to the failure of affordable housing projects (Durdyev and Hosseini, 2020; Nguyen et al., 2020; Yap et al., 2021). Additionally, studies have also highlighted the importance of effective risk management strategies to mitigate potential obstacles and ensure project success (Fashina et al., 2020). These strategies involve identifying and assessing risks early on, implementing measures to prevent or minimise their impact, and establishing contingency plans. Moreover, research has shown that involving diverse stakeholders from the beginning and fostering open and transparent communication channels can enhance project outcomes (Nguyen et al., 2020).

Furthermore, it is crucial for project managers to continuously monitor and evaluate the effectiveness of risk management strategies throughout the project lifecycle (George, 2020). This allows for timely adjustments and improvements to be made, reducing the likelihood of risks derailing the project. Additionally, regular communication and collaboration with stakeholders not only help in identifying new risks but also enable the project team to proactively address them. By actively engaging stakeholders and keeping them informed, project managers can build trust

and support, which are vital for successful project implementation. For example, in a software development project, regular communication with stakeholders can help identify potential issues with user requirements early on. This allows the project team to make necessary adjustments and prevent delays or cost overruns later in the project. Additionally, involving stakeholders in decision-making processes can result in better solutions and increased stakeholder satisfaction, ultimately leading to a successful project outcome (Yap et al., 2022).

Overall, a combination of effective communication, proactive problem-solving, and clear goals is essential for successfully managing a project. By regularly communicating with team members and stakeholders, project managers can stay updated on the project's progress and address any issues or concerns promptly. This open line of communication also fosters collaboration and allows for effective decision-making. Additionally, proactive problem-solving involves identifying potential challenges and developing strategies to overcome them before they become major obstacles. This approach helps to keep the project on track and minimises the chances of delays or budget overruns. By understanding and addressing these factors, project managers and policymakers can improve the likelihood of affordable housing projects meeting their objectives and providing much-needed housing options for communities in need. Consequently, literature demonstrates that project success or failure depends on the management of stakeholders. The sub-section described the stakeholder management practices.

2.5.4 Inadequate PMP impact on success or failure of AHP

In recent years, there has been a growing body of literature examining the impact of inadequate project management practices on the success or failure of affordable housing projects (Norman, 2021). Several studies have highlighted how poor project management can lead to cost overruns, delays in completion, and compromised quality in affordable housing developments (Gupta et al., 2023). These findings emphasise the need for effective project management strategies and highlight the importance of investing in skilled project managers who can navigate the complexities of affordable housing projects to ensure their successful implementation.

Mwendwa (2022) investigated the effect of project management techniques on the success of affordable housing projects in a large urban area. The researchers found

that projects with strong project management practices were more likely to be completed on time and within budget, while those with poor project management practices experienced significant delays and cost overruns. Furthermore, the study revealed that projects with effective project management practices also exhibited higher quality outcomes and greater stakeholder satisfaction. These findings highlight the importance of implementing robust project management techniques to ensure the overall success and sustainability of affordable housing initiatives in urban areas.

Culwick et al. (2023). Studies have shown that projects that actively involve and engage the local community in the planning and implementation process are more likely to be successful and sustainable in the long term. Community engagement helps to build trust and support for the project, as well as ensuring housing meets the specific needs and responses of the local residents (King et al., 2021).

Ogunberu et al. (2018) found that the implementation of project scope management techniques had a noteworthy effect on project success, resulting in meeting customer expectations and satisfaction, improved allocation of resources, and timely delivery of projects. Nibyiza (2015) examined the efficacy of change management in facilitating project success in Rwanda, revealing that effective project scope management has a significant impact on project cost, schedule, and quality. Hakizimana (2021) assessed scope change management as a means of achieving project success, revealing a significant correlation between effective management of scope changes and project success.

Risk management is a crucial aspect of project management, involving various activities throughout the entire duration of the project to effectively manage potential risks (Rajab et al., 2022). Kerzner (2017) asserts that the process of devising and implementing plans for evaluating, tracking, and managing potential hazards is instrumental in shaping project results. Kallow et al. (2022) suggest that monitoring risks associated with all project processes and resources can aid in mitigating the adverse effects of potential setbacks. Cobb (2023) emphasises the importance of implementing risk prevention tactics such as risk transfer, control, or avoidance in mitigating project failures.

Al-Hajj and Zraunig (2018) demonstrated a positive correlation between the implementation of a schedule management plan and project success. Solis-Carcano

et al. (2015) corroborated this finding, showing a positive correlation between project schedule management and project success. Suresh and Sivakumar (2019) further validated that effective project scheduling planning, including appropriate resource allocation, competent leadership, and adequate inventory management, are critical factors in achieving project effectiveness.

Wah (2020) examined the relationship between human resources management and project success in Pakistan, finding that recruitment and selection, training and development, and performance appraisal were significant predictors of project success. Ansari et al. (2017) demonstrated that the recruitment and selection process has a favourable impact on project success. Imran et al. (2016) found that training and development procedures can effectively enhance the skills of human resources and contribute to achieving desired outcomes for project success.

Lukale (2018) identified that cost estimating, cost budgeting, and cost control are interrelated processes that interface with other domains of project management. NJOROGÉ (2017) noted that the cost estimation process entails resource planning while acknowledging that alterations in scope may impact project tasks and activities, resulting in additional costs for rework.

Flyvbjerg et al. (2003, cited in Idrees & Shafiq, (2021) conducted a global study on cost overruns in transport infrastructure projects, finding that 90% of the projects experienced cost overruns. Idrees and Shafiq (2021) posited that the essential determinant of a project's success is its ability to meet time and cost performance criteria. Their study in Malaysia indicated that 92% of construction projects experienced overruns, with only 8% achieving completion within the predefined schedule, budget, and quality.

Kamau et al. (2022) found a noteworthy correlation between project cost and client satisfaction, quality, and business success, as well as project quality and technical success. Solomon (2023) investigated the influence of project cost management practices on project success in Ethiopia, finding that project cost management is significantly associated with overall project management success.

Rugenyi (2016) asserted that a project may achieve timely and budgetary completion while fulfilling all predetermined specifications yet still fall short of satisfying significant stakeholders. Akhwaba, (2020) emphasised that project

managers bear the obligation of ensuring crucial stakeholders are engaged throughout the project's lifecycle. Luo et al. (2020) discovered that various communication factors had a significant positive influence on project success.

Yang et al. (2022) posited that effective project communication management among project stakeholders enhances the likelihood of attaining project success. Nguyen et al. (2019) assert that establishing a two-way exchange of information among stakeholders is imperative for project success.

Magagan and Ngugi (2021) conducted a study to enhance project management through stakeholder inclusiveness, finding that engaged stakeholders demonstrated a favourable enhancement in their involvement with the organisational process. Lekunze and Motaung (2022) analysed the participation of young individuals in water resource management in Cameroon, indicating that organisations actively involving young people have a greater likelihood of achieving success.

2.6 Challenges faced in Implementing Affordable Housing

Projects

2. 6.1 Project management practices challenges

2.6.1.1 Inadequate Project Resource

According to Khan et al. (2021), the Ghanaian public sector is marked by inadequate infrastructural services and ineffective management of the limited existing projects. This is attributed to insufficient resources and inadequate motivation for public service officials to deliver services in a productive and efficient manner. According to Khan and colleagues (2021), the effective provision of public services requires adequate remuneration for public officials as well as enhanced transparency and accountability measures. One such resource is the human resource. Yusoff et al. (2021) reported that inadequate labour during construction phases was a significant factor contributing to delays and cost overruns in large-scale projects.

Furthermore, Yap et al. (2022) conducted a study on construction projects in Malaysia, which revealed that inadequate labour, both skilled and unskilled, constitutes a significant factor contributing to project failure. Yusoff et al. (2021) cited a report by Grant Thornton International that indicates a global deficit of skilled workers at 39%, with Malaysia experiencing a shortfall of over 60% in 37 regions.

The insufficiency of proficient labourers within the nation has led to a surge in the employment of foreign workers (Enshassi et al., 2021). While this escalation in foreign labour helps alleviate the shortages encountered, the potential challenges stemming from multicultural workers and divergent work ethics remain a significant concern (Shafiei & Puttanna, 2022). The material resource is a frequently cited factor in project failure within the literature. The aforementioned materials are physical items that are necessary for the successful completion of certain projects.

According to Eja and Ramegowda's (2020) findings, projects that require tangible outputs cannot be accomplished without the necessary material resources. One of the primary reasons for delays is attributed to material-related factors. According to Eja et al. (2020), research conducted on Nigerian projects has revealed that project delays are caused by insufficiency and tardiness in the provision of necessary materials for project execution. In addition, finance is commonly viewed as a crucial resource in the course of project implementation, and difficulties related to financial matters are widely recognised as a significant contributor to project breakdown. According to recent research conducted by Eja and Ramegowda (2020), as well as Zaman et al. (2022) and Kinyanjui and Ombui (2022), numerous projects have experienced failure on a global scale due to insufficient management, inadequate funding, or a lack of financial resources. Certain construction projects may encounter delays due to financial constraints. In Ghana, research indicates that clients' financial challenges constitute a significant factor contributing to project delays and abandonment (Kinyanjui and Ombui, 2022).

2.6.1.2 Improper Project Planning

Undoubtedly, the process of planning is an indispensable aspect of any project, and to attain triumph, it is imperative to devise a comprehensive plan. Inadequate project planning is a prevalent factor leading to project failure. According to Gomes Silva et al. (2022), the absence of well-defined deliverables during project planning may lead to project failure. This statement implies that undertaking projects without adequate planning and understanding of the associated limitations increases the likelihood of failure. Inadequate planning lacks a cohesive framework for the execution of the project. According to Nandjebo et al. (2021), it can be inferred that there are instances during projects where employers and team members may lack a definitive understanding of the appropriate course of action, timing, and methodology. Consequently, this impedes the rate of success for the majority of projects in Ghana.

According to the study, a significant proportion of the participants (over 605) identified inadequate planning as a key factor contributing to project failures within the organisation (Ibid., 2016). According to Eja and Ramegowda's (2020) research, inadequate planning is a fundamental factor contributing to numerous project failures in Iran. Similar planning issues were identified in construction projects in Nigeria, as reported by Daniel and Ibrahim (2019), indicating that this is a widespread challenge in various developing countries.

Prior research (Eja and Ramegowda, 2020; Kader & Ullah, 2020) has identified the alteration of project scope as a significant contributor to project failure. Numerous projects encounter alterations in their requirements either prior to or during their implementation. Nevertheless, the implementation of these modifications frequently falls short of the anticipated deadline for finalisation. According to Dick-Sagoe et al. (2023), the prevalence of this phenomenon is notable in information systems (IS) projects. While project scope alterations are typically acknowledged as a hallmark of projects, they tend to exert a significant impact on the project. According to Edwards (2019), alterations in project scope have a substantial impact on the overall cost of a project as well as the timeline for completion. This is because changes to the scope of a project often require additional resources, such as time, money, and personnel. As a result, project managers must carefully monitor and manage scope changes to ensure that they do not negatively impact the project's success.

One approach to managing scope changes is through effective communication with stakeholders and team members. By keeping all parties informed of any potential scope changes and their potential impact on the project, project managers can minimise the risk of delays or cost overruns. Additionally, project managers can use tools such as change control processes and risk management strategies to proactively address potential scope changes before they become major issues. Ultimately, successful management of scope changes requires a combination of effective communication, proactive planning, and ongoing monitoring and control throughout the life cycle of the project.

2.6.1.3 Poor Communication

The process of communication entails the transmission of data or knowledge from one individual to another. Effective communication plays a crucial role in determining the success of a project within the project management process.

According to Moodley et al. (2021), inadequate communication among project stakeholders is a significant contributing factor to project failure, as evidenced by various studies. Previous research has indicated that effective communication plays a crucial role in project management by facilitating the dissemination of pertinent information to all project stakeholders, which is essential for achieving successful project outcomes (Subramaniam et al., 2020; Eja & Ramegowda, 2020).

Consequently, inadequate communication during the phases of project planning and implementation is highly likely to result in project failure. Damoah and Akwei (2017) posit that communication entails the acquisition of crucial information, its analysis, and its dissemination to the appropriate individuals and locations. Furthermore, the term "information" can be characterised as data that has been analysed and organised in a comprehensible and significant manner, as stated by Damoah & Kumi (2018). It is apparent that successful communication serves as a crucial factor in facilitating a project team's attainment of its objectives, whereas inadequate communication poses a risk to the project's triumph. According to Dadzie (2021), the construction industry experiences inadequate communication due to linguistic barriers, cultural barriers, unclear communication channels, and poor feedback, among others.

The foremost two factors enumerated are prevalent in undertakings that entail cross-cultural cooperation. The feedback received from project participants is critical for effective communication and task completion, as it provides insight into their reactions to specific information and tasks. The significance of prioritising the quality and promptness of feedback cannot be overstated, particularly in situations that demand urgent attention (Igwe & Ude, 2018). In conclusion, the lack of clarity in communication channels can present a challenge for the individuals involved in the exchange of information. As such, it is imperative to establish a suitable communication pathway for each project, as noted by Eja and Ramegowda (2020).

2.6.1.4 Poor financial capacity

It is widely acknowledged that project implementation is contingent on the availability of adequate financial resources. According to Akande et al. (2018), financial difficulties have been identified as a significant factor contributing to the challenges faced by several Ghanaian projects, including delays and abandonment. Insufficient funding arrangements can also have an impact on the efficacy of

projects. Several studies have indicated that insufficient financial resources have impeded and resulted in the failure of various developmental projects, particularly in Ghana (Eja and Ramegowda, 2020).

Occasionally, government funding is received belatedly, necessitating a prolonged project duration that surpasses the designated timeframe (Augustine et al., 2023). According to Adjei Mensah (2021), the District Assembly Common Funds allocated by the government are particularly noteworthy in this regard. The revenue-generating capacity of Metropolitan, Municipal, and District Assemblies (MMDAs) has been observed to be deficient in specific regions. (Ghana Audit Service, 2022). Consequently, this impedes the capacity of the Metropolitan, Municipal, and District Assemblies (MMDAs) to complete their projects within the designated timeframe and agreed-upon parameters. Ranta et al. (2020) conducted a study that revealed that the implementation of the medium-term development plan was unsuccessful in six MMDAs due to inadequate funding. The research conducted by Damian et al. (2020) revealed that inadequate funding was a significant factor contributing to the unsuccessful implementation of projects in the Atwima Nwabiagya District of Ghana.

According to Ika's (2012) study conducted in South Africa, the insufficiency of funding was identified as the primary cause of community project failures during the implementation phase. The involvement of contractors in government projects has been identified as a significant contributing factor to project failure. This is due to the financial inability of many contractors to effectively execute such projects. It is mandatory for every contractor to possess the necessary capital investment to undertake a project prior to submitting a bid. Notwithstanding this principle, contracts are granted to contractors who possess inadequate capability to carry out the necessary project, thereby exacerbating the issue of project non-completion.

Researchers have established a correlation between budgetary drawbacks and a significant incidence of project failures in Nigeria. Eja and Ramegowda (2020) have demonstrated that the inadequate disbursement of government funds for project implementation, attributable to corruption, bureaucratic inefficiencies, and insufficient project allocations, has resulted in a significant number of project failures in Ghana's infrastructure sectors, including roads, buildings, and energy. Dim (2018)

has demonstrated that a significant proportion of road construction initiatives in various African nations have resulted in unsuccessful outcomes.

2.6.1.5 Inaccurate costing and corruption

According to Eja and Ramegowda (2020), precise project cost estimation is crucial for attaining success. A significant proportion of government initiatives in Ghana encounter the challenge of imprecise cost projections, attributable to a variety of factors, including corruption. According to Ongbali et al. (2021), the ministries and agencies responsible for project delivery in Ghana are granted the authority to initiate and oversee their projects, which may result in unregulated manipulation of project expenses. According to Eja and Ramegowda's (2020) findings, systems with inadequate monitoring and accountability mechanisms provide opportunities for corrupt activities to be perpetrated. In addition, it has been observed that contractors engage in the manipulation of procedures and generate inaccurate documentation that is biased towards their own interests. Sokro and Agbola (2021) have noted that corruption is often rationalised by its perpetrators, who attribute it to factors such as poverty. The impact of these practices on Ghana is multifaceted, encompassing issues such as insufficient basic infrastructure, including limited access to potable water, as well as a rise in unemployment and poverty rates (Adesuyi and Gberevbie, 2022).

Despite efforts to curb these practices, the issue persists and exacerbates the problem of project failure within the nation. In contemporary Ghana, the dearth of proficient personnel poses a significant challenge to the successful implementation of various projects, despite the country's burgeoning population (Eja and Ramegowda, 2020; Mtonga, 2021). Ezeoke (2021) identified the migration of skilled professionals to other countries as one of the factors contributing to the problem of incompetence in Nigerian projects. This has resulted in an increase in the hiring of foreign professionals at a high cost. It is indisputable that possessing a comprehensive understanding and adept implementation of project management methodologies greatly enhances the likelihood of achieving successful project outcomes. Government initiatives in Ghana are prone to failure due to inadequate project management practices. Ezeoke (2021) conducted a study on project management practice in the Nigerian public sector, which revealed a deficiency in the fundamental understanding of project management tools, such as Gantt charts, among project professionals.

2.6.1.6 Poor planning, and estimation

The dearth of expertise among project professionals in Nigeria has led to the manifestation of planning and monitoring challenges in the majority of projects. The significance of project planning, control, and monitoring in achieving successful project execution has been highlighted in the literature (Montes-Guerra et al., 2014). The inadequacy of proficient planning, estimation, and scheduling during project execution has been identified as a major contributor to project failure in various regions of Nigeria (Daniel and Ibrahim, 2019).

Dosumu and Aigbavboa (2017) have established a strong correlation between inadequate contractor estimation, time horizons for implementation, and cost estimations and project failures in Ghana. The inadequacies in planning stem from the insufficient formulation of objectives and unambiguous strategies for achieving them. Many projects in Ghana and other African countries have been initiated without a structured progression, resulting in significant failures (MA and Ndefo, 2021)

2.6.1.7 Political instability

Political instability refers to the precarious nature of a government's structure and its susceptibility to rapid collapse as a result of unstable political frameworks (Damoah et al., 2021). One of the primary causes of project failure is political instability among stakeholders. According to Eja and Ramegowda (2020), a number of government initiatives, including the Aluminium Smelting Company in Ikot Abasi, Akwa Ibom State, and the Ajakuta Iron Company, have experienced setbacks as a result of political instability in Nigeria.

In the Ghanaian context, the alteration of political leadership has been identified as a significant contributor to the failure of numerous projects in the country. The administration of the New Patriotic Party (NPP) during their tenure from 2001 to 2009 put forth a proposal for the creation of "affordable housing units" as a means of addressing the housing shortfall in Borteyman and Kpone, located within the Greater Accra Region. This information has been documented by Damoah et al. (2021). The primary objective of the project was to enhance the aesthetic appeal of the capital city and other major urban centres by providing assistance to impoverished residents residing in substandard settlements (Ministry of Works and Housing, Ghana, 2008; Boamah, 2020).

Additionally, the project aimed to generate employment opportunities, with a particular focus on women. The project was terminated in its early stages owing to a transient political framework, as reported by Klutse (2020). Several projects, such as school building initiatives, initiated by the previous National Democratic Congress administration were halted upon the assumption of power by the New Patriotic Party government, and vice versa. This has led to numerous discontinued initiatives within the nation.

2.6.1.8 Poor contracting and contractor practices

The escalation in project failures in Nigeria has been attributed to contractor-related factors. Inadequate contracting procedures, which include the execution of substandard contracts with contractors, intentional non-compliance by awarded contractors, and misappropriation of allocated budgets, have resulted in suboptimal project outcomes, tardiness in project delivery, and the undesirable abandonment and collapse of public projects throughout Ghana (Salifu, 2022). The difficulties encountered in contracting that result in unsuccessful outcomes have been associated with favouritism and in-group favouritism in the allocation of contracts in a prejudiced manner, resulting in elevated rates of failure.

The occurrence of design modifications and errors has been found to result in escalated project costs, implementation delays, and hindrances to the successful execution of construction projects in Ghana, as noted by Dosumu and Aigbavboa (2017). The impacts related to design changes have resulted in project failures in various public projects throughout Nigeria. Eja and Ramegowda (2020) conducted a study on this. The study further stated that design issues in Nigeria account for up to 50% of all project failures before commencement.

2.6.1.9 Socio-cultural and political interferences

The presence of cultural diversity within both domestic and global project settings poses a multifaceted obstacle for project managers. Amadi and Ahiaga-Dagbui (2021) suggest that insufficient comprehension may lead to conflicts resulting from misinterpretations and divergent priorities (Unegbu et al., 2022). According to Burchell and Gilden (2008), the occurrence of serious miscommunication, misinterpretations, frustration, and disputes can impede the growth and productivity of an organisation. Numerous initiatives have been executed in Ghana in response to the demands, protests, and demonstrations of its populace. The Eastern Corridor

Road Project is an illustrative example that began in 2014 following the ultimatum issued to the government by the Volta Region's chiefs and opinion leaders (Ghanaweb, 2014; Daily Guide, 2014). Thus, the populace assumes a pivotal role as a stakeholder, given that the outcomes of the project have a significant impact on their livelihood.

Moreover, it is common for such initiatives to be funded by public funds, particularly in industrialised nations, thereby rendering taxpayers the principal stakeholders. The primary concern of the general populace is the potential effect of the project on their lives, as noted by Weinreich (2021). According to Boateng et al. (2022), the challenges encountered during the implementation of projects in District Assemblies are attributed to various factors such as insufficient institutional frameworks, inadequate financial and human resources within the MMDAs, disputes related to chieftaincy and land, a lack of commitment among stakeholders, and ineffective teamwork. These factors have been identified as significant contributors to the failure of projects within the District Assemblies. Similarly, societies are complex entities that are difficult to define based on a single set of behavioural patterns, and significant variations often exist within countries and among regions within countries (Al Nahyan, 2019). It is crucial for individuals involved in a project to demonstrate empathy towards the indigenous culture and possess a comprehensive comprehension of the rationale behind the customary practices (Al Nahyan, 2019).

2.6.1.10 *Poor leadership and corruption*

The presence of inadequate leadership and corrupt practices during the stages of project design, contracting, estimation, and implementation has resulted in exorbitant costs and significant delays in project completion, ultimately leading to project failure and abandonment within Ghanaian contexts (Eja and Ramegowda, 2020). The misappropriation of funds and involvement in questionable contracts by public officials have resulted in financial challenges that have impeded the progress of infrastructure projects, leading to project failures, delays, and cancellations. The primary consequence of project failure in Nigeria is the reduction in government income from various sources, leading to a decrease in state revenue. It is imperative to comprehend that a mere 16% of road construction projects in Nigeria culminate in success, despite the substantial government investment in this domain (Dim, 2018). The manifestation of reduced income during the phases of planning,

procurement, and execution of infrastructure initiatives is observable not solely in Nigeria but also in numerous African nations, such as Ghana.

2.6.2 Stakeholder management challenges

The success of a project is contingent upon the preservation of support and dedication from all stakeholders, as asserted by Moodley et al. (2021). The literature highlights several challenges and barriers to effective stakeholder management in affordable housing projects in Ghana and other developing countries. Kosgei (2021) asserts that the selection of a communication style is crucial for the regulation of both message content and audience interaction. According to Li et al. (2019), stakeholder management is enhanced by the presence of efficient communication as a crucial factor for success. Consequently, inadequate communication and ineffective stakeholder management can lead to unfavourable outcomes for project success. The majority of projects tend to neglect or fail to solicit the perspectives and anticipations of stakeholders from the project's inception (Fashina et al., 2020). In cases where communication is inadequate, there may be a deficiency in the mutual comprehension of stakeholder expectations, ultimately resulting in negative impacts on project delivery. Wu et al. (2017) posit that inadequate communication between project teams and stakeholders can result in significant resistance and conflicts, ultimately impeding the successful execution of projects. One could assert that inadequate and restricted communication give rise to difficulties in managing stakeholders.

Effective stakeholder management is also a critical component for project success and organisational change initiatives. The success of a project is not solely dependent on the performance of the project team but rather on the involvement of various stakeholders, such as top management, functional managers, customers, suppliers, contractors, and other relevant parties (Tefera, 2022). In many projects, the interaction between the project team and stakeholders is frequently managed in an informal or intuitive manner. This can be attributed to the perception that stakeholder management is not a fundamental component of the project's achievement. El Khatib et al. (2022) asserts that a lackadaisical approach to stakeholder management is a fundamental cause of numerous project failures, which can be mitigated through improved planning.

Another challenge is litigation over land. The indispensable natural resource of land plays a crucial role in fulfilling numerous socioeconomic needs of humanity, as highlighted by Ahmed et al. (2020). The reduction in available land for agricultural, residential, commercial, and small-scale industrial purposes has been significant due to the increase in the global population. According to Biitir and Kuusaana (2019), utilising Alternative Dispute Resolution (ADR) mechanisms in resolving land disputes is more advantageous compared to resorting to the court system due to the protracted duration and legal expenses involved in the latter. The use of alternative dispute resolution (ADR) or resorting to the court system depends on the parties involved in the dispute. In cases of land disputes, there is a proliferation of conflict that results in disharmony, thereby impeding the ability of stakeholders and project teams to engage and interact effectively.

The study conducted by Murphy et al. (2021) investigated the factors that impede or facilitate stakeholder engagement in global mental health initiatives. The study's results indicated that various factors, including contextual factors, available resources, level of participation, adoption rates, empowerment, and stigma, collectively served as both facilitators and obstacles. The presence of intricate contextual obstacles can impede progress, but the utilisation of formative research can aid in developing a more comprehensive contextual comprehension, which in turn can bolster the efficacy of implementation planning. The presence of constrained financial and human resources, coupled with the existence of competing priorities, can give rise to significant obstacles. The utilisation of pre-existing local resources and expertise can serve as a means to alleviate the aforementioned obstacles. Barriers to achieving active stakeholder participation and diverging expectations regarding the nature of participation were identified, while drivers included opportunities for meaningful participation and empowerment. The presence of stigma at the institutional, community, and individual levels has been recognised as a significant obstacle to engagement.

Zarewa (2019) conducted a study to investigate the obstacles associated with stakeholder management in the delivery of multifarious infrastructure projects in Nigeria. The top ten barriers that hinder effective stakeholder management (ESM) in the delivery of Major Infrastructure Projects (MIPs) were identified as follows: failure to comprehend stakeholders' needs and expectations, uncooperative attitude of stakeholders, inability to identify key stakeholders, failure to identify potential

conflict areas, inadequate knowledge of stakeholder management (SM) by the project manager, delayed identification of stakeholders, dissemination of incorrect information to stakeholders, insufficient stakeholder engagement/involvement, conflicts between stakeholders, misunderstanding of roles by stakeholders, lack of fairness and equity for all stakeholders, and lack of continuity in the SM process. These barriers were ranked in descending order based on their level of impact on ESM in MIP delivery.

Relatedly, Bonney (2021) note that the lack of a comprehensive framework for sustainable, affordable housing delivery can hinder effective stakeholder engagement and collaboration. Damoah et al. (2021) identify inadequate stakeholder involvement and communication as barriers to public housing delivery in Ghana, highlighting the need for improved stakeholder management strategies. Also, Damoah et al. (2020) suggest that poor stakeholder management can contribute to government construction project failure in Ghana, underscoring the importance of effective stakeholder engagement and coordination. Akomea-Frimpong et al. (2023) highlight the challenges of stakeholder management in affordable housing delivery in Ghana and Nigeria, noting the need for improved stakeholder identification, communication, and collaboration.

Osei-Kyei, et al. (2021) emphasises the importance of effective stakeholder engagement and communication in achieving critical success factors for public-private partnership affordable housing projects in Ghana. Owusu, et al. (2019) identify the lack of stakeholder collaboration and coordination as a challenge in the delivery of affordable housing in Ghana, suggesting the need for improved stakeholder management strategies. Oyeyipo et al. (2021) highlight the impact of inadequate stakeholder identification, communication, and engagement on the success of public building projects in Nigeria, underscoring the importance of effective stakeholder management practices. Magassouba et al. (2019) suggest that insufficient stakeholder involvement can negatively affect development project performance in Guinea, emphasising the need for improved stakeholder engagement and participation.

2.7 Effective Ways of Implementing PMP in Ensuring Successful AHP

Existing literature has demonstrated that there are several key factors that contribute to the successful implementation of project management practices in affordable housing projects (Adabre and Chan, 2019; Adabre et al., 2020). These factors include clear project goals and objectives, effective communication and collaboration among stakeholders, proper resource allocation and management, and the use of appropriate project management tools and techniques (Adabre et al., 2020; Safapour et al., 2019). Additionally, studies have shown that the involvement of experienced project managers with a strong understanding of affordable housing regulations and policies is crucial for ensuring the success of these projects (Kavishe et al., 2018).

Furthermore, it is important for project managers to have a comprehensive understanding of the unique challenges and constraints that are often associated with affordable housing projects (Kisi et al., 2014). These challenges can include limited funding, complex approval processes, and the need to balance the affordability of the housing units with the quality of construction (Rowley and Phibbs, 2012). By addressing these challenges head-on and implementing effective project management strategies, affordable housing projects can be successfully executed and provide much-needed housing options for low-income individuals and families. This can have a positive impact on the community and improve the overall quality of life for those in need.

Table 2.1: Literature summary on PMPs and AHP

| Study | Title | Theories | Methods | Findings | Country |
|--------------------------|---|---|--------------|--|----------------|
| Ogunberu et al. (2018) | The effect of project scope management techniques on project success used by telecommunication organisations in the implementation of ICT projects. | No theory | Quantitative | The research also showed that customer expectations, resource allocation, customer satisfaction and project duration had a substantial influence on the success of projects. | Nigeria |
| Nibyiza (2015) | The efficacy of change management in facilitating project success in Rwanda. | No theory | Quantitative | The study discovered that changes in project activities lead to changes in the project's cost, timeline, and product/service quality. | Rwanda |
| Kallow et al. (2022) | The impact of risk management techniques on project success. | No theory | Quantitative | The study shows that methods for managing risks have a big impact on how successful a project is. | Pakistan |
| Al-Hajj & Zraunig (2018) | The state of project management techniques today and how they affect the factors that determine a project's success. | No theory | Quantitative | Project management success, which is one of two key components for attaining project success, has a favourable impact on project success. | United Kingdom |
| Wah (2020) | The relationship between human resources management and project success in Pakistan. | No theory | Quantitative | The results of the investigation indicated that recruitment and selection, training and development, and performance appraisal were significant predictors of project success. | Pakistan. |
| Mwendwa (2022) | How project management techniques affect the execution of affordable housing projects in Mombasa County, Kenya. | Project Management Competency Theory, Uncertain theory and the theory of project implementation | Quantitative | According to the study's findings, the project implementers in Mombasa County's affordable housing project are aware of a variety of project management practices, including the practices of involving stakeholders, controlling costs, project scheduling, and managing risks. | Kenya |
| Murphy et al (2021) | The factors that impede or facilitate stakeholder engagement in global mental health initiatives. | No theory | Quantitative | The study's results indicated that various factors, including contextual factors, available resources, level of participation, adoption rates, and empowerment, as well as stigma, collectively served as both facilitators and obstacles. | Canada |

| | | | | | |
|-----------------------|---|-----------|------------------------------|---|----------|
| Zarewa (2019) | The obstacles associated with stakeholder management in the delivery of Multifarious Infrastructure Projects in Nigeria. | No theory | Quantitative | The study concluded that improving present methods of stakeholder management in MIPs delivery and paying particular attention to the above hurdles was necessary to increase project success rates owing to their high effect level on ESM. | Nigeria |
| Damoah et al. (2020) | The difficulties that arise with delivering affordable housing utilizing a private-public partnership (PPP) paradigm. | No theory | Quantitative and qualitative | The findings indicate that there are 34 obstacles in the delivery of affordable housing projects. | Ghana |
| Bilal et al. (2019) | Explored the problems and difficulties with the current affordable public housing programs and suggests a different affordable public housing plan for low- and middle-income families in Malaysia. | No theory | Qualitative | The aggregate results show that Malaysia's inexpensive public housing programs have struggled to succeed due to rising costs, inadequate upkeep, and bad administration. | Malaysia |
| Kavishe et al. (2019) | The legislative and regulatory framework elements and inherent problems in the implementation of affordable housing programs in Tanzania using public-private partnerships (PPPs). | No theory | Quantitative | Poor planning and analytical abilities, high building material costs, and limited access to home financing were identified as the major hazards by the research. | Tanzania |
| Eja et al. (2020) | the factors that contribute to project failures in developing nations, particularly in Nigeria | No theory | Quantitative | According to the study, the factors that contributed to these issues included a lack of financial resources, inaccurate costing and corruption, incompetence and a lack of knowledge, poor planning, poor communication, poor contracting and contractor practices, interference from sociocultural and political factors | Nigeria |

| | | | | | |
|----------------------|--|-----------|--------------|---|----------|
| Yap et al. (2022) | Project knowledge and expertise for the effective completion of projects in the construction sector. | No theory | Quantitative | An exploratory factor analysis identifies six knowledge-based variables that are related to erroneous resource estimates, design revisions, resource shortages, lack of expertise, incompetence, and faults and defects that have an impact on project failure. | Malaysia |
|----------------------|--|-----------|--------------|---|----------|

2.8 Existing Frameworks/Models for Successful AHP

The challenges of affordable housing in African countries have led to diverse approaches and policies aimed at addressing this critical issue. Ghana's ISAH Framework represents a comprehensive strategy that integrates multiple aspects of project management, stakeholder engagement, and sustainability (Agyemang et al., 2021; Ahadzie et al., 2022). This holistic approach contrasts with more focused strategies seen in other African nations. For instance, Nigeria's National Housing Programme emphasises public-private partnerships and the use of local building materials but faces implementation delays and land acquisition issues (Akinyode et al., 2020; Olotuah & Bobadoye, 2019). Similarly, Kenya's Affordable Housing Programme incorporates green building technologies and an Integrated Project Delivery approach yet struggles with the high costs of sustainable technologies and limited private sector participation (Republic of Kenya, 2020; Mwangi, 2021).

South Africa's Breaking New Ground policy takes a unique approach by focusing on creating integrated human settlements to address the spatial segregation legacy of apartheid (Department of Human Settlements, 2004). However, this initiative has encountered challenges related to housing quality and significant delivery backlogs (Cirolia, 2020). Ethiopia's Integrated Housing Development Program, on the other hand, concentrates on condominium housing in urban areas and involves micro and small enterprises in construction (UN-Habitat, 2011). While this approach has shown promise in addressing urban housing shortages and creating jobs, it has faced affordability issues for the lowest-income groups and cultural mismatches with traditional living patterns (Eskedar, 2017).

Rwanda's National Housing Policy stands out for its forward-thinking approach to urbanisation and emphasis on sustainable development (Republic of Rwanda, 2015). This strategy incorporates green technologies and proactive land management through land banking. However, like many other African countries, Rwanda faces challenges related to limited financial resources and capacity constraints in the construction sector (Mugisha, 2020). These diverse approaches across African countries highlight the complexity of addressing affordable housing and the need for context-specific solutions.

When compared to these various national strategies, the ISAH Framework developed for Ghana offers a more comprehensive and integrated approach to affordable housing project management. Its strengths lie in its holistic view, robust stakeholder engagement model, emphasis on data-driven decision making, focus on contextual adaptation, and inclusion of a collaborative knowledge management platform. While other countries have implemented elements of these features, the ISAH Framework's integration of all these aspects into a cohesive strategy sets it apart. This comprehensive approach could potentially address many of the challenges faced by other African countries in their affordable housing initiatives, such as implementation delays, cultural mismatches, and sustainability concerns.

2.9 Gaps Identified in Literature

2.9.1 Methodological Gap

A major gap that has been identified in the literature is the absence of qualitative research in project management, especially for affordable housing projects. Although many scholars have used quantitative research methods to analyse the relationship between project management practices and project performance (Ogunberu et al., 2018; Nibyiza, 2015; El-Sayegh, 2014; Kerzner, 2017; Kallow et al., 2022), there is a significant gap in the use of qualitative methods. The use of qualitative research methods, according to Ragab and Arisha (2018), provides a more holistic and detailed understanding of the phenomenon under study. This gap points to the fact that there is a dearth of qualitative studies that aim to provide an understanding of the multifaceted aspects of affordable housing projects. Subsequent research should look at the different contributions of different project management practices in the success or failure of affordable housing projects and offer rich, contextual understanding of stakeholder interactions and decision-making processes.

2.9.2 Contextual Gap

There is a significant gap in research specifically addressing affordable housing construction initiatives, particularly in the Ghanaian context, despite the extensive study of project management methodologies in sectors like IT, telecommunications, and healthcare (Kerzner, 2017; Kallow et al., 2022). This gap is particularly crucial as affordable housing projects, unlike profit-driven private sector initiatives, primarily focus

on serving economically disadvantaged citizens and operate within unique socio-economic, cultural, and regulatory frameworks (Murphy et al., 2021). The Ghanaian construction industry presents specific challenges and opportunities in affordable housing project management that have not been adequately captured in existing literature, offering an opportunity to gain novel perspectives on the balance between social welfare objectives and project efficiency. Future research needs to address this dual gap by examining the nature and issues of affordable housing projects in Ghana, defining suitable project management methodologies for these initiatives, and analysing how Ghana's specific socio-economic factors and regulatory structures impact affordable housing project delivery compared to other developing countries and sectors (Murphy et al., 2021).

2.9.3 Stakeholder Management Gap

To the best of the researcher's knowledge, there is limited literature on the challenges of stakeholder management in the delivery and implementation of affordable housing projects, with the exception of Murphy et al. (2021) and Zarewa (2019). However, these studies have not fully accounted for the unique features of the affordable construction sector, which attracts more attention from the stakeholders than other projects. In the case of Ghana's affordable housing initiative, which has experienced significant setbacks, there is limited research on the challenges with stakeholder management (Murphy et al., 2021). There is a research gap in understanding the stakeholder dynamics in affordable housing projects in Ghana, how to manage stakeholders in the affordable housing sector, and the effect of managing stakeholders on the success of affordable housing projects in Ghana.

2.10 Summary of Chapter

The provision of affordable housing by the government is a significant social intervention aimed at catering to the housing needs of individuals with low incomes. Various housing provision modes have been identified in scholarly literature, including private, joint venture, and public sector approaches. The global housing deficit is on the rise, and Ghana is no exception, with a shortfall of over 2 million housing units. The Royal Institute of British Architects outlines a three-stage process for the delivery of

affordable housing projects, encompassing the initiation, design, and construction phases.

The scholarly literature indicates that the outcome of a project is contingent upon critical factors, including but not limited to cost, time, quality, and stakeholder contentment. The affordable housing sector has been found to incorporate various project management practices, such as project scope management, project stakeholder management, project risk management, project cost management, project schedule management, project communication management, project human resource management, and project quality management. Among various factors, hindrances to the execution of these methodologies encompass inadequate project resources, ineffective communication, political instability and disruptions, substandard contracting practices, and deficient planning. The challenges associated with stakeholder management encompass issues such as communication barriers, land disputes, and insufficient stakeholder engagement.

Furthermore, the literature emphasises the need for improved risk management strategies in affordable housing projects. Many projects in this sector face numerous risks, such as cost overruns, construction delays, and regulatory challenges. However, current project management practices often fail to adequately address these risks, resulting in project failures and financial losses. Moreover, there is a lack of standardised processes and guidelines for managing these risks, further exacerbating the problem. For instance, there is a need for more research on the long-term sustainability of affordable housing projects and their ability to provide lasting benefits to residents. Additionally, there is a lack of understanding of the specific mechanisms through which affordable housing projects contribute to neighbourhood revitalisation and economic development. Moreover, there is a need for more comprehensive evaluation frameworks to assess the overall impact and effectiveness of these projects.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology, and methods used to conduct the research. It presents the rationale for the research process, particularly to justify adopting the qualitative multiple case study design. This chapter will also review the researcher's decision-making regarding the research philosophy and paradigm, sampling techniques, sample sizes, and sample justifications for the study. This chapter also discusses the various methods for collecting and analysing data. The chapter also discusses the ethical considerations for the entire study and concludes with a summary.

3.2 Research Paradigms

3.2.1 *Introduction*

In the case of knowledge creation, ontology refers to what 'truth claims' a researcher makes about reality and what constitutes true knowledge (Hathcoat et al., 2019). Generally, there are two different and conflicting ideas of reality: objectivism and subjectivism. According to Hathcoat et al. (2019), objectivism asserts the existence of a singular reality that is subject to study, understanding, and experience, regardless of human perception. Subjectivism, on the other hand, relies on the belief that reality is socially constructed within the human mind and is relative' according to how individuals experience it at any given time and place, such that no one true reality exists (Hathcoat et al., 2019). Often, researchers follow one of the two philosophies when conducting their research. However, a recently emerging "middle-of-the-road" approach allows researchers to incorporate both objectivist and subjectivist philosophies into a single research study (Kaushik and Walsh, 2019). This study is, however, influenced by subjectivism.

Social gatherings do not merely occur, many times, they are deliberate actions made by many social actors. Because these interactions are ongoing processes rather than one-time occurrences, social phenomena are not static but are constantly changing.

They are continually updated. The consequence is that to properly comprehend the essence of the truth underlying the events in society, it is imperative to investigate the specifics of each circumstance. In contemporary social research, we should not interpret subjectivism as a sign of unreliability but rather as a crucial element of case studies that aim to deeply comprehend the viewpoints of their participants and incorporate these insights into their conclusions. The research relies on the social constructivism-interpretive approach, which forms the study's ontology.

3.2.2 Social Constructivism

Moberger (2020) proposed that social constructivism pertains to social structures and the active participation of individuals in community interactions, including rural community groups, families, religion, cultural activities, and festivals. This study chose a social constructivism philosophical approach to research in Ghana, focusing on an unexplored area. Qualitative data collection techniques investigated issues, established experiences, and validated opposing viewpoints, addressing the research question(s). The researcher aimed to understand participants' project management methods and experiences in Ghana's socially constructed reality, focusing on the impact of these practices on affordable housing projects' success or failure. Social constructivism is a teaching method that emphasises individual knowledge creation and the influence of experiences on reality (Beale, 2019; Enrique et al., 2022). It explores participants' experiences through researcher interaction, emphasising personal perspective and interpretation. The social constructivism theory was chosen because of its emphasis on the subjective processes of meaning-making.

The study, inspired by the social constructivism ontology, focuses on data collection and analysis using a qualitative case study, addressing the need for more reliable data on affordable housing project management in Ghana. This method collects data from various sources, allowing researchers to better understand project managers and stakeholders' experiences in affordable housing development. The social constructivism approach aims to reveal meanings in project managers' and stakeholders' practices and experiences in government affordable housing project failures.

3.3 Research Design

It is important to note that every choice was made to address the main research question. Therefore, this study used a qualitative case study methodology. The primary research methodology types are quantitative and qualitative (Sileyew, 2019). However, Al-Ababneh (2020) asserted that a third strategy, known as the mixed method, which combines qualitative and quantitative methods, has emerged. The researcher examines participant experiences through dialogue, which is the foundation of qualitative research. Al-Ababneh (2020) states that interview data generates a rich narrative from which one can draw conclusions.

This study aimed to investigate affordable housing project failures from a project management perspective, exploring the experiences and methods used by Ghanaian project managers and project stakeholders in affordable housing projects. Therefore, it was essential to review various approaches that would be most appropriate in order to accomplish the study's goal. The study used an exploratory case study design to investigate affordable housing projects, conducting in-depth interviews and observing participants in their daily activities. A case study approach provides an understanding of experience from the perspective of individuals, allowing researchers to observe the roles of project managers and other stakeholders (Asenahabi, 2019).

3.3.1 Case Study Approach

To better comprehend the problem, Farquhar et al. (2019) advised identifying the case first before choosing the case study design and data sources. According to Cleland et al. (2021), case study research requires a thorough and rigorous analysis of a specific event(s), scenario, establishment, or social unit. Alam (2021) defines a case study as a comprehensive analysis of a current event in its actual setting. According to literature, a case study is particularly appropriate when the setting is relevant to the phenomena (Alam, 2021; Cleland et al., 2021). A case study's traditional time and location frame is "some form of phenomenon in a constrained setting" (Farquhar et al., 2019, p. 28). Because it is not always simple to tell a phenomenon apart from its context, a case study relies on a number of sources for its evidence (Alam, 2021, p. 15). Cleland et al.

(2021) suggest that the circumscribed phenomena of interest, rather than a particular methodology, best suggest case studies, allowing for various types of research.

Granikov et al.'s (2020) research provided the rationale for using a multiple-case study design. He contended that this approach best addressed the "how" and "why" questions, which resonates very well with this study. Furthermore, the researcher chose the case study approach to focus on specific occurrences of phenomena and investigate and analyse the various interactions at play (Farquhar et al., 2020). Moreover, it provided in-depth, rich data from multiple sources (White et al., 2012). Some of the multiple cases to be explored in this study include affordable houses in Asokore Mampong, Kpone Affordable Housing Project, Saglemi Affordable Housing Project, Cape Coast and Amasaman Affordable Housing. Furthermore, this study is critical because it allows for the comparison of multiple affordable housing projects, identifying commonalities and differences between them. Alam (2021) also pointed out that while this type of research is considered reliable and solid, it can also be quite time-consuming and costly to conduct.

3.3.2 Case definition

The study question represents the case's boundaries and definition, focusing on project management practices in affordable housing projects. It highlights challenges faced by project managers and stakeholders, as well as unrecognised realities in their practices (Johnson et al., 2020; Rashid et al., 2019). The question of whether affordable housing projects have been successful, as perceived by project managers and other key stakeholders involved in their management, motivated this investigation. It was also important to point out that the scope of the case is the managerial aspects of affordable housing projects in Ghana with some selected project sites namely Amasaman, Asokore Mampong, Kpone and Saglemi. In relation to this, the study aimed at identifying any possible barriers encountered by the stakeholders in managing affordable housing projects at the selected sites.

3.3.3 Case Selection

According to Johnson et al. (2020), when dealing with cases, it is crucial to think critically and contemplate. Early plans or objectives, such as the study's objectives,

help ensure focus and concision in a complex scenario (Signorell et al., 2021). The study's stages were directed by the hypothesis, ensuring the research question and objectives were met ((Rashid et al., 2019). A comprehensive method was needed to understand project management in affordable housing developments from various angles.

This study focused on project management in affordable housing developments, using a qualitative method to investigate complex phenomena. The study aimed to protect the research focus due to the broad scope of the topic, as stakeholders at different sites managed affordable housing initiatives differently. The study's objectives ensured a thorough understanding of project management in a specific setting. Rashid et al. (2019) suggest using one or more case studies with embedded units to examine similarities and differences. Researchers should choose locations with accessible access to individuals, organisations, documents, procedures, and other analytical units (Cash et al., 2022; Thomas, 2021). Choosing diverse case study sites helps establish or identify the phenomenon under research.

This study examined multiple case studies to determine the success or failure of affordable housing projects at the listed sites. A multi-case instrumental case study design, introduced by Schulz, (2019), improved veracity, reliability, transferability, and confirmability.

A group of case studies was selected because they provide universal answers and can be applied widely. A single case study reduced the depth of exploration, while several or collective case studies provided a more comprehensive understanding of the topic.

The study aims to uncover the common qualities of high-achieving project managers and project stakeholders in affordable housing projects. Furthermore, the researcher wanted to discover the common barriers and challenges to implementing affordable housing projects at the selected sites in Ghana. Finally, the researchers believed that a multiple-case study would provide significant data that would benefit other project managers and stakeholders who were experiencing similar issues in their line of duty regarding affordable housing construction.

3.3.4 Qualitative vs Quantitative

Qualitative research investigates and describes people's causes, beliefs, and attitudes concerning a phenomenon (Stockemer, 2019). Qualitative research involves the gathering of data that cannot be represented in figures through methods like interviews, observation, and case studies (Toyon, 2021). On the other hand, quantitative research entails the use of numerical data, with the help of statistical means to arrive at conclusions and make reliable predictions (Mohajan, 2020). This type of research focuses more specifically on quantities and their relationships, utilising surveys, experiments, or statistical methods (Wyllie, 2019). In other words, both qualitative and quantitative methodologies have their strengths and weaknesses, and the type of research method to use depends on the research question or objective.

It is evident that qualitative research enables the investigation of the depth of various socio-cultural processes and an understanding of people's perceptions of events or phenomena. It can also provide a lot of information and possible perspectives on a subject area. Quantitative research, on the other hand, entails generalisation and the potential to formulate a conclusion, which is often characterised by a statistically significant viewpoint (Fushimi, 2021).

It provides concrete and quantifiable data and facts, which aid in making predictions and choices during decision-making (Kamal, 2019). Typically, researchers employ these two approaches sequentially or in combination to offer a broader perspective on a specific research issue. However, in a bid to address the philosophical stance of this study, a qualitative approach to data collection and analysis was used.

In order to determine how effective or ineffective the operations, management, and implementation of project procedures are in influencing the successes and failures of affordable housing projects in Ghana, the study took a qualitative research approach. The rationale for the use of this method is that the researcher holds the view that while using the quantitative method, excessive concentration is placed on quantitative measurement and interpretation of the phenomenon of a study, where little account is given to the subjectivity of the study under question without having to use numbers (Kamal, 2019). Therefore, this approach gives the researcher a chance to understand how affordable housing project failures in Ghana are influenced by project management

practices and stakeholder management in real life from the respondents who have worked on such projects, which a quantitative approach cannot allow you to get the realities on the ground, though statistical data can help.

3.3.5 Justification for Case Study Setting

The study employs a purposive sampling strategy to select six affordable housing projects (AHPs) in Ghana as case studies: Wa, Asokore Mampong, Kpone, Saglemi, Koforidua, and Cape Coast. These cases were chosen based on several criteria that ensure their representativeness in the broader context of AHPs in Ghana. The selected projects are located in different regions of the country (Greater Accra, Ashanti, Cape Coast, Upper west and Eastern regions), capturing the geographical diversity and regional variations in housing needs and project implementation challenges (Twumasi-Ampofo et al., 2014). The projects are at different stages of completion, ranging from abandoned sites to partially completed units, providing a comprehensive view of the project lifecycle and the challenges encountered at various phases (Osafo and Ameh, 2020). The projects involve a mix of public and private sector actors, reflecting the typical institutional arrangements and stakeholder dynamics in AHPs in Ghana (Osafo, 2020).

3.4 Sample Selection Procedure

3.4.1 Sampling Procedure and Recruitment Process

For their part, Ramsden et al. (2021) have described purposive sampling as the identification and deliberate selection of participants or populations that possess certain knowledge in relation to an object of interest. In addition to participants' knowledge and experiences, other authors have emphasised the significance of participants' availability and willingness to participate, as well as their ability to articulate their experiences and views in a cogent, honest, and insightful manner (Mirick and Wladkowski, 2019). Participants were selected from four study sites, each representing diverse geographic regions with a range of populations, dialects, cultures, socioeconomic conditions, infrastructure, and distance from major capital cities. The

study sites included locations where affordable housing projects were being constructed.

The researcher sought permission from a stakeholder to involve its members in the study and invited voluntarily willing participants for interviews. The information sheet included text that described the study's objectives and made it clear that participants had the freedom to leave the study at any time, even after giving their consent, without giving a reason. The researcher informed participants of their rights and what to do if they participated in the study. An appropriate date and time for the observation and interview were then decided upon. All the in-person interviews took place wherever it was convenient or based on agreement. All participants gave verbal consent before each interview, recorded on audio tapes, and signed a formal consent form.

3.4.2 Eligibility Criteria

The eligibility criteria included project managers and other Ghanaian stakeholders who were present in the study settings. This study sought to understand the role of project management practices in contributing to the success or failure of affordable housing projects in Ghana. To get a broad perspective, the study targeted a diverse group of professionals across the government affordable housing spectrum. Participants included project managers, senior estate officers, project engineers, metro engineers, municipal chief executives, government appointees, clerks of works, project consultants, project quantity surveyors, public procurement officers, heads of government procurement, senior engineers, architects, site managers and contractors. This diverse selection was essential in obtaining a comprehensive understanding from multiple viewpoints within Ghana's affordable housing sector. Each role provided distinct perspectives on various facets of project management, ranging from strategic planning and policy formulation to practical execution and technical proficiency.

The selection criteria included those with over five years of experience in financing, contracting, and procurement, as well as project members, project managers, engineers, and other stakeholders. As a result, they must be able to identify any difficulties and be open and honest about their experiences and areas of expertise with affordable housing projects.

However, other employees who do not hold managerial positions in the project management of affordable housing will be excluded from the study. This was done because it was determined that they lacked the necessary and up-to-date practical experience with the managerial gaps in project management. The researcher excluded other project managers and project stakeholders who had no involvement in affordable housing projects in order to gather primary data about the area of study.

3.5 Materials and Tools for Data Collection

3.5.1 In-depth Interviews

A qualitative research strategy, such as in-depth interviews, involves a face-to-face conversation between a researcher and a participant (Staller, 2021). In essence, in-depth interviews capture the participant's experiences, opinions, and feelings on a given matter or concern (Johnson and Rowlands 2012). In-depth interviews commonly employ open-ended questions to enable study participants to freely express their thoughts and feelings, free from preconceived response possibilities. (DeJonckheere and Vaughn, 2019).

Hence, in-depth interviews have the following pros and cons: In-depth interviews can be labour-intensive, especially if they involve a large sample size, and the findings obtained may be influenced by the researcher's bias by not accurately representing the population (Staller, 2021). Furthermore, the interviewer's knowledge, level of training, or relationship with the participant may influence the combined qualities of the data derived from an in-depth interview. Nevertheless, in-depth interviews are useful in integrating research into qualitative studies, especially when studying complicated patterns or seeking the participants' perceptions of their existence.

The purpose of conducting in-depth interviews in this study is to investigate the issue of affordable housing project failures in Ghana from a project management perspective. This approach will offer deeper insights into the studied phenomenon and enhance comprehension of the participants' experiences and perceptions. Additionally, it will enable the researcher to ask follow-up questions to ensure a comprehensive understanding of the topic. In addition, the researcher deemed that permits for in-depth

interviews would generate new and unknown aspects concerning affordable housing project failures in Ghana, which are comparable with other approaches (McGrath et al., 2019).

3.5.1.1 Interview Question Development and Planning

According to Edwards and Holland (2020), creating a suitable interview plan or semi-structured interview can aid participants in offering a comprehensive explanation. The formulation of interview questions was one of the most important processes for gathering relevant and comprehensive data. The questions were developed systematically by first linking the research objectives to the three main research questions. These questions centred on the use of project management practices in the delivery of affordable housing projects in Ghana, the factors that hinder the implementation of project management practices, and how the practices could be enhanced to increase the success rate of affordable housing projects in Ghana.

The literature review guided the selection of key areas of discussion, including global and African views, as well as concerns specific to Ghana's affordable housing industry. To ensure these topics were pertinent to the Ghanaian context, the researcher consulted professionals in the area of project management and affordable housing in Ghana. This consultation was useful in refining the topic areas and gave the researchers a feel of the intricacies of the Ghanaian housing sector.

The study planning stage entails identifying a study topic and developing research-related questions. However, challenges may arise due to improper phrasing of questions, sensitive topics, difficulties in obtaining help from a therapist, and participants who may not be willing to answer questions. Therefore, preparations and arrangements were made to handle these circumstances (Edwards and Holland, 2020). Braun and Clarke (2021) suggest reviewing the interview guide with potential interviewees, fellow researchers, or supervisors before the interviews start.

Open-ended, concise, objective, and sensitive questions are typical of qualitative research interviews. Additionally, a person's actions or experiences, opinions or values, knowledge, emotions, sensory perceptions, and demographic or background information determine the outcome (Peterson, 2019). Generally, starting the interview

with simple questions is a beneficial idea before moving on to more challenging or delicate ones (Lanka et al., 2020). Lanka et al. (2020) noted that while establishing the interviews, the respondents were not asked leading questions, and while relaying the findings to the respondents, the language used was simple and appropriate for easy understanding. Furthermore, the researchers wrote down analytic notes as questions or cues to guide the participants towards providing the most detailed information.

3.5.1.2 Language Concerns and Transcription Procedure

To acknowledge the linguistic diversity in Ghana and to allow the participants to speak in a language they are comfortable with and be understood, the interviews were conducted with language flexibility. While most of the interviews were in English, some participants spoke in Twi, one of Ghana's most widely spoken languages. This approach was employed to facilitate the respondents' natural expression of their thoughts and experiences, thereby enhancing the collected data.

In instances where interviews were conducted in Twi, the researcher, who is bilingual in Twi and English, facilitated the conversation. This flexibility of languages was important since it made it possible to capture some subtle views and cultural associations that would not have been possible and could have been missed if the participants were limited to the English language only.

In the case of the interviews conducted in Twi, the transcription process entailed an extra step of translation. The interviews conducted in Twi were first transcribed in Twi in order to retain the expressions and proverbs used by the participants. Consequently, these Twi transcripts were translated into English by the researcher, who is fluent in both languages.

Throughout the translation process, significant emphasis was placed on preserving the original content and context of the participants' comments. This approach to language and transcription underlined the researchers' intention to capture authentic voices and viewpoints, acknowledging the significance of language in articulating intricate concepts related to project management and affordable housing within the Ghanaian context. It underscored the researcher's endeavour to overcome possible language

barriers and to ensure that important information was not left unnoticed during the data gathering and analysis phases.

3.5.1.3 Analytical notes

Where and when possible, brief notes were also taken throughout the interview. It is thought that taking quick notes during the interview process will enable the researcher to describe the surroundings and the various activities encountered (Lanka et al., 2020). The notes were helpful in capturing the key issues during the familiarisation phase without letting them dominate the de-contextualisation of the data. The process of reduction, according to Fuster Guillen (2019), is a crucial part of qualitative analysis because it preserves the origin of themes in the data and avoids obscuring participant reality by merely superimposing themes from the researcher's perspective.

3.5.2 Observation analysis

Observation means paying attention to, observing, and occasionally challenging the participants' actions and inactions (Khan, 2022). One technique that can be applied during the data collection process is observation. This approach provides a level of perception and comprehension of the participants' experiences that could otherwise go unnoticed (Hagan, 2022). Case studies frequently employ the observation analysis approach as part of the data collection process, using a variety of data-gathering techniques. Observations can be conducted with or without the observer's active participation. Because they are not mutually exclusive, researchers can integrate these two observational methods into a single study (Khan, 2022). Studies have labelled these methods as participant and non-participant observation (Crawford, 2019; Fenton and Parry, 2022). All social research, according to Martos-Garcia et al. (2022:21), "is a form of participant observation since we cannot study the social environment without becoming a part of it."

According to Hays and McKibben (2021), there are two main difficulties: the observed-observer relationship and potential observer bias. Hays and McKibben (2021) argued that the presence of an observer can lead to a deviation from the norm in conduct. They bring up the subject of observer bias as well. The observer may misjudge, misinterpret the action, or fail to notice it. They contend that it is challenging to make objective

observations. Using a knowledgeable insider has the extra benefit of allowing one to understand the significance of tiny interactions, but it can also prevent one from noticing important trends. Martos-Garcia et al. (2022:21) refer to this as a non-observing participant.

According to Curdt-Christiansen (2019), if the researcher is familiar with the research setting, it is vital to consider their "taken for granted" assumptions and perhaps keep an eye out for situations that might contradict that assumption. Shadowing is a method where a researcher observes a participant carrying out their regular tasks over a period of time (Van der Weele and Bredewold, 2021). It entails watching them and getting information about what they are doing. These questions prompt the individual under observation to articulate their ideas and tasks. In some ways, shadowing connects observations and interpretation. According to Adler and Adler (1994), using observation to gather data has come under fire for being opaque. They argue that observation cannot undergo external review, unlike an interview recording or transcript, which allows for comparison of results; they suggest employing a large number of observers. However, Rosenbaum (2005) questioned this method, stating that observation is not a neutral process but rather experiential and occasionally emotive, meaning that different observers will produce different data. However, credibility depends on the researcher's capacity to consider how his or her actions affect the data gathered. However, this study employed both participant and outsider observation methods. The researcher was interested in observing the conditions of the AHP at the selected locations, as well as the daily activities of stakeholders related to the AHP's restrictions in Ghana.

3.5.2.1 *Who was observed*

The research on affordable housing projects in Ghana observed various stakeholders involved in project management practices. These stakeholders included project managers, local contractors, project/civil engineers, public procurement officers, project consultants, and government agencies. The study aimed to understand their roles, responsibilities, and interactions within the projects to identify effective strategies for successfully implementing affordable housing initiatives.

3.5.2.2 What was observed

Deciding what to observe and what not to observe can be an overwhelming task, and it is not possible to observe everything (Mason, 2002). Observation thus means that the researcher has discretion on who and what aspects to observe, and the position of the researcher in the given observation process is significant. In this case, the researcher aimed to examine the current activities of housing projects and the management of such projects in a Ghanaian setting with a view to identifying some improvement measures. In addition, the researcher wanted to know the effect and implications of these practices on the success, failure, and sustainability of affordable housing projects in the country.

3.5.2.3 How long was the observation?

In this study, each participant underwent at least 6 hours of observation over the course of 10 days to gather sufficient data on the long-term effects of affordable housing projects.

3.5.2.4 Analysing and reporting the observation data

The findings were reported using field note excerpts as recommended by Spradley's (1980) ethnographic archival records: people, places, and event notes. To enhance the interview information and provide additional support for the narrative, excerpts were used to validate concerns raised during the study and clarify issues within the actual interview. To expand on the interview information and thus provide additional support to the narrative, extracts were employed to justify the concerns raised during the study and clarify issues within the interview.

3.5.3 Document analysis

Document analysis is a qualitative research data collection technique that entails scrutinising and understanding various types of documents. They may also involve documents and writings in words and images in the form of speeches or written ones such as reports, memos, photographs, videos, or films (DeJonckheere and Vaughn, 2019). Document analysis aims to uncover patterns, themes, and meanings within the documents that can provide insights into a particular research question or phenomenon. The documentary review process for this study on Ghana's affordable

housing project yielded several crucial official documents that provide valuable insights into the project's timeline, scope, and challenges. As Bryman (2004) notes, such documents offer the advantage of being created without prior knowledge of their use in research, potentially offering unbiased perspectives on organisational practices and decision-making processes.

The researcher examined a January 4, 2013, agreement document detailing the initial contract between the Ministry of Water Resources, Works, and Housing of the Government of Ghana and Construtora OAS Ghana. This document reveals key details about the development of an affordable housing unit project, including its phased approach with "four (4) phases" and a total site area of 2,172 acres. The contract value is stated as Two Hundred Million United States Dollars (USD 200,000,000), excluding taxes and duties. This aligns with Marwick's (2001) assertion that such documents provide crucial viewpoints in case studies, regardless of their presentation.

A subsequent letter dated March 8, 2019, from Construtora OAS Ghana to the Ministry of Works and Housing indicates the contract has been terminated. This document highlights several challenges faced during the project's execution, including delays in tax exemptions and changes in the pace of work. These issues led to additional costs for the contractor, demonstrating the complexities and setbacks often encountered in large-scale public projects.

A Letter of Acceptance dated January 4, 2013, provides context on the project's initiation, revealing that it received executive approval on August 15, 2012, and was approved by the Parliament of Ghana on October 31, 2012. This document also confirms the project's scope, which included developing affordable housing units in all ten regional capitals of Ghana. While specific cost-related documents were not fully accessible for this study, the available information suggests significant financial implications. The initial contract value of USD 200 million, coupled with the contractor's claim for additional costs due to delays and disruptions, indicates that the project faced substantial financial challenges. This aligns with findings from other studies on government construction projects, such as those by Damoah et al. (2020), which highlight the prevalence of cost overruns and financial mismanagement in such initiatives.

The documentary evidence reveals a complex project history, from its ambitious beginnings to its eventual termination, spanning approximately six years. This timeline, along with the challenges documented, provides crucial context for understanding the factors contributing to the project's outcomes. As Bowen (2009) suggests, this documentary analysis complements the interview and observational data, offering a more comprehensive view of the project's lifecycle and the various stakeholder perspectives involved.

In conclusion, these documents offer valuable insights into the Affordable Housing Project's conception, execution, and ultimate challenges. They highlight issues in project management, stakeholder coordination, and financial planning that are critical for understanding the complexities of large-scale public housing initiatives in Ghana. This documentary evidence, combined with other research methods, provides a robust foundation for analyzing the factors contributing to the project's outcomes and deriving lessons for future affordable housing projects in similar contexts.

3.6 Reliability and Validity

Hence, reliability is the extent to which results obtained in qualitative research are consistent and stable (Franklin and Ballan, 2001). It ensures that a similar conclusion will be reached if the same study is conducted again (Ahmed and Ishtiaq, 2021). While reliability deals with the consistency of the results by minimising errors and focusing on internal consistency, validity aims at achieving accurate and true results that correspond to what they intend to measure. Just as reliability and validity are essential in quantitative research, they also play a significant role in qualitative research as they contribute to the credibility and trustworthiness of the result of the study (Ahmed and Ishtiaq, 2021). Thus, triangulation, member checking, and peer debriefing are some strategies researchers use to increase the reliability and validity of their qualitative work (Franklin and Ballan, 2001). This approach focuses on independently employing data sources, methods, and investigators to assure and substantiate the findings (Coleman, 2022). Subsequently, in the member checking procedure, one returns to the participants to confirm their interpretations of the data. Peer debriefing can also be defined as getting feedback and ideas from other researchers because the information

needs to be accurate. These help to reduce bias and increase the reliability and validity of the study, making it more accurate. However, to ensure the reliability and validity of the research instruments in generating the data, the study adopted the method of data triangulation.

3.6.1 *Triangulation of data*

Data triangulation is the act of using more than one source of data or more than one way of analysing the data to enhance the validity of a study (Dzwigol, 2020). Furthermore, there are claims that triangulation enables the combination of various viewpoints, thereby facilitating an enhanced understanding of the phenomenon of interest (Motoyama and Mayer, 2017). To provide comprehensive information, interview data, observation data, document review data, and researcher-reflective journal data were compiled.

In one way or another, each data source contributed to answering the research query. The interview data provided insight into the participants' perspectives, while the observation data allowed a direct examination of their daily activities. The documentary data gave a full picture of how the affordable housing project was put into action at the different sites that were visited. It showed the project management methods that were used, the people who had a say in the project from the planning stages to the execution stages, the problems that came up with managing those people, and the difficulties that came up with putting the affordable housing project into action in Ghana.

The researcher's reflective diary provided an opportunity to reflect on every aspect or stage of the study's developmental process. It also ensured that steps were taken to eliminate personal bias to the best of the researcher's knowledge. Incorporating data from all sources provided a more coherent and complete understanding of PM practice issues in the Ghanaian public sector. A diagrammatic presentation of how triangulation was achieved is provided in the appendix of this thesis.

3.7 Data Analysis

Evaluation entails using data analysis to emerge with a critical appraisal of findings that can lead to other subsequent studies and change (Mezmir, 2020). Choosing suitable themes when conducting a case study can be vital in analysing the data collected in the case study and enables the researcher to arrive at themes applicable to everyone and every participant (Mihas, 2019). As Lester et al. (2020) pointed out, data analysis is always more critical than interview approaches or sampling strategies for case study research. The researcher verbatim transcribed the interviews for validity and reliability and proofread them several times while listening to the audio for grammar and other issues. NVivo 12 was then used to import the anonymised transcript for coding, analysis, and interpretation. The study objectives were used in this step as a framework. However, it also considered any other contextual themes that may have resulted from the data analysis process that could have posed a threat to the original perspectives of the study.

According to Braun and Clarke (2019), thematic analysis is the method of choice for researchers to examine people's beliefs, information, experiences, or values using qualitative data. Therefore, when choosing a thematic analysis approach, one should consider the following methods, inductive, deductive, latent, and semantic (Braun et al., 2023). There are different types of data analysis, namely, semantic, latent, inductive, and deductive analysis. Lorenzetti et al. (2022) recommend that researchers consider the existing theoretical framework or construct a new one based on the discovery. Goldsmith (2021), on the other hand, employed the framework method of analysis to reconcile data management and organisation and develop another structure out of the data to address research questions. Frazer et al. (2023) also developed a five-stage framework analysis system that synthesises data from the sources and creates both inductive and deductive themes.

Braun and Clarke (2019) presented a six-phase thematic analysis framework with integrated inductive and deductive dimensions. During the observation, the researcher established specific goals. When deciding on the type of thematic analysis to use to evaluate the collected data, the researcher chose Braun & Clarke's (2019) six-phase framework to observe the data. The researcher then adopted the six-phase framework

after selecting the appropriate type of thematic analysis to analyse the collected data. The researcher concluded that the sample size was adequate, and therefore, to determine data saturation, he kept noting what recurred during the analyses (Goldsmith, 2021). Data saturation means that the next data collection phase in the research phase can stop if there is nothing else found new by analysing it (Braun & Clarke, 2019).

3.7.1 Transcription and Coding Process

The data analysis process involved the use of NVivo 12 software, which enriched the understanding of the project management practices in affordable housing projects in Ghana. Several major themes and subthemes emerged from the analysis of the interviews with the 20 participants, offering a thorough framework for addressing the research questions. The first step involved the verbatim transcription of all 20 interviews. The second phase involved familiarisation with the data through several readings of the transcriptions. The transcripts were then imported into NVivo, where each of them was labelled according to the participant.

The researcher engaged the NVivo coding features, where a preliminary round of coding was carried out, in which segments of text were labelled with descriptive tags. All 20 interviews were analysed using this process. As the coding advanced, trends emerged that were then examined utilising NVivo's analytical tools. The researcher then utilised NVivo's thematic analysis features to cluster the initial codes into themes and subthemes. This method led to the discovery of numerous principal themes, each comprising multiple subthemes.

The major category that was identified was Affordable Housing Practices, and these were subdivided into Awarding Procedure, which included tendering, political basis and project publication, and Bidding Procedure, which included site identification and pricing, publication finalisation and project funding. The other key theme was the current state of affordable housing, with subthemes as houses in use, uncompleted projects, sales of houses and projects handed over to SSNIT.

Project management practices constituted a broad category where different elements included integration, scope, resource, cost, communication, risk, procurement, and

stakeholder. AHP Implementation Challenges emerged as an important theme; subthemes included challenges in the award of AHPs, funding, political factors and challenges in managing stakeholders.

Project Management Failure surfaced as a prominent subject, encompassing sub-themes pertaining to awareness of project status, perceptions of failure origins (including corruption and misaligned objectives), and particular project management challenges such as funding delays.

Suggestions on enhancing AHP constituted a major theme, with sub-topics highlighting recommendations on improving the awarding processes, setting up preferred housing institutes and other recommendations that would lead to improved project outcomes. The issue of stakeholder roles in implementation was examined, focusing on the functions of many stakeholders and pinpointing essential participants in the affordable housing industry.

Throughout the analysis process, the researcher consistently revisited and modified these themes and subthemes, utilising the query functions in NVivo to identify emerging patterns. The visualisation features like the mind maps and the cluster analysis were used in investigating relations between the themes and refining the thematic structure.

To increase the credibility, peer review was integrated, where a colleague reviewed a sample of coded transcripts in NVivo. This external perspective aided in the recognition of biases or inconsistencies in the coding and the feedback was incorporated to enhance the coding scheme.

The conclusive theme structure, produced by NVivo and enhanced through iterative and adaptive analysis, offered a thorough foundation for understanding the intricacies of project management in affordable housing initiatives in Ghana. This framework not only answered the primary research inquiries but also uncovered intricate insights into the issues, methodologies, and prospective enhancements in the field.

This approach to data analysis, with the help of NVivo, guaranteed the systematic and reliable analysis of the interview data obtained from all 20 participants. The identified topics and sub-themes establish a robust basis for tackling the study questions and

objectives, presenting a comprehensive overview of project management methods in affordable housing initiatives in Ghana.

3.7.2 *Sentiment Analysis*

Apart from thematic analysis, the study also conducted a sentiment analysis to assess the sentiment of project management practices (PMPs) among the project managers. This approach was undertaken to add another perspective to the study and to gain an understanding of the general sentiments that the participants had concerning PMPs in affordable housing projects. However, this analysis was eventually deemed not to be very helpful in the context of this study.

The sentiment analysis entailed sorting the statements made by the participants regarding PMPs into positive, negative or neutral sentiments. This process was designed to give an overall picture of the perception of the project managers regarding the efficacy and execution of PMPs in their work. Despite performing the sentiment analysis, the researcher did not find it particularly helpful in this context. The rather straightforward positive/negative sentiment analysis did not always fully reflect the dynamic and diverse processes involved in affordable housing project management.

The drawbacks of sentiment analysis in this regard were the rationale for the theming approach to capture the nuances of project management practices in affordable housing projects in Ghana. This underlines the importance of the qualitative approach to the analysis of the data as opposed to general sentiment classifications. This study presents the sentiment analysis results in its appendix. Although not included in the key findings, this dataset offers the full spectrum of analytical methods tried in this study. This experience with sentiment analysis is valuable to the methodological findings of the study, as it shows the need to assess various analytical techniques and the relevance of the techniques for certain research contexts.

Step 1: Familiarisation

To familiarise oneself with the data, one must read and reread the transcripts, listen to audio recordings, and make preliminary observations. To fully comprehend the

interviewees' perspectives, the researcher would read and reread transcripts and listen to audio recordings to become familiar with the information in this area.

Step 2: Coding

This entails creating initial codes and labels to represent essential data features relevant to research questions. It describes reducing large amounts of data into small chunks of meaning. In this stage, the researcher would create initial codes to reduce the data to small chunks of meaning.

Step 3: Generating themes

This would require identifying patterns and connections within and throughout the complete data set. In other words, rather than focusing primarily on codes in this step, the analysis at a higher level of themes would be the focus.

Step 4: Reviewing themes

By this point, the researcher had ensured that the themes offered a helpful and accurate summary of the data acquired. In order to determine whether he had missed anything at this point, the researcher went back to the predetermined data and assessed the themes against it. The process was carried out to determine whether the established themes were present in the data and whether any adjustments were needed to make the themes more powerful.

Step 5: Defining and naming themes

In this stage, the themes would be further refined and defined; that is, the core of each theme (as well as the themes as a whole) would be identified, and what part of the data each theme captures would be determined.

Step 6: Writing up

The primary objective of this final phase is to write up the data analysis. Liamputtong (2020) recommends including an introduction when writing up a thematic analysis, which should state the research question, aims, and techniques used. Liamputtong

(2020) also proposed a methodology section that explains the procedures for data collection and theme analysis.

Moreover, it is anticipated that each theme will be covered in the results and findings section (Braun et al., 2023). At this point, a description of how the themes emerged and an explanation of what they stand for or mean, supported by statements from the data, is necessary (Linneberg and Korsgaard, 2019). The conclusion elaborates on the key points and demonstrates how the analysis addressed the research question as the final component.

While this research primarily employed qualitative analysis, an element of quantitative analysis was employed to validate the proposed Integrated Sustainability Affordable Housing (ISAH) framework. This approach aligns with the recommendation by Lorenzetti et al. (2022) to consider existing theoretical frameworks or construct new ones based on discoveries. The integration of quantitative validation enhances the robustness of the study's findings and provides a more comprehensive understanding of the sustainability dynamics in Ghana's affordable housing projects.

3.8 Issues of Quality in Research

The credibility of the study findings depends on trustworthiness and rigour, which should be distinguished at every stage of qualitative studies, including data collection, analysis, and descriptions (Jackson and Bazeley, 2019). Despite this, Hammersley (2023) stated that one challenge for qualitative researchers has been demonstrating the calibre of their work. Researchers hold several theoretical perspectives, each presenting their ideas and stances on rigour (Hammersley, 2023). However, rigour has long been associated with reliability and validity. Pearse (2019), a positivist who promoted the use of a comprehensive set of rules in case study design, advises using them to ensure rigor.

According to Pearse (2019), using a flexible case study design enables the researcher to understand fully, which is better than using a predetermined method or set of rules. Pearse (2019) recommends employing a comprehensive set of guidelines in case study design to ensure rigor, adopting a positivist perspective. According to specific authors

like Haven and Van Grootel (2019), the flexibility of case study design enables the researcher to gain a thorough understanding, which is preferable to a uniform technique. Enworo (2023) recommended using credibility, transferability, dependability, and confirmability to gauge the level of research, like or identical to rigour. Using credibility, transferability, dependability, and confirmability is the best strategy for this investigation (Enworo, 2023).

3.8.1 Credibility

Kyngäs (2020) asserts that when qualitative research seeks to depict a phenomenon from the viewpoint of the participants, it is crucial to evaluate and enhance the research's credibility. Credibility measures how well the researcher's representation of the data fits the views of the participants studied, or how accurately the findings reflect the participants' experiences and perspectives. Establishing credibility is essential for enhancing the overall trustworthiness of qualitative research. To improve the credibility of the research, the investigator would conduct member checks to ensure that transcripts are accurate and a true reflection of the views of each respondent (Haven & Van Grootel, 2019).

Again, participants should be asked if the themes and sub-themes are true to their experiences and perceptions. Keeping audit trails would also improve the credibility of the research. The oversight responsibility of the University of Sunderland research committee, coupled with the monitoring of a faculty mentor regarding the research work, would enhance the work's credibility.

3.8.2 Transferability

Transferability, according to Enworo (2023), is the process of adapting research study findings from one scenario to other situations that are similar. "To what extent can the results of qualitative research be extended or applied to different settings or contexts?" (Guenther and Falk, 2019). For transferability to occur, readers need to have a solid understanding of the original study setting to judge how similar it is to their own (Booth et al., 2019). Therefore, Booth et al. (2019) advise researchers to provide a highly detailed overview of their study circumstances and procedures.

Generalisation, a type of interpretation that aims to find the broader picture by considering detailed observations and opinions, poses significant challenges in qualitative findings (Hays and McKibben, 2021). This may be done by estimating the probability that the assessment results will be transferred further, which is supported by a theoretical consideration of the methodological approach and a consideration of the impact of the context. Analytic generalisation, in turn, means comparing the case study's outcomes to an existing theory (Hays and McKibben, 2021). It also meant that detailed descriptions were produced as part of the study, as well as the type of design and methodology used in producing detailed data extracts. These excerpts are in a paradigm that provides a wealth of knowledge and evidence of references that are assumed to be applied to other cohorts. This position was based on a few patterns that participants reported, which enhanced the likelihood of transferability.

3.8.3 Dependability

Hanson et al. (2019) define dependability as the degree to which a third party not initially involved in the study can monitor, evaluate, and critique the research process.

Stake (2010) argued that for research to be reliable, the researcher must provide a comprehensive account or acknowledge the ever-changing context in which it takes place. Therefore, it is the researcher's responsibility to explain how changes in the environment might affect the study's overall progress or the procedures involved in conducting it (Moon et al., 2016). Korstjens and Moser (2018) argue that data reliability increases when triangulation and integration from multiple sources improve data dependability.

The researcher also ensured that the data analysis in this investigation demonstrated that each material was coded systematically. Consequently, opportunities arose where different forms of data could be replicated in the findings and results for the study participants, in the codes applied in the study. The supervisors were given access to the reports that the researcher had created for discussion. Because there was only one researcher, it was not possible to use inter-rater reliability (IRR) in this study. This study describes IRR as a method to check the validity of the study, despite the involvement of many scholars in the coding process (McAlister et al., 2017).

3.8.4 Confirmability

As Moon (2019) pointed out that qualitative research is predisposed to assume that each researcher comes to it with a particular perspective. Korstjens and Moser (2018) define confirmability as the degree to which other researchers can easily replicate or support the drawn conclusions. They noted ways of enhancing confirmability, including (Korstjens and Moser (2018), p. 844. Moon (2019) recommended that researchers note the data verification procedures throughout the research process. Furthermore, the proposal suggested that involving a different researcher in the study to act as a 'devil's advocate' could ensure the same results. It was also proposed that the process be recorded (Moon, 2019). The proposal stated that the researcher could vigorously defend and explain negative occurrences that contradicted prior research findings.

Finally, after the study is completed, data auditing is performed, in which data gathering and analysis processes are reviewed, and evaluative judgements are made about the possibility of bias or distortion (Moon, 2019). Therefore, using the protocol to order and conduct this study was the driving force behind it. Therefore, the study is documented to show that it was planned and conducted as necessary. Braun et al. (2023) also suggested that reflexive analysis is useful to ensure that the researcher understands how actions taken influence the data collected. Hence, researcher bias was reduced by establishing ethics that encouraged researcher reflexivity, ensuring the research findings' verifiability.

3.9 Reflexivity

Qualitative investigation involves investigating, analysing, and reflecting on the research process, allowing for adjustments to the study's approach (McCallum et al., 2022). Researchers engage supervisors to discuss challenges and ensure validity. Visits are necessary to select the best method for knowledge production and consider participant understanding, as suggested by social constructivism. Interpretive researchers believe data is generated rather than discovered (Qoyyimah, 2023).

Zahle (2021) highlights the impact of researchers' identities and disclosures on data generation. Professional positions and values influence the significance of research

methods and findings. Recognising project management backgrounds and academic qualifications helps minimise biases. Project managers and stakeholders are aware of the researcher's background, providing accurate information for thorough research responses.

The researcher's project management skills may have influenced interviews and observation sessions. Participants are more candid and open with insiders, but data collection and interpretation can still be influenced. Qualitative researchers should critically reflect on their identities (Mohler and Rudman, 2022). Good chemistry between researchers and participants can reveal information typically closed off to outsiders, providing valuable insights and perspectives (Cohen-Miller et al., 2022; Chammas, 2022). To prevent instilling a sense of tension and intimidation in the subordinate, the researcher ensured the environment was relaxed and welcoming through exchanges and the exchange of greetings, jokes, and laughter. For instance, participants chose to use the researcher's surname and salutation, as they are culturally accepted in Ghana. The researcher went on to further explain to them the purpose of the study's findings and its advantages and results. After that, participants were eager to contribute to the study.

However, it is important to clarify the position or role of the researcher in the process of data collection to avoid confusion. Researchers should ensure that there are no situations whereby the participant can easily assume that the researcher is other people, because this may cause the participant to misunderstand the purpose and objective of the study (Noyes et al., 2019; Stahl and King, 2020). Such answers may be shaped to fit the social setting standard and may affect the study's validity, reliability, relevance, richness, and, therefore, the outcome.

Stating the study's purpose and the researcher's name was a way of stripping off the professional mask. Thus, to minimise the impact of personal bias in a study, a researcher must be honest and objective and make sure that the data collected is not skewed in a manner that provides an inaccurate portrayal of the participants' feelings and opinions. This was useful in reporting on the progress of the researcher in his work as well as writing down the things learned by the researcher during this research. To achieve the goal, the researcher used a reflective diary during the analysis process to

record real-time events that occurred and then reflect on them afterwards. This was especially helpful because the researcher could record events they would otherwise have forgotten. On consent, participants were provided with an informational document about the study and were told that they were free to withdraw from the study at any time without any explanation. They all agreed, and no pressure was put on them, whether they were strangers or people they knew.

3.10 Ethical Consideration

Ethical frameworks dictate the procedures to follow when conducting any form of learning (Greller and Drachsler, 2012). The research ethics used in this study include informed consent and voluntary participation, privacy, anonymity and confidentiality, and responsibility for the accuracy of analysis and reporting. These are some of the most important ethical challenges identified by Pietilä et al. (2020). As emphasised by Arifin (2018), it constitutes a highly relevant area of ethical concern that the subjects of a study should indicate their willingness to participate in a study before the data collection process begins. Each participant in this study receives a written statement of consent, requiring them to read, comprehend, and provide their written consent before they can participate in data collection.

Furthermore, Sanjari et al. (2014) assert that participants should provide their consent voluntarily and not under duress. The research in this study will advise each participant that participation in the study should be voluntary and that if they have any reservations, they can withdraw either before the study or at any point throughout the study, in which case the information they gave for the study will be deleted. This is crucial to make sure that the study only includes participants who are willing and interested in taking part.

Participants' anonymity was maintained throughout the study to increase the likelihood of eliciting honest answers. The anonymity and confidentiality rules would be strictly adhered to in this case. The anonymity and confidentiality of research participants are safeguards in place to ensure their well-being. The term "anonymous" refers to the fact that neither the researcher nor the people who read the final report or paper on the study's results will be able to determine who provided any given response (Nickerson, 2022, p. 138).

Confidentiality means ensuring that the information provided by participants is kept from third parties. Bennouna et al. (2017) reaffirmed that safeguarding respondents' interests and safety during surveys prioritises the confidentiality of their personal information. West (2020) highlighted confidentiality, the researcher's handling of private information to preserve the subject's identity, as an alternative to the guarantee of anonymity. In order to maintain the participants' privacy, the interview sessions would be held either in an enclosed space between the interviewee and researcher alone or at a venue where the participants believed their privacy would not be violated.

3.11 Participants' Consent

To answer the current case and the study, each candidate was given a sheet of information before the interview, and then they joined the interview themselves. Each participant was also informed that they had a right to leave the study without affecting their legal or professional jurisdiction. The researcher gave participants a week to consider joining the study, during which time they were also able to ask any questions they had and receive responses. Prior to recording the meetings, consent was sought.

3.12 Data Protection, Confidentiality and Anonymity

In this investigation, concerns about privacy protection were of utmost importance. Any data, information, or evaluation was provided anonymously, and no participants shared their names or other personal details. Interviews were audio recorded with the participant's consent; data was anonymised and securely archived with a password, with access limited to the researcher. To ensure that the information collected from the cards did not fall into the wrong hands, the researcher took the following precautions: All paper documents and computer data were password-protected. This was done to help perpetuate our unaltered guarantee of the 1998 Data Protection Act.

Also, to ensure that personnel without authorisation do not access the information or it gets lost accidentally, all the personal information was kept safely in a special area. Moreover, the anonymity of all the research information was preserved throughout the whole process of the research. The information collected was kept in an encrypted

folder on the researcher's personal computer at the point of data collection, and the researcher did his best to ensure that participants' identification was protected at all stages of the study. These are the university's correct protocols for the maintenance and archiving of research records. The respondents were informed that their information would be provided to supervisors and the Ministry of Works and Housing, who would disseminate the report to other state organisations and stakeholders. The participants were also informed of the possibility of publishing the findings of the research at national and international conferences.

3.13 Chapter Summary

The purpose of this chapter is to explain the research method and why the multiple qualitative case study research design was adopted. This section provides an understanding of the paradigms of the research in relation to social constructivism and an interpretive paradigm. The study aims to assess project management practices in affordable housing projects in Ghana according to the perceptions of project managers and other stakeholders.

In this chapter, the method of case study is explained, as is the reason why several case studies were used to compare different types of affordable housing project sites, such as Amasaman, Asokore Mampong, Kpone, Koforidua, Cape Coast and Saglemi. This chapter describes the purposive sampling method, and the factors observed when recruiting participants with backgrounds in affordable housing.

There is also a clear description of data collection tools, such as interviews using structured questionnaires and document analysis, whereby project documents and information are gathered and observed, and whereby one observes project activities and interactions between stakeholders. Ways of ensuring reliability and validity, such as source triangulation, are also outlined.

Hence, the current chapter continues from where the previous one left with the use of coding, theme development, and data interpretation outlined in Braun and Clarke's (2019) six-phase thematic analysis model. Some of the issues about quality in research include credibility, transferability, dependability, and confirmability. The role of the

researcher in minimising bias and ensuring the proposed ethical measures, such as voluntary participation, informed consent, confidentiality, and data protection, as followed.

In conclusion, the chapter is comprehensive and well-structured in its explanation and justification of the chosen qualitative research method for analysing project management practices and the perceived attitudes of stakeholders towards affordable housing projects in Ghana.

CHAPTER FOUR

CASE STUDIES

4.1 Brief Profile of Ghana

Ghana is located in West Africa, with Accra serving as its capital and government seat. It shares borders with Burkina Faso in the north, La Cote d'Ivoire in the west, Togo in the east, and the Atlantic Ocean in the south. The country is divided into sixteen administrative regions. According to the population statistics released by the Government of Ghana in 2016, the total population of Ghana stood at approximately 28,833,629 (i.e., about 28.8 million) (GoG, 2016). Estimates place the male population at 14,367,797, accounting for 49.83% of the total population, and the female population at 14,465,832, representing 50.17%. Ghana In 2016, Ghana's Gross Domestic Product (GDP) was 42.69 billion USD (GoG, 2017; Trading Economics, 2018). In 2016, Ghana's GDP per capita stood at 1,707.70 USD, while at purchasing power parity (PPP), it was USD 3,980. Life expectancy as of 2015 stood at 61.49 years (Ghana Statistical Service, 2016).

Housing and research carried out in the context of the Ghanaian economy have attracted the interest of several researchers in this area (Mittal et al., 2020; Obi, 2017; Abdel-Moneim et al., 2021). Researchers have studied and explored the diverse facets of the housing situation in terms of affordability, quality, and availability to gain a better understanding of the country's current housing situation, as explained by Damoah and others (2020) and Adabre and Chan (2020). These works have aided in revealing the problems inherent in the usage of buildings in the two areas and calling for workable and sustainable measures of addressing the housing issues in Ghana. Moreover, researchers have examined government policies and approaches towards the housing sector, aiming to establish efficient solutions for the provision of affordable housing. Through analysis of factors like income, population growth, and construction costs, experts suggest solutions like creating affordable housing, enforcing rent control, and improving housing infrastructure. Table 4.1 depicts a summary of housing stocks and deficits in Ghana.

Table 3:1: Cumulative housing stock and deficit in Ghana

| Year | Total Population | Actual Housing Stock | 6- persons/Household per 2-bedroom unit | | 4-persons/Household per 2-bedroom unit | |
|------|------------------|----------------------|---|----------------------|--|----------------------|
| | | | Est. Housing stock | Est. Housing deficit | Est. Housing stock | Est. Housing deficit |
| 1960 | 6,726,800 | 636,189 | 1,121,133 | 484,944 | 1,681,700 | 1,045,511 |
| 1970 | 8,559,313 | 945,639 | 1,426,552 | 480,913 | 2,139,828 | 1,194,189 |
| 1984 | 12,205,574 | 1,204,395 | 2,034,262 | 829,867 | 3,051,394 | 1,846,999 |
| 2000 | 18,912,079 | 2,181,972 | 3,152,013 | 970,041 | 4,728,020 | 2,546,048 |
| 2010 | 24,658,823 | 3,392,745 | 4,109,804 | 717,059 | 6,164,706 | 2,771,961 |

Source: ISSER (2013, p.184)

4.2 Housing in Ghana

Housing is crucial for individual and community well-being and quality of life, accounting for 30–35% of building costs in industrialised countries (Kim et al., 2018; Wang et al., 2021). It comprises various structures, homes, and units, varying in size, quality, and location (Mittal et al., 2020; Obi, 2017; Abdel-Moneim et al., 2021). Housing is essential for satisfying economic, social, political, and cultural needs, and it is a process that involves finding suitable housing, securing financing, and establishing a sense of belonging and stability (Gustafsson, 2022; Aalbers, 2019; Nethercote, 2020). Housing is a complex process involving planning, manufacturing, funding, allocation, and upkeep to ensure its quality and suitability for human occupancy.

Economic development and GDP growth often view housing supply as a solution (Anacker, 2019). However, when used as a commodity, it affects people directly through well-being, as well as indirectly through health and productivity. The ultimate goal is to improve a variety of human endeavours by providing instant human delight. One can view housing as a means to quantify an individual's value. Often referred to as housing, it is a physical structure that provides shelter for basic human requirements.

4.2.1 Overview of Selected Affordable Housing Project Sites

Some of the affordable housing projects have been implemented in different parts of Ghana. Some of these regions include the Accra, Ashanti, and Central regions. Such projects have the intention of solving the problem of inadequate housing for the low-income population and enabling them to access decent housing. In connection with this, consecutive administrations have collaborated with private developers and global organisations to guarantee the effective execution of these initiatives and establish lasting communities for inhabitants. This section also gives a short overview of the different administrative areas in the affordable housing projects in Ghana (refer to Figure 3.1).

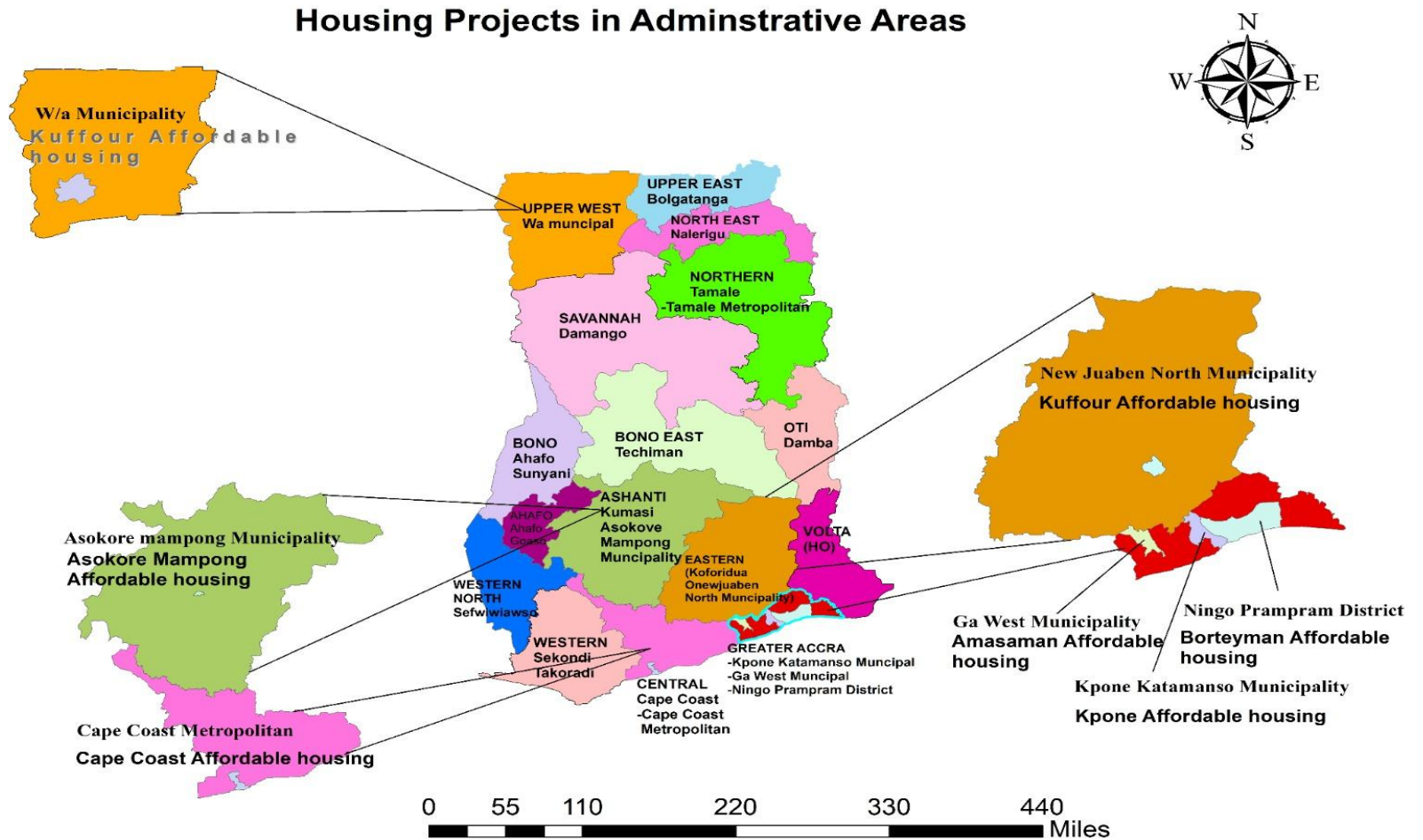


Figure 3.1: Affordable Housing Projects in administrative areas of Gh.

4.2.1.1 Asokore Mampong

Background and Context

The Asokore Mampong Affordable Housing Project started in 2006, as part of the national affordable housing plan under the Kufuor administration (Ministry of Water Resources, Works and Housing, 2007). The project sought to respond to the severe housing deficit in Kumasi, the second largest city in Ghana, which has experienced rapid urbanisation resulting in the growth of squatters and substandard housing (Acheampong and Acheampong, 2019).

Project Details

The project was located in the Asokore Mampong Municipality of the Ashanti Region in Ghana. It was intended to build 1,053 units, of which 336 are one-bedroom apartments, 691 are two-bedroom apartments, and 26 are stores. The cost at initiation was estimated to be GH¢256,972,988.04; about USD 44 million at the 2006 exchange rates (Ministry of Works and Housing, 2018).

Project Timeline

| Year | Event | Source |
|-------------|---|---|
| 2006 | Initiative started during the Kufuor led government | Ministry of Water Resources, Works and Housing (2007) |
| 2009 | Construction stopped due to change of government and lack of funds | Damoah and Kumi (2018) |
| 2017 | Social Security and National Insurance Trust (SSNIT) endorsed financing to revive the project | Buabeng (2019) |
| 2021 | Project reached near completion with most units constructed. | Ghana News Agency (2021) |

Challenges Faced

The Asokore Mampong project encountered significant challenges during its implementation. The change of government in 2009 brought about political instability that forced a review of the project hence leading to a long break in construction activities (Damoah and Kumi, 2018). This funding was however inadequate to support the project

implementation which stalled the project until the intervention of SSNIT in 2017 (Buabeng, 2019). The delays in the AHP project resulted in high costs in construction hence the need to revise the budget (Ministry of Works and Housing, 2018). Acheampong and Acheampong (2019) report that the project encountered land ownership problems with local people, which resulted in early delays and necessitated mediation.

Stakeholder Analysis

There were several stakeholders involved in the project, and each of them contributed to its progress. The government started the project but faced the problem of unstable funding and policy implementation across different governments (Ministry of Water Resources, Works and Housing, 2007; Damoah and Kumi, 2018). SSNIT was instrumental in reviving the project, which clearly illustrated the possibilities of pension fund investment in housing (Buabeng, 2019). The local community at first was not in support of the project because of issues to do with land ownership but later supported the project because of employment opportunities created by the project (Acheampong & Acheampong, 2019). The contractors encountered problems with payment and alterations to the project specification, which called for more stable project delivery and funding systems (Ministry of Works and Housing, 2018).

Technical Aspects

The construction of the project combined traditional and modern building methods. It prioritized locally sourced materials to cut expenses as well as enhance the economy of the country (Ministry of Works and Housing, 2018). The design also included one- and two-bedroom units in a bid to address the housing market in the area.

Current Status and Outcomes

Currently, the Asokore Mampong project is almost complete, with more than 90 percent of the intended units constructed (Ghana News Agency, 2021). But problems of availability and distribution have arisen, along with fears that the completed structures may be out of the affordable reach of the targeted low-income earners.

4.2.1.2 Cape coast

Background and Context

The Affordable Housing Project at Cape Coast was started in the 1970s during the Acheampong Regime as a housing project mainly intended for the Ghana Police Service (Twumasi-Ampofo et al., 2014). The project was designed to provide adequate accommodation for the police in Cape Coast, which is the capital city of the Central Region of Ghana. This program was a component of a comprehensive strategy aimed at addressing the quality of living standards of the public servants and the effectiveness of their service delivery in society.

Project Timeline

| Year | Event | Source |
|-------------|---|---|
| 1972 | Project initiated during the Acheampong administration. | Twumasi-Ampofo et al. (2014) |
| 1972-1978 | Initial building phase. | Twumasi-Ampofo et al. (2014) |
| 1978 | Project halted following President Acheampong's removal from office | Twumasi-Ampofo et al. (2014) |
| Post-1978 | Project remained incomplete with no progress | Twumasi-Ampofo et al. (2014) |
| 2006 | Initiative restarted during the Kufuor led government. | Ministry of Water Resources, Works and Housing (2007) |
| 2009 | Construction stopped due to change of government and lack of funds. | Damoah and Kumi (2018) |
| 2017 | Social Security and National Insurance Trust (SSNIT) endorsed financing to revive the project | Buabeng (2019) |
| 2021 | Project reached near completion with most units constructed. | Ghana News Agency (2021) |

Challenges Faced

The Cape Coast Affordable Housing Project has faced several challenges since its implementation. Political instability, including the ousting of the Acheampong administration in 1978, resulted in a sudden cessation of the project's execution (Twumasi-Ampofo et al., 2014). Financial constraints hindered development, resulting in prolonged periods of inactivity due to erratic funding. The project was also characterised by poor maintenance of the structures that were partly constructed hence

deteriorating with time. Changes in government policies and direction, as well as inconsistency in housing policies, played a role in slowing down the project.

Current Status and Outcomes

The researcher's site visit and available information reveal that the Cape Coast Affordable Housing Project remains partially abandoned. Some of the structures were only half built before the war started, and the long period of inactivity has seen the structures deteriorate and therefore the question of whether they are habitable as they are or whether they can be completed.

4.2.1.3 Kpone

Background and Context

The Kpone Housing estate is one of a number of projects aimed at addressing the shortage of affordable housing in the Greater Accra Region. It was designed to meet the urgent need of housing in the rapidly growing Greater Accra metropolitan area (Awuvafoqe, 2013). The project is located in the Kpone-Katamanso District, perfectly positioned to address the housing demands of the expanding urban populace while alleviating congestion in central Accra.

Project Details

Location: Kpone-Katamanso District, Greater Accra Region Initiation

Year: 2012 Planned Units: 3,016 Estimated Cost: \$70 million USD Developer:

Tema Development Corporation (TDC) Current Status: Ongoing (as of 2021).

Project Timeline

| Year | Event | Source |
|-------------|--|---|
| 2012 | Project implemented by the Government of Ghana. | Ministry of Water Resources, Works and Housing (2013) |
| 2014 | First phase of construction was initiated. | Tema Development Corporation (2015) |
| 2016 | Project encountered delays due to funding issues. | Addo (2018) |
| 2019 | Government announces intention to complete the project. | Ministry of Works and Housing (2019) |
| 2021 | Partial completion achieved; some sections still under construction. | Ghana News Agency (2021) |

Challenges Faced

The Kpone Affordable Housing Project faced some major challenges in the course of its implementation. Lack of sustainable funding sources was a thorn in the progress of the implementation process (Addo, 2018). The project also suffered challenges of providing core infrastructure like roads, water, and electricity, which delayed project delivery and occupancy (Awuvafoqe, 2013). A shift in project scope and objectives impacted on time and cost factors (Ministry of Works and Housing, 2019). Furthermore, questions were raised on the viability of the completed units and their marketability to the targeted population in the project area (Arku et al., 2012).

Stakeholder Analysis

The project encompasses several stakeholders, each contributing significantly to its progression. The government launched the project and had overall policy management responsibility (Ministry of Water Resources, Works and Housing, 2013). The Tema Development Corporation was also the main developer of the project and had issues in implementation and funding of the projects (Tema Development Corporation, 2015). The local community has exhibited ambivalent responses, anticipating enhanced employment opportunities and infrastructural improvements (Awuvafoqe, 2013). Potential homeowners face uncertainty due to project delays and changing affordability criteria (Arku et al., 2012).

Technical Aspects

The project adopts a mixed housing typology, including apartments and townhouses. It incorporates modern building techniques aimed at cost-efficiency and durability. The development plan includes provisions for social amenities and commercial spaces to create a comprehensive living environment (Tema Development Corporation, 2015).

Current Status and Outcomes

As of 2021, 71 blocks have been completed with 537 units sold. The project is ongoing, with expectations of completion by the end of 2022 (Ghana News Agency, 2021). However, challenges persist in terms of infrastructure development and unit

affordability. The partial success of the Kpone project, compared to some others, suggests that focused management and ongoing commitment can yield positive results, even in the face of challenges.

4.2.1.4 *Saglemi*

Background and Context

The Saglemi Housing Project was initiated in 2012 as a flagship affordable housing scheme under the Mills administration. Located in the Ningo-Prampram District of the Greater Accra Region, the project aimed to deliver 5,000 housing units to address the acute housing deficit in the Greater Accra metropolitan area (Ministry of Water Resources, Works and Housing, 2013). This ambitious project was conceived as a significant step towards alleviating the housing crisis in Ghana's rapidly urbanising capital region.

Project Details

Location: Saglemi, Ningo-Prampram District, Greater Accra Region

Initiation Year: 2012

Initially Planned Units: 5,000

Actual Construction: 1,506 units (as of 2020)

Estimated Cost: \$200 million USD

Contractor: Construtora OAS Ghana Ltd

Current Status: Stalled amid legal controversies (as of 2021)

Project Timeline

| Year | Event | Source |
|------|--|---|
| 2012 | Project initiated with parliament approving \$200 million loan. | Parliament of Ghana (2013) |
| 2014 | First phase of construction commenced. | Ministry of Water Resources, Works and Housing (2015) |
| 2016 | Government transition led to project evaluation. | Damoah et al. (2020) |
| 2018 | Project halted due to accusations of fund embezzlement and financial misconduct. | Osafo (2020) |
| 2021 | Government initiated legal action against former officials. | Ghana News Agency (2022) |

Challenges Faced

The Saglemi project has faced numerous major problems since the commencement of its implementation. Political influence has been a significant concern, resulting in project evaluations and modifications due to governmental changes (Damoah et al., 2020). Accusations of financial mismanagement and corruption have beset the project, resulting in inquiries and judicial actions (Osafo, 2020). Contractual conflicts, especially those concerning project scope and funding allocation, have led to legal challenges and project impasse (Ghana News Agency, 2022). Furthermore, the project has been characterised by infrastructure deficits where most of the completed units lack basic facilities such as water and electricity, as noted by Osei-Tutu et al. (2018).

Stakeholder Analysis

The project encompasses several stakeholders, each contributing significantly to its intricate progression. The government, as the project initiator, has experienced multiple governmental administrations contesting the project's conditions and execution (Parliament of Ghana, 2013; Damoah et al., 2020). Construtora OAS Ghana, the contractor of the project, is currently facing legal issues concerning the project (Ghana News Agency, 2022). The local people, especially those interested in housing and employment opportunities, have been let down as these expectations have not been met (Osei-Tutu et al., 2018). Financial institutions involved in the project have

expressed concerns about loan recovery and the sustainability of the project (Osafo, 2020).

Technical Aspects

The project design encompassed various dwelling typologies, ranging from one-bedroom flats to three-bedroom homes, with the objective of addressing varied housing requirements. Contemporary building methods were utilised, emphasizing swift delivery to address the urgent housing need. Nonetheless, documented challenges regarding quality control and infrastructure provision have raised questions about the long-term durability and habitability of the constructed units (Osei-Tutu et al., 2018).

Current Status and Outcomes

To date, only 1,506 units have been constructed as part of the planned 5,000 units. The project remains at a standstill, while the few units that have been completed have not been occupied due to the absence of basic facilities. Some of the former government officials involved in the project have been charged in court, which has made the future of the project even more uncertain (Ghana News Agency, 2022). The Saglemi project, which was once celebrated as a panacea for the housing deficit in Ghana, now exemplifies the difficulties encountered by large-scale public housing programs in Ghana.

4.2.1.5 Koforidua

Background and Context

The Koforidua Affordable Housing Project began in the year 2001 as part of the Government of Ghana's National Housing Project. The project was meant to offer houses for low- and middle-income earners in the fast-developing city of Koforidua, which was the capital of the Eastern Region (Kwofie et al., 2011). This was in line with a national agenda of seeking to solve the housing deficit problem and enhance living standards in different parts of Ghana.

Project Details

The project is situated in Koforidua in the Eastern Region of the country. Originally, the size of the project was 110 acres, and it aimed to house 12,000 families (Ministry of Works and Housing, 2002). The first phase was to be completed in 2006 as the government sought to respond to the housing demands of the citizens. However, the project has encountered considerable delays and obstacles since its initiation.

Project Timeline

| Year | Event | Source |
|------|--|---|
| 2001 | Project initiated under the National Housing Programme | Ministry of Works and Housing, Ghana (2002) |
| 2006 | Project missed first completion deadline | Kwofie et al. (2011) |
| 2009 | Project halted due to government change and financial difficulties | Adabre and Chan (2019) |
| 2015 | Public-private partnership revival efforts failed | Ministry of Works and Housing (2016) |
| 2021 | Government sought \$51 million for project completion | Ghana News Agency (2021) |

Challenges Faced

The Koforidua Affordable Housing Project faced numerous challenges throughout its lifespan. From the outset, conflicts over land ownership led to early setbacks and opposition from the community, underscoring the need for clear land rights in Affordable Housing Projects (AHPs) (Obeng-Odoom, 2013). Financial constraints were a persistent issue. The lack of funds caused project delays and ultimately led to project abandonment (Adabre and Chan, 2019). Compounding this problem, political discontinuity due to changes in government resulted in shifting priorities and further project abandonment (Kwofie et al., 2011).

Moreover, inadequate project management, marked by insufficient control and coordination, resulted in resource depletion and inefficiencies (Ahadzie and Badu, 2011). These management issues exacerbated the financial and political challenges, creating a complex web of obstacles for the project.

Stakeholder Analysis

The project had several stakeholders, each possessing distinct roles and facing unique challenges. The government, as the project initiator, failed to provide consistent support due to changes in administration from one government to another (Ministry of Works

and Housing, 2002; 2016). Local people were initially enthusiastic about the project but subsequently became disillusioned by its slow progress, which eroded public confidence in government schemes (Obeng-Odoom, 2013). Some contractors who worked on the project complained of delayed payments, resulting in work disruptions and eventually leading to site abandonment (Ahadzie and Badu, 2011). Prospective homeowners who had paid initial deposits were left in a precarious position as the project remained incomplete (Kwofie et al., 2011). This situation caused significant frustration and financial strain for those who had invested in the promise of affordable housing.

Technical Aspects

The project was designed to consist of one-, two-, and three-bedroom units to accommodate households of different sizes and income levels. It also provided for other social amenities that were essential to creating a comfortable and complete living environment. Construction techniques were predominantly traditional, with limited attempts to incorporate precast components to mitigate expenses (Ahadzie and Badu, 2011). However, the prolonged delay resulted in the deterioration of partially completed structures, raising significant concerns over the quality, integrity, and safety of the existing construction.

Current Status and Outcomes

The Koforidua Affordable Housing Project remains incomplete. Some of the buildings under construction have collapsed, and the area now poses a security threat to neighbouring residents. The government's recent attempt to mobilize \$51 million for project completion underscored the substantial financial consequences of project abandonment (Ghana News Agency, 2021). The project's lack of success to date represents a significant setback in addressing housing demands in the Eastern Region. As such, it serves as a cautionary tale for future large-scale housing projects in Ghana. The Koforidua project has several important implications for future affordable housing initiatives: It highlights the critical need for stable and secure sources of funding for long-term housing projects (Adabre and Chan, 2019). These lessons learned from the Koforidua project can inform policymaking and project management strategies for future affordable housing initiatives in Ghana.

4.2.1.6 Wa

Background and Context

The Wa Affordable Housing Project started in 2007 in the Upper West Region of Ghana as part of the Government of Ghana's decentralisation of affordable housing provision and housing needs in the regions (Ministry of Water Resources, Works and Housing, 2008). This was an effort intended to meet the housing needs of a growing population and rising urbanisation in Sombo, Wa (Ghana Statistical Service, 2010).

Project Details

The Wa Affordable Housing Project was situated in Sombo, Wa, which is the capital of the Upper West Region. This location was chosen to meet the particular housing requirements of the region and to stimulate economic growth. The project was planned to have a capacity of 1000 housing units and was expected to greatly transform the housing market in the region. The estimated cost of GH¢ 27.9 million, about \$19.2 million USD at the 2007 exchange rate, was a significant amount of capital investment in the development of the region (Ministry of Water Resources, Works and Housing, 2008).

Project Timeline

The project timeline, as reported by several sources, shows a story of ambition, challenge, and stagnation. The project began officially in 2007, with the usual trappings of a sod-cutting ceremony that symbolised the government's determination to tackle housing shortages in the Upper West Region (Ministry of Water Resources, Works and Housing, 2008).

Construction began in 2009, but problems arose as soon as the project started, which would later define its development (Obeng-Odoom, 2013). By 2012, the construction of the Wa Affordable Housing Project had slowed down mainly due to funding problems and contractor disagreements (Adabre and Chan, 2019). A site visit conducted in 2018 exposed the total level of project abandonment, whereby some structures that were halfway through construction were left to decay (Ghana News Agency, 2018). To date, there has been no real development or revival of the project, and so it has become a classic example of a project that has suffered protracted abandonment, which is a

strong pointer to the fact that large-scale housing projects in the less developed regions of Ghana are fraught with many challenges (Bondinuba et al., 2022).

Challenges Faced

Since the conception of the WA affordable housing project, the project has been characterised by inadequate funding, which led to some setbacks and ultimately the project was halted (Adabre and Chan, 2019). This financial instability was indicative of larger problems in Ghana's approach to sourcing capital for large-scale public infrastructure development. Adding to these financial problems was the dearth of initial feasibility studies and needs assessments. This critical oversight resulted in a massive gap in a substantial discrepancy between the project's design and the real housing needs of the local populace (Obeng-Odoom, 2013). The construction of the project was challenged by the remoteness of the site, which added other difficulties, especially in the provision of fundamental facilities. The absence of essential services not only led to higher costs but also introduced additional levels of difficulty in the construction phase (Bondinuba et al., 2022). Moreover, disputes with contractors about payment and project requirements resulted in project delays and ultimately culminated in the site's abandonment (Ghana News Agency, 2018).

Stakeholder Analysis

The AHP was significantly influenced by the actions and interactions of different stakeholders that the direction of the Wa Affordable Housing Project was altered. The government as the initiator of the project took the central role but was unable to bring the steady funding and supervision that were needed for the project's success (Ministry of Water Resources, Works and Housing, 2008; Adabre and Chan, 2019). Such intermittent support underlines the weaknesses of public projects in terms of changing political priorities and fiscal constraints. The local community, initially optimistic about enhanced housing and economic possibilities, gradually became disillusioned as the project encountered delays (Obeng-Odoom, 2013).

The contractors who worked on the project encountered difficulties, such as delayed payments that forced them to abandon the project site (Ghana News Agency, 2018). The regional authorities, which were responsible for support and coordination, failed to cope with the challenges of organising such a vast project in a relatively

underdeveloped area. These organisational challenges extended beyond stakeholder management to impact the technical execution of the project as well (Bondinuba et al., 2022).

Technical Aspects

From a technical point of view, the Wa Affordable Housing Project adopted features that would tackle the local needs and cost. The project was planned as a combination of one-bedroom and two-bedroom units, which showed an effort to try to provide for the different sizes of households in the area. The project design also adopted policies that would help cut costs and promote the local economy, such as the use of local materials where possible. However, as highlighted by the stakeholder challenges, the location of the project site was a major disadvantage in terms of construction quality and progress. These challenges were compounded by the unavailability of skilled human resources in the region, hence the need for human resource development alongside infrastructural development (Obeng-Odoom, 2013; Bondinuba et al., 2022).

Current Status and Outcomes

The Wa Affordable Housing Project is one of the many failed development promises in Ghana. The project site has changed from a symbol of hope to an eyesore, a potential danger to public safety and a source of annoyance (Ghana News Agency, 2018; Bondinuba et al., 2022). This outcome also means not only the loss of considerable amounts of money but also points to the depth of social and economic consequences of failed housing projects.

4.3 Chapter Summary

This chapter provides an overview of affordable housing projects in Ghana, focusing on case studies from different regions of the country. It begins with a brief profile of Ghana, including demographic and economic data, before delving into the housing situation in the country. The chapter then presents detailed case studies of affordable housing projects in various locations, including Asokore Mampong, Cape Coast, Kpone, Saglemi, Koforidua, and Wa. For each project, the chapter outlines the background, project details, timeline, challenges faced, stakeholder analysis, technical aspects, and current status. Common themes across these projects include political

instability, funding issues, land ownership disputes, and management challenges. The case studies illustrate the complex nature of affordable housing initiatives in Ghana and highlight the various factors that have contributed to the success or failure of these projects.

CHAPTER FIVE

RESULTS

5.1 Introduction

The previous three chapters focused on the study's problem statement and objectives, a literature review that included a critical discussion of theories and models, and a detailed description of the study's methodology. This chapter consists of a thematic analysis of the data obtained from the field. The analysis of this study's findings is based on responses given during interviews. The following themes were generated through the coding process from information gathered from key respondents to the study: The themes were generated in accordance with the specific research questions of the study. These were in an attempt to provide answers to these questions. All themes and sub-themes were generated in line with the affordable housing projects in Ghana, more precisely with the selected site.

5.2 RQ1: How have PMP been employed in AHP delivery in Ghana?

The purpose of this study is to examine the Project Management Practices (PMPs) commonly employed in affordable housing developments in Ghana. By analysing these practices, the research aims to identify potential flaws or deficiencies that may contribute to project failure. This investigation will help understand how specific project management approaches may be linked to the unsuccessful outcomes of affordable housing initiatives in Ghana. The study question also attempts to investigate whether Ghana's particular context-specific variables are unique in any way that worsens these difficulties. In connection with the above, respondents were asked what project management practices are employed by AHP in Ghana. The information gathered from the field revealed that the various PMPs adopted in the AHP include project integration management, scope management, project resource management, project cost management, project communication management, project risk management, project procurement management, and project stakeholder management. In addition to thematic analysis, a sentiment analysis was performed to evaluate the overall perception of PMPs among project managers.

The results of the analysis revealed that the majority of respondents had a negative sentiment towards the PMPs, indicating that they found them ineffective in managing AHP in Ghana.

Project integration management

With respect to project integration management as an element of PMPs, respondents were asked how project integration management contributes to AHP failure in Ghana. Information retrieved from the field indicated that even though respondents had some knowledge about project integration management, they failed to incorporate it into Ghana's AHPs, while others had little knowledge about the practice. The researcher collated and presented the verbal quotations from the respondents in Table 5.1.

Table 5.1: Causal relationships and sub-themes on project integration management

| Causal Relationship: Sub-themes | Reference from Source |
|---|--|
| Integration Management → Poor project charter | <i>"In my years of experience, I will say the project integration management plan is poor for affordable housing projects. The affordable housing project started in 2007 without a proper project charter in place and is not news in Ghana." (R6)</i> |
| Integration Management → Poor project documentation | <p><i>"The affordable housing initiative is not comprehensive, and the plan that directs the project scope is not clear enough. And this has caused many failures in affordable housing with poor documentation. I blame the government for all these because this will never happen within the private housing sector." (R10)</i></p> <p><i>"For this project, there was something of that sort that was comprehensive to see the project to the later. I will say a project charter, a project plan, monitoring, and control were developed for all the affordable housing projects. Just that most of the things about this project were just verbal, making it not much employable and affected the project, which is why most of the project got abandoned." (R4)</i></p> |
| Integration Management → Poor coordination | <i>"I will tell you the truth: there is no proper coordination or project integration when it comes to affordable housing. That is why there are a lot of outstanding or failed projects with affordable housing." (R3)</i> |
| Integration Management → No coercive layout plan | <i>There was no clearly laid-out project charter for the affordable housing project, project objectives, or cohesive layout plan of action prepared in advance for the affordable housing project, especially the affordable housing project initiated by Kuffour in 2007. (R8)</i> |

| | |
|---|--|
| Integration Management → Lack of timelines and budgetary plan | <i>"The integration of affordable housing projects, in my opinion, lacks essential elements such as timelines and the total cost of the project. This is because, if all the affordable projects had been successful, they should not have failed." (R9)</i> |
|---|--|

It is evident from the foregoing that the respondents were knowledgeable about the most recent project integration management methods and procedures as far as AHP is concerned. This suggests that in order to ensure the successful completion of a project such as AHP, the respondents had a solid understanding of how to efficiently coordinate and unify numerous project parts. Furthermore, their understanding of current practices suggests that they were well-informed about the latest developments and trends in project integration management. However, it was the final execution or implementation that led to the project's failure.

Project scope management

One of the emergent themes was scope management in AHP. In view of this, respondents were asked to indicate the essence of project management scope in affordable housing projects in Ghana. The project managers indicated that, though there is a clear understanding of the project scope, there are often challenges in effectively managing it due to limited resources and expertise. Furthermore, they mentioned that changes in government regulations and policies have an impact on the scope of AHP in Ghana. Table 5.2 addresses the causal relationship and sub-themes that emerged from the interviews.

Table 5.2: Causal relationships and sub-themes on project scope management

| Causal Relationship: Sub-themes | Reference from Source |
|---|--|
| Scope Management → Improper stakeholder consultation | <i>"The scope is what the whole work of affordable housing entails. Therefore, if you neglect the scope, it means you do not understand the scope. That is where the affordable housing projects gets abandoned? Most of these projects scope failure has been lack of proper stakeholder consultation about the project. Example: We are going into a project, what is the scope of the project, we say is affordable, who are our target group, bear in mind that affordability is relative. Therefore, until you know the scope you cannot have a firm budget." (R3)</i> |
| Scope Management → Poor practices | <i>"Project scope is a very important aspect of this whole affordable housing, it is so because when you are doing your gang-chart or WBS you know when the resources must come in for you to achieve your quality, time, maximize profit or reduce waste. We are not doing it, so you see there are a lot of waste on site, misplaced activities on site. So, there is a lot of things we are supposed to do that we are not doing now. Like control scope and validating the scope at each point, I am therefore not surprised that almost all the affordable housing projects has collapse". (R4)</i> |
| Project Management → Scope Poor documentation | <i>"All Government project that were initiated in Ghana since 2007 including affordable housing had a project scope. Just that the Scope management was weak and there is currently no document at the ministry of works and housing to show official scope adoption." (R8)</i> |
| Project Management → Scope Lack of adherence to scope | <i>"Every Government project that were initiated in Ghana including affordable housing had a project scope, as a project manager that has supervised some of the state housing project am very confident about that. The scope is submitted to the necessary authorities so when you are doing your gang-chart you know when the resources must come in for you to achieve a successful outcome of the project, but what do we see, the reality is that the scope are not followed and things are done anyhow, ask yourself that how many of the contractors and project manager has the required qualifications to manage affordable housing project." (R7)</i> |
| Project Management → Scope Improper supervision | <i>"The collection for scope management in affordable housing project has been inadequate. The breadth expands unchecked and there is mostly no proper official authorisation that takes place." (R6)</i> |

According to the aforementioned, it is evident that respondents recognise the significance of establishing and controlling a project's scope. To make sure the project stays on course and achieves its intended goals, this entails defining the project's objectives, deliverables, and boundaries. Effective scope management also aids in preventing scope creep, which raises expenses and causes delays in project completion.

Project schedule management

The study found project schedule management to be one of the PMPs in affordable housing projects in Ghana. Respondents were asked to rate the importance of project schedule management in AHP. The majority of respondents indicate that effective project schedule management is crucial for the success of affordable housing projects in Ghana. However, respondents argue that there is improper implementation of project schedule management in practice, leading to delays and cost overruns. Their views were presented in Table 5.3.

Table 5.3: Causal relationships and sub-themes on project schedule management

| Causal Relationship: Sub-themes | Reference from Source |
|---|--|
| Schedule Management →No existence of practice | <i>“To me I can say that this was not used in the affordable housing projects per my experience and knowledge on project management. If there was anything like proper project schedule management with proper monitoring to ensure its implementation most of the affordable housing would not have failed. It would have seen to it proper completion without any delays.” (R1)</i> <i>“To me I do not see anyone practising project schedule management, in any of the project sites in the affordable housing project in Ghana, if there was, there should have been timely delivery of the project, but what do you see currently, almost all the affordable housing projects have failed, and is a big disgrace to our country”. (R7)</i> |
| Schedule Management →Improper supervision and monitoring | <i>“If you have a project and you do not have a schedule it is not a project. If you do not have a schedule management in place, how will you know when you should finish the project. There is a maxim by one professor that “work expect to fill the available time”. If you do not have a schedule, you will not know what to do at a particular time. Affordable housing project in Ghana is always affected by schedule management as the projects are always affected by a lot of in eventualities like change in government, funding, lack of</i> |

| | |
|--|---|
| | <i>project monitoring to control schedule management, lack of trained or literate project contractor that understand how to achieve project deliverables within set time, lack of project managers at site to coordinate the project with modern project management tools such as gun chart, agile etc.” (R3)</i> |
| Schedule Management → Poor schedule management plan | <i>“There is no project without schedule management, but with affordable housing project I don’t think there was a proper schedule management plan in place, that were captured in the scope, because almost all the projects have been abandoned or failed.” (R10)</i> |
| Integration Management → Poor funding and control | <i>“The major setback to schedule management of these affordable housing project is funding and lack of control. There are no checks on the contractors and the kind of human resource available and all this were caused by lack of funds available to people who were meant to supervise the project, this are all contribution factor to the failure of the project.” (R9)</i> |

The findings above suggested that participants were informed about the project schedule management process and were aware of its importance in ensuring project success. However, it was also observed that some participants lacked a clear understanding of how to effectively manage and update the project schedule throughout its lifecycle.

Project cost management

For project cost management, the study highlighted that cost management planning, cost estimation, budget determination, and cost controls are the basic elements of AHP. Relatedly, respondents were asked about the significance of cost management in affordable housing projects. Information gathered indicates poor cost management in affordable housing projects. Many respondents expressed concerns about cost overruns, lack of budgetary control, and inadequate cost estimation techniques leading to delays and compromises in project quality. The verbal quotes were addressed in Table 5.4.

Table 5.4: Causal relationships and sub-themes on project cost management

| Causal Relationship: Sub-themes | Reference from Source |
|--|--|
| Cost management →No policy document | <i>“If you do not manage the cost well, you will have a cost overrun and the project will not be completed, it is therefore a key aspect as affordable housing is concern. Most of these affordable housing projects were just started without factoring the cost involve in these projects before they were started. Besides there were no policy document with regards to project cost in all the affordable housing project. Therefore, the change in government affected all these projects till date.” (R3)</i> |
| Cost management →Delays in the flow of fund | <i>“Cost management procedures associated with affordable housing project are insufficient and this has affected the government affordable housing project till date. Because the project was a GOG project, the delays in the flow of funds has made almost all the projects to collapse.” (R6)</i> <i>“Affordable housing projects that were started in 2007 have all failed because the project cost was not thought through, there were no funding available for the project, the project was funded by GOG (government of Ghana) without any contingency funds to support the project and this has affected the project till date”. (R7)</i> |
| Cost management → Poor cost estimation | <i>“When it comes to cost in relation to affordable housing projects that were started years back, I will say they have all failed because of poor project cost estimation and lack of funding on the part of the government.” (R8)</i> |
| Integration management → Not factoring cost management | <i>“Today If you ask the ministry of works and housing today about the total cost of all the abandoned affordable housing, they have no idea. Project cost was never factor in the affordable housing project that is the hardest truth. How then do you expect a project to be successful.” (R9)</i> |

The outcome of the interview indicates that respondents are concerned about the cost management aspect of the AHP. They believe that effective cost management is crucial for the success of the project and its overall financial viability.

Project quality management

Another theme that emerged from the interviews was the importance of project quality management in affordable housing projects. Interviewees were asked to indicate their experience with project quality management and its impact on affordable housing projects. Many interviewees expressed the view that effective project quality

management is crucial for ensuring the long-term success and sustainability of affordable housing initiatives. Otherwise, most of the respondents indicate their displeasure with the current state of project quality management in affordable housing projects. They highlighted various challenges, such as inadequate resources, a lack of standardised processes, and limited accountability measures. In Table 5.5 are the verbal quotation from respondents.

Table 5.5: Causal relationships and sub-themes on project quality management

| Causal Relationship: Sub-themes | Reference from Source |
|---|--|
| Quality management → Poor material quality | <i>“As some of the building units have been abandoned for more than a decade, quality will be an issue if these same unites are to be completed and given out to customers. Things have changed for the past 10 years which even those affordable housing project that have been completed some tenant’s or buyers wants to even change the designs in the rooms and has started complaining of material quality.” (R5)</i> |
| Quality management → Poor monitoring and quality control checks | <i>“Project quality is a major setback to this project, most of the project has been abandon and those that were given to SSNIT by the government to complete them has some quality issues, most of the people that bought those houses has been complaining of the quality of the project which raises a lot of issues about the project monitoring and quality control checks.” (1)</i> |
| Quality management → Use of inferior materials | <i>“But with quality control I cannot say same because there was other part of the project that had to be replaced when the contractors returned to site to complete the project and hand over the keys. Atypical example is the woman you met here who was complaining about the window frame in her room. Not all the various aspect of the project passed the quality control test as some contractors chose to use inferior materials.” (R8)</i> |
| Quality management → Poor standards and quality | <i>“I will say plans are not well though through in the first place before the project was initiated, therefore those few affordable housings project that are completed, Standards and quality are missing”. (R6)</i> |
| Quality management → Project not meeting specification | <i>“Project quality is a major problem to this affordable housing project such as specifications adjusting, quality strategy, and assurance procedures are all flaws that leads to problems in quality management that has caused the already completed affordable housing project to lose its value.” (9)</i> |

It could be said that respondents are well informed about the importance of project quality management. They understand that it is crucial for ensuring that project deliverables meet the required standards and satisfy customer expectations.

Project resource management

Respondents also indicated through the interviews that they believe effective project resource management is crucial for affordable housing success. However, from the interviews, respondents indicated that the affordable housing projects failed due to ineffective project resource management. This failure was attributed to a lack of proper planning and allocation of resources, leading to delays in construction, cost overruns, and inadequate quality control (refer to Table 5.6).

Table 5.6: Causal relationships and sub-themes on project resource management

| Causal Relationship: Sub-themes | Reference from Source |
|---|---|
| Resource management → Inexperienced project managers | <i>“It is important to note that most of the contractors were not resourced, again there were no proper project managers employed on site, most of these project managers had no knowledge in project management. Again, most of the plan resources for the project were not released to contractors on time and sometime the resource / materials do not arrive as planned at all.” (R2)</i> |
| Resource management → No room for planning | <i>“Yes, project resource management is critical part of affordable housing project, because if you do not manage your resources well how do you complete the project. With the affordable housing project, one was not able to plan the resources for the project, that is, the physical project resource was provided by the central government in Accra so there was no room to plan the project according to the available resource, in order words “work with what you have.” (3)</i> |
| Resource management → Use of inferior materials | <i>“It is important to make it clear to you that most of the contractors that were employed on affordable housing project were not resourced, resource estimation was poor, Control over the distribution of resources were lacking and all these affected the project.” (R6)</i> |
| Resource management → Untrained human resource and | <i>“To me I will categorize resources into two parts human and material resources. With human resource, I will say qualified trained human resource were not employed to embark on this affordable housing project and every meaningful Ghanaian knows about this, contracts were given based on affiliations. With materials resources, because the project was a GOG project all the materials were supplied from the central government to the contractors so at a point the materials</i> |

| | |
|--|---|
| | <i>supply stopped when there was no cash flow which also affected the affordable housing project.” (R7)</i> |
| Resource management → Inadequate cash flow | <i>“To me the major setback to affordable housing project was resource management, there were poor human resource on site and funds that were to be made available for the affordable housing project were not forthcoming.”(9)</i> |

From the analysis, it could be deduced that interviewees are aware of the significant impact that effective resource management can have on project outcomes. They recognise that without proper allocation and monitoring of resources, projects may face delays, cost overruns, and a decrease in overall quality.

Project communication management

In relation to AHP, project communication was observed as one of the PMPs that could enhance the success of the projects. From the perspective of the interviewee, project communication management is crucial for the success of AHP. It involves effectively conveying information, updates, and expectations to all stakeholders involved in the project. Yet, some interviewees revealed that project communication management in affordable housing is a long-standing issue that needs to be addressed. They mentioned that there is often a lack of clear and consistent communication channels, leading to misunderstandings and delays in decision-making. Respondents' views were illustrated in Table 5.7.

Table 5.7: Causal relationships and sub-themes on project communication management

| Causal Relationship: Sub-themes | Reference from Source |
|---|--|
| Communication management → Effective communication lacking | <i>“There was lack of communication between the contractors and the client and even site managers because things were not that formalised. So, I can say there was none.” (R2)</i> |
| Communication management → Poor expectation management plan | <i>“There has always been a poor communication between contractors and the client -government of Ghana. Sharing and transmitting information among stakeholders are inconsistent with poor expectation management plan.” (R6)</i> |
| Communication management → Difficulty in passing on information | <i>“Communication is a major Ghanaian problem, who to communicate with is always a problem when it comes to government project and affordable housing project is no exception. The worst part was the contractors working on the project were struggling to get somebody to even speak to when there are delays with funds and materials, the answers they kept getting was ‘I don’t know.’ (R7)</i> |
| Communication management → Improper communication channel | <i>“There was no proper channel of communication for affordable housing project, and this made communication very difficult between the contractors and the client.” (R9)</i> |
| Communication management → Lack of coordination | <i>“If there is no communication between the consultants, contractors, project team members, and stakeholders of the project, you cannot accomplish the project. The lack of coordination between the top and the bottom is one of the main problems with affordable housing. Communication gap in affordable housing has been a problem till date and if there is a gap in communication how do you expect a project to be completed without failing.”(R10)</i> |

The results show that even though respondents were aware of communication management, they did not consistently practice effective communication in AHP. This highlights the need for key stakeholders to prioritise training and resources for improving communication skills among AHP teams.

Project risk management

Project risk management is crucial for successful project execution, involving regular monitoring and evaluation of potential risks throughout the project lifecycle. However, respondents expressed dissatisfaction with lack of transparency, communication, and

stakeholder involvement. They called for clearer guidelines, accountability, and more proactive risk management. Respondents expressed their candid opinions as indicated in Table 5.8.

Table 5.8: Causal relationships and sub-themes on project risk management

| Causal Relationship: Sub-themes | Reference from Source |
|--|---|
| Risk management → No preventive systems | <i>“There were no preventive systems in all the affordable housing project to detect, analyse and assess risks. Risk management were completely absent.” (R8)</i> |
| Risk management → No policy on risk management | <i>“To the best of my knowledge and experience as a project manager, I can emphatically say there was no project risk management. How can a project be abandoned for years if there was?” (R6)</i> <i>“To me I cannot say I saw or have seen any proper risk management plan in place in these affordable housing project.” (R1)</i> |
| Risk management → Poor planning towards risk | <i>“What I will say about risk is that Proper implementation of risk management activities like detection of risk, assessment, reaction and tracking of risk was not planned and put in place in affordable housing project. Ghana as a country lack risk planning with a proper layout mitigation plan.” (R9)</i> <i>“Risk management, recognising, analysing, developing reactions, and tracking risks do not truly occur with affordable housing and if all these risk factors are not present you do not expect your project to succeed, and this has caused all the affordable project to fail.” (R6)</i> |
| Risk management → Political risk | <i>“Not at all, because if project risk was factored into affordable housing am not sure most of these projects would have failed or abandoned, the client should have known that the most important identifiable risk hindrance to these affordable housing is political risk.” (R2)</i> |

Project procurement management

In relation to the procurement management, respondents were asked whether this practice is applicable to AHP in Ghana. Respondents claimed that effective project procurement management ensures that the necessary resources are obtained in a timely manner and at the best possible cost to meet project objectives. In the context of AHP, respondents revealed that procurement procedures are not followed.

Table 5.9: Causal relationships and sub-themes on project procurement management

| Causal Relationship: Sub-themes | Reference from Source |
|---|--|
| Procurement management → improper procurement procedures | <i>“Almost all the contractors were handpicked so I cannot say the proper procurement procedure was followed.” (R4)</i> |
| Procurement management → wrong procurement of materials | <i>“If wrong people are employed or awarded for a project then straight away the procurement process for material for the building project will go wrong and that is the problem we have as a country. I even helped some of the contractors to get contract as I was close to one of the ministers then” (R5)</i> |
| Procurement management → No standardisation in procurement | <i>“The government Policies for choosing and hiring suppliers, subcontractors and providers are not standardised in procurement. Contract management after award is not managed well and this has affected all the affordable housing projects” (R6)</i> |
| Procurement management → Financial constraints | <i>“Procurement issues are handled by procurement authority when it comes to government project and affordable housing was no exception. One thing you have to realise is all the materials procurement were done in Accra, but I do not know what affected it that all the projects got failed but I think it was financial related constraints” (R7)</i> |
| Procurement management → procurement contracts based on political affiliation | <i>Choosing suppliers should have followed the normal procurement laws but what do we see, procurement contracts are based on family and friends and political affiliation” (R9)</i> |

| | |
|---|---|
| Procurement management → Violation of procurement laws | <i>“Affordable housing has several different components, including project procurement. When purchasing building materials, using the wrong channels, or violating the law has had an impact on the affordable housing project in Ghana, procurement laws are not followed and that is the outcome of what we see today”(R10)</i> |
|---|---|

The result shows that even though project procurement management is fundamental to the success of AHP, yet there is lack of adherence to procurement among AHP stakeholders.

Project stakeholder management

The project stakeholder management was indicated by respondents as one of the components of PMPs. The practice includes stakeholder identification, planning stakeholder engagement, managing stakeholder engagement, and monitoring their engagement. In conjunction with this, interviewees were asked the significance of stakeholder management in projects such AHP in Ghana. Surprisingly, information gathered from the field indicated that stakeholder management is not fully practiced as far as AHP is concerned. This suggests that there may be a gap between the theoretical knowledge of stakeholder management and its practical implementation in the field. In view of some interviewees are demonstrated in Table 5.10.

Table 5.10: Causal relationships and sub-themes on project stakeholder management

| Causal Relationship: Sub-themes | Reference from Source |
|---|--|
| Stakeholder management → No stakeholder consultation | <p><i>"I do not think that was done. The government had a vision, he brings it out and already had the target group in mind, the government then proceeded to give the contracts out to contractors to execute its vision. That was all, no stakeholder consultation was done." (R4)</i></p> <p><i>"President Kwame Nkrumah appointed state agencies to oversee government building projects, but inadequate stakeholder consultation led to the failure of affordable housing projects, resulting in politicians' interference and political influence." (R1)</i></p> |
| Stakeholder management → No stakeholder engagement | <p><i>"There are no stakeholder engagement or consultation at all levels in the affordable housing project. Once the project fails, that is when stakeholders become agitated". (R8)</i></p> <p><i>"I do not think project stakeholder engagement is done from the inception to the closure of the affordable housing project, and this is not new to Ghanaians". (R9)</i></p> |
| Procurement management → No stakeholder involvement | <p><i>"What I will say is there is no stakeholder involvement or consultation in affordable housing project in Ghana." (R10)</i></p> <p><i>"Stakeholders' involvement during and after the project is not properly managed, once the government initiates the project, there is no consultation or stakeholder involvement". (R6)</i></p> |
| Procurement management → Ineffective communication | <p><i>"These politicians they know nothing about proper procedure, they do whatever they want and in the end they fail. I did not see anything like project stakeholder management which plays an integral part in this project. Even the consultant who was working for the client was ignored at a certain point. No proper communication between them ended with the failure of the project." (R4)</i></p> |

Arguably, the result indicates a lack of understanding or awareness of the importance of stakeholder management in the context of AHP. Without proper stakeholder management, the outcomes of AHP may not fully consider the perspectives and interests of all stakeholders, leading to potential conflicts or dissatisfaction. Therefore, it is essential to prioritise stakeholder engagement and ensure their involvement throughout the AHP process to achieve optimal results.

Also, the researcher probe further to identify the specific stakeholder management practices that contribute to the unsuccessful implementation of affordable housing projects in Ghana. In line with this, various questions were formulated to provide answers to the research questions. In essence, respondents were first asked to indicate the key stakeholders and their respective roles as far as the affordable housing project is concerned. Responses from the interviewees highlighted various stakeholders involve in the AHP in Ghana. These include but not limited to state housing corporation, social security and national trust, ministry for works and housing, engineering fraternity or contractor, rent control, private sector, state institute of construction, habitat international and department of rural housing as emerged from the interviews. Respondents further indicated that these stakeholders play diverse roles in AHP. From the interviews, sub-themes such as initiation of projects, recruitment of project management team, designing and supervision consultant, ensuring affordability of houses, sale of project, ensuring availability of funds, and ensuring strict bidding to corporate decision (see Figure 5.1

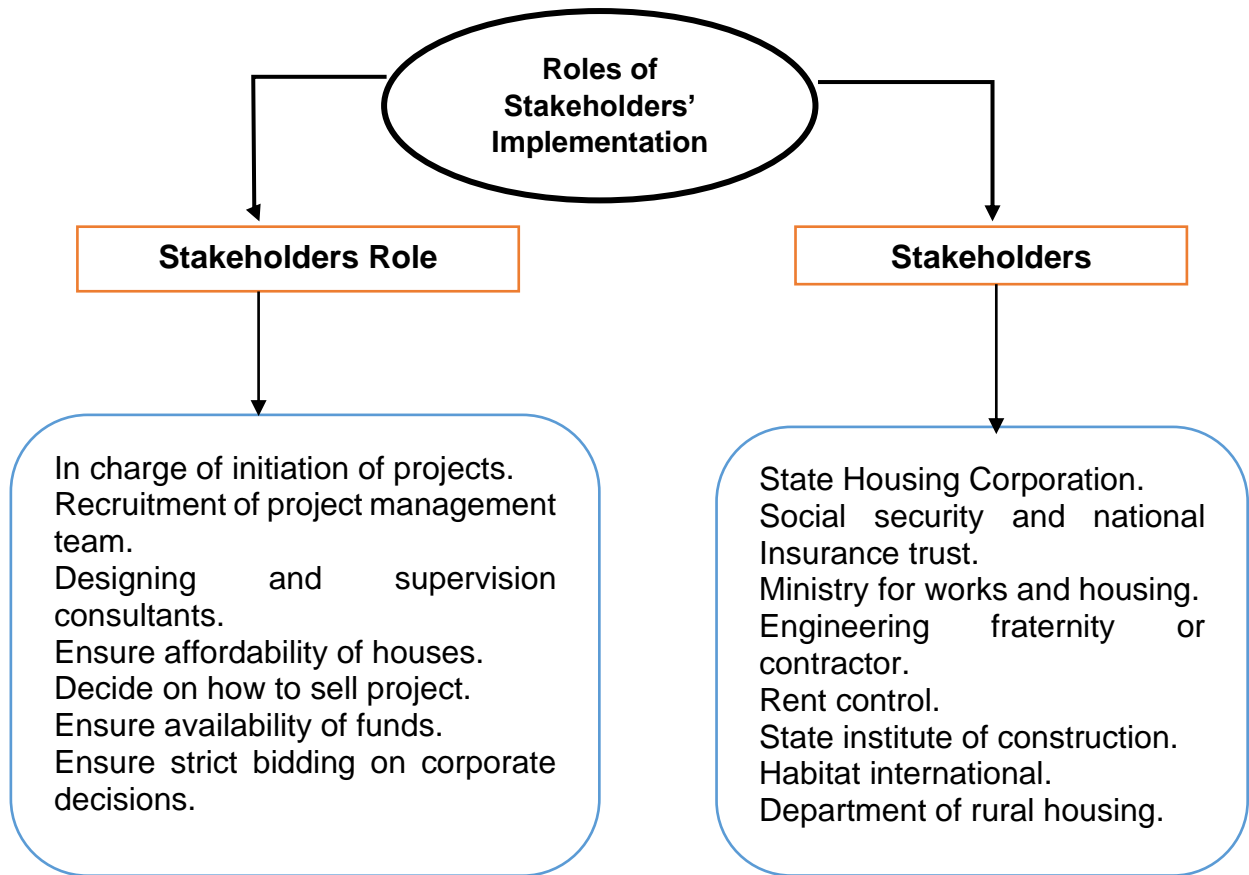


Figure 5.1: Stakeholders and specific roles played in AHP implementation

Nevertheless, the interviews presented arguments suggesting that the diverse approaches to stakeholder management have resulted in the unsuccessful implementation of the AHP. The ineffectiveness of stakeholder management can be attributed to various issues, including the non-engagement of stakeholders such as chiefs and community members, as well as a lack of information. From the responses to the source in relation to verbal quotations of respondents, it is evident that inefficient stakeholder management practices result in the failure of AHP in Ghana.

Table 5.11: Causal relationships and sub-themes on stakeholder management practices

| Causal Relationship: Sub-themes | Reference from Source |
|--|---|
| Main stakeholders → state housing corporation, state housing corporation, SSNIT, ministry for works and housing, engineering fraternity or contractor, rent control, private sector, state institute of construction, habitat international, and department of rural housing | <p><i>"I know of the state housing corporation who are responsible for housing projects in Ghana" (R12)</i></p> <p><i>"There are various stakeholders in AHP. I know of ministry for works and housing, SSNIT who have been handed one of the projects in recent times. Also, there is the rent control and other private sectors." (R17)</i></p> <p><i>"ooooh, for me, I know about department of rural housing and state institution of construction "(R1)</i></p> |
| Stakeholder role → initiation of projects | <i>"I was part of the team that started Boteyman affordable housing in 2007, I was the quantity surveyor to state housing. The state housing company were given 5 of the projects. The engineers and I were in charge. I was in charge of the labour to the contractors and then the engineers were also playing their role. At a point in time, I moved to Kumasi Asokore Mampong affordable housing project site. I was also working on the same affordable houses at Koforidua, but it has been abandoned since 2007 till date." (R11)</i> |
| Stakeholder role → designing and supervision consultant | <p><i>"We supervise the contractors that are appointed by the client. We do the oversight responsibility of the project. My specific role is to make sure that the contractor goes by what has been specified in the bill of quantity." (R17)</i></p> <p><i>"As an agency are there to support all government project to make sure the right things are done, in terms of planning, execution and monitoring of the project to specification" (R12)</i></p> |
| Stakeholder role → recruitment of project management team | <i>"I make sure we get the right developers for the affordable housing projects." (R13)</i> |
| Stakeholder role → ensure availability of funds | <i>"Their work involves a lot of money, so we give funds to support the contractors and the government, we do so with the aim to recoup what we have invested in the project." (R16)</i> |

Evidently, it is obvious that stakeholders are essential to the success of Ghana's AHP in implementing project management techniques. They offer useful information and assets that can contribute to the success of these projects. For instance, while government representatives can offer funding and regulatory support, community leaders can assist in locating appropriate sites for housing developments. Additionally, investors and developers can contribute their knowledge and experience to the project, ensuring that it is finished on schedule and within the allocated budget. It is crucial to remember that stakeholders must cooperate in order to accomplish their objectives. This calls for efficient coordination, communication, and a shared dedication to the project's accomplishment. In the end, stakeholders can contribute to the creation of much-needed affordable housing options for low-income families in Ghana by working together.

Stakeholder management is crucial for the successful implementation of affordable housing projects in Ghana. However, obstacles such as lack of effective communication, limited funding, lack of political commitment, and cultural and social norms can hinder progress. These issues can lead to delays, disputes, and failure of projects. Cooperation among all parties is essential to overcome these challenges and ensure the successful execution of affordable housing initiatives in Ghana.

Moreover, exploration of the extent to which inadequate project management practices contribute to the success or failure of affordable housing projects in Ghana was made. In conjunction, respondents were asked to provide their insights and experiences regarding the specific project management practices that they believed were lacking or ineffective in affordable housing projects. The following emerged from the interviews (see Fig.5.2).

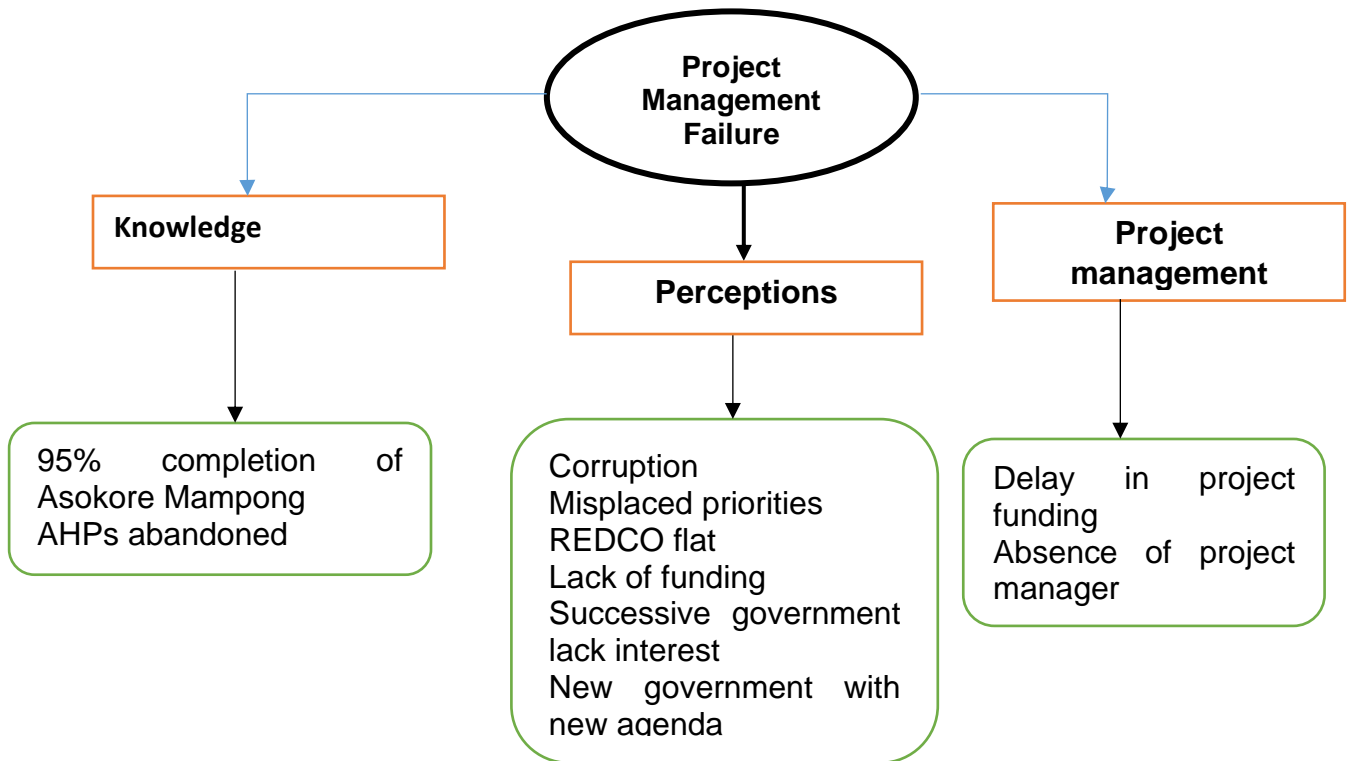


Figure 5.2: Knowledge and perception on project management failure

Table 5.12: Causal relationships and sub-themes on stakeholder management practices

| Causal Relationship: Sub-themes | Reference from Source |
|---|---|
| Knowledge → 95% completion of Asokore Mampong project | <i>In the news you can hear of the Asokore Mampong, which is 95% completed, Koforidua, Seglemla affordable housing has been abandoned, and Kpone under TDC they are developing some. A few years ago, the police came for one of the blocks to develop it for themselves. That one I will not say it has failed because the project is still ongoing. I think the Tamale one too has been abandoned for some years now. These are the ones I know of, I do not know if there are more. But these are the ones that I know of when I joined the company in 2014 and had worked on previously during President Kuffuor's time."</i> (R10) |
| Knowledge → abandoned projects | <p><i>"I have not involved in any of the failed affordable housing units, but I know that president Kuffuor started something like that during his time but at the moment they have been left in the bush. The current one is the Saglemla which is now under litigation."</i> (R1)</p> <p><i>"For now, I am not involved with any. Okay we were having another one at Tamale, should I say it has failed, there was pressure, so my boss was linked with another consultant to take care of that Tamale project. I think that architect did not have time to manage it, so all the attention came to Kumasi and Accra site. For that one as we speak now it is abandoned."</i> (R7)</p> <p><i>"Well, I know of the Dedesua affordable housing project that one was another site in Ashanti Region here. The fact of the matter is that the land was secured, sod was cut but the project didn't see the light of the day. I can say that it was a project that was started but couldn't see the light of the day so I cannot say it is a failed project or a project that we couldn't start."</i> (R4)</p> |
| Perceptions → REDCO flat | <i>"My take is it didn't start from now. Look at the affordable housing units Kwame Nkrumah started now using the REDCO Flat. It was targeted at normal workers. After he left office, the project was stalled because the government which succeeded him was also looking at a different project and didn't have interest in continuing the project. President Kuffuor came and most of the building was about 95 percent, some were even habitable but the one who succeeded him had no interest in it and left it to rot. Look at this Saglemla project, the same thing that is going on. So is about misplaced priorities."</i> (R1) |
| Perceptions → new government with new agenda | <i>"The reason is that they want to start something on their own, I mean personal interest. A typical example is when president Kuffuor left power, those who came felt that they have taken their 10% so if they are to continue, they wouldn't get any profit. Then they</i> |

| | |
|--|--|
| | <i>will decide to also start a new similar project elsewhere so that they can take their 10%.”(R20)</i> |
| Perceptions → successive government lack interest | <p><i>“President Kuffuor started eight years he couldn’t finish it, there was a change in government. NDC came and the whole project was abandoned, they decided to work on it the later part of their eight years. The time they decided to move back to site there was another change in government. So, the NPP government came in just to pick up, and I can tell you we have sold a lot of the apartments within the Asokore Mampong affordable housing.” (R4)</i></p> <p><i>“Basically, it has to do with change of government. When there is a change of government they refuse to continue with the projects.” (R12)</i></p> |
| Stakeholder role → misplaced priorities | <i>“Their work involves a lot of money, so we give funds to support the contractors and the government, we do so with the aim to recoup what we have invested in the project.” (R16)</i> |
| Stakeholder management practices → ineffective communication | <i>“I will say there were ineffective communication and interaction and with the population or the public prior to the start of the affordable housing project, especially places where the affordable housing projects were initiated. When we started the project, we encountered a lot of roadblocks and demonstrations especially when people realised their compensations for the land used for the construction were not paid”. (R11)</i> |
| Project management practices → delay in project funding | <i>“Yes, because when the project manager is not passionate about what he is doing, the project won’t move on. Because if you are passionate about where you want the project to reach and it’s not there you will feel worried. Project management is key, and as a project manager if your client is delaying payment to contractors. Find out, if your contractors have money the work will be scheduled on time but if they don’t have money, it will not complete on time. The project manager is the middleman between the client and the contractor. Sometimes the contractors need to be pampered to get the job done, as well as the client too has to find a way to coordinate them so that they can meet up with the cash flow” (R19)</i> |
| Project management practices → absence of project manager | <p><i>“Project management has come to help, but unfortunately those project management practices are not utilised due to lack of project managers or qualified project personnel.” (R14)</i></p> <p><i>“I think so because if we are practicing it would have achieved the project target. That is having the project at a lower cost, with the right and desired quality if we were following our project management schedules.” (R1)</i></p> |

The aforementioned makes it clear that a number of variables, including funding, stakeholder engagement, and effective communication, can affect how well such projects turn out. To make sure that these factors are properly managed and coordinated, project management techniques are crucial. Effective project scheduling and planning, for instance, can ensure that resources are allocated effectively and that deadlines are met. Similar to this, risk management techniques can assist in identifying potential difficulties and reducing them before they worsen. In the end, a variety of factors will determine whether affordable housing projects in Ghana are successful or unsuccessful, but sound project management techniques will undoubtedly play a significant role in their success or failure.

5.3 RQ2: What challenges impede effective Project management

Implementation in AHP in GH?

In a quest to find out the various challenges faced by project managers in implementing affordable housing projects in Ghana, participants were asked to share their experiences from the awarding stage of the contract to the final completion. The themes that emerged from the interviews show that there are challenges in the awarding of AHP in Ghana. This includes poor procurement processes, the selection of skilled and qualified personnel, and tendering issues. In terms of general challenges, the data gathered depicts a lack of on-time funding, political hindrances, a lack of fund acquisition, interference from politicians, a lack of competent contractors, and legal regimes governing permit acquisition as the major constraints that impede the successful implementation of AHP in Ghana (see fig.5.3).

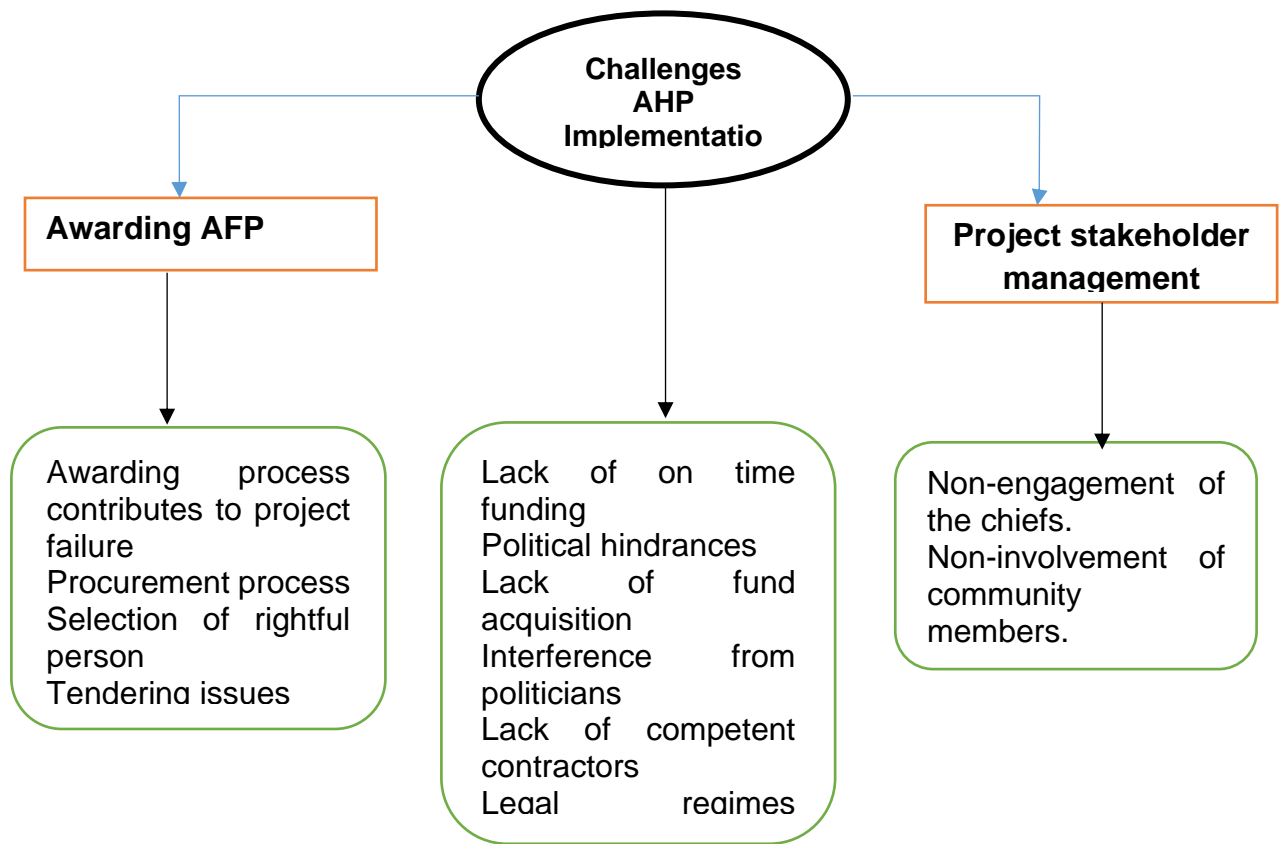


Figure 5.3: AHP Implementation challenges

Challenges to PMPs implementation

Respondents further indicated project stakeholder management as a challenge to AHP implementation. All these challenges, together with other factors, contribute to the failure of AHP implementation in Ghana. The Table 5.12 addressed the verbal narratives of respondents.

Table 5.12: Causal relationships and sub-themes on AHP implementation challenges

| Causal Relationship: Sub-themes | Reference from Source |
|---|---|
| Awarding AHP → poor process contract awarding Tendering issues | <i>“From our politicians, also most of the construction companies don’t know what to do when they get the contract. They don’t employ qualified project managers, when they don’t it affects the project and makes it fail. That’s why these projects incur a lot of cost and at the end of the day the building no longer becomes affordable.” (R1)</i> |
| Awarding AHP → selection of rightful person | <i>“We have no authority to choose contractors on the basis of competence instead of cheapest bid. Eventually, quality problems result from this.” (R15)</i> |
| General challenge → lack of on time funding. Interference from politicians | <i>“It is not feasible to produce high-quality work that will withstand usage of time within the allocated set funds especially when contractors are struggling to get funding from the government and banks are unwilling to realise fund to contractors.” (R2)</i> <i>“Payment and maybe the commencement of the project when there is no advancement even to the contractor. It is one of the biggest challenges. One of the challenges is that banks are not willing to give loans to contractors in Ghana. Now project management in Ghana, if you want to do a project and the client doesn’t give you enough money to start you cannot do it at all.” (R11)</i> |
| General challenge → political hindrances/interference | <i>One is political hindrances, number two is availability of funds on time. That one is categorised into two (availability of funds). I will give you an example of the government of Ghana affordable housing project. Initially it was a GOG project, the government said it does not have funds to continue the project, so SSNIT was brought in. Sometimes the funds can be available but will not be released on time. Sometimes too the funds will not be there at all, they will not have a secured funding for the project.” (R13)</i> |
| General challenge → legal regimes governing permit acquisition | <i>‘Also, there is long bureaucratic processes. You will send a document to an agency for approval which is supposed to take 3 days or 6 days, and it will be there for 3 months. They will give all kinds of excuses for not approving it within a short period. The legal regimes governing acquisition of permits also affects project management. Because a licence is required to start a project, and the delay affects the project.” (R13)</i> |
| General challenge → lack of competent contractors | <i>“.....one is the acquisition of land for the affordable housing, two the financial input, and the type of people used in the construction of the affordable houses is also another challenge. The type of people been used both skilled and unskilled labour.”(R3)</i> |

According to the information presented above, project management practices for low-cost projects in Ghana face a number of difficulties. Lack of resources, including funding, personnel, and equipment, is one of the biggest challenges. Project planning and execution may be difficult as a result, resulting in delays and cost overruns. Cultural factors like a reluctance to question authority or a lack of trust between team members may also hinder effective project management. The complicated regulatory environment in Ghana is another difficulty because it can lead to administrative roadblocks that impede project progress. Finally, there might be problems with coordination and communication between various parties involved, such as local communities, contractors, and government organisations. The extent of these challenges depends on the specific project and the individuals involved, but they can significantly impact the overall success and timeline of the project.

5.4 RQ3: How can PMP be developed to improve AHP success in Ghana

The research question sought to identify strategies for implementing effective project management practices in Ghana's affordable housing projects to ensure their success. In accordance with this, various questions were asked by the researcher in an endeavour to provide answers to the research questions. Respondents were asked to indicate some measures or steps that can be taken to implement effective project management practices in affordable housing projects in Ghana. In response to the question, it emerged that there is a need for proper procedure in awarding AHP contracts and selecting the right housing institution were some of the measures suggested. Respondents further echoed the need for standardised and transparent evaluation criteria for awarding AHP contracts. Participants emphasised that such criteria could ensure fairness and equal opportunities for all potential contractors. Additionally, the data suggested that regular monitoring and evaluation of selected housing institutions' performance could help ensure consistent delivery of quality housing projects. (refer to Fig.5.4).

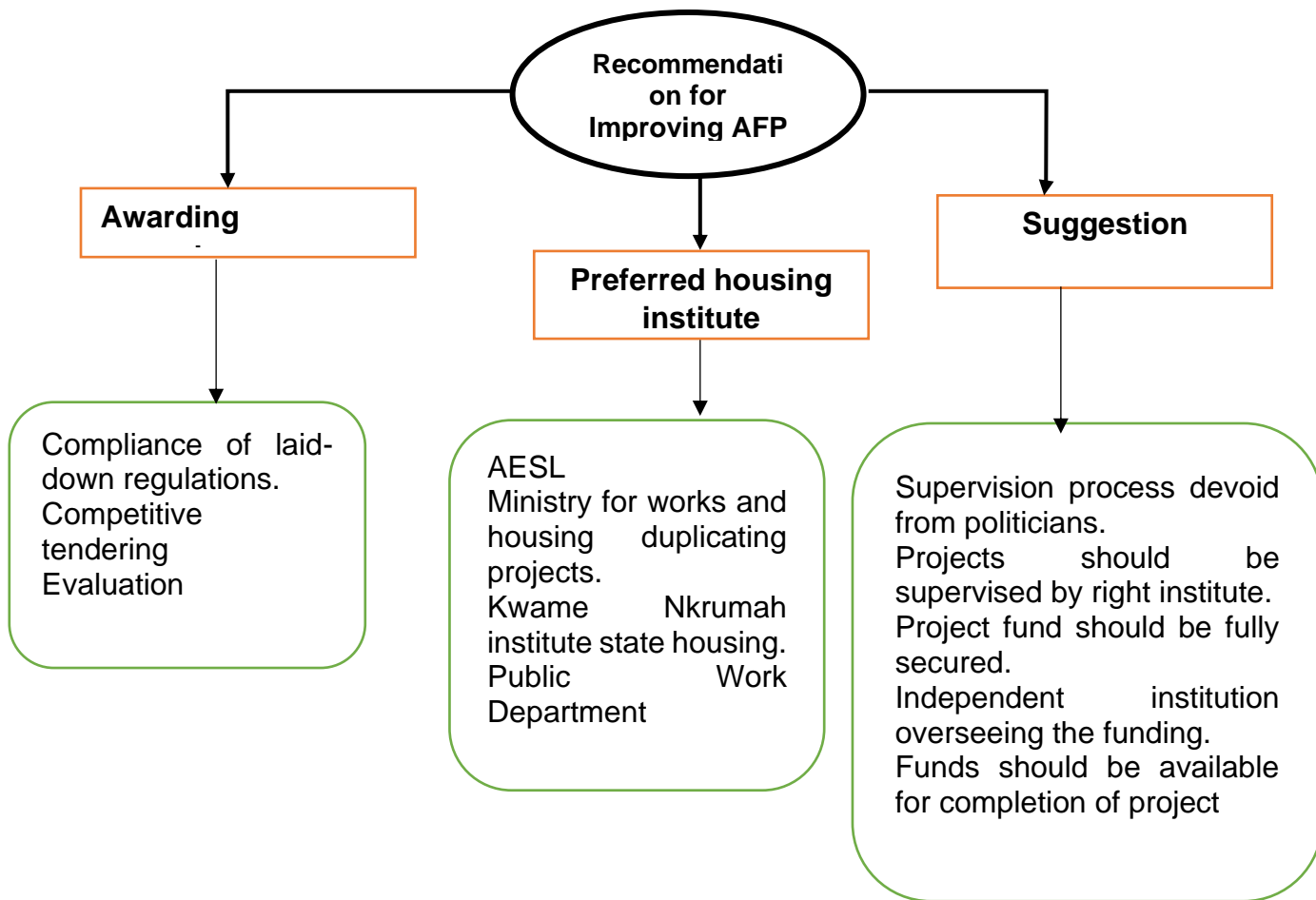


Figure 5.4: Suggestions for effective PMPs implementation in AHP

Table 5.13: Causal relationships and sub-themes on effective PMPs implementation in AHP

| Causal Relationship: Sub-themes | Reference from Source |
|--|--|
| Awarding AHP → compliance of laid-down regulations | <i>“The systems are already in place like it should go to competitive tendering, evaluation should be done and so on. The number of contractors that are supposed to apply to the project is already there. The system are there just that there is no compliance. Compliance to procedure are the main fault for this failure.” (R18)</i> |
| Awarding AHP → competitive tendering | <i>“There should be genuine process. If a genuine tendering is done and the client is also willing to release the money, there wouldn’t be any failure.” (R7)</i> <i>“hmmmmmmmm.....it all balls down to the construction aspect and the contractor who have been employed to do the job. The timeframe will be met if the right contractors are employed.” (R5)</i> |
| Awarding AHP → evaluation | <i>“There should be a national policy on affordable housing because by all means there will be a change in government. There should be a proper national policy that will prevent people from discontinuing projects from the previous government.”(R14)</i> |
| Preferred institutions → AESL | <i>“Yeah, I think that will be the right thing. When we have a national framework and then TDC (Tema Development Corporation), AESL (Architectural Engineering Services Limited), PWD and the individual estate management system are signing up to it am sure we are going to achieve a better result. Because there is no framework, everybody builds and price it anyhow with no proper basis. This framework will also help us in doing green construction. Green construction means construction that is done to preserve the environment. If there is a framework the framework will pick up all these little issues where everyone will stand up to it and if they are not able to do it they will be called to answer.” (R1)</i> |
| Preferred institutions → Kwame Nkrumah institute state housing | <i>“What I will say is that government should resource the various institutions like Nkrumah did. He was able to link these institutions the Ghacem, iron rod companies which make them get it at a cheaper price which affects the entire building cost.” (R15)</i> |
| Strategies → projects should be supervised by right institute | <i>“I believe that it goes as far as changing the narrative of the government institutions' side. Because they deal with project management. I think they have to be fair in the selection of project managers for specific projects. It shouldn’t be a political base, for most of the projects their project managers don’t even have project management certificates, but they call themselves project</i> |

| | |
|--|---|
| | <i>managers, managing a contract. Is a big problem we have in this country, people with qualifications don't get a job.” (R10)</i> |
| Strategies → Clear cut framework needed | <i>“I think there should be a national policy as it will stop all the abandonment of affordable housing projects.” (R11)</i> |
| Strategies → project fund should be fully secured | <i>“If there are any affordable projects is to come on, I think they should get their finances in order and payment be made within a short period. Even with the six-storey building it will take only 6 months to 12 months to complete unlike the long period it took because of lack of funds to pay the contractors. Is all about funds, if the building has four storeys building it should not take more than 12 months to complete.” (R19)</i> |
| Strategies → supervision process devoid from politicians | <i>“First, they should employ qualified project managers, there should be a law governing project management in Ghana so that those project management practitioners managing it when they fall short of what they are to do they can be punished. Politicians should avoid interferences with government affordable housing project and allow qualified contractors with technical know how to handle government project.” (R1)</i> |

Several strategies can be suggested to enhance the application of project management techniques in Ghanaian affordable housing projects. First and foremost, it's crucial to establish precise project goals and objectives that are in line with the demands of the neighborhood. This will help to prevent any misunderstandings or conflicts in the future and will help to ensure that all stakeholders are working toward a common vision. Secondly, it is essential to have a clear project management plan in place that specifies the task scope, budget, schedule, and resource needs. To keep this plan current and useful, it should be regularly reviewed and updated as needed. Thirdly, successful project management depends on clear communication. Meetings with all parties involved on a regular basis are necessary to keep everyone updated on the status, difficulties, and next moves. Establishing clear channels of communication among team members is also crucial so that everyone knows who to contact with any questions or concerns. Fourthly, having a knowledgeable and experienced project team is crucial.

5.5 Chapter Summary

This chapter has provided a comprehensive analysis on the study conducted on affordable housing projects (AHPs) in Ghana, with emphasis on project management practices and associated challenges. The findings have revealed significant deficiencies and gaps across PM knowledge areas in Ghanaian AHPs, as well as context-specific challenges that exacerbate these issues. The findings of this study have revealed that affordable housing issues in Ghana are interrelated and affect various aspects of project management and stakeholder involvement.

The overall poor practice, other gaps in integration, scope definition and management, and stakeholder engagement suggest that the problem is systemic in the current approach to affordable housing delivery in Ghana's public sector. A recurring theme that emerged in the research was the absence of a strategic framework or integrated nationwide affordable housing policy at the national level. This sentiment was echoed by several respondents, emphasising the need for a more structured and comprehensive AHP framework in Ghana.

As respondent R11 stated, "I think there should be a national policy as it will stop all the abandonment of affordable housing projects" (Table 5.20). This view was further reinforced by respondent R14, who emphasised the importance of policy continuity across different administrations: "There should be a national policy on affordable housing because by all means there will be a change in government. There should be a proper national policy that will prevent people from discontinuing projects from the previous government" (Table 5.20).

The need for a comprehensive national framework was elaborated on by respondent R1, who highlighted its potential benefits: "Yeah, I think that will be the right thing. When we have a national framework and then TDC (Tema Development Corporation), AESL (Architectural Engineering Services Limited), PWD, and the individual estate management system are signing up to it, am sure we are going to achieve a better result. Because there is no framework, everybody builds and prices it anyhow with no proper basis. This framework will also help us in doing green construction. Green construction means construction that is done to preserve the environment. If there is a

framework, the framework will pick up all these little issues where everyone will stand up to it, and if they are not able to do it, they will be called to answer" (Table 5.20). This statement not only underscores the need for a national framework but also points to its potential to address various issues identified in this study, including standardisation of practices, environmental sustainability, and accountability.

The challenges identified range from technical project management deficiencies to broader institutional and political issues. The lack of proper documentation and planning, exemplified by the absence of project charters and clear scope statements, suggests a fundamental gap in project management capacity and practice. As respondent R6 noted, "The affordable housing project started in 2007 without a proper project charter in place" (Table 5.3). Furthermore, the study revealed significant issues in stakeholder management, with a lack of active participation and inclusion of important stakeholders, particularly community members and intended beneficiaries. This was evident in respondent R11's statement: "There were ineffective communication and interaction with the population or the public prior to the start of the affordable housing project" (Table 5.14).

The research also uncovered context-specific challenges such as political interference and bureaucratic delays that exacerbated project management difficulties. As respondent R13 highlighted, "One is political hindrances, number two is availability of funds on time" (Table 5.18), indicating how political factors and funding inconsistencies severely impact project outcomes.

Several key results have emerged that both confirmed initial assumptions and revealed unexpected insights. The study confirmed the initial assumption that there are significant deficiencies in project management practices across all knowledge areas in Ghanaian AHPs. Particularly striking was the consistent lack of proper documentation and planning, suggesting a systemic problem in the approach to project management in Ghana's public sector. The extent and nature of political interference stood out as unusual, revealing a deeper issue of political economy in public projects that goes beyond typical bureaucratic challenges. The finding that political changes often lead not just to project delays but to complete abandonment and initiation of new projects was particularly striking, revealing a deeper issue of political economy in public projects.

Although some level of stakeholder management challenges was expected, the degree of stakeholder exclusion, especially the community members and beneficiaries, was a surprise. This points to a more profound issue than was previously thought in regard to community involvement and project stewardship. The findings further revealed that resource constraints were more serious than anticipated, especially in the area of personnel. The findings that a large number of project managers lack minimum project management certifications suggest a more profound capacity deficiency than previously anticipated. An unanticipated finding was the high level of awareness of the respondents about the absence of a national policy for affordable housing. This implies that there is a better appreciation of the systemic problems by the stakeholders than was thought before.

The study further revealed that procurement problems in AHPs are not only corruption or inefficiency as was expected but rather a combination of political influence, resource constraints, and institutional vulnerabilities. This was an intriguing discovery because previous research suggested that procurement issues are complex and have multiple dimensions.

Altogether, these findings suggest the need for a systems approach to meeting the challenges of the affordable housing sector in Ghana. Focus on technical aspects of project management but also consider the broader socio-political environment, stakeholders, and institutions in which AHPs operate. In the next chapter of this study, the researcher will discuss how the above findings informed the development of the Integrated Sustainability Affordable Housing (ISAH) framework. This framework is intended to offer a comprehensive, national approach that several respondents called for, to meet the complex, multifaceted issues outlined in this study and to offer a structure for enhancing affordable housing delivery in Ghana.

CHAPTER SIX

DISCUSSION

This section of the study provides a thorough examination of the outcomes from the empirical research derived from the inquiry conducted on the shortcomings of government affordable housing projects (AHP) in Ghana, with a specific emphasis on the perspective of project management.

6.1 PMP in affordable housing project delivery in Ghana

6.1.1 Project integration management

The findings reveal that AHPs in Ghana lack effective practices in project integration management. Specifically, the project documentation lacks clearly defined charters, objectives, and an integration plan with well-outlined goals, scope, schedule, cost, roles, responsibilities, and success factors. The absence of such foundational planning documents made effective management and integration difficult for such complex projects. The lack of specific guidelines is consistent with the literature that highlights the need for integrating the results and documentation to prevent scope creep and achieve the desired outcomes (Ahmed and Jawad, 2022; Kerzner, 2022). Thus, inadequate coordination and integration management played a critical role in the failure of AHPs.

As discussed above, institutions responsible for affordable housing need to improve their ability to formulate effective integration plans for future endeavours. Through the establishment of explicit objectives, specific timeframes, and defined roles, project teams can more effectively overcome obstacles and guarantee favourable results.

6.1.2 Project scope management

Regarding project scope management, the findings indicate that incorrect cost projections, insufficient financial controls, and delays in funding, which are signs of bad cost management, led to significant cost overruns in AHPs. The projects also failed to provide clear scope statements that define deliverables, milestones, and boundaries.

Additionally, the lack of well-established procedures for scope change approvals resulted in uncontrollable changes that deviated from the initial plans the project aimed to achieve. This lack of clearly defined scope and change control processes aligns with prior studies that highlight the role of setting and managing a proper scope to effectively manage change and achieve project goals (Zaman et al., 2019). The lack of sufficient stakeholder engagement in scope planning was a significant weakness, aligning with research that emphasises the significance of stakeholder involvement for precise and efficient scoping (Waligo et al., 2014). Existing literature indicates that scope management failure is a primary cause of poor implementation and AHP outcomes (Althiyabi & Qureshi, 2021; Bader et al., 2023; Shabir, 2023).

6.1.3 Project schedule management

According to current research studies, inadequate schedule management and monitoring of project progress cause delays in AHPs. This correlates with literature emphasising that schedule management is crucial in the achievement of timely project delivery (Salleh, 2009). The schedule incompatibilities and lack of adherence led to the project's failure to meet its set timelines and goals, underscoring the significance of inadequate schedule compliance in AHP. Schedule management is critical to the success of projects, as it ensures the project is completed on time and within budget. Adopting and strictly adhering to schedule management protocols is key to mitigating delays and improving project outcomes.

6.1.4 Project cost management

The results also show that the costs of individual projects were overestimated and the financial risk controls and funding for AHPs were inadequate, all of which are hallmarks of weak cost management and resulted in significant cost overruns. This aligns with other studies that have shown the effects of poor cost control on the project budget and its financial sustainability (Abdel-Monem et al., 2022). The lack of cost management standard framework provides additional proof of the need for policies and other strategic activities that will indicate accountability, as emphasised in existing studies (Sibanda et al., 2020; Sun et al., 2023). Therefore, the lack of effective cost management practices greatly contributed to the financial difficulties and eventual failure of AHPs. To tackle this problem effectively, it is essential for AHPs to adopt

strong cost management strategies and frameworks that are customised to their unique requirements and challenges, and by implementing this strategy, organisations can reduce the likelihood of exceeding budgeted costs and enhance their overall financial performance in the long term.

6.1.5 Project quality management

In line with literature linking poor quality management to rework, defects, and stakeholder dissatisfaction (Heravi, 2014), flaws in AHP's ability to meet quality standards result from the use of low-quality materials and poor-quality management practices, including standards, monitoring, and control. The deficiencies in quality management therefore impacted the quality of the housing units delivered, leading to issues such as physical appearance, interior work, and overall discontentment among the target beneficiaries. These findings suggest that there is a need to enhance the quality management systems in AHPs to meet the requirements for delivering quality housing projects. With quality control measures, AHPs can prevent costly rework and increase stakeholder satisfaction, thereby enhancing project success rates.

6.1.6 Project resource management

Regarding resource management, the study also discovered that poor resource planning and management were a significant factor in AHP delays and inefficiencies, as underlined in research done by (Sibanda et al., (2020); Kerzner, (2022)). Researchers cited resource shortages and constraints, such as weak human resource skills and delayed material acquisition, as prominent resource issues, aligning with prior literature on effective teams and timely access to resources (Sibanda et al., 2020; Kerzner, 2022). Therefore, the lack of adequate resource management was one of the challenges that hindered the effective implementation and conclusion of AHPs. Mitigating these challenges requires better resource planning, distribution, and tracking of resources to enhance the efficiency of AHPs. Therefore, by focusing on specific resource management strategies, organisations can mitigate these pitfalls and achieve positive project outcomes in the future.

6.1.7 *Project communication management*

The findings indicate notable deficiencies in communication management among AHPs, consistent with existing research highlighting how insufficient communication and coordination contribute to project ambiguity and mismanagement (Muszyńska, 2022). Prior research, which focuses on effective communication tactics and lines, highlights the failure to meet stakeholders' expectations due to communication breakdown processes. The absence of efficient communication among project teams, stakeholders, and beneficiaries resulted in misinterpretations, setbacks, and eventually the inability of AHPs to achieve their intended objectives. Enhancing communication and coordination among AHPs is vital for guaranteeing effective project implementation and attaining intended outcomes. Effective and coherent communication can reduce risks, improve collaboration, and cultivate a more efficient working environment for all parties involved.

6.1.8 *Project procurement management*

Non-standard procurement practices, such as politically influenced rather than merit-based contractor selection, resonate with the literature that argues that ineffective contract management results in delays, increases in costs, and overall project inefficiency (Othman et al., 2021). The focus on political connections more than ability and expertise in procurement also highlights the need to have an ethical, competent, and merit-based procurement system (Charron et al., 2017). The mismanagement of procurement in AHPs, where irregularities, favouritism, and a lack of proper due diligence were common, was also to blame for their failure. The above findings support the necessity of supervision and monitoring of the procurement process to address monopolies and qualify contractors' exploitation of the public's interest. Implementing robust monitoring mechanisms alongside ethical policies can significantly reduce the inherent risks associated with improper contract management in procurement, as well as improve the overall low project success rates.

6.1.9 *Project stakeholder management*

The lack of active participation and inclusion of important stakeholders in AHPs is supported by research that highlights the adverse effects of excluding stakeholders, such as a lack of synchronisation between project results and stakeholder demands

and prerequisites (El Khatib et al., 2022; Uddin and Ferdous, 2020). The explored literature highlighted limited stakeholder management, including poor communication, consultation, and participation of targeted beneficiaries and other relevant stakeholders, as a significant factor that hindered AHPs from addressing the housing needs of the targeted populations. These findings emphasise the significance of actively involving stakeholders at every stage of the project's lifespan to guarantee effective results and tackle important problems. By prioritising stakeholder engagement and communication, AHPs can more effectively connect their objectives with the requirements of the communities they serve, resulting in more efficient and enduring housing solutions.

Also, the findings highlight several issues related to stakeholder relations and communication, which were found to be inadequate in Affordable Housing Projects (AHPs). The inadequate communication and unrealistic involvement of key stakeholders, such as community members and intended beneficiaries, align with research demonstrating the serious negative impacts of stakeholder exclusion, including a mismatch between project objectives and stakeholder expectations. A significant concern that has been highlighted in previous research is the failure to actively engage and take into account the input of key stakeholders, especially those who are directly affected by the housing projects. This lack of involvement has hindered the effective identification and resolution of their needs. Prior studies (Pedley et al., 2018) have emphasised the crucial importance of involving all relevant stakeholders in addressing these issues. The analysis that was done in this study showed that the main sentiment expressed by the stakeholders in AHPs is frustration and dissatisfaction.

Research suggests that neglecting to address stakeholder concerns can lead to active opposition, disruption, and derailing projects (Shen and Xue, 2021). The examined risks include the possibility of bidding manipulations, insufficient supervision, and the use of personnel who are not sufficiently trained for this activity. With the decrease in the quality of the work done and delays in the implementation of projects, the results of other studies indicate the problems stated above (Mathar et al., 2020; Olawale et al., 2020; Toor and Ofori, 2023). Moreover, due to the lack of sufficient information disclosure to stakeholders, particularly financial institutions, the AHPs failed to get the required funding, which reveals the concept that a lack of transparent processes affects

confidence and financing (Herath & Chong, 2021). These are in line with stakeholder theory, which posits that the interests of stakeholders must be considered in the execution of activities (Di Maddaloni & Sabini, 2022). The gaps identified in this study in AHPs are a result of failings in the four principal elements of stakeholder management, namely, involvement, communication transparency, and ethical use of instruments. The failure to take stakeholders and their expectations into account during the planning and implementation of projects is likely to result in less than optimal performance, as suggested by Khan et al., (2021). The findings of this study affirm this assertion, revealing the consequences of poorly managed stakeholders in AHPs. In summary, the findings concerning the lack of proper management of stakeholders support the research on the relationships between unsuccessful recognition and management of stakeholders and public project failure, as well as confirming the fundamental principles of stakeholder theory, emphasising the significance of addressing various stakeholders' interests for the project's success.

6.2 Context specific challenges exacerbating project management difficulties

The study also revealed other general and specific challenges that make it difficult to implement AHPs in Ghana, apart from deficiencies in project management practices and poor stakeholder engagement. Some of these include political influence, bureaucratic delays, and constraints on the availability of skilled workers and resources.

6.2.1 Political interference

This study identified political interference as a primary obstacle to the successful implementation of AHPs in Ghana. The findings reveal instances of political influence in decisions, preferential treatment of contractors, and a focus on political goals over project goals. This is in line with the literature that qualifies political interference as a major disaster to any public project as it leads to delay, cost inflation, and poor quality (Damoah and Akwei, 2017; Damoah and Kumi, 2018). Other factors that exacerbate

the problem of politically influenced AHPs include bureaucratic opacity and accountability in the procurement process.

6.2.2 *Bureaucratic delays*

Another context-specific challenge affecting the timely implementation of AHPs in Ghana is prolonged proceduralism, characterised by long bureaucratic delays, complex approval processes, and intricate administrative systems, routines, and procedures. The studies have established that cases of delays in crucial permits, licenses, and approvals were more than encouraging and took more time than required, thus compromising the overall project duration and cost. This supports prior literature that has noted that bureaucratic complexities delay schedules and exponentially increase costs (Ofori-Kuragu et al., 2016). Bureaucracy, which is characterised by slow and complex administrative procedures in Ghana, is a discouraging factor when it comes to the implementation of AHPs.

6.2.3 *Limited access to skilled labour and materials*

The study also revealed Ghana's scarcity of skilled labour and high-quality materials, which underscores the need to implement AHPs. According to the findings presented, there were instances of significant gaps within the project team, difficulty in evaluating suitable contractors and labour forces, and delays in the procurement of necessary materials. This is in concord with the literature on human and material resources and construction project performances in developing nations (Ahadzie et al., 2014; Kwofie et al., 2016). A shortage of qualified human resources and substandard materials are some of the factors that have escalated problems, such as poor quality, time delays, and cost increases in AHPs. These contextual factors disintegrate and integrate with the other gaps mentioned in project management and the relations with stakeholders, which do not allow the implementation of AHPs in Ghana. Addressing these problems requires one to adopt a holistic approach to the socio-political, institutional, and financial resources in Ghana today.

6.2.4 *Implementation of effective PMP in Ghana*

The study analysed strategies for successfully implementing affordable housing projects (AHP) in Ghana. The findings indicate a requirement to enhance compliance

with competitive tendering laws and contractor assessments in AHP procurement. This is consistent with the existing research on open and merit-based procurement, which helps reduce risks for agencies such as adverse selection. The literature supports this idea, as demonstrated by studies conducted by Abou-Abed (2020), Cao and Wang (2020), and Jaskowski & Biruk (2019).

The use of community groups to address their needs is emphasised in stakeholder theory (Hörisch et al., 2020). Supporting housing institutions such as AESL and advocating for more competent oversight aligns with agency guidelines for outcome-based monitoring, which ensures equitable information exchange between government principals and project team agents (Turner, 2019). This can be connected with the findings of the concept that focuses on the governance structures for the implementation of accountable implementation (Haq et al., 2019).

Demands for clearly defined structures and extensive funding arrangements conform to existing research on goal conflicts and disparities in timing within agency relationships, mitigated through effective governance (Gryglewicz, et al., 2020). Minimal politicking in stakeholder relations is beneficial to the stakeholders and eliminates the power of the few elites politically influenced people, as highlighted by Olsen (2017). Scholars have also discussed inclusive participation in previous research (Ferrary, 2019; Laboutková et al., 2020; Chaudhry & Ramakrishnan, 2019). In general, increasing the level of compliance, monitoring, decreasing politicisation, and participation fits the agencies' recommendations on the regulation of conflicts of interest and responding to stakeholders' expectations.

Findings provide empirical evidence aligned with theoretical frameworks and literature on managing agency challenges in public projects through proper governance and stakeholders' engagement for success.

6.3 Establishing a National Framework for Affordable Housing Projects

Thus, the study calls for the need for Ghana to adopt a national strategic plan, or policy that would set a framework for affordable housing development initiatives in the Ghanaian context. Regarding this, respondents noted that the lack of a national framework is the root cause of the widespread problem, leading to suboptimal performance and unsustainable outcomes in many affordable housing projects (AHPs) in Ghana.

During the interviews, key stakeholders stressed the importance of establishing a national framework that can provide a cohesive and enabling environment for the successful delivery of affordable housing (Table 5.23). Respondents suggested that this national framework should serve as a guiding document, outlining the strategic vision, institutional arrangements, regulatory provisions, funding mechanisms, and implementation protocols for affordable housing projects nationwide. One respondent stated, "I think there should be a national policy as it will stop all the abandonment of affordable housing projects" (R11, Table 5.23). The sentiment analysis further reinforced the need for a clear-cut framework, with respondents expressing frustration and dissatisfaction with the current state of affordable housing projects in Ghana (Figure 5.10). The analysis highlighted the negative impact of poor project management practices, a lack of accountability, and inadequate stakeholder engagement on the success of AHPs (Table 5.19).

By establishing a national framework for affordable housing, Ghana can create a cohesive and enabling environment that supports the widespread adoption and long-term sustainability of effective project management practices for AHPs. The proposed national framework should incorporate the ISAH framework approach, which effectively addresses the main issues identified under Project Management Practices (PMP) in affordable housing projects.

6.4 Chapter Summary

This chapter discusses the findings of an empirical study on the shortcomings of government affordable housing projects (AHPs) in Ghana from a project management perspective. It examines various aspects of project management, including integration, scope, schedule, cost, quality, resource, communication, procurement, and stakeholder management. The study reveals significant deficiencies in these areas, such as lack of clear objectives, poor financial controls, inadequate quality standards, and insufficient stakeholder engagement. Additionally, the chapter highlights context-specific challenges like political interference, bureaucratic delays, and limited access to skilled labour and materials. The findings emphasize the need for improved project management practices, better stakeholder involvement, and the establishment of a national framework for affordable housing projects in Ghana. The chapter concludes by suggesting that adopting a comprehensive national strategy could address many of the identified issues and create a more enabling environment for successful AHP implementation.

CHAPTER SEVEN

A ROADMAP FOR AHPS IN GHANA

7.1 Introduction and Development of the ISAH Framework

The ISAH framework proposed in this chapter is a novel contribution to this research, designed in response to the multifaceted issues highlighted in the analysis of affordable housing projects (AHPs) in Ghana. It is important to stress that ISAH is not a pre-existing framework that has been used to analyse the data but rather a novel framework that has been developed based on the analysis of the research data.

Several factors influenced the researchers' decision to develop a new framework rather than utilising existing ones. First, the set of issues identified and uncovered in the Ghanaian context was different and required a tailored approach. Secondly, the research revealed that while existing project management frameworks were useful, they had limitations and were insufficient to address the context and issues identified in Ghana's affordable housing sector. Finally, respondents agreed that there is a need for a framework for affordable housing as a national level approach, which existing frameworks did not adequately address.

The framework was built in an inductive manner, through an iterative process by combining the results of this study, literature on project management, and contextual factors of the affordable housing industry in Ghana. This approach made it possible for the study to develop a framework that is both theoretically informed and contextually sensitive to the Ghanaian environment.

One of the study's main conclusions is the understanding of the need for a national level solution anchored among all the stakeholders. According to respondent R11, "I think there should be a national policy as it will stop all the abandonment of affordable housing projects" (Table 5.20). This sentiment was echoed by respondent R14, who emphasised the importance of policy continuity: "There should be a national policy on affordable housing because by all means there will be a change in government. There

should be a proper national policy that will prevent people from discontinuing projects from the previous government" (Table 5.20).

Furthermore, respondent R1 elaborated on the potential benefits of a comprehensive national framework: "Yes, I think that will be the right approach." When we have a national framework and then TDC (Tema Development Corporation), AESL (Architectural Engineering Services Limited), PWD, and the individual estate management system are signing up to it, I am sure we are going to achieve a better result. Because there is no framework, everybody builds and prices it anyhow with no proper basis. This framework will also help us in doing green construction. Green construction means construction that is done to preserve the environment. If there is a framework, the framework will pick up all these little issues where everyone will stand up to it and if they are not able to do it, they will be called to answer" (Table 5.20).

This collective call for a national framework, combined with the identified deficiencies in project management practices, stakeholder engagement, and context-specific challenges, formed the foundation for the development of the ISAH framework. The research revealed significant deficiencies across multiple project management knowledge areas, including integration, scope, schedule, cost, procurement, and stakeholder management. As respondent R6 stated, "The affordable housing project started in 2007 without a proper project charter in place" (Table 5.3), highlighting fundamental gaps in project initiation and planning processes.

Severe stakeholder management issues were also uncovered. Respondent R11's comment that "There were ineffective communication and interaction with the population or the public prior to the start of the affordable housing project" (Table 5.14) underscored the critical need for improved stakeholder engagement strategies. Context-specific challenges such as political interference and bureaucratic delays were identified as major obstacles. As respondent R13 noted, "One is political hindrances, number two is availability of funds on time" (Table 5.18), indicating how political factors and funding inconsistencies severely impact project outcomes.

To address these multifaceted issues, the ISAH framework was designed with the help of the 'Hard Systems OU Model'. This model was selected because of its systematic

problem-solving approach, which is in line with the systemic issues highlighted in the research. By using the OU Model, the stakeholder inputs were systematically examined and identified issues in Project Management Practices (PMP) for AHPs.

Based on the analysis of the study findings, the ISAH framework was established with five major strategies, which are aimed at addressing the challenges highlighted in this study. Some of the models are contextualised project management processes, participatory stakeholder engagement models, data-driven decision support systems, sustainability assessment framework, and collaborative knowledge management platforms. These components were developed based on the findings of this research to offer a solution to the challenges that were identified to affect the management of affordable housing projects in Ghana.

The subsequent sections of this chapter will explain each of the components of the ISAH framework and show how it responds to the issues highlighted in the research and how it can assist in enhancing affordable housing delivery in Ghana. This framework is designed to offer the comprehensive, national-level approach that several respondents have suggested is needed to address the multifaceted issues outlined in this study and to offer a structure to enhance the delivery of affordable housing in Ghana.

7.2 Contextualised Solutions for AHPs in Ghana

7.2.1 Cultural Considerations

Culturally, Ghana has an affluent and ethnically diverse population, which has impacted housing projects and overall methodologies. Solutions for AHPs must address these cultural dimensions to guarantee effective community adoption. For example, engaging with traditional leaders and incorporating features like local building styles will ensure community ownership. Furthermore, gender issues and women's rights should be considered when discussing housing, as women are most societies' final decision-makers and maintainers of households. Adopt culturally appropriate strategies focusing on women's experiences and insights to improve AHPs' liveability and sustainability.

7.2.2 Political Landscape

Like many other African nations, Ghana's political landscape remains unstable, with regular alterations to governance that can impact the stability and enforcement of AHPs. However, to eliminate political interference, it is crucial to establish independent housing authorities or agencies that operate outside the influence of specific political systems, parties, or leaders. However, decentralising decision-making and responsibility for allocating resources and funds makes it possible to enhance accountability and adjust the AHP to fit the local authority's needs and community demands. Therefore, to mitigate these issues and minimise the impact of politics, AHPs can implement measures such as constructive consultation and engagement feedback mechanisms.

7.2.3 Economic Factors

The Ghanaian economy has recently experienced growth but still faces several challenges, including high unemployment, income inequality, and limited financial access, especially in rural areas. When seeking solutions, it is important to consider specific economic factors in order to develop targeted solutions for these issues. It is recommended that financing modes like public partnership financing, microfinancing, and community financing help enhance the provision of affordable social housing to low-income earners. Further, awareness on the part of builders and contractors about using locally available and eco-friendly products in construction can also lead to cheap construction and enable job creation within the local economy.

7.2.4 Social Dynamics

The people of Ghana have highly knit families and social relationships, with a culture of togetherness and support. These structures act as social frameworks that locals support, making them crucial for improving AHP implementation. Incorporating participatory design processes in AHPs is essential, involving end-users in planning and decision-making to fit target communities' needs. To ensure the sustainable development of AHPs, community-based organisations and cooperatives need strengthening to support their values.

7.3 Lifecycle Analysis of AHP Failures

Lack of positive culture, politics, and poor human resource management have caused AHPs in Ghana to experience problems or fail during the project's development phases. Early intervention is crucial to prevent potential obstacles to project success.

7.3.1 Planning and Design Stage

The planning and design stage of affordable housing projects in Ghana often faces several critical challenges. Inadequate stakeholder consultation and assessment lead to misaligned project objectives and scope, failing to address the real needs of the community. Inaccurate cost estimation and resource planning contribute to budget overruns and resource shortages later in the project. Furthermore, the absence of comprehensive environmental and social impact assessments can result in unsustainable developments that negatively affect local ecosystems and communities.

7.3.2 Procurement and Contracting Stage

During the procurement and contracting stage, non-transparent or politicised processes undermine the integrity of project implementation. The selection of unqualified or inexperienced contractors often results in subpar construction quality and project delays. Poorly defined contract terms and conditions create ambiguities that can lead to disputes and legal complications. Additionally, insufficient oversight and monitoring mechanisms fail to ensure accountability and adherence to project specifications throughout the construction process.

7.3.3 Construction Stage:

The construction stage is plagued by operational inefficiencies and quality control issues. Delays in material delivery and resource availability disrupt project timelines and increase costs. Poor quality control and workmanship compromise the structural integrity and longevity of housing units. Inadequate site management and safety measures put workers at risk and can lead to accidents or regulatory non-compliance. Contractor disputes and payment issues further exacerbate delays and can result in project stoppages or abandonment.

7.3.4 Handover and Maintenance Stage:

The handover and maintenance stage often reveals the cumulative effects of earlier project shortcomings. Incomplete or substandard construction work becomes evident, requiring costly repairs or renovations. A lack of community ownership and capacity for maintenance leads to rapid deterioration of housing units and infrastructure. Inadequate funding or mechanisms for long-term sustainability compromise the project's ability to meet ongoing community needs. Insufficient documentation and knowledge transfer hinder effective management and future improvements of the housing developments.

7.4 The ISAH Framework a comprehensive strategy

The Integrated Sustainability Affordable Housing (ISAH) framework, developed through comprehensive research and analysis, employs the 'hard systems OU model' to address the complex challenges in Ghana's affordable housing sector. This approach, as described by Checkland and Poulter (2020) and Jackson (2019), provides a systematic method for assessing and improving intricate systems by focusing on the current state, desired future state, and strategies to bridge the gap between them. A thorough literature review was conducted to establish the current state of affordable housing in Ghana. This review revealed significant challenges including inadequate project management, lack of stakeholder coordination, budget constraints, political interference, and a shortage of qualified contractors (Agyemang et al., 2021; Damoah et al., 2020; Owusu-Ansah et al., 2019). These issues have led to project failures, delays, and cost overruns, hindering the effective delivery of affordable housing (Ameyaw et al., 2021).

To validate and refine the ISAH framework, expert consultation was sought from nine (9) professionals in urban planning, sustainability, architecture, academia and affordable housing (refer to Table 7.1).

Table 7.1: Experts Consulted for ISAH Framework development

| Expertise | Role/Background | Area of Contribution |
|-------------------------|--|--|
| Urban Planner | Senior Consultant at Urban Development Institute | Sustainable urban design strategies |
| Sustainability Expert | Professor of project management | Integration of sustainability principles in housing |
| Architect | Principal at Affordable Housing Design Firm | Innovative design solutions for low-cost housing |
| Project Manager | Director of Housing Projects, Ghana | Project management best practices in local context |
| Civil Engineer | Structural Engineer specialising in affordable housing | Cost-effective and durable construction methods |
| Policy Analyst | Government Housing Policy Advisor | Regulatory framework and policy implications |
| Sociologist | Researcher in Urban Studies | Social impact and community engagement strategies |
| Financial Expert | Investment Analyst specialising in Real Estate | Financing models for affordable housing projects |
| Environmental Scientist | Climate Change Adaptation Specialist | Environmental sustainability and resilience measures |

This interdisciplinary input helped to ensure that the framework's components were comprehensive and aligned with best practices across relevant fields. The experts' insights were particularly valuable in defining the future state of the ISAH Framework, which envisions a sustainable and well-managed affordable housing delivery system capable of meeting the needs of Ghana's vulnerable population.

The development process also led to the incorporation of new perspectives. For instance, recent research by Adabre and Chan (2019) on critical success factors for sustainable affordable housing was integrated into the Sustainability Assessment Framework component. Additionally, the work of Osei-Kyei and Chan (2017) on public-private partnerships in developing countries informed the refinement of the Participatory Stakeholder Engagement Model. In accordance, the comprehensive development approach, combining literature review, expert consultation and stakeholder feedback, has resulted in a robust ISAH Framework. For the development process, two steps were undertaken. First, the framework underwent a rigorous peer review process, where it was submitted to other researchers and experts in the field of sustainable affordable housing. This peer review provided valuable external perspectives and critiques, helping to identify potential weaknesses and areas for improvement in the framework. The peer review enhances the robustness and reliability

of the ISAH Framework, ensuring its relevance and effectiveness in addressing the complex challenges of affordable housing delivery in Ghana.

The framework's strategies and components work synergistically to address the multifaceted challenges of affordable housing delivery in Ghana, aiming to achieve a future state characterised by sustainable, participatory, and well-managed affordable housing projects. By bridging the gap between the current challenges and the desired future state, the ISAH Framework provides a practical roadmap for improving affordable housing delivery in Ghana, with potential applications in similar contexts in other developing countries.

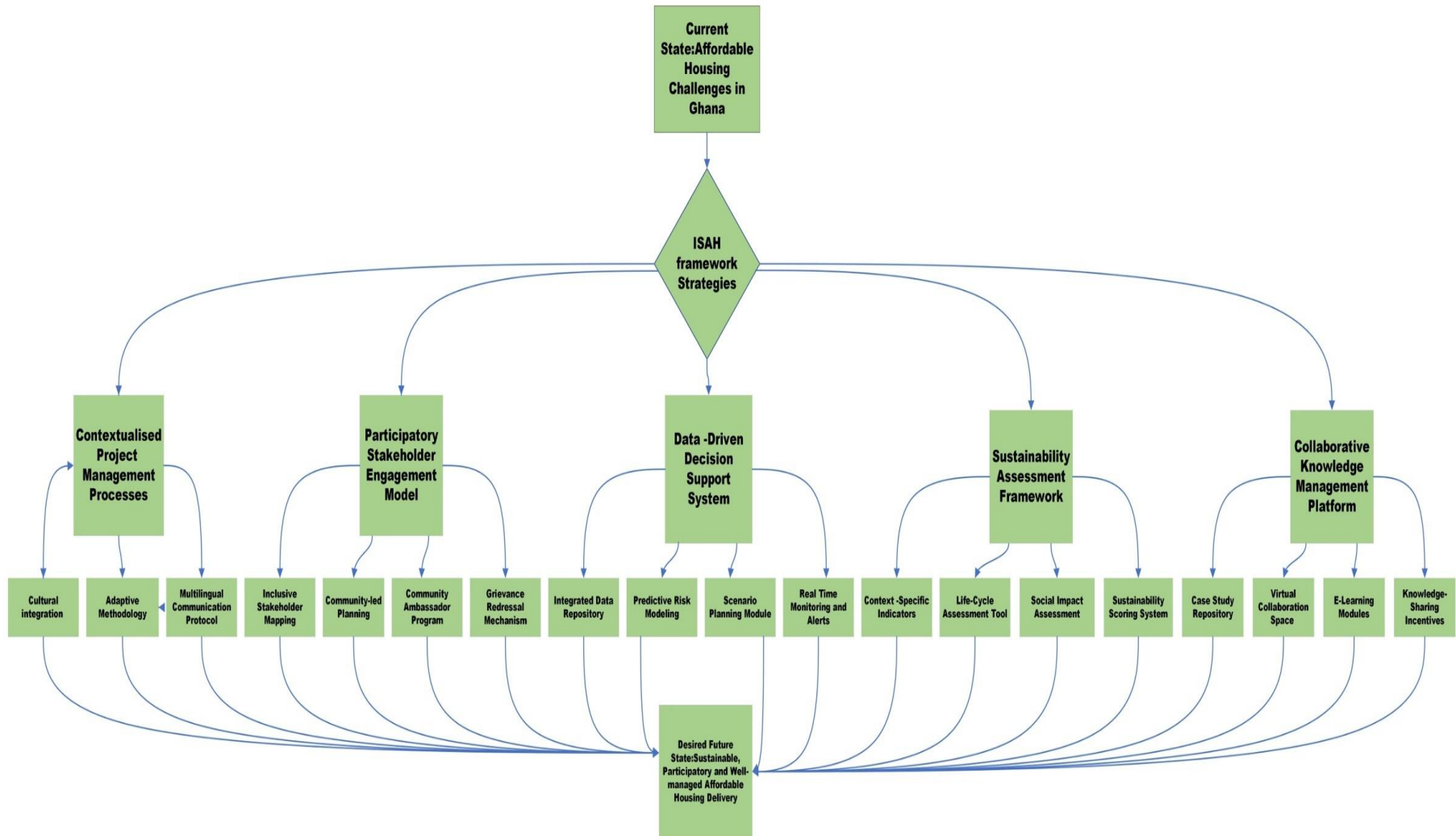


Figure 7.0.1: ISAH Framework using Hard Systems OU Model

The above chart clearly illustrates Ghana's current status with regards to affordable housing, desired future state of sustainable, participatory, and well managed affordable housing delivery. The ISAH Framework Strategies for introducing change enable alignment between the prevailing status and the envisaged future state. The ISAH Framework consists of five key strategies.

1. Contextualised Project Management Processes
2. Participatory Stakeholder Engagement Model
3. Data-Driven Decision Support System
4. Sustainability Assessment Framework
5. Collaborative Knowledge Management Platform

Each strategy is further broken down into its constituent components, which are connected to their respective strategies. Ultimately, all strategies and their components lead to the desired future state, illustrating the interdependence and synergistic effects of the ISAH Framework in addressing the challenges of affordable housing delivery in Ghana. All these strategies and their respective components work together to address the challenges of affordable housing delivery in Ghana and achieve the desired future state of sustainable, participatory, and well-managed affordable housing projects.

7.5 Components of the ISAH framework

Each component of the ISAH Framework plays a crucial role in contributing to the overall strategy of improving affordable housing delivery in Ghana. Each component is explained in the following sections, elucidating its inclusion in the proposed solution and demonstrating its ability to tackle the challenges highlighted in the research outcomes and existing literature.

7.5.1 Contextualised project management processes

Contextualised project management processes should be adapted to ensure the availability of affordable housing in Ghana, considering cultural, social, and institutional factors. Therefore, the ISAH Framework aims to increase the acceptability and sustainability of housing interventions by incorporating cultural elements into its

planning and implementation processes, such as community-inclusive decision-making and the recognition of Indigenous knowledge systems (Agyemang et al., 2021; Opoku et al., 2020). Ahadzie et al. (2022) recommend that affordable housing project organisational structures and management systems employ *adaptive* and scaled-down methodologies from the typical methodologies used in 'normal' construction projects in Ghana. Additionally, housing executives and managers can foster *culturally appropriate communication strategies* reflecting stakeholders' language, literacy, and communication preferences regarding messages to enhance stakeholders' understanding and avoid misconceptions and disputes that often hinder housing projects (Ameyaw et al., 2021).

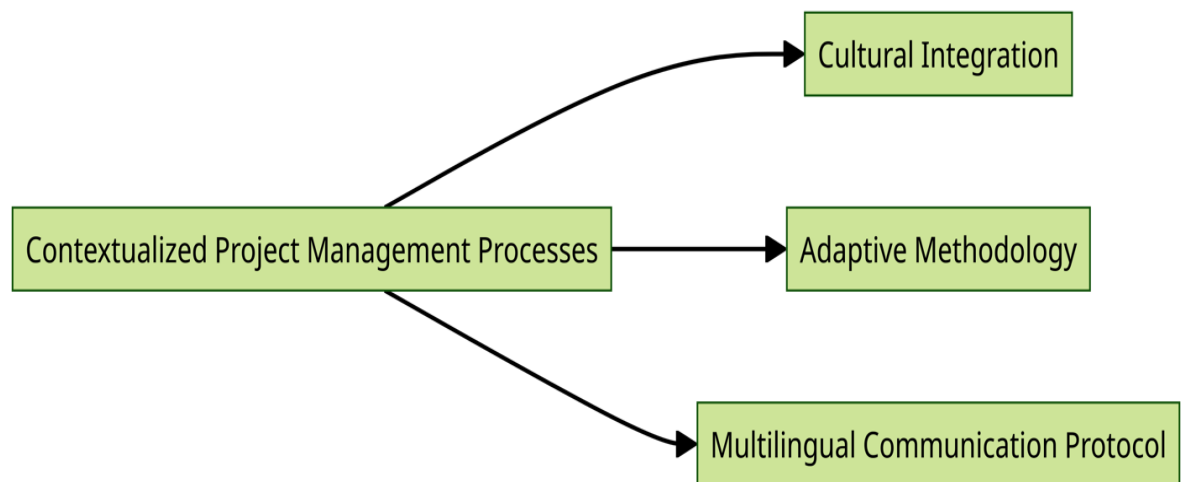


Figure 7.0.2: Contextualised Project Management Processes

7.5.2 Participatory stakeholder engagement model

According to Osei-Kyei, et al. (2021) and Oyeyipo et al. (2021), protecting underrepresented stakeholders' interests and synchronising housing interventions with community needs and preferences pose significant challenges to community engagement. However, participatory stakeholder engagement is a fundamental element of the ISAH Framework. Stakeholder analysis ensures the inclusion of all potential stakeholders in the selected project and prioritises their needs, especially those of vulnerable groups (Magassouba et al., 2019). According to Ahadzie, et al. (2022), the participatory design strategy, when used with other types of community

planning, involves community members, leaders, and CSOs in the planning and design of housing projects that best meet their needs. This leads to more useful and acceptable housing projects (Ahadzie et al., 2022). The community ambassador initiative and grievance redressal mechanisms, which reinforce dialogue, feedback collection, and conflict resolution throughout the project duration, also enhance community communication and engagement (Ameyaw et al., 2021).

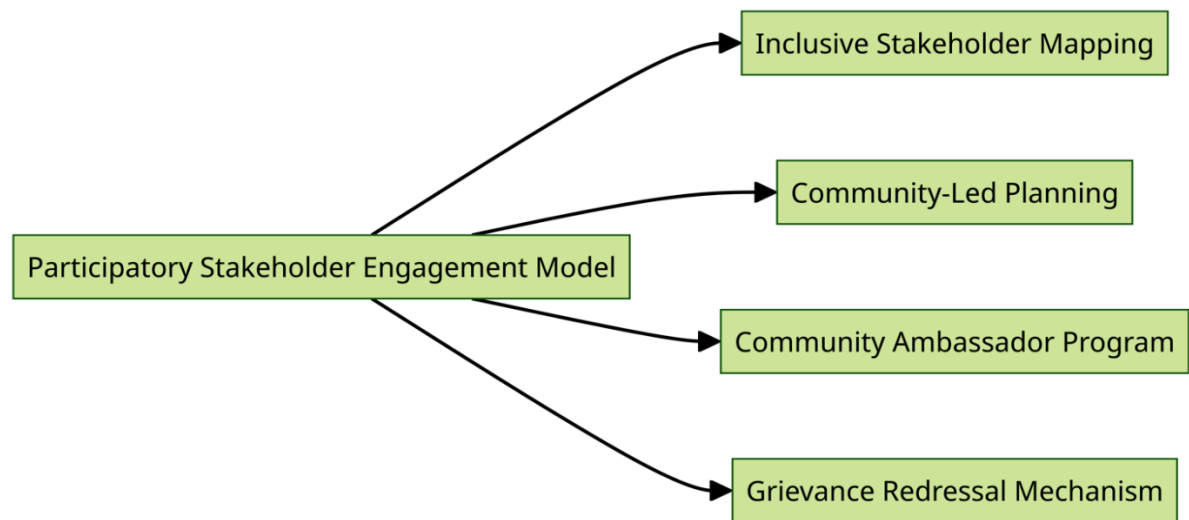


Figure 7.3: Participatory Stakeholder Engagement Model

7.5.3 Data-Driven decision support system

Damoah et al. (2020) and Owusu-Ansah et al. (2019) suggest that the ISAH Framework's data-driven decision support system can assist affordable housing projects struggling with inadequate information, poor risk management, or insufficient resources. Through the following sub-frameworks: past project data storage, stakeholder feedback storage, socio-economic factors storage, and environmental data storage, the framework captures all data required for a project and integrates it to create an integrated data repository, which is useful in the decision-making process at various stages of the project life cycle (Ahadzie et al., 2022). As applied to predictive risk models, for instance, machine learning algorithms, project managers can be in a position to identify potential challenges and prevent such pitfalls, including project failure and cost overruns, in advance (Ameyaw et al., 2021). Simulation of project and scenario planning modules for different project alternatives to check their viability,

sustainability, KPIs, and feedback helps make informed interventions and housing decisions (Opoku et al., 2020). Real-time management and alert-usage systems, which use IoT sensors, drones, and other such tools, allow the identification of emerging problems and their intervention before they cause significant downtime (Osei-Kyei et al., 2021).

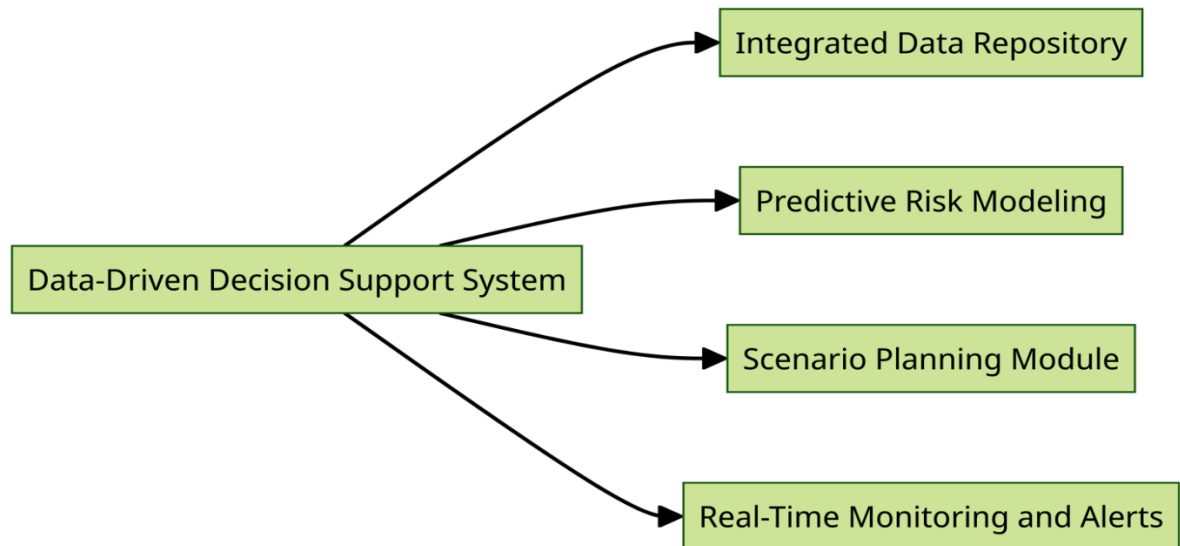


Figure 7.0.4: Data-Driven Decision Support System

7.5.4 Sustainability assessment framework

The sustainability assessment framework component responds to the need to properly consider environmental, social, and economic sustainability in affordable housing projects (Ahadzie et al., 2022; Opoku et al., 2020). Therefore, the ISAH Framework incorporates sustainability indicators related to the context of Ghana's housing sector, including energy efficiency, water use, local content, community and neighbourhood resilience, and social equity (Ameyaw et al., 2021). Osei-Kyei, et al. (2021) assert that long-term environmental impact assessment tools, which determine the environmental effects of a housing project from material derivation, construction, occupancy, and deconstruction, aid project teams in selecting materials, construction methods, and waste management strategies that minimise ecological imprint (Osei-Kyei et al., 2021). Social impact assessment methods, which quantify the project's benefits to social welfare, social integration, and social facilities, guarantee equitable housing

intervention to improve people's quality of life (Oyeyipo et al., 2021). Sustainability assessment tools, which allocate scores to housing projects by evaluating their sustainability indices, offer a reference point for sustainability improvement and afford an insight into the sustainability of different housing projects among stakeholders (Ahadzie et al., 2022).

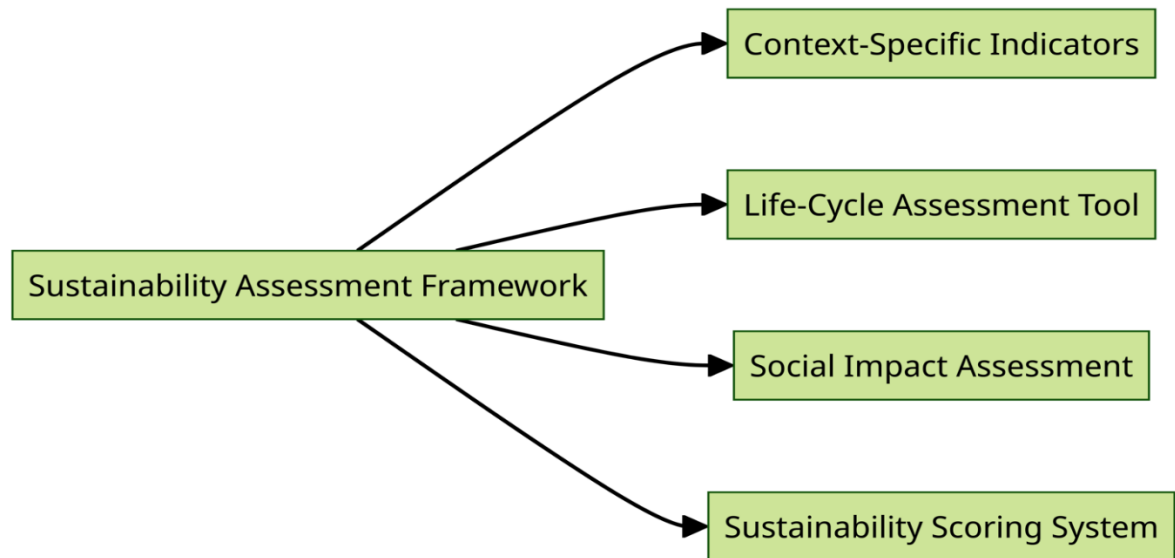


Figure 7.0.5: Sustainability Assessment Framework

7.5.5 Collaborative knowledge management platform

The knowledge management platform, which is part of the ISAH Framework, tried to solve problems like not sharing explicit and tacit knowledge well, building competency, and not having a place to store knowledge, skills, and experience in low-cost home production (Damoah et al., 2020; Owusu-Ansah et al., 2019). To construct an online database of affordable housing interventions in Ghana and similar worldwide efforts, the structural support outlined empowers the application of lessons learned in previously successful or failed endeavours (Ahadzie et al., 2022). The application of real-time collaboration tools, voice and video communications, and a shared online workplace to facilitate interaction and collaboration among project stakeholders fosters teamwork and innovation towards effective housing interventions (Ameyaw et al., 2021). Ghana's affordable housing management system should adopt the use of webinars, e-learning modules, and training courses on facets of affordable housing to

enhance professional knowledge and skills development or training, mostly to do with special features necessary for project implementation (Opoku et al., 2020). These include incentives for people and groups who may provide useful information, ideas, and solutions in affordable housing, leading to an active community of practice in the affordable housing sector, as stated by Osei-Kyei, et al. (2021).

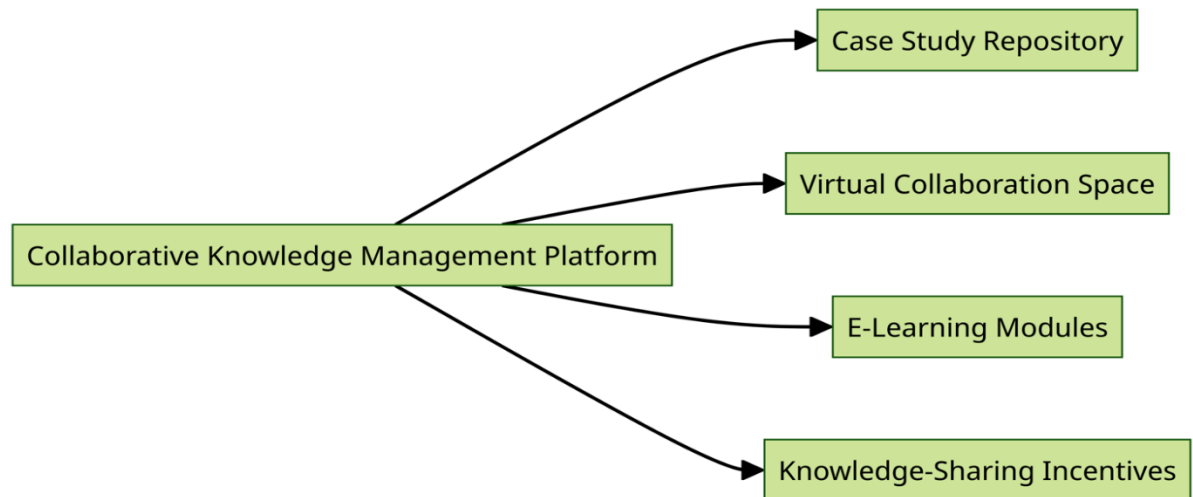


Figure 7.0.6: Collaborative Knowledge Management Platform

7.6 Empirical Validation of the ISAH Framework

In order to validate the framework, stakeholder feedback was collected from a diverse group including Project managers, Senior estate officers, Project engineers, metro engineers, Municipal chief executives/Government appointee, Clerk of works, Project consultants, Project quantity Surveyors, Public procurement officers, Head of government procurement, Senior engineers, architects, site managers, contractors and policymakers' constituting 150 respondents from the selected study sites through questionnaire. This feedback was crucial in refining the five key strategies of the ISAH Framework: Contextualised Project Management Processes, Participatory Stakeholder Engagement Model, Data-Driven Decision Support System, Sustainability Assessment Framework, and Collaborative Knowledge Management Platform. The input from various stakeholders ensured that the framework addressed the needs and concerns of all parties involved in affordable housing development. With the feedback, a rigorous

statistical analysis was employed to validate its effectiveness and relevance in addressing affordable housing challenges in Ghana. The results provide strong empirical support for the framework's structure and components in addressing the complex challenges of providing sustainable and affordable housing solutions.

7.6.1 Results of Empirical Analysis of the ISAH Framework

As covered in Chapter Three the following are the results of a SPSS validation exercise carried out for the ISAH Framework.

Descriptive analysis for effectiveness of the component of ISAH framework

The descriptive analysis in table 7.2 for the effectiveness of the components, measured on a 5-point Likert scale, shows that all items received high mean scores, indicating positive evaluations from respondents. Specifically, the mean scores range from 4.03 for "Contextualised project management processes" to 4.25 for "Data-driven decision support system," with the composite score averaging at 4.18. This suggests that respondents generally perceive these components as effective. The standard deviations, which range from 0.757 to 0.897, indicate moderate variability in responses, reflecting some differences in opinion but overall consistent agreement among the participants. The minimum and maximum values of 1 and 5 across all items confirm the full range of the scale was used, suggesting diverse perspectives among the respondents. Overall, the data highlights strong and consistent positive perceptions of the effectiveness of the components evaluated.

Table 7.2: Descriptive analysis for effectiveness of the component

| Items | N | Mini mum | Maxi mum | Mean | Std. Deviation |
|---|------------|---------------------|---------------------|-------------|---------------------------|
| Contextualised project management processes | 150 | 1 | 5 | 4.03 | 0.897 |
| Participatory stakeholder engagement Model | 150 | 1 | 5 | 4.16 | 0.769 |
| Data-driven decision support system | 150 | 2 | 5 | 4.25 | 0.796 |
| Sustainability assessment framework | 150 | 1 | 5 | 4.24 | 0.757 |
| Collaborative knowledge management Platform | 150 | 1 | 5 | 4.23 | 0.804 |
| Composite score | 150 | 1 | 5 | 4.18 | 0.805 |

Correlation Analysis

The Pearson correlation coefficients among the study items reveal significant positive correlation between all pairs of components within the ISAH framework as can be seen in the table 7.2. The strongest correlation is between “Contextualised project management processes” and “Participatory stakeholder engagement model” ($r = 0.645$), indicating a strong association between effective project management and stakeholder engagement. Similarly, “Contextualised project management processes” also shows a notable correlation with “Data-driven decision support system” ($r = 0.620$), suggesting that project management benefits from data-driven decision-making. The “Participatory stakeholder engagement model” is significantly correlated with “Data-driven decision support system” ($r = 0.613$), “Sustainability assessment framework” ($r = 0.602$), and “Collaborative knowledge management platform” ($r = 0.538$), underscoring the interconnectedness of stakeholder engagement with other components. The “Sustainability assessment framework” is correlated with both “Data-driven decision support system” ($r = 0.589$) and “Collaborative knowledge management platform” ($r = 0.561$), highlighting its role in linking sustainability assessments with data and knowledge management. Lastly, “Collaborative knowledge management platform” shows moderate correlations with “Data-driven decision support system” ($r = 0.560$) and “Contextualised project management processes” ($r = 0.597$). All correlations are significant at the 0.01 level, indicating that improvements in one component are likely associated with improvements in others, reflecting the integrated nature of the ISAH framework.

Table 7.3: Correlation between components of ISAH framework

| Correlations | 1 | 2 | 3 | 4 | 5 |
|---|--------|--------|--------|--------|---|
| Contextualised project management processes | 1 | | | | |
| Participatory stakeholder engagement model | .645** | 1 | | | |
| Data-driven decision support system | .620** | .613** | 1 | | |
| Sustainability assessment framework | .593** | .602** | .589** | 1 | |
| Collaborative knowledge management platform | .597** | .538** | .560** | .561** | 1 |

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

Exploratory factor analysis for the effectiveness of the ISAH framework

The exploratory factor analysis (EFA) conducted on the items measuring the effectiveness of the ISAH framework reveals two distinct components, which we label as "Project Management and Decision Support" (Component 1) and "Collaborative Knowledge Management" (Component 2). Component 1 has high loadings on "Contextualised Project Management Processes" (0.719), "Participatory Stakeholder Engagement Model" (0.864), "Data-Driven Decision Support System" (0.767), and "Sustainability Assessment Framework" (0.718). These high loadings indicate that these items are strongly associated with effective project management, stakeholder engagement, data-driven decision-making, and sustainability assessments within the ISAH Framework. This component explains 67.382% of the variance, demonstrating that it captures a substantial portion of the overall effectiveness in the context of sustainable affordable housing. The Cronbach's alpha for this component is 0.878, suggesting high internal consistency and reliability, which means that these items collectively provide a reliable measure of the project's management and decision support effectiveness.

Component 2, labelled "Collaborative Knowledge Management," is characterised by a high loading on the "Collaborative Knowledge Management Platform" (0.93). This high loading indicates that this item distinctly represents the second factor, highlighting the importance of collaboration and knowledge sharing within the ISAH Framework. This component explains an additional 9.515% of the variance, indicating that while it is less dominant than Component 1, it still plays a significant role in the overall effectiveness of the framework. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is 0.880, which is above the acceptable threshold, indicating that the sample is adequate for factor analysis. Additionally, Bartlett's Test of Sphericity is significant ($\chi^2 = 351.971$, $df = 10$, $p = .001$), confirming that the correlations among items are sufficiently large for factor analysis to be appropriate. These results affirm the robustness of the identified factors and their relevance in evaluating the ISAH Framework, with Component 1 focusing on project management and decision support, and Component 2 emphasizing collaborative knowledge management.

Table 7.4: Exploratory factor analysis

| Items | Component | |
|--|--------------|--------------|
| | 1 | 2 |
| Contextualised project management processes | 0.719 | 0.444 |
| Participatory stakeholder engagement model | 0.864 | 0.201 |
| Data-driven decision support system | 0.767 | 0.337 |
| Sustainability assessment framework | 0.718 | 0.391 |
| Collaborative knowledge management platform | 0.327 | 0.930 |
| Variance Explained (%) | 67.382 | 9.515 |
| Cronbach alpha (Reliability) | 0.878 | |
| KMO = .880; $\chi^2 = 351.971$; df = 10; p = .001 | | |

Regression Results

The regression weights in Table 4 show the relationships between the component effectiveness (CE) construct and its five items (CE1 to CE5). All items have positive and statistically significant relationships with the CE construct, as indicated by the *** in the P column ($p < 0.01$). CE5 (Collaborative knowledge management platform) serves as the reference item with a fixed weight of 1.000. The other items have weights ranging from 0.938 to 1.179, indicating their relative importance in measuring the CE construct. CE1 (Contextualised project management processes rating) has the highest weight (1.179), suggesting it's the strongest indicator of component effectiveness. CE4 (Sustainability Assessment Framework) has the lowest weight (0.938), but it's still a significant contributor. The C.R. (Critical Ratio) values, all above 1.96, further confirm the statistical significance of these relationships. Overall, these results suggest that all five items are valid and reliable measures of the component effectiveness construct, with each item contributing substantially to its measurement.

Table 7.5: Regression weights for ISAH component effectiveness

| | | | Estimate | S.E. | C.R. | P-label |
|-----|------|----|----------|------|-------|---------|
| CE5 | <--- | CE | 1.000 | | | |
| CE4 | <--- | CE | .938 | .105 | 8.978 | *** |
| CE3 | <--- | CE | 1.031 | .110 | 9.410 | *** |
| CE2 | <--- | CE | 1.012 | .106 | 9.568 | *** |
| CE1 | <--- | CE | 1.179 | .123 | 9.551 | *** |

*Note(s): CE5 = Collaborative knowledge management platform; CE4 = Sustainability Assessment Framework; CE3 = Data-Driven Decision Support System; CE2 = Participatory stakeholder engagement model rating; CE1 = Contextualised project management processes rating; CE = Component effectiveness. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

Component Ranking for the ISAH Framework

The relative impact analysis (RII) for the component ranking of the ISAH framework provides insights into the perceived importance of various elements by the respondents. The “participatory stakeholder engagement model” is ranked highest with an RII of 0.85067, indicating that respondents consider it the most crucial component for the effectiveness of the ISAH framework. This is followed by the “collaborative knowledge management platform”, which holds the second rank with an RII of 0.83733, reflecting its significant role in fostering collaboration and information sharing. The “data-driven decision support system” is ranked third with an RII of 0.83600, underscoring the value of data in guiding decisions within the framework. The “contextualised project management processes”, with an RII of 0.83467, is considered the fourth most important component, highlighting the need for tailored management practices in project execution. Lastly, the “sustainability assessment framework”, with an RII of 0.82667, is ranked fifth, indicating its relative importance but lower priority compared to the other components. These rankings illustrate that while all components are valued, stakeholder engagement and collaborative knowledge management are viewed as the most critical for the success of the ISAH framework.

Table 7.6: Relative impact analysis (RII) for the component ranking for the ISAH framework

| Items | RII | Ranks |
|---|---------|-------|
| Contextualised project management processes | 0.83467 | 4th |
| Participatory stakeholder engagement model | 0.85067 | 1st |
| Data-driven decision support system | 0.83600 | 3rd |
| Sustainability assessment framework | 0.82667 | 5th |
| Collaborative knowledge management platform | 0.83733 | 2nd |

7.6.2 Conclusion of Analysis and Validation of the ISAH Framework

The statistical results offer evident and strong empirical evidence for the practicality and applicability of the ISAH Framework for solving affordable housing issues in the Ghanaian context. This proves so since the mean scores for each component show that the stakeholders regard the framework as highly effective. The notable relation

between the components supports the intertwined model of the framework, indicating that its parts are mutually collaborative.

The two main factors that came out of EFA are consistent with the framework in favouring PM and practical action-oriented execution, as well as KMO and sharing of knowledge: “Project Management and Decision Support” and “Collaborative Knowledge Management.” This dual focus is likely to improve the framework’s capacity to tackle multifaceted issues of housing. Another strength of the RII analysis is the focus on the aspects of the subject: participatory stakeholder engagement and collaborative knowledge management—all of which correlate with the principles of the framework: affordable housing that is context-sensitive.

Therefore, it can be ascertained that the ISAH is a fairly sound and well-framed approach to the affordable housing problems in Ghana. As seen from the responses, three aspects stand out: it is an integrated approach, it emphasises the engagement of stakeholders, and it relies on data in making decisions. When applying this framework, one must pay more attention to the facilitation of participatory processes and knowledge management since they were the most influential factors.

This empirical validation serves as a solid base on which the ISAH Framework can be applied and built on in Ghana and other developing countries that are experiencing similar affordable housing hurdles. Due to its comprehensive nature that addresses cultural, economic, political, and environmental aspects, the framework can be valuable to enhance affordable housing delivery and meet the requirements of vulnerable communities in Ghana and in other nations.

7.7 Opportunities for Adoption of ISAH Framework

The ISAH Framework has a level of applicability that is ideal for transforming the delivery of affordable housing in Ghana and other developing country contexts. The framework has a structured and theoretically sustainable approach to housing interventions that would contribute to rising project efficiency rates and stakeholders' satisfaction levels, as well as promote socially desirable outcomes. Therefore, the ISAH Framework may be a valuable tool for driving innovation, capacity, and the accumulation of knowledge for the construction of affordable houses.

Additionally, the ISAH Framework can help contribute to the achievement of a broader project objective, such as poverty reduction, social justice, and sustainability of the environment. Thus, the framework can help improve low-income and vulnerable units' quality of life, health, and economic situation. In the same respect, a concern for sustainable design, construction, and management of housing projects can also help mitigate the impacts of urbanisation on the environment and support the transition to a low-carbon future and a future more resilient to climate change.

To attain these opportunities and manage the challenges of ISAH Framework implementation, multiple stakeholders need cooperation and partnership, policy integration, and resource dedication. To provide affordable housing, all these must be achieved in collaboration with various stakeholders, including the government, non-governmental organisations, the private sector, and the general population. The ISAH Framework also mandates policy, legal, and financial frameworks that will aid in realising the ISAH Framework and enhance sustainable and equitable housing initiatives.

Thus, the ISAH Framework offers a comprehensive and coordinated system as an innovative solution to the challenges fostered by the delivery of affordable housing in Ghana and other developing countries. Apart from presenting the 'hard systems OU model' and its key components, this chapter provides an understanding of the components of the framework as well as the possibilities and concerns of appropriate and constructive application for making improvements in affordable housing construction for the better. Ensuring the ISAH Framework and its scale-up will require commitment and more learning from various stakeholders. However, the significance is high for positively impacting low-income and vulnerable populations and enhancing sustainable development.

7.7.1 Enhancing Governance and Accountability

To enhance governance and accountability in AHPs, it's crucial to establish an independent housing authority with a robust mandate and appropriate governance frameworks. This authority should coordinate and supervise nationwide AHP implementation, ensuring sound legal and regulatory frameworks for policies and guidelines. A proper system of audit and reporting, along with a Project Management

Information System (PMIS), should be implemented for transparency and real-time tracking. Collaboration between government departments, the private sector, and NGOs should be fostered to promote information exchange. Public engagement can be enhanced through community engagement boards, allowing input and involvement in AHP decisions.

7.7.2 Fostering Inclusive Participation

Inclusive stakeholder participation is vital for the success and sustainability of AHPs. This can be achieved through comprehensive stakeholder analysis, including vulnerable and marginalised groups. Community members should be involved in planning and design processes through participatory approaches. Establishing community-based organisations or housing cooperatives can help aggregate end-user demand and maintain AHPs. Capacity development activities should be designed to empower community members and local organisations. Implementing grievance procedures and regularly engaging local communities for feedback ensures AHPs remain aligned with end-user needs and preferences.

7.7.3 Strengthening Regulatory and Legal Frameworks

To strengthen regulatory and legal frameworks for AHPs, existing building codes, zoning regulations, and environmental laws should be reviewed and updated to align with international best practices. Regulations should address land affordability, property rights, and housing finance. Simple codes and standards for contractor licensing, materials, and construction quality control should be invested in. Strict legal regimes with provisions for inspections, penalties, and violation handling need to be established. Promoting cooperation between government departments responsible for housing, city planning, and environmental conservation is essential. Awareness campaigns about relevant laws should be created to improve knowledge and application among authorities, local governments, and industry personnel.

7.7.4 Ensuring Sustainable Funding

Sustainable funding is critical for the successful implementation and long-term viability of AHPs. A National Housing Fund should be established to source and disburse funds from various allocations, taxes, and levies. Innovative financing solutions, including

housing microfinance and community financing structures, should be championed to address limitations in affordable housing finance for low-income households. Incentive initiatives and tax breaks can encourage private sector investment in AHPs. International development assistance and financing from multilateral bodies should be leveraged. Incorporating cost-friendly and sustainable construction materials can help achieve low costs. A permanent financing approach and budgeting steps should be created to ensure consistent funding for the maintenance and operation of AHPs throughout their lifecycle.

The Integrated Sustainable Affordable Housing (ISAH) Framework should be implemented to address the real outstanding issues regarding housing. The outlined ISAH Framework for Ghana is quite comprehensive in addressing the issue of affordable houses in Ghana. It offers a comprehensive approach that tackles the multifaceted issues through several key components: acculturated custom project protection techniques, contemplating and engaging stakeholders in the decision-making process, effective indicators of sustainability, and knowledge management systems.

While the framework may not fully address housing problems in Ghana, it provides techniques and strategies that will immensely assist in improving and addressing the problem if key stakeholders, such as the government and other housing authorities, adopt the framework. For this reason, people who need affordable houses in Ghana will likely adopt the ISAH Framework because it takes cultural, economic, political, and environmental considerations into account. The emphasis on inclusive processes, sustainability, analytics, and knowledge sharing for delivering safe, adequate, and affordable housing to the population of Ghana, mainly the needy and most vulnerable, is ensured.

Therefore, the ISAH Framework, if appropriately adapted, executed, and rooted in good governance structures, participation, better regulations, sustainable funding, capacity building, and improvement mechanisms, could significantly improve the current situation in Ghana's housing sector. The study's framework is useful due to its broad scope and contextualisation. It makes a significant contribution to solving existing real-world housing problems, not only in Ghana but in other developing countries with

similar problems. It will, therefore, be helpful to those who want to have better policies and practices for offering sustainable and more equitable housing.

7.8 Implementation Strategies

This research provides detailed implementation pathways for operationalising the ISAH Framework in affordable housing projects, offering systematic approaches that bridge theoretical concepts with practical execution. The implementation strategies are structured across multiple critical dimensions:

Project Setup and Initialisation

The study offers specific guidance for project initialisation, establishing comprehensive project governance structures with clearly defined roles, responsibilities, and decision-making hierarchies. This includes creating detailed project charters that define scope boundaries, success criteria, and key performance indicators. The framework encompasses developing thorough risk registers with mitigation strategies specific to the Ghanaian context, alongside setting up robust monitoring and control systems with defined metrics and reporting frameworks. Additionally, it emphasizes implementing document management systems that ensure proper record-keeping and information accessibility throughout the project lifecycle.

Operational Excellence Framework

The research provides structured approaches for maintaining operational excellence through integrated quality management systems with specific checkpoints and verification procedures. This encompasses resource allocation matrices that optimize human and material resource utilization, coupled with cost control mechanisms featuring clear procedures for budget monitoring and variance analysis. The framework includes schedule management protocols with integrated milestone tracking and delay mitigation strategies, complemented by change management procedures that effectively balance flexibility with project stability.

Stakeholder Integration Mechanisms

Detailed strategies are provided for stakeholder management, encompassing community engagement protocols that ensure meaningful participation throughout the

project lifecycle. The framework establishes comprehensive communication approaches tailored to different stakeholder groups with specific channels and frequencies, incorporating feedback collection and analysis systems that inform decision-making processes. This is supported by robust conflict resolution mechanisms that address stakeholder concerns effectively, alongside partnership development approaches that leverage local knowledge and resources.

Technical Implementation Tools

The study offers specific technical implementation tools through standardised templates for project documentation and reporting, complemented by decision-making frameworks for critical project phases. This includes comprehensive performance measurement systems with defined metrics and benchmarks, alongside quality control checklists customised for different construction phases. The framework incorporates risk assessment tools that carefully consider local context and constraints to ensure effective project delivery.

Capacity Building and Knowledge

Implementation strategies for organisational development encompass comprehensive training programs designed to enhance project management capabilities, supported by knowledge management systems that effectively capture and share lessons learned. This includes structured mentorship frameworks that support skill development, along with performance evaluation systems that identify areas for improvement. The approach is reinforced by learning platforms that facilitate continuous professional development across the organisation.

Monitoring and Evaluation Framework

The research provides comprehensive monitoring and evaluation strategies through integrated performance tracking systems with defined indicators and measurement protocols. This includes robust data collection and analysis frameworks that support evidence-based decision-making, coupled with progress reporting mechanisms featuring standardized formats and frequencies. The framework incorporates impact assessment tools that measure project outcomes against objectives, supported by continuous improvement protocols that effectively incorporate feedback and lessons learned.

Sustainability Integration

Implementation strategies for ensuring project sustainability encompass comprehensive environmental impact assessment protocols integrated with social sustainability frameworks that consider community needs. This includes economic viability assessment tools coupled with long-term maintenance planning guidelines, all supported by resource efficiency optimisation strategies that ensure project longevity and effectiveness.

Risk Management and Mitigation

Detailed approaches for managing project risks incorporate comprehensive risk identification and assessment frameworks alongside mitigation strategy development protocols. This includes thorough contingency planning guidelines integrated with crisis management procedures, complemented by recovery planning mechanisms that ensure project resilience and adaptability to changing circumstances.

These implementation strategies are designed to be adaptable while maintaining their core effectiveness, allowing organisations to customize them based on specific project requirements and local contexts. The strategies are supported by practical examples, case studies, and lessons learned from successful implementations, providing valuable reference points for practitioners. The research also addresses common implementation challenges, offering specific solutions for issues such as resource constraints, stakeholder resistance, and regulatory compliance. By providing this level of detail and practical guidance, the study enables organisations to effectively translate the ISAH Framework into successful project outcomes, ultimately contributing to improved affordable housing delivery in Ghana and similar developing contexts.

7.9 Chapter Summary

The ISAH framework has been introduced as the most suitable solution to the problems affecting affordable housing projects in Ghana. As a result of empirical evidence and analytical work, the ISAH Framework was found to be relevant to addressing the multifaceted and complex problems highlighted in the Ghanaian context. The five components of the framework are integrated to offer a comprehensive solution to the delivery of affordable housing. The empirical validation of the framework demonstrated

its effectiveness and relevance in solving the multifaceted issues of delivering sustainable housing in Ghana. The ISAH Framework provided a clear roadmap for transforming the delivery of affordable housing in Ghana and potentially other developing countries. The framework's structured and theoretically sustainable approach made projects more efficient, satisfactory to the stakeholders and socially beneficial. Also, it is evident that the framework can be used to achieve other goals like poverty reduction, social justice, and sustainability of the environment, which makes it even more valuable than just being a tool for housing delivery. Although the process of implementation of the ISAH Framework requires cooperation, collaboration, policy integration and resource dedication across various stakeholders, the integrated nature of the ISAH Framework makes it a valuable tool for enhancing affordable housing delivery and addressing the needs of vulnerable in Ghanaian society and potentially other countries. Therefore, the ISAH Framework was found to be a valuable contribution to addressing real-world housing issues and presents a roadmap for more sustainable housing practices.

CHAPTER EIGHT

CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

In conclusion, this study provides information on the causes of AHP failure, which are core project management concerns in Ghana. The study identified gaps in integration, scope, time, cost, quality, resources, procurement, and stakeholders, all of which were associated with weak strategy and poor performance in affordable public housing projects. Some of the issues raised include poor integration and scoping, which created distortions and deviated from the actual goal of AHP. Other causes include frequent schedule difficulties, such as delays, erroneous cost estimates, and, most importantly, inadequate supervision. Similarly, using low-quality materials and omitting quality principles resulted in poor housing and delivery quality. Moreover, inadequate resource management, information flow, procurement procedure deviations, and a lack of adequate stakeholder engagement were critical concerns that negatively impacted the outcome of affordable housing projects.

The research confirms established theoretical connections between project management weaknesses and public project failures. Recommendations focus on improving transparency around planning, budgeting, and decisions while minimising interference. Implementing systematic governance frameworks, community participation protocols, and outcome-based oversight can help reconcile stakeholder misalignment and ensure accountable resource utilisation.

Strengthening project management knowledge in critical areas can mitigate coordination and accountability deficits in affordable housing. Targeted capacity building and institutional reforms are integral to translating findings into action. While sustained investments remain vital, enhancing delivery practices is equally crucial for converting resources into successful community impacts.

8.2 Contribution of the Study

8.2.1 Contribution to Knowledge

This study makes a threefold contribution to the body of knowledge on project management in the context of affordable housing projects in developing countries. This study represents the first comprehensive examination of all project management practices within a single study, specifically focusing on housing projects from a developing country perspective. By adopting this holistic approach, the research provides a unique and integrated view of how various project management practices interact and influence project outcomes in this specific context. This comprehensive analysis allows for a more nuanced understanding of the complexities and interdependencies within project management in the affordable housing sector, filling a critical gap in the existing literature which has typically focused on individual practices or developed country contexts (Pinto & Slevin, 1988; Ofori, 2007; Ahadzie et al., 2014).

Furthermore, this study is among the few attempts to systematically examine the barriers that impede the application of project management practices in housing projects, with a particular focus on Ghana's affordable housing initiatives. By identifying and analysing these barriers, the research provides valuable insights into the challenges faced by project managers and stakeholders in implementing effective project management strategies in this sector. This contribution is especially significant given the unique socio-economic, cultural, and infrastructural challenges faced by developing countries like Ghana in the realm of affordable housing (Kwofie et al., 2016; Damoah & Kumi, 2018). The study's findings in this area have the potential to inform policymaking, guide resource allocation, and improve project management strategies in similar contexts across the developing world.

A key innovative aspect of this study is the development of a unique framework designed to enhance project management in housing projects. This framework, grounded in empirical research and tailored to the specific challenges and opportunities present in Ghana's affordable housing sector, represents a significant advancement in the field. It provides a practical tool for project managers, policymakers, and other stakeholders involved in affordable housing initiatives in developing countries. By

offering a structured approach to addressing the identified barriers and leveraging effective project management practices, this framework has the potential to significantly improve project outcomes, increase efficiency, and enhance the overall success rate of affordable housing projects in Ghana and similar contexts (Ofori-Kuragu et al., 2016; Agyekum et al., 2017). The framework's adaptability and focus on context-specific factors make it a valuable resource for both practitioners and researchers in the field of project management in developing countries.

8.2.2 Contribution to Practices

This study makes several significant contributions to project management practices in the affordable housing sector. First, it provides practitioners with a comprehensive understanding of the interconnected nature of project management practices, helping them better navigate the complexities of affordable housing projects. The research offers practical insights into how different aspects of project management - from integration and scope management to stakeholder engagement and procurement influence project outcomes.

For project managers and housing authorities, the study provides specific actionable guidelines:

1. Project Documentation and Planning:

The implementation framework emphasizes comprehensive project documentation and planning through the development of clear project charters that establish well-defined objectives, scope, and success factors. This is supported by detailed integration plans that outline roles, responsibilities, and timelines while establishing explicit documentation protocols that guide all project phases.

2. Quality and Resource Management:

The framework incorporates systematic quality control measures throughout construction, supported by resource allocation plans developed before project initiation. This includes creating detailed material procurement schedules with integrated quality checkpoints, alongside establishing clear quality standards and monitoring protocols to ensure consistent project delivery.

3. Stakeholder Engagement

A thorough stakeholder analysis is conducted at project inception, followed by the establishment of formal communication channels with all stakeholder groups. The approach includes implementing regular feedback mechanisms and establishing community engagement protocols that ensure effective stakeholder participation throughout the project lifecycle.

4. Cost and Schedule Control

The framework emphasizes detailed cost estimation procedures coupled with robust financial control systems. This is complemented by schedule monitoring and update protocols, alongside clear change management procedures that maintain project control while allowing necessary flexibility for successful project delivery.

The ISAH Framework developed through this research serves as a practical tool that practitioners can implement to enhance their project management capabilities. It offers concrete strategies for contextualising project management processes, engaging stakeholders effectively, making data-driven decisions, assessing sustainability, and managing knowledge collaboratively. This framework provides practitioners with a structured approach to improving project outcomes while considering the unique challenges of the Ghanaian context.

The study's detailed analysis of barriers and challenges offers valuable lessons for project managers and housing authorities, enabling them to anticipate and proactively address potential project obstacles. By highlighting specific issues such as poor resource planning, inadequate quality management, and weak stakeholder engagement, the research provides practitioners with a roadmap for improving their project management approaches.

8.2.3 Contribution to Policy

This research makes substantial contributions to policy development in the affordable housing sector. The study's findings highlight the critical need for a comprehensive national framework for affordable housing projects in Ghana, providing policymakers with evidence-based insights for developing more effective housing policies. The research demonstrates how current policy gaps contribute to project failures and offers specific recommendations for policy improvements.

The study's emphasis on contextual factors, such as political interference, bureaucratic delays, and resource constraints, helps policymakers understand the broader systemic issues that need to be addressed through policy interventions. This understanding can inform the development of more effective regulations and guidelines for affordable housing projects, particularly in areas such as procurement, quality standards, and stakeholder engagement.

The ISAH Framework provides policymakers with a structured approach to developing comprehensive housing policies that address multiple aspects of project management and sustainability. The framework's components can guide the development of policies that promote better governance, enhance accountability, and ensure more sustainable funding mechanisms for affordable housing projects. Furthermore, the research's recommendations for strengthening regulatory and legal frameworks offer policymakers specific guidance on improving the institutional environment for affordable housing development.

The study's empirical validation of the ISAH Framework also provides policymakers with evidence of its potential effectiveness, supporting the case for its adoption at the national level. The research's findings on the importance of participatory stakeholder engagement and collaborative knowledge management can inform policies that promote more inclusive and effective approaches to affordable housing development.

8.2.4 Practical Implications

The findings of this study have significant practical implications for the implementation of affordable housing projects in Ghana and similar developing contexts. The research demonstrates that successful project delivery requires a multi-faceted approach that integrates robust project management practices with local contextual considerations. Organisations implementing affordable housing projects can utilize the ISAH Framework to develop standardised procedures for project documentation, quality control, and stakeholder engagement, while simultaneously adapting these practices to local conditions. Project managers and housing authorities can leverage the study's findings to establish more effective cost estimation procedures, improve resource allocation strategies, and implement stronger quality control measures throughout the construction process. The emphasis on local capacity building, sustainable practices, and community engagement provides practical guidance for developing housing

solutions that are both technically sound and socially sustainable. Furthermore, the identified barriers and challenges offer valuable insights for practitioners to proactively address potential obstacles, while the recommended governance structures and procurement practices provide a blueprint for improving project delivery mechanisms.

8.3 Limitations/Weakness

The following limitations were found to exist despite the researcher's meticulous research work:

8.3.1 *Generalizability constraints*

The study provides insightful information, but it is geographically limited, focusing only on affordable housing areas in Ghana, which limits its applicability throughout Africa and highlights problems with governmental institutions and cultural norms surrounding participation.

8.3.2 *Methodological limitations*

Findings from an exploratory qualitative investigation derive from non generalisable interview accounts, which provide indicative but not conclusively representative perspectives. The absence of quantitative measurement, randomly sampled data, or statistical representativeness constrains explanatory power and comprehensiveness. Small sample sizes also inhibit corroboration. Similarly, cross-sectional snapshots cannot establish causality as strongly as longitudinal tracking.

8.3.3 *Thematic constraints*

Despite coverage of main knowledge areas, project success determinants and post-completion housing impacts escaped in-depth examination. Significant aspects like leadership, learning, innovation culture, and contextual complexity received only tangential coverage, given bounded rationality and respondent experiences. Critical success sub-components likely slipped examination. Housing occupancy outcomes essential for societal returns avoided measurement.

8.3.4 Interpretive implications

Despite robust protocols, researcher positionalities, biases, and subjectivities likely shaped non-trivial investigative framing, interpretations, and recommendations. The reliance on a lone coder placed inherent limitations on comprehensively capturing all themes. The explicit use of theory also raises the possibility of overlooking alternative, empirical explanations.

8.3.5 Reform feasibility uncertainties

Proposed reforms remain untested in context, requiring further evaluation. Practical hindrances around political constraints, entrenched procurement customs, ineffective bureaucracies, and market incentives threatening change could undermine viable adoption. There is a lack of explicit analysis of the intervention requirements and feasibility for realistic, grounded contributions.

Generally, the impressive scope for methodological, empirical, analytical, and practical expansion persists around study limitations, providing fruitful avenues for subsequent investigations to pursue impactful affordable housing delivery.

8.4 Strength of the Study

This research makes numerous noteworthy contributions by providing essential baseline empirical evidence on the delivery issues of affordable housing project (AHP) in a critically understudied developing country context. The detailed qualitative insights into intricate management dynamics greatly advance our understanding of this area, which is crucial for equitable growth.

Furthermore, the researcher's Integrated Sustainable Affordable Housing (ISAH) framework offers a thorough and all-encompassing method of resolving the issues found in the investigation. Modification and use of this framework are possible for affordable housing projects worldwide, particularly in impoverished countries grappling with similar issues. The ISAH framework can assist researchers, practitioners, and policymakers in their endeavours to enhance the implementation of affordable housing

projects and advance sustainable urban development by providing a methodical and context-sensitive approach.

8.5 Recommendations and Future State for Improving AHP

8.5.1 Recommendations for Policy

Based on the findings, this research offers suggestions for enhancing affordable housing development programmes in Ghana, addressing stakeholder concerns, management difficulties, and issues related to employing the AHP methodology.

8.5.1.1 Comprehensive project management frameworks

In the context of the study conducted, it is apparent that strict adherence to superior project management methodologies, procedures, and practices within diversified disciplines of knowledge is highly desirable to facilitate successful project AHP implementation and compliance with goals and objectives (Kerzner, 2017).

8.5.1.2 Governance mechanisms to reduce political interference

Proper governance structures should be implemented to avoid political interference in AHPs, entailing accountability, transparency, and independence (Locatelli et al., 2017; Osei-Kyei and Chan, 2015). Therefore, for AHPs to be implemented purely based on technical merit and stakeholders' requirements, other external bodies should be allowed to monitor the implementation process, ethical standards, penalties and penalties for politically influenced interferences.

8.5.1.3 Inclusive Stakeholder Participation

The emphasis is placed on discussing the efficiency of stakeholder involvement in AHPs to obtain the right project outcomes and meet the needs of beneficiaries and communities. It outlines organisational procedures, including consultations, planning sessions, and feedback channels, for implementing diverse solutions (El-Gohary et al., 2006; Olander and Landin, 2005).

8.5.1.4 Merit-based procurement practices

Strategic procurement calls for merit-based procedures focusing on competence, qualifications, and cost to enhance procurement in AHPs. Therefore, achieving this may involve raising suspicion, evaluating, and contesting to ensure that AHPs benefit from obtaining supplies and services from quality suppliers and contractors (Arrowsmith, 2010; Walker and Rowlinson, 2008).

8.5.1.5 Consistent funding provisions

According to the report (Ibem, 2011; Abdul-Aziz and Kassim, 2011), AHPs need predictable and solid financial support to establish efficient, problem-free work.

8.5.1.6 Localisation and Sustainability Priorities

Based on the research findings, government initiatives for affordable housing projects should prioritise localisation and sustainability approaches as fundamental strategic elements. This involves developing housing solutions that are deeply rooted in local contexts while ensuring long-term environmental and social sustainability.

Localisation

The framework emphasizes utilising local building materials and construction techniques that balance cost-effectiveness with cultural appropriateness, while actively engaging the local workforce and contractors to build community capacity. This approach incorporates indigenous knowledge and architectural practices suited to local climate conditions, supported by strengthened local supply chains that reduce costs and stimulate the local economy.

The strategy adapts project management practices to align effectively with local institutional capabilities, ensuring sustainable implementation.

Sustainability

The sustainability approach focuses on implementing comprehensive green building practices and energy-efficient design solutions, complemented by renewable energy integration strategies tailored for housing projects. This includes creating effective waste management and recycling programs that span both construction and occupancy phases while establishing long-term maintenance frameworks that communities can independently sustain. The framework emphasizes building resilient infrastructure designed specifically to withstand local environmental challenges, ensuring long-term project viability.

The integration of these priorities into AHPs can lead to more successful outcomes by ensuring projects are both locally relevant and environmentally sustainable while creating lasting positive impacts on communities. This approach aligns with both global sustainability goals and local development needs, making projects more viable and beneficial in the long term.

8.6 Further Research

Even though the study provides important initial data, additional research will be helpful for continued housing enhancements. Areas of priority include:

- Evaluating the effect of the project management capacity-building initiative on housing delivery.
- Analysing how the interventions in the sphere of governance affect politicisations, transparency, and accountability.
- Analysing participation mechanisms to determine their effectiveness in providing results that align with a community's goals and values.
- Exploring the effectiveness of improved procurement systems and practices on construction quality, cost, and time.
- Analysing the ability to fund provision models to unlock affordable housing supply and sustainability.
- Practical application of the ISAH framework on similar projects.

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APPENDICES

Appendix I-Ethics approval from ethics review committee



Downloaded: 12/01/2024
Approved: 10/02/2023

Andrews Kyeremeh
School of Engineering
Programme: PhD Research Engineering

Dear Andrews

PROJECT TITLE: An investigation into government affordable housing project failures in Ghana: A project management perspective.
APPLICATION: Reference Number 012421

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 10/02/2023 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 012421 (form submission date: 15/01/2023); (expected project end date: 25/03/2023).
- Participant information sheet 1023681 version 1 (15/01/2023).
- Participant consent form 1023682 version 1 (15/01/2023).

If during the course of the project you need to deviate significantly from the above-approved documentation please email ethics.review@sunderland.ac.uk

For more information please visit: <https://www.sunderland.ac.uk/research/governance/researchethics/>


Yours sincerely

Mrs Andrea Howell
Ethics Administrator
University of Sunderland

Appendix B-Ethics approval from office OHLGS

**OFFICE OF THE HEAD OF THE LOCAL GOVERNMENT SERVICE
(OHLGS)**

*In case of reply, the number
and the date of this letter
should be quoted*


Republic of Ghana

P.O. BOX MB 396
MINISTRIES-ACCRA
Tel: 0302-677929
Fax: 0302-662799
E-mail: Ohlgs@lgs.gov.gh
Web: <http://www.lgsgov.gh>

Our Ref: OHLGS/FC/45/09
Your Ref:

Date: 22/06/2022

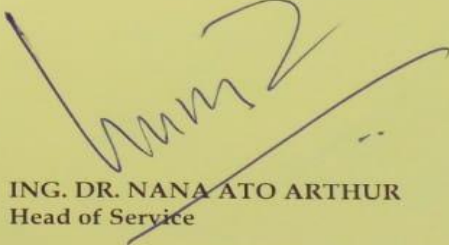
TO WHOM IT MAY CONCERN

LETTER OF APPROVAL/CONSENT

Mr. Andrews Kyeremeh, a PhD Candidate at the University of Sunderland has requested permission to interview Metropolitan, Municipal, and District Chief Executives (MMDCEs) and other key stakeholders within the Local Government Service as part of his research on governmental housing projects in Ghana.

On behalf of the Service, I have read and received briefing on the purpose of the research/interviews and do hereby grant approval to the above-mentioned Candidate to conduct his study.

Accept the compliments of the Service.


ING. DR. NANA ATO ARTHUR
Head of Service

Appendix C-Ethics approval from PMI-Ghana



12 September 2022

Andrews Kyeremeh
PhD Candidate,
PhD Research Engineering
University of Sunderland

Dear

**AUTHORIZATION TO RECRUIT STUDY PARTICIPANTS FROM THE MEMBERSHIP OF PROJECT MANAGEMENT
INSTITUTE (PMI) GHANA**

Following your request to recruit participants for your Doctoral study from the Professional Association membership, permission is hereby granted to enable you to proceed with your study.

Individual's participation will be voluntary and at their discretion.

We trust you will carefully observe the terms and conditions as a member of this association in your conduct with the membership.

We wish you good luck in your study on the **An Investigation into Government Affordable Housing Project Failures in Ghana: A Project Management Perspective** in the pursuance of your academic laurels.

Best Wishes,

A handwritten signature in black ink, appearing to read 'Jumoke Lafenwa'.

Ms. Jumoke Lafenwa
President

P.O. Box YK 1035 Kanda - Accra, Ghana | Tel: +233-244 544 964 | Email: info@pmi-ghana.org, www.pmi-ghana.org
President: Ms. Jumoke Lafenwa

Appendix D-Permission letter to OHLGS



University of Sunderland
Edinburgh Building, Chester RD,
Sunderland
SR1 3SD

10TH May, 2022

**OFFICE OF THE HEAD OF THE
LOCAL GOVERNMENT SERVICES
ACCRA, GHANA**

Dear Sir/Madam,

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

My name is Andrews Kyeremeh a Ghanaian international PhD student pursuing research engineering at the university of Sunderland. As part of my study, I will conduct research in some selected institutions in Ghana including yours that will involve officers/professionals and it is an institutional requirement that I get permission from such study sites allowing me to conduct the study in Ghana subject to ethical clearance from your outfit. My study topic is: **An Investigation into Government Affordable Housing Project Failures in Ghana: A Project Management Perspective**. This will involve interviewing Project managers, MMDCES, local contractors, civil engineers, public procurement officers and civil society across 3 selected regions (Northern, Central and Southern areas) of the country.

I would therefore be very grateful if you could grant me permission and provide me a letter to that effect in order to conduct the study in your institution.

I do hope this email reaches you well. Counting on your usual cooperation.

Thanking you in anticipation.

Yours Sincerely

Andrews Kyeremeh

(PhD Candidate)

PhD Research Engineering

Appendix E- Permission letter to PMI-Ghana



University of Sunderland
Edinburgh Building, Chester RD,
Sunderland
SR1 3SD

05TH August 2022

**THE PRESIDENT
PROJECT MANAGEMENT INSTITUTE
ACCRA, GHANA**

Dear Sir/Madam,

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

My name is Andrews Kyeremeh a Ghanaian international PhD student pursuing research engineering at the university of Sunderland. As part of my study, I will conduct research in some selected institutions in Ghana including yours that will involve officers/professionals and it is an institutional requirement that I get permission from such study sites allowing me to conduct the study in Ghana subject to ethical clearance from your outfit. My study topic is: **An Investigation into Government Affordable Housing Project Failures in Ghana: A Project Management Perspective**. This will involve interviewing Project managers, MMDCES, local contractors, civil engineers, public procurement officers and civil society across 3 selected regions (Northern, Central and Southern areas) of the country.

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Yours Sincerely

Andrews Kyeremeh

(PhD Candidate)

PhD Research Engineering

Appendix F- Sample Thematic analysis of transcript

Table 4.1: Development of themes and sub-themes

| Themes | Sub-themes |
|--------------------------------------|--|
| Affordable Housing Practices | Awarding Procedure Tendering Political basis Project publication Requisite contractor invitation Bidding Procedure Site identification and pricing Publication finalization Issuing of award letter Project funding |
| Affordable Housing Practices | Current state Houses in use Uncompleted projects Sale of houses Project handed to SSNIT. 95% completion level |
| Project Management Practice | General management practice Project integration management Project scope management Project resource management Project cost management Project communication management Project risk management Project procurement management Project stakeholder management |
| AHP Implementation Challenges | Awarding AHP Awarding process contributes to project failure. Procurement process Selection of rightful person Tendering issues Challenges Lack of on time funding Political hindrances Lack of fund acquisition Interference from politicians Lack of competent contractors Legal regimes governing permit acquisition. Stakeholder management challenges Non-engagement of the chiefs Non-involvement of community members Lack of information |

Table 4.2: Themes and sub-themes developed.

| Themes | Sub-themes |
|---|--|
| Project Management Failure | <p>Knowledge 95% completion of Asokore Mampong project Most AHP abandoned.</p> <p>Perceptions Corruption Misplaced priorities REDCO flat Lack of funding Successive government lack interest. New government with new agenda</p> <p>Project management practice Delay in project funding</p> |
| Recommendations to Improving AHP | <p>Awarding procedure Compliance of laid-down regulations Competitive tendering Evaluation</p> <p>Preferred housing institute AESL Ministry for works and housing duplicating projects. Kwame Nkrumah institute state housing Public Work Department</p> <p>Suggestions Supervision process devoid from politicians Projects should be supervised by right institute. Project fund should be fully secured. Independent institution overseeing the funding. Government should also have clear objective. Funds should be available for completion of project. Clear cut framework needed. Clients should have a thorough objective. Project officialdom should be surcharged. Procurement process should be free and fair</p> |

Table 4.3: Themes and sub-themes developed.

| Themes | Sub-themes |
|--|--|
| <p>Role of Stakeholder's Implementation</p> | <p>Stakeholders Role In charge of initiation of projects Recruitment of project management team Designing and supervision consultant Ensure affordability of houses Decide on how to sell project. Ensure availability of funds Initiation of project Ensure strict bidding to corporate decision.</p> <p>Stakeholders State housing corporation Social security and national trust Ministry for works and housing. Engineering fraternity or contractor Rent control. Private sector State institute of construction Habitat international Department of rural housing</p> |

Appendix G- Participant Information sheet



**University of
Sunderland**

PROJECT INFORMATION SHEET

**Study Title: PROJECT MANAGEMENT PERSPECTIVES ON THE FAILURES OF
GOVERNMENT HOUSING PROJECTS IN GHANA**

What is the purpose of the study?

The main purpose of the study is to investigate the high failure rate of affordable housing projects in Ghana by interrogating the use of project management practices. The following research questions were formulated as guide to achieve the stated research objective.

1. How have project management practices been employed in affordable housing project delivery in Ghana?
2. What challenges impede effective project management implementation in affordable housing projects in Ghana?
3. How can project management practices be developed to improve the success rate of affordable housing projects in Ghana?

Research aim

This study is aimed at exploring the factors contributing to the failure of Affordable Housing Projects in Ghana from the PMP perspectives.

Who can take part in the study?

The participants in this research will be project managers, civil Engineers, contractors, Public Procurement officers, MMDCE'S, quantity surveyors particularly those that handle governmental affordable housing projects in Ghana. Their views and experiences will be sought on what needs to be known regarding the high failure rate of government affordable housing project in Ghana from PMP perspectives.

Do I have to take part?

Participation is entirely voluntary. If you change your mind about taking part in the study, **you can withdraw at any point during the session without giving a reason and without penalty**. After you have completed the study, you can also withdraw your consent for your data to be included by contacting me via email **within 2 weeks of participation** and providing me with your participant code. The participant code will be given to you after you have consented to take part in the study. If you decide to withdraw during the study or in the subsequent 2-week period, your data will be destroyed and will not be used in the study.

What will happen to me if I take part?

Nothing will happen, you will only be interviewed by asking your taught about the high failure rate of government affordable housing project in Ghana from a PMP perspective. The interview will last between 30-60 minutes. Participating in this research will not have any cost bearing on you as the cost will be taken care of by the researcher.

What are the possible disadvantages and risks of taking part?

There are no foreseen disadvantages or risks to you by your participation in this study.

What are the possible benefits of taking part?

There is no intended benefit in terms of monetary entitlement for taking part in this research, the outcome of the study/recommendations from the study would inform practice and thus reduce the rate of government affordable housing project failure to aid in the social-economic growth of the country.

What if something goes wrong?

If you change your mind about participation, please contact me by email to cancel your participation. If you feel unhappy after the study, please contact me immediately or the Chairperson of the University of Sunderland Research Ethics Committee, whose contact details are given below.

Will my taking part in this study be kept confidential?

Please be assured that individual confidentiality will be maintained, information provided by you will remain confidential that only factual results will be reported. Your participation is voluntary; therefore, your identity will not be disclosed at any time therefore you are free to withdraw from the project any time without prejudice.

What will happen to the results of the research study?

If suitable, the results may be presented at academic conferences and/or written up for publication in peer reviewed academic journals.

Who is organising and funding the research?

This research has been funded by the scholarship secretariat of Ghana (Government of Ghana).

Who has reviewed the study?

The University of Sunderland Research Ethics Committee has reviewed and approved the study.

Contact for further information

Prof John MacIntyre (Pro Vice Chancellor, University of Sunderland)

Email: john.macintyre@sunderland.ac.uk

Phone: 0191 515 3266

Appendix H- Participation consent form



**University of
Sunderland**

Participation Consent Form

**Study title: PROJECT MANAGEMENT PERSPECTIVES ON THE FAILURES OF
GOVERNMENT HOUSING PROJECTS IN GHANA**

Participant code: _____

- I am over the age of 18.
- I have read and understood the attached study information and, by signing below, I consent to participate in
- I understand that I have the right to withdraw from the study without giving a reason at any time during the study
- I understand that I also have the right to change my mind about participating in the study for a short period after the study has concluded, i.e., 2 weeks after attending the testing session.
- I have consented to take part in this study.

Signed: _____

Print name: _____

(Your name, along with your participant code is important to help match your data from two questionnaires. It will not be used for any purpose other than this.)

Date: _____

Name of researcher taking consent (Witnessed by)

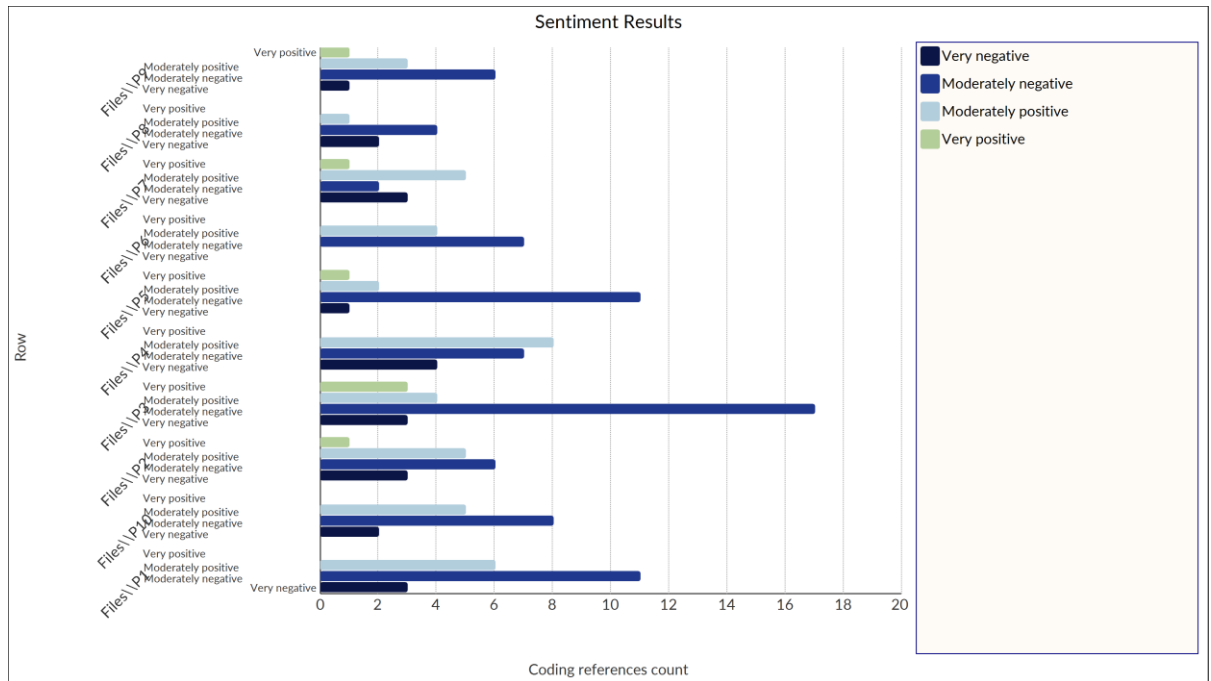
Andrews Kyeremeh

Appendix I- Sample observation extract

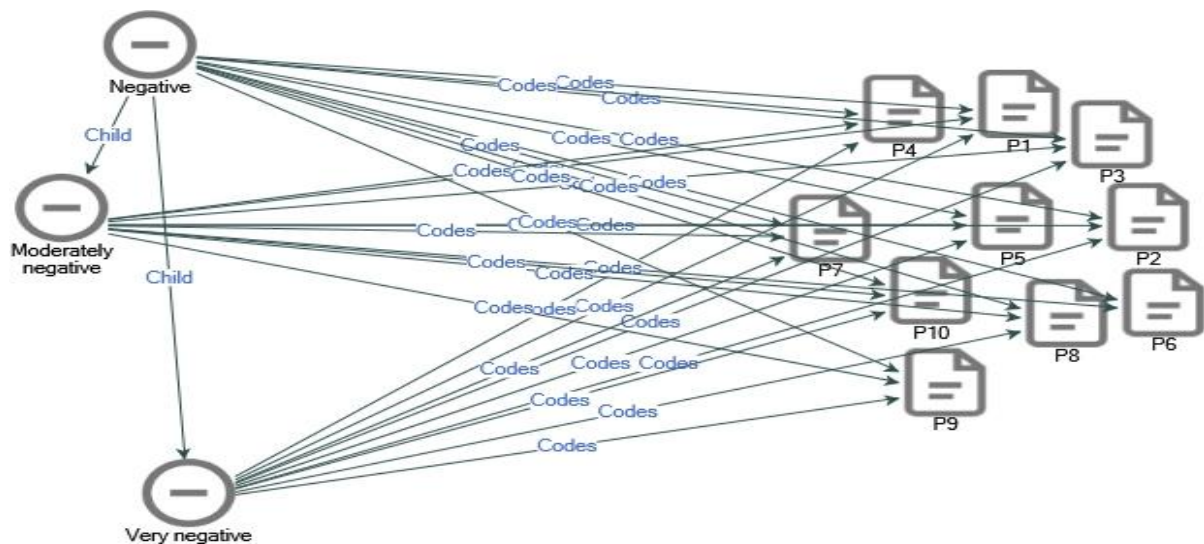
| Activity | Event | Place |
|----------------------------|---|---|
| Project Nearing Completion | <p>Before the start of work at the affordable housing at Asokore Mampong, the researcher arrived at the site about 40 minutes before the start of work. It was necessary for the researcher to arrive early enough to prepare appropriately before the study participant's arrival.</p> <p>The project team started arriving just about 20 minutes to 7:00 am. Morning meetings were held among the project team. The site supervisor was visibly holding the site design of the structures and were seen sharing responsibilities to the team members.</p> <p>Even though the project was about 90 percent completed, there were visible signs of the designs, especially the wood works, which looks old and outmoded as this project should have been completed years ago. There was an instance where a customer who had paid for one of the flat complained about the wooden window frame that it had bent beyond repairs and therefore wanted it change.</p> <p>There was another customer was also furious because the place was not as he expected.</p> | Asokore Mampong |
| Unfinished structures | Unfinished or partially constructed buildings are one of the most obvious signs of at the abandoned locations visited. You might notice buildings with exposed foundations, unfinished walls, or missing roofs, obvious cracks, | Amasaman, Saglemi, kpone, koforidua, cape coast |

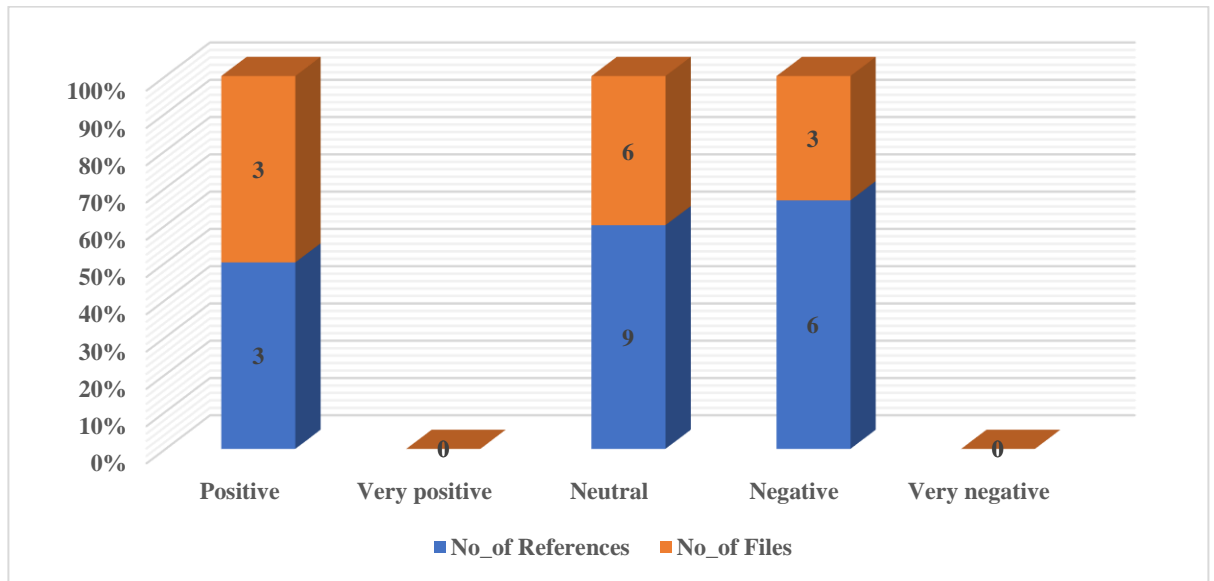
| | | |
|---------------------------------|---|--|
| | <p>weakened structural integrity, or inferior finishing.</p> <p>which point to a lack of development and perhaps poor project management.</p> | |
| Neglected construction supplies | <p>Dispersed or underutilised supplies of building tools and equipment were left behind at abandoned projects sites visited. This includes scaffolding, concrete mixers, piles of abandoned building supplies, or stacks of bricks or building blocks. The presence of abandoned equipment points to poor project organisation and resource management.</p> | |
| Vandalism or theft evidence | <p>The abandoned sites visited shows evidence of vandalism or theft. There were evidence of shattered windows, wall graffiti, missing fixtures or fittings. These obvious damages point to a deficiency in security precautions and inadequate site oversight.</p> | |
| Deterioration and weathering | <p>The abandoned construction sites visited had develop visible symptoms of degeneration and weathering over time. This involves buildings that are falling apart or degrading, metal parts rusting, or construction materials becoming discoloured. These obvious indicators point to the lengthy period of idleness and neglect at the location.</p> | |

Appendix J -Sentiment analysis

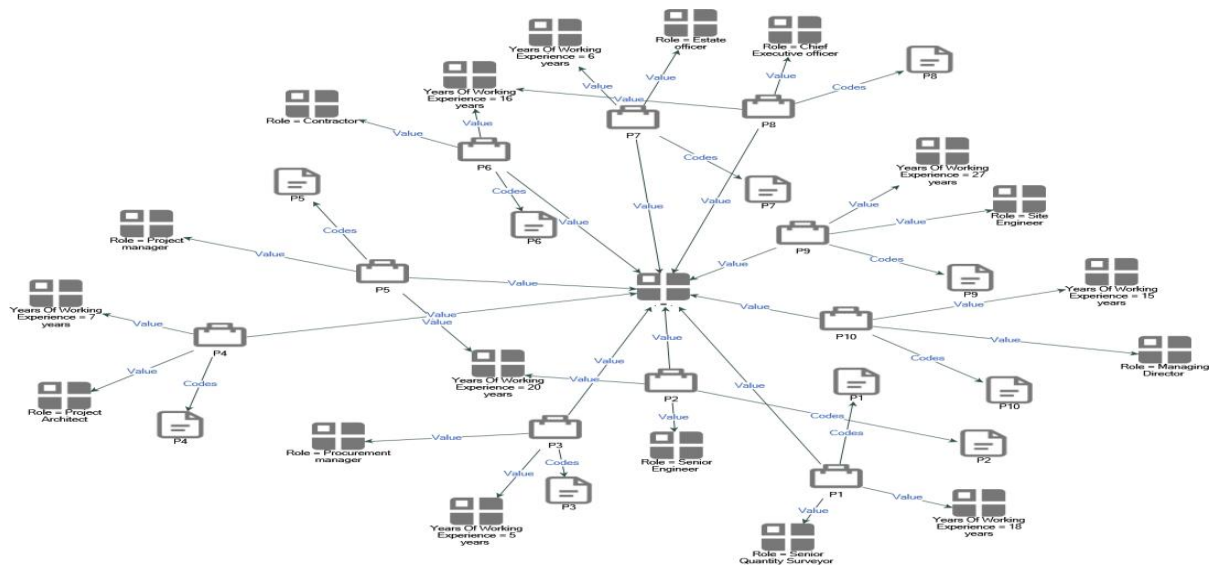


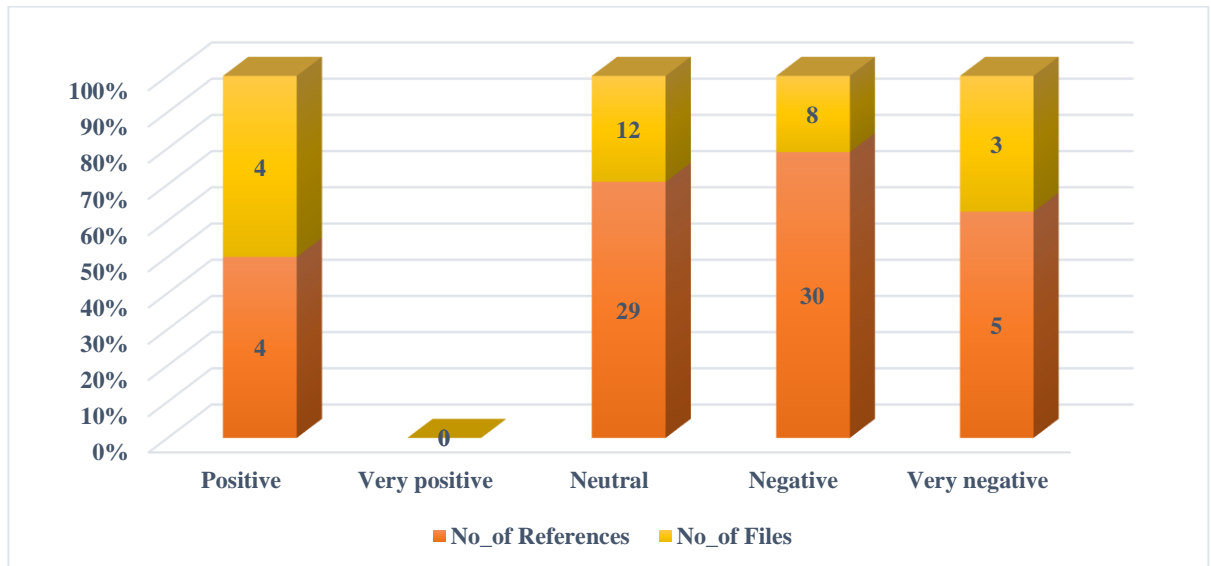
Project managers' perceptions towards PMPs



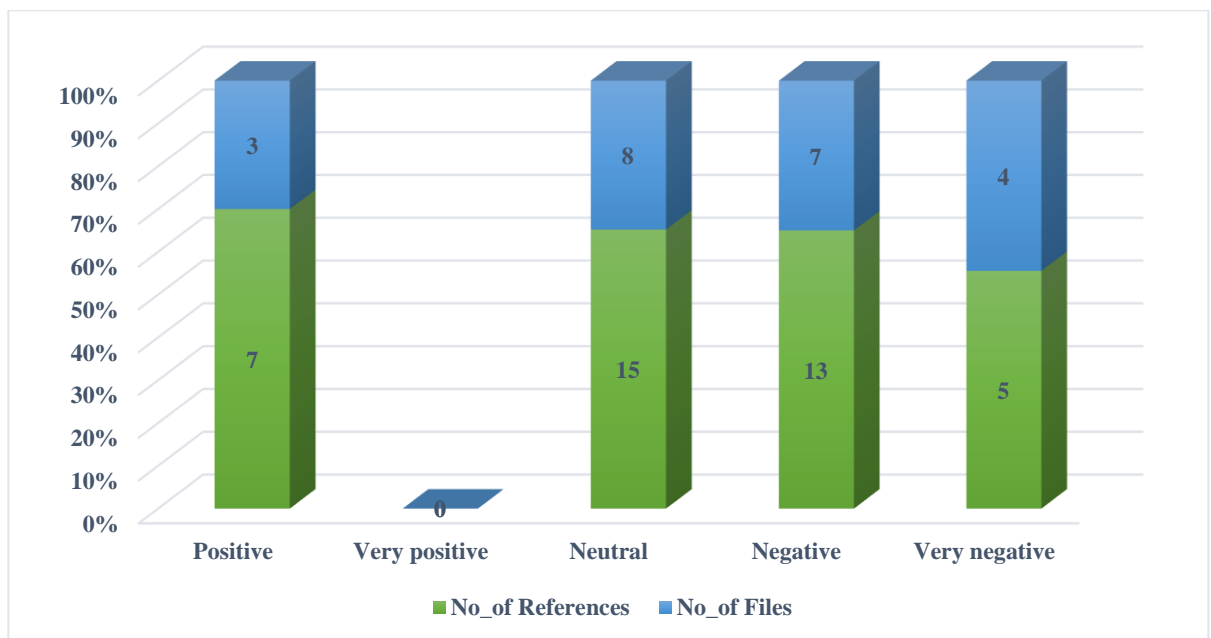


Stakeholder management practices sentiment

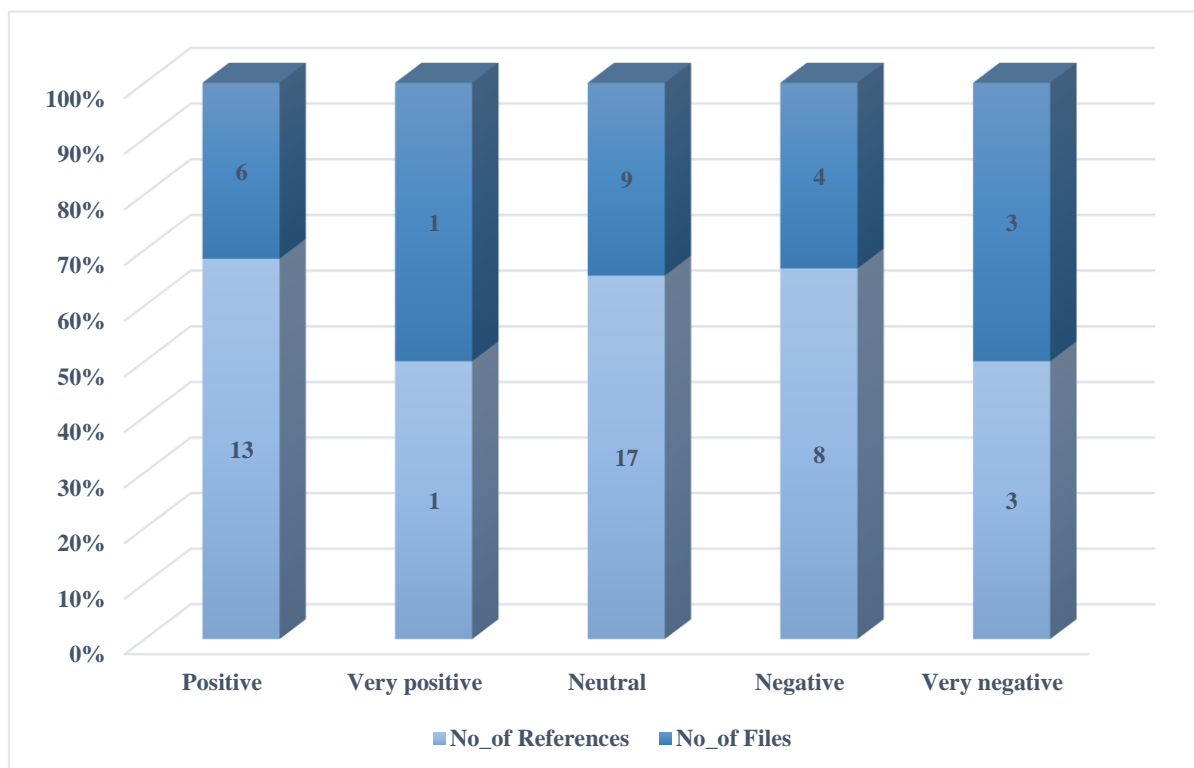




Project management practices contribution to AHP



Challenges to PMPs implementation



Effective strategies for PMPs implementation in AHP