

**Project Portfolio Management as an Enabler of Group Strategy within a
Selected Commercial Bank**

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ABSTRACT

The research topic under investigation is Project Portfolio Management as an Enabler of Corporate Strategy within a Selected Commercial Bank. The topic is important, as project portfolio management is an approach that enables organisation to realize its strategic objective. It is an approach that links corporate strategy and implementation.

Organisations exist to deliver value to all stakeholders in the current competitive landscape. To achieve business value, projects have to be initiated by the different business units that align to the group strategy and executed efficiently with the available resources. However, organizations continue to face challenges that impede the timely and cost-effective delivery of projects. The research topic becomes important as it aims to explore the challenges that hinder effective project portfolio management, with an emphasis on project selection, prioritisation and alignment capabilities. Also to assess whether effective project portfolio management indeed improved employee productivity and business profitability. This is so organisation can close the gap between strategy formulation and implementation. A conceptual model is constructed by analysing literature, which takes into account corporate strategy, project portfolio management capabilities, staff productivity, and business profitability. This model can be utilised for upcoming empirical studies on the impact of strategy on project portfolio management and its effectiveness.

Quantitative research was employed as the research methodology in this study. The rationale behind selecting this particular methodology is its ability to facilitate rigorous hypothesis testing, establish causal relationships, and ensure the applicability of research findings to a broader population. Stated differently, it provides a response to the question of quantity. The study further employed the judgmental random sampling technique to choose 163 individuals. A questionnaire was utilised to gather information from the respondents. Descriptive statistics and percentages were utilised to address the research questions posed in the study, while regression and correlation analyses were employed to examine the research hypotheses.

The findings of this study revealed lack of collaboration between the different units in selecting and prioritising projects, employee lack of understand of how their day-to-

day activities link to the group strategy as challenges that hinder effective project portfolio management with the selected bank. The respondents agree that the improvement of project portfolio management will improve employee productivity and business profitability.

Moreover, the researcher provided recommendations based on the study's findings and conclusions. For example, the selected bank should include a strategic pillar that will focus on fostering collaboration within the group. Design a consistent framework to select and prioritise projects. And define processes that will enable business unit executive to consistently share the consolidate view of prioritised initiatives with all employees. Lastly create a platform for employee to give feedback on strategy.

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DECLARATION

I, Rabothe Cleopatra Mosia, declare that the applied research paper submitted for the degree MBA: Masters in Business Administration, at Wits Business School, is my own effort and has not in the past been submitted to any other institution nor is it in the process of being submitted at any other institution of higher education. I further declare that all sources cited or quoted are indicated and acknowledged by means of a comprehensive list of references.



Signed: _____

Date: 2024 February 28

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CHAPTER 1 - INTRODUCTION

1. Introduction

This research seeks to explore Project Portfolio Management (PPM) in the South African banking industry, with a particular emphasis on how business units select and prioritise projects that align with the corporate strategy.

Employees in the banking industry continue to work on strategic, operational, and compliance projects driven by the need to meet corporate strategy, which outlines what the bank must do to enhance its product offering, market share, and customer experience to sustain a competitive advantage. According to Butler (2019), PPM is a key connection between corporate strategy and project management. Each business unit initiates projects that align with the strategic objectives to fulfil the strategic objectives of the organisation. In this context, business units such as retail and business banking, corporate and investment banking, and product solutions make up the bank. The projects progress to the execution phase, where a team must be assigned to carry them out once the business units have approved them. The term "project portfolio management" (PPM) describes this procedure.

According to Danesh et al. (2017), the adoption of PPM by large organisations is driven by the challenges inherent in project management, which can negatively affect service delivery. The primary objective of PPM is to optimise the return on investment for all resources allocated to various projects within an organisation, as stated by Butler (2019). The rising trend of utilising projects as a means of organising work has led to a growing interest in project portfolio management procedures among organisations. The objective of project portfolio management is to ensure that the most suitable IT projects are initiated, executed, and prioritised in light of competing demands for organisational resources. As such, it is plausible to assert that the implementation of PPM methodologies could substantially enhance the alignment between business and information technology, as noted by Butler (2019). Projects are closely associated with an organisation's strategy in terms of alignment, execution, and meeting the expectations and satisfaction of project stakeholders. The portfolio of projects exhibits a well-balanced assortment of projects, and the entity places emphasis on selecting appropriate projects and programs (Partner, 2013).

The process of project portfolio management (PPM) involves the evaluation of all proposed projects by each business unit, determining their priority, and eliminating those that do not align with the organisation's strategic objectives. The objective of PPM is to identify a set of projects that optimises resource utilisation and minimises risks, as posited by (Hansen & Svejvig, 2022). The system offers a centralised perspective on all on-going projects. Butler (2019) asserts that project portfolio management (PPM) is a complex skill that necessitates managers to employ diverse procedures, techniques, and tools to allocate resources consistently across a range of projects to optimise their impact on the overall welfare and success of the organisation. Project Portfolio Management (PPM) is a methodology that effectively manages multiple projects competing for the same resources and strategic objectives. According to Butler (2019), managers engage in the prioritisation of projects as a means of achieving strategic objectives.

While acknowledging that PPM decision issues are related to project selection, prioritisation, and resource balancing, Danesh et al. (2017) conducted a holistic assessment of PPM challenges focusing on management decision-making. It is imperative to concentrate exclusively on the banking industry to isolate the challenges specific to banking and improve the current project portfolio management (PPM) process for optimal efficiency and effectiveness. The PPM framework encompasses several key components: a comprehensive overview of the project portfolio; financial and risk analyses; interdependencies; prioritisation; alignment and selection; constraints; and periodic re-evaluation of the portfolio. According to (Hansen & Svejvig, 2022), it is not necessary for organisations to implement all elements to create value. Rather, they should focus on adopting the appropriate element. The objective is to enhance financial value, align the portfolio with strategy, and optimise project allocation by considering available resources and capabilities (Meskendahl, 2010).

Notwithstanding the implementation of the PPM methodology, the banking industry still faces challenges in effectively addressing project prioritisation, alignment, and selection, which ultimately hinder the achievement of strategic objectives. The banking sector's inadequate project portfolio management can be attributed to several

factors, including the absence of a centralised perspective on projects, ineffective prioritisation, alignment, and selection, resource constraints, and a deficient comprehension of the potential benefits of proper project portfolio management in enhancing project delivery. The banking sector faces challenges in project portfolio management that centre on developing a systematic approach for prioritising and selecting projects for implementation. This assertion aligns with Partner's (2013) findings, which suggest that organisations continue to face challenges related to resource management and maintaining uniformity in their PPM methodologies. Partner (2013) categorises the difficulties into three main areas: resource management, project selection and prioritisation, and adoption. Permana and Pribadi (2020) assert that for the Bank of Indonesia, aligning project selection with corporate strategy is crucial to ensuring that the selected project yields maximum returns. Despite the availability of techniques to facilitate selection and prioritisation, their implementation can be intricate and necessitate well-defined and precise criteria. Efficient project selection is a crucial requirement for organisations.

The on-going digital transformation in South Africa poses a persistent challenge for banks to innovate their digital products and services while maintaining regulatory compliance. Consequently, the number of IT projects is rising, and many of them have yet to adhere to their designated schedules. According to De Wet (2022), the South African Reserve Bank allocated a sum exceeding ZAR 30 000 000 000 towards IT projects, which has contributed to the perception of the South African banking industry as a dynamic arena for project management. According to De Wet (2022), it is imperative to revise the current project management methodologies employed in the South African banking industry to effectively address the complexities and scale of large projects. Despite the existence of project management methodologies in major banks, it is imperative that the anticipated benefits are realized in accordance with expectations.

A theoretical framework that draws on “general theory,” encompassing the complete cycle of project portfolio management, strategic planning, and business success, underpins the present study. According to Meskendahl's (2010) proposal, a comprehensive model comprises four key components: strategic orientation, project portfolio structuring, project portfolio success, and business success. According to

Editor et al. (2018), to attain maturity in project management and bridge the divide between strategic and operational levels, it is imperative for organisations to establish efficient structures via processes. The attainment of organisational excellence requires a level of PM maturity.

The below conceptual framework has been adapted for the purpose of this study.

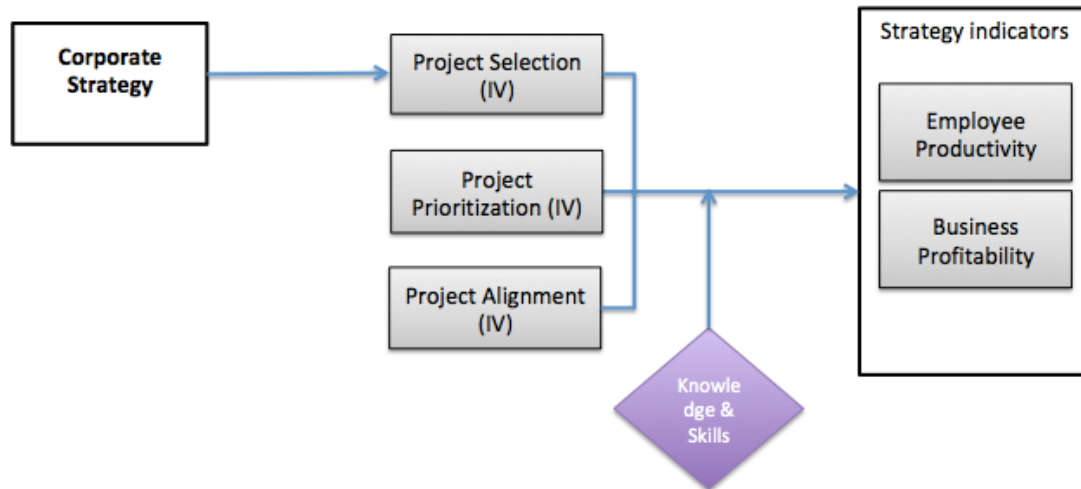


Figure 1: Conceptual Framework for PPM (Source: Rapola R., 2023)

Figure 1 represents the conceptual framework of the research study. It consists of four independent variables: corporate strategy, project selection, project prioritisation and project alignment, which are elements of project portfolio management, and employee productivity and business profitability (strategic objectives) as dependent variables. Knowledge and skill are moderating variables as they influence the dependent and independent variables. This study explores how project portfolio management, particularly the element of project selection, prioritisation and alignment, impacts employee productivity and business profitability.

1.1. Problem Statement

Many research gaps are identified by prior work and are compiled in the literature review section. The relevant research needs for this study were concentrated on project portfolio management - project alignment, selection and prioritising component. (Danesh et al., 2017) emphasise that one of the reasons projects fail is that organisations attempt to deliver projects beyond their capacity. Project selection and prioritisation are vital in the banking sector to efficiently select large and complex

project (De Wet, 2022): inefficient selection and prioritisation result in employees needing more direction from top management. Apart from a lack of direction, employees need to learn how their day-to-day activities contribute to the business's overall strategy. They cannot focus on what is critical for the business to deliver value to the stakeholders. Although business units proactively decide on strategic initiatives that align with the Corporate Strategy, as part of PPM (Project Portfolio Management), there is no collaboration across the different business units to decide and agree on priority for the multiple projects. As resources are limited, top management battles to decide on which project should be allocated the highest priority that will guarantee productivity and profitability. Existing selection methods must provide an integrated and seamless approach (Jafarzadeh et al., 2018a). As a result, projects extend beyond the defined business wish date due to capacity constraints, lack of planning and prioritisation. The research aims to investigate the impact of project management portfolio capabilities (selection capability, prioritisation capability and alignment capability) on business productivity and profitability and examine the mediating role of management decisions in these relationships. The primary research question guiding this study is how project management capabilities impact business productivity and profitability within a selected commercial bank in South Africa. To tackle the primary research question, the below two secondary questions shall guide the study:

- What are the factors that hinder effective project selection, project prioritisation and project alignment within banking sector?
- How do PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) improve employee productivity?
- How do PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) impact business profitability?

1.2. Justification of the Study

Tackling these research questions will provide valuable insight and solutions to stakeholders on effectively applying project portfolio management, especially project prioritisation, alignment and selection within the banking environment. The contributions from this research study can help the banking regulator meet its objective to protect the local currency and ensure sustainable economic growth. Compliance projects are selected and prioritised by the SA banking regulator – South African Reserve Bank, and they ensure that all the banks meet the industry requirements through project delivery. For the project team to effectively select, prioritise and align projects to corporate strategy will improve productivity and turnover rate. In addition, the findings of this research will be valuable to investors in the banking sector as practical project, prioritisation and selection will enhance the speed of project delivery, therefore, realise the return on investment. Timely project delivery will help customers to gain access to banking features, which in turn will improve customer experience and service. For the scholarship, the study will contribute to the existing literature by filling in the gaps in the literature, providing new sight and developing new strategies for Project Portfolio Management in enabling Corporate Strategy within South Africa’s Banking Sector. Lastly, for the practitioner, it will provide insight into the PPM capabilities that could be adopted and enhanced for the effective execution of strategy through project management. It will also give an insight into the lack of efficient and effective PPM capabilities.

1.3. Research objectives

- To understand factors that hinder effective project selection, project prioritisation and project alignment within banking sector
- To assess the impact of PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) on employee productivity
- To evaluate the impact of PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) on business profitability

1.4. Delimitations of the Study

The contributions from this research study are crucial for effective and efficient project portfolio management. Although other issues are highlighted within the

project management discipline, this study will focus on project selection, prioritisation and alignment. The theoretical perspective embraced is delimited to conceptual lenses of the project management framework, which promotes six elements: strategic orientation, project selection, project prioritisation, project alignment, employee productivity and business profitability. Strategic direction focuses on the influence of project portfolio management in enabling group strategy. Project selection is evaluating individuals or groups of projects to select and carry out those that contribute to achieving organisational goals. Project prioritisation is geared towards setting priorities for the project chosen based on the business value to be realised. Lastly, alignment entails that all the areas that need resources to work on the project know the selected project and its priority. Although the literature assessed other international banking institutions to understand the PPM challenges, the scope of this research study will be limited to the South Africa banking environment.

1.5. Structure of the Paper

The research paper is structured in this manner: The next chapter will focus on an empirical review of the literature to identify gaps examined in the research paper and define the objectives and secondary research question. To establish the study goal and support this paper's research hypotheses and proposals, the literature review will also evaluate and specify a theoretical or conceptual framework based on institutional theory. The motivation for the research technique, which is used from a research paradigm, follows the rationale for the institutional theoretical framework. The results will be obtained from the study and then be presented, discussed and interpreted. The analysis of the research's principal takeaways and its implications for management and procedural changes will be covered in the paper's concluding part. The research report will discuss the study's shortcomings and offer suggestions for future research.

1.6. Operational Definitions:

The following operational definitions are adopted in the context of the project portfolio management in the banking sector.

1.6.1. Project Portfolio Management

PPM ensures organisations adhere to best practices to execute and achieve strategic objectives. Ineffective PPM hinders the decision-making required to select, prioritise

and manage suitable projects with limited resources (Smit, 2018). The definition from (Smit, 2018) focuses entirely on the best practices while (De Reyck et al., 2005) expands the definition to highlight that PPM considers the entire project portfolio of an organisation to decide on which projects are given priority.

1.6.2. Project Selection

The process of project selection involves a systematic and objective evaluation of project ideas and concepts to determine the most viable, feasible, and profitable projects to implement. This process results in a prioritised profile of project alternatives, as defined by Njue et al. (2016).

1.6.3. Project Prioritisation

According to Schwencke (2022), project prioritisation refers to the capacity to evaluate and establish the significance of a task in order to arrive at a well-informed and efficient decision regarding a crucial task. Portfolio management aligns the management of the portfolio with the group strategy by prioritising resources for projects and programs (Purnus & Bodea, 2014).

1.6.4. Project Alignment

Managing IT projects within the banking industry is a complex undertaking, largely due to the potential impact that any changes may have on the interconnected IT infrastructure. According to De Wet (2022), the majority of IT projects in the banking industry require modifications to be executed across multiple components that are delivered by diverse development teams. Ensuring project alignment is of paramount importance to facilitate effective collaboration among multiple development teams. The present research study adopts the perspective that employee alignment is a crucial factor for the successful execution of collaborative projects by development teams.

1.6.5. Employee Productivity

Employee productivity is defined as “a measure of the efficiency of workers part of an organization. Productivity is, more likely than not, measured by observation rather than indices. It can be assessed in terms of the output of an employee on a project in a specific period of time” (Thapa & Singh, 2020). Employee productivity is an

important driver of organization performance. There are numerous variables that influence productivity such as working atmosphere, career opportunities, reward and fairness (Rahaman et al., 2020). Reward is generally linked to the performance on the organization. And performance is achieved when employees are able to deliver project that provide business value. However, when the working atmosphere is not conducive, lacks proper management and planning, it will affect employee productivity. The approach to this research study considers employee productivity important for business to realize its strategic objectives.

1.6.6. Business Profitability

Business Profitability refers to the financial performance of a business entity, which is determined by the amount of earnings generated from its revenue after deducting all the expenses incurred during a particular period. The aforementioned metric holds significant importance in determining the efficacy of managerial performance, satisfaction of shareholders, attractiveness to investors, and the sustainability of the enterprise (Alarussi & Alhaderi, 2018) conducted a study.

CHAPTER 2 – SYSTEMATIC LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2. Introduction

The literature review section stipulates the theoretical basis for the research study. It starts with an empirical review of existing literature to identify research gaps that provided the basis for why this research study focused on the role of Project Portfolio Management in enabling Corporate Strategy. The second part focuses on the various theories governing Project Portfolio Management (PPM) and its impact on business success. After that, it discusses the approaches around challenges faced with project selection, prioritisation and alignment as crucial elements for PPM.

2.1. Systematic Review of Literature

The section's consideration of the body of research showing a connection between strategy and project portfolio management serves as its conclusion. This is how the chapters are organised: the first section gives a general introduction to project portfolio management, including selection, prioritisation, and alignment. The impact of poor project selection and prioritisation is then summarised, explaining why firms need help choosing and ranking initiatives that add value to their businesses. The last part reviews some benefits of effective project portfolio selection and prioritisation. The assumption from the rationale developed in the introduction is that Project Portfolio Management, especially selection and prioritisation, are crucial to enabling group strategy. The systematic literature review aims to understand the challenges organisations face with project selection, prioritisation and alignment and the value to be realised with effective project selection, prioritisation and alignment.

2.1.1. Project Portfolio Management (PPM)

The present analysis pertains to evaluating the sustainability of project portfolio management (PPM) in the context of implementing information technology solutions in the banking industry. Kononenko et al. (2022) assert that an organisation's efficacy is influenced by selecting a project portfolio management (PPM) methodology and the extent to which PPM competencies are employed during project execution. According to Kononenko and Kpodjedo (2022), project portfolio management refers to the managerial process that involves the initial screening, selection, and prioritisation of project proposals, as well as the concurrent reprioritisation of projects

within the portfolio. Additionally, this process involves allocating and reallocating resources to projects based on their priority. According to Silvius and Marnewick (2021), project portfolio management connects an organisation's strategic objectives and the corresponding initiatives undertaken to achieve them, typically in the form of programs and projects.

According to Obeidat's (2016) perspective, the utilisation of strategy by organisations can facilitate the resolution of problems, the acquisition of novel competencies, and the enhancement of overall performance. The attainment of a lasting competitive edge is contingent upon the harmonisation of projects with organisational objectives, coupled with the awareness of employees regarding their role in the achievement of business success. This enhances productivity and bolsters the capacity of the business to withstand market fluctuations . While Savion (2021) posits that a competitive advantage can be achieved through employees' comprehension of their role in strategy, Heide et al. (2018) contend that communication-lacking purpose can result in a decline in organisational performance.

The implementation of a strategy is dependent on the execution of projects. Organisations must undertake appropriate projects to implement their strategic plans effectively. Stated differently, it pertains to ensuring that projects are in accordance with the objectives of the entity. The statement underscores the significance of PPM capabilities, specifically regarding project selection, prioritization, and alignment, as posited by (Fiala, 2021). Fiala (2021) posits that the strategic alignment of a portfolio is influenced by various factors, including project selection and prioritization as well as the coherence between delivery teams. According to Rad and Rowzan's (2018) argument, while PPM is commonly acknowledged as a rational decision-making approach, it is unfortunate that political and path-dependent challenges often interfere with the process, affecting its complex and dynamic elements.

2.1.2. The Rational for the Introduction of Project Portfolio Management

Dixit and Tiwari (2020) assert that Project Portfolio Management encompasses a set of intricate activities, which entail the identification, prioritisation, management, and selection of projects that align with a given portfolio. The utilisation of the Project

Portfolio Management (PPM) methodology serves the purpose of aligning the project portfolio with the organisation's strategic objectives (Dixit & Kumar, 2020). Ershadi et al. (2020) assert that the PPM process is fraught with complexities that must be effectively managed. Consequently, organisations encounter difficulties in determining the optimal project combination to invest in, given the constraints imposed by limited resources (Ershadi et al., 2020) .

Kovach and Ingle (2020) suggest that inadequate project selection and prioritisation practices have resulted in dissatisfaction among practitioners. This is attributed to the absence of integration and selection criteria, leading to subjective project selection. The utilisation of a subjective approach in project selection has led to a significant incidence of project failure, with a tendency for projects to be prematurely terminated prior to their intended completion. In specific instances, the Information Technology department may produce a project that fails to yield any commercial benefit or lacks congruence with the overall objectives of the enterprise. According to Herz and Krezdorn (2022), the failure of a project has the potential to damage relationships with collaborators, business partners, and customers. The lack of proper selection and prioritisation of projects can have adverse effects on the overall success of an organisation (Herz & Krezdorn, 2022). Research has identified inadequate planning and insufficient commitment from top-level management as contributing factors to project failure. The failure of a project can lead to both financial and ethical repercussions. The incidence of project failure has persisted at a significant level over the past decade. According to Nizam's (2022) findings, the success rate was recorded at 29%, while challenging projects accounted for 59% and cancelled projects constituted 19% (Nizam, 2022).

As to why organisations fail to select and prioritise project, resources are limited as such decision makers constantly need to decide on which projects require resources (people, time, money, equipment, etc), when and for how long. Allocation of resources is critical in ensuring profitability and productivity. Although previous research has produced project portfolio selection approaches, the majority of them fall short of seamlessly integrating selection criterion hierarchy, decision-making uncertainty, and project interdependencies (Jafarzadeh et al., 2018). The existing methods used to determine the relative order of importance within the portfolio

overlooks the complexity in which the organisation operates. As a result, businesses base their selection on financial and economic metrics and do not permit to evaluate long-term success of the business (Darwish et al., 2014).

Kovach & Ingle (2020) cite the fact that organisations find it difficult to choose a project from a pool of candidates because thorough, impartial project identification, prioritisation, and selection take time and effort. As a result, too many projects pass the selection phase and fail to have resources allocated to deliver the projects. Another issue highlighted is with regards to uncertainty in estimating cost and schedule for projects. Failure to select and prioritise project has a negative impact on the success of the business (Kovach & Ingle, 2020).

As organisations generate new innovative ideas to improve product and services, there is a risk that good ideas might not get allocate resources in time to make a meaningful impact in the market. Critical strategic projects consequently experience delays as a result of resources being committed to other potential initiatives. Banks must have reliable project evaluation and weighting tools to prevent this (BlueAnt: Part of Hypergene, n.d). In the case of the banking environment, Ramgathi (2009) established that selection and prioritisation were a challenge as the tools and governance structures needed to assess value of projects were negatively impacting the strategic objectives of the bank. Therefore, selection and prioritisation have become crucial for internal and external customer benefits. Ichsan et al. (2017) emphasise that the financial sector is quite fragile and influenced by the uncertainties in the business environment such as high demand of products and services, regulatory requirements and market competition, therefore it is very essential for the right decisions to be made timely to implement the strategy that will overcome the business dynamic.

2.1.3. Benefits of effective Project Portfolio Management

In exploring how PPM has evolved in recent years, existing literature highlighted that PPM overlooked the portfolio alignment and availability of resources and proposes portfolio prioritisation process where selection will be based on strategic alignment and execution capabilities (Hannach et al., 2019). Many organisations are adopting PPM due to the proven benefits it has. Some of the benefits, is that it helps

organisations run business based on projects, invest in best resources and support the strategic direction of the organisation for a competitive advantage(Ershadi et al., 2020). Other benefits include the following:

- The fundamental output of efficient project selection is increasing the return on investment. Several selection and prioritisation methods could be used to aid project selection and weigh projects against each other based on the returns (EcoSys Team, 2018).
- Organisations are able to realise return on investment through successful project delivery however; this is only possible when there are efficient selection and prioritisation processes (Ershadi et al., 2020)
- A well standardized method of selection aid PMO in benchmarking projects against criteria that is well defined as ad-hoc processes lead to inconsistencies in approvals. Consistent approach allows for transparent communication downstream as clarity is obtained on why certain project was approved or rejected (Hannach et al., 2019).

Effective prioritisation and selection enables organisation to gain the competitive advantage of reaching the customers first with new or improved products or services. With a sea of projects competing for resources, large companies struggle to maintain time-to-market (EcoSys Team, 2018).

2.1.4. The Role of Project in Strategy Enablement

The term "strategy" pertains to formulating a unique and advantageous position through a range of actions. As per the assertion, several organisations have endeavored to attain this unique and coveted position, formulating intricate and advanced strategies employing state-of-the-art tools (Cattini Junior & Zatti, 2013). Ramashala et al. (2020) state that the primary factor enabling organisations to achieve their vision and mission is strategic planning and execution. In the process of strategy formulation, the vision is deconstructed into pivotal concerns that are subsequently converted into actionable initiatives. Ramashala et al. (2020) assert that organisations with superior project management practices exhibit traits such as a well-articulated and effectively communicated strategy and a comprehension of how each project aligns with the overall strategy Ramashala et al. (2020) suggest that integrating project management principles during the strategy-planning phase can enhance

accountability and efficacy among organisational leaders. According to Cattini Junior and Zatti (2013), project management plays a critical role in implementing strategies, and it is imperative that project management be both relevant and effective for the organisation. It is imperative that individuals across all tiers of an organisation possess a comprehensive comprehension of the benefits of project management in the daily execution of strategic initiatives.

2.1.5. Project Portfolio Selection and Prioritisation

The authors Silvius and Marnewick (2021) recognise the significance of projects in effecting modifications to products and processes. The sustainable selection and prioritisation of resources within an organisation is imperative. The activities of selection and prioritisation in project portfolio management are of utmost importance, as projects contend for limited resources. Consequently, resources ought to be assigned based on project priority. Saviom (2021) posits that the present project portfolio management (PPM) practices exhibit inadequacies and inherent issues in establishing a connection between corporate strategy and project portfolio management as well as project management. Consequently, this affects the criteria for selection and prioritisation. While the framework proposed by (Silvius & Marnewick, 2021) aims to establish a connection between corporate strategy, project portfolio management, and project management, Armenia et al. (2019) contend that the framework fails to account for a diverse array of social and environmental concerns.

The process of project selection plays a crucial role in determining the success of an organisation. It involves identifying and prioritising projects based on their relevance and timing. However, allocating resources to the most suitable project in a manner that maximizes efficiency and profitability remains a challenging task for decision-makers. According to Jafarzadeh et al. (2018b), the lack of clarity regarding selection criteria for new projects often poses a challenge for businesses during the selection process. The present research delves into the difficulties encountered in the process of selection and prioritisation as a component of project portfolio management (Saviom, 2021). Additionally, the study examines the benefits that can be derived from improving how organisations select and prioritise projects. Despite the existence of project portfolio selection methods, they do not effectively incorporate selection or prioritisation, decision uncertainties, and project interdependencies, as noted by

Jafarzadeh et al. (2018b). The methodologies do not prioritise the determination of selection criteria; rather, they prioritise the identification of an optimal portfolio based on a predetermined set of criteria.

2.1.6. Project Alignment between Project Teams

The process of identifying and selecting an optimal team to support a project is crucial for its successful execution. According to Bingham et al. (2019) the project team members may originate from diverse departments within an organisation and assume distinct roles in overseeing specific components essential for the project's successful completion. In the context of this investigation, the project team refers to a cohort of professionals comprising analysts, testers, scrum masters, and developers who have been selected to carry out a project.

Romera (2023) posits that alignment occurs when a project team engages in effective collaboration, comprehends business objectives comprehensively, and maintains a lucid vision for long-term prosperity. Achieving a competitive advantage requires more than just setting objectives; team alignment is also crucial. This entails ensuring that all team members agree and work together towards a common goal. The aforementioned factor assumes a pivotal position in the triumph of the enterprise and necessitates individuals to possess a firm conviction and comprehension of their respective responsibilities. According to Fiala (2021), the profitability of a business and its ability to achieve its objectives are contingent upon the projects it chooses to undertake. Fiala further underscores the significance of the strategic alignment of projects in optimising resource utilisation within an organisation. Identifying and selecting an optimal team to support a project is crucial for its successful execution.

2.1.7. Employee Productivity

According to Thapa and Singh (2020), the evaluation of an employee's performance can be measured based on their project output within a defined timeframe. The productivity of employees is a significant factor that influences the overall performance of an organisation. Productivity can be influenced by various factors, including the working environment, career prospects, and equitable rewards, as noted by (Rahaman et al., 2020). The correlation between an individual's performance within an organisation and the reward they receive is a commonly observed

phenomenon. Performance is attained through the ability of employees to deliver projects that yield business value (Rahaman et al., 2020). In cases where the work environment is not favorable, characterised by inadequate management and planning, it can have a negative impact on the productivity of employees. The present research study adopts an approach that regards employee productivity as a crucial factor for businesses to achieve their strategic goals. Grifell-Tatjé & Lovell (1999)) assert that enhancing productivity has the capacity to increase the profitability of a corporation. However, it is noteworthy that other factors, such as a more favorable pricing system, can also contribute to the augmentation of business profit.

2.1.8. Business Profitability

One of the foremost goals of any company is to maintain sustainability in a competitive environment. The implementation and maintenance of performance-enhancing strategies are imperative for the organisation to achieve its objectives. Profitability refers to the financial performance of a business entity, which is determined by the amount of earnings generated from its revenue after deducting all the expenses incurred during a particular period. The aforementioned metric holds significant importance in determining the efficacy of managerial performance, satisfaction of shareholders, attractiveness to investors, and the sustainability of the enterprise Alarussi & Alhaderi (2018) conducted a study.

2.2. Empirical Review of Literature

The perspective adopted in this research study is that effective Project Portfolio Management could improve productivity and profitability by helping organisation to deliver business value that aligns to the corporate strategy. Prior literature shows that organisation experience challenges with PPM elements – selection, prioritisation and alignment. Although methods exist, they still do not help business in the selection and prioritisation of initiatives. The analysis of the 18 publications that were included for the synthesis is grouped in accordance with the themes that emerged from the systematic review. This is a table that summarizes the conclusions drawn from the data extraction. Relevance method was used to determine the most appropriate journals and papers in this study and focus was on journal with project portfolio management content.

Theme	No. of Articles	References	Research Gap
Project Portfolio Management Capabilities (Selection, Prioritisation & Alignment)	6	(Andini Permana & Pribadi, 2020) (Armenia et al., 2019) (Flechas Chaparro et al., 2019)	<ul style="list-style-type: none"> • Lack of best framework that organisations could adopt. • Limited adoption of PPS
Impact of PPM Capabilities on Employee Productivity.	3	(Hoffmann et al., 2017) Ehsan & Ali (2019),	<ul style="list-style-type: none"> • Lacks consideration of how organisations can manage overload to improve employee productivity.
Knowledge and Skill as moderating variable for PPM practices	3	(Ershadi et al., 2020)	<ul style="list-style-type: none"> • Lack of consideration on how knowledge and skills can help shape PPM practices
Impact of PPM Capabilities on Business Profitability	4	(Hoffmann et al., 2017) Ko and Kim (2019).	<ul style="list-style-type: none"> • Lacks consideration of different levels of PPM maturity.

2.2.1. PPM Capabilities (Selection, Prioritisation & Alignment)

Project-based businesses nowadays have an increasing requirement to develop integrated and integrated portfolio management systems based on the organisation's entire strategy. In order to make an informed decision on which projects to implement, project selection is a systematic, subjective, and objective process of conceiving and critically evaluating project ideas and concepts with the goal of producing an output profile of prioritised project alternatives (Njue et al., 2016). The choice of a project portfolio is an important and dynamic decision, and companies face unique issues due to the simultaneous scheduling of existing and new projects.

Making sure that the organisation's projects adhere to the company's corporate governance strategy is one of the major issues (Rad & Rowzan, 2018).

PPM capabilities include portfolio strategic planning, evaluation, prioritisation and selection of new projects, balancing of portfolios, budgeting. These processes require close interaction for effective portfolio management (Ershadi et al., 2020). Andini Permana & Pribadi (2020) describes how Bank of Indonesia has implemented framework for PPM selection and prioritisation. The framework adopted addresses issues with strategy alignment, assessment, filtration, visualization and prioritisation. The framework still has problems with titles for the stages that are thought to be less representative, the requirement for specific tasks in each stage, and the lack of a step where management takes decisions about the process. Although many frameworks exist, none of which has been declared as the best practice. And evaluation was not conducted to determine if the frameworks explored improved project selection and prioritisation for Bank of Indonesia. The literature has highlighted that the process of project selection and prioritisation will help support organisations to realize strategic objectives. According to (Flechas Chaparro et al., 2019) Flechas Chaparro et al. (2019) adoption of project selection framework by organisation remains limited. The incremental and radical selection framework proposed has not been tested in other industries e.g. banking.

2.2.2. The impact of PPM Capabilities on employee productivity

The effectiveness of IT project portfolio management (PPM) encompasses the strategic allocation of technologies, knowledge, and resources within the portfolio, along with the proficient handling of interdependencies among projects. However, Hoffmann et al. (2017) conducted a study that illustrates how striving to meet stakeholder expectations and delivery deadlines by maximizing resource utilisation can have detrimental effects on the workforce, such as increased multitasking and employee overload. The presence of a substantial workload has been recognized as a significant factor contributing to stress within the professional setting. Elevated levels of stress encountered within the professional setting can have a substantial impact on the productivity of employees. Stress is an omnipresent factor that individuals from all walks of life inevitably encounter (Ehsan & Ali, 2019). It is worth noting that stress exerts significant effects on employees. Employees experiencing high levels of

stress are often unable to meet the performance expectations set by their organization due to the presence of physical, psychological, and organizational burnout. According to Ehsan & Ali (2019), employees within service organizations experience a significant level of work-related stress, which is a primary factor contributing to their subpar job performance.

2.2.3. The impact of PPM Capabilities on business profitability

The current state of environmental turbulence exerts considerable pressure on contemporary IT organisations, compelling them to adopt a proactive approach in addressing evolving strategic trajectories. Consequently, these organisations are compelled to undertake a multitude of projects with the aim of capitalizing on emerging opportunities (Hoffmann et al., 2017). The outcome of these projects significantly impacts the overall performance of the company. Therefore, it has become imperative to establish a methodical procedure for the constrained distribution of resources to accommodate the growing number of projects. Consequently, numerous organisations have endeavored to incorporate project portfolio management (PPM) strategies; nevertheless, the outcomes have not uniformly met expectations. One of the contributing factors for this divergent outcome can be attributed to the variance in their level of project portfolio management maturity (PPMM). The level of project management maturity has been found to have a positive impact on project performance, as demonstrated by the research conducted by (Ko & Kim, 2019)

2.3. Analytical Framework

2.3.1. Theoretical Framework

According to (Killen et al., 2012), the application of theories from the strategic management domain advances research on project management (PM) and project portfolio management (PPM). The Resource-Based View (RBV), the Dynamic Capability (DC) idea, and the Absorptive Capacity (AC) concept are three theoretical strategic viewpoints that are the main subject of this study, along with how they apply to PM and PPM research. RBV looks at how a company's resources contribute to its competitive edge. The RBV states that the best foundation for long-term competitive advantage is provided by resources that are valuable, rare, inimitable, and non-substitutable (VRIN) or valuable, rare, inimitable, and involve organisational focus and support (VRIO). These resources are difficult for rival organisations to imitate or obtain (Killen et al., 2012). (Priem & Butler, 2001) states that organization should acquire valuable and uncommon resources to gain a competitive edge; also, that these resources should be difficult to replicate and non-substitutable for long-term advantage.

The study by (Killen et al., 2012), highlight challenges with the resource-based view theory because of its path-dependent and evolutionary nature, the RBV is best implemented in contexts that are reasonably stable, and its practical application may necessitate both external environmental stability and internal organisational stability. "Dynamic capabilities" (DC) are a class of organisational characteristics that allow organisations to successfully adjust to changes in the dynamic settings in which they compete. This important extension to the RBV addresses these deficiencies.

According to (Bogers et al., 2019), the ability of a company to integrate, develop, and reconfigure internal and external competencies in order to deal with quickly changing, highly uncertain settings is known as dynamic capabilities. According to the dynamic capabilities approach, the capacity to reorganise organisational structures and assets in response to market and technological changes and enterprise expansion is essential for long-term, profitable growth. DCs can be thought of as enabling resources because they reconfigure the current resource base to provide value, as they are unable to do

on their own. DCs are crucial in determining the intended growth and direction of resources and capabilities in accordance with strategy, as well as in the allocation of resources. Thus, to maintain a competitive edge over time in dynamic contexts, one must have both DC and the underlying resource advantages of VRIN or VRIO (Killen et al., 2012).

Meskendahl (2010) affirms that for organisations to attain a sustained competitive advantage and enhance business efficiency, they need to align their internal and external environments by leveraging their resources, competencies, and capabilities to build industry positions. This necessitates a coordinated effort on the part of the organisation. The achievement of organisational objectives is contingent upon the strategic orientation of a company, as it serves as a guiding principle for the direction of its operations and subsequent enhancement of business performance. The extent to which a firm conforms to the universal principles for assessing projects and choosing portfolios in accordance with the overall strategic goals is reliant upon the organisation's position with respect to the strategic orientation elements.

Meskendahl's (2010) research indicates that a significant portion of firms fail to fully acknowledge 63% of the potential value of their strategies, and a substantial 66% of business strategies remain unimplemented. The implementation of strategy can be facilitated by project portfolio management, which has garnered significance in theoretical and practical contexts (Meskendahl, 2010).

Additional research endeavors have been undertaken to investigate the correlation between organisational strategy and project portfolio management, as posited by Silviu and Marnewick (2021). Nevertheless, a comprehensive framework that encompasses the entire cycle from corporate strategy to project portfolio management and ultimately to company success has not been researched. Meskendahl's (2010) research investigates the impact of corporate strategy on project portfolio management and its efficacy. The literature on project portfolio management was analysed through the lens of the strategic orientation concept to establish a comprehensive framework. Thus, Meskendahl (2010) proposed a broad framework that includes a strategic focus, a project portfolio, success with the project portfolio, and business success. The overarching framework posits that the influence of project

portfolio structuring and project portfolio achievement on organisational success is contingent upon strategic orientation. It is posited that the correlation between the structuring of a project portfolio and its success may be subject to moderation by strategic direction.

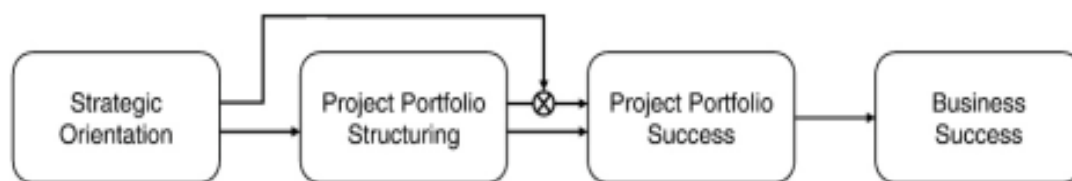


Figure 2: Theoretical Framework (Source: (Meskendahl,2010))

Integrating the concept of strategic orientation with the existing literature on project portfolio management developed this comprehensive framework. The aforementioned circumstances prompted a thorough examination and development of four hypotheses that tackled the tripartite facets of strategic orientation, project portfolio structuring, project portfolio success, and business success, along with their immediate interconnections and the moderating influence of strategic orientation on said interconnections. An overarching conceptual model was employed to introduce the correlation between strategic orientation, project portfolio management, and business success.

2.3.1.1. Strategic Orientation Capability and Business Success

Strategic orientation is a fundamental aspect that significantly impacts the structure, functioning, and efficiency of an organisation, as noted by (Obeidat, 2016). The study conducted by Escribá-esteve et al. (2008) suggests that a strategic orientation can have a favorable impact on a firm's performance. This is due to the firm's ability to introduce new products and services to the market before competitors, regulate market entry by managing distribution channels, and acquire sustainable competitive advantages that ultimately enhance overall performance. According to Alani et al. (2019) strategic orientation refers to a set of guiding principles that have the potential to impact an organisation's managerial decision-making process. It also assists

managers in effectively allocating organisational resources and establishing connections with the market.

2.3.1.2. Influence of Project Success on Business Success

The strategies employed in project management are continuously developing and adjusting to meet the evolving demands of various industries and conform to global standards of excellence in the rapidly changing contemporary landscape. The correlation between organisational success and effective project management strategies and procedures is apparent, notwithstanding any modifications. Project management is a crucial aspect of business operations as it ensures the smooth facilitation of all tasks. Additionally, it ensures that staff members are kept up-to-date with the status of completed and pending tasks. Maintaining task oversight and ensuring organisational coherence is facilitated by the implementation of a Quality Management System (QMS) (Quality Management System, 2022). According to the research conducted by Magwali (2018), there exists a significant correlation between project success and business success. The study highlights that the capacity of projects to deliver the benefits essential for business strategies to attain wider organisational goals and create value is a crucial determinant of project success. This exemplifies that projects serve as instruments employed by organisations to achieve their goals and, consequently, must also possess financial viability.

2.3.1.3. Justification of Selected Theory

The rationale for selecting the conceptual framework lies in its comprehensive methodology that encompasses the entire cycle, ranging from strategic planning to project portfolio management and ultimately, business success. Hence, the impact of project portfolio management on the organisational level is taken into account along with its extraction. Furthermore, it extends the current body of knowledge in project portfolio management and serves to bridge the divide between the development of strategic plans and their successful execution. Finally, it should be noted that this approach is not restricted to a particular project or industry and thus has the potential to be customised for implementation within the selected banking context (Meskendahl, 2010). It also aligns to the research objectives:

- What are the factors that hinder effective project selection, project prioritisation and project alignment within banking sector?

- To assess the impact of PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) on employee productivity
- To evaluate the impact of PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) on business profitability.

2.3.2. Conceptual Framework

The crux of the entire conceptual framework lies in the Project Portfolio Management (PPM) capability of an organisation to execute their strategic initiatives through projects, utilising project portfolio management capabilities that are moderated by the presence of project selection, prioritisation, alignment, and the project management office. The present investigation aims to identify potential associations among the variables comprising the research model depicted in Figure 3. The variables of independent selection, prioritization, and alignment exhibit a correlation with managerial decision-making. The mediation of effective portfolio management, organisational productivity, and profitability is contingent upon management decision-making. Both correspondences are moderated by the variable of knowledge and skills in parts per million (PPM).

The conceptual research model has been designed to take into account the sequence of events involved in the initiation, formulation, and implementation of strategic initiatives, as well as their impact on the perceived productivity and profitability of the organisation. The concept of dynamic capability is a fundamental aspect of project portfolio management capabilities that has a significant impact on the implementation of strategic initiatives (Ichsan et al., 2017).

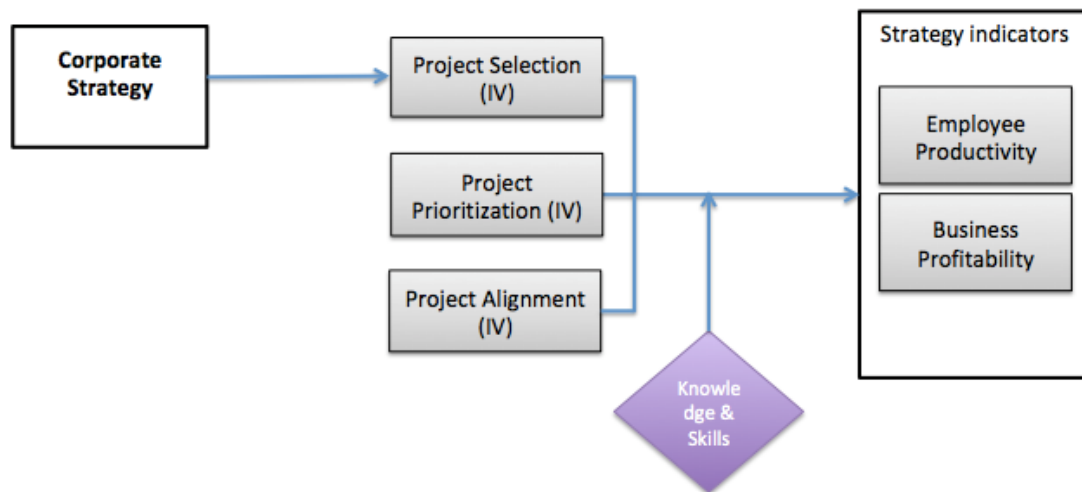


Figure 3: Conceptual Framework for PPM (Source: Rapola R., 2023)

The present research study endeavors to investigate the impact of project portfolio capabilities on the productivity of employees and the profitability of financial (banking) organisations operating in resource-constrained environments. The study integrates the theory of project portfolio, and knowledge and skills as fundamental constructs that mutually influence each other in impacting the productivity of employees and the profitability of businesses. The conceptual framework under consideration has been derived from Meskendahl's (2010) overarching framework that integrates strategic orientation, project portfolio structuring, and the linkage between project and business success. The proposed model incorporates three distinct, independent variables, namely Project Portfolio Selection Capabilities (PPSC), Project Portfolio Prioritisation Capabilities (PPPC), and Project Portfolio Alignment Capabilities (PPAC), which build upon the aforementioned concepts. The construct of interest in this study is the dependent variable, which has been operationalised as Business Productivity and Profitability, as originally defined by Grifell-Tatjé and Lovell (1999). The moderating variable, as conceptualised by Njue et al. (2016), is Knowledge and Skills. The concepts of the framework are put into operation in the subsequent sub-sections.

2.3.2.1. Linking Corporate Strategy and Project Portfolio

Management

Buyss & Stander (2010) assert that in numerous organisations, there exists a disparity between the formulation of a strategy and its implementation. The inability to effectively address this disparity may ultimately result in plan failure, loss of competitive advantage, financial gains, and employment opportunities. As per theoretical frameworks, project portfolio management (PPM) is a managerial approach that establishes a linkage between a collection of projects and the overarching business strategy. One of the challenges faced by businesses operating in dynamic environments is the discrepancy between their long-term and short-term strategic objectives, as well as their ability to efficiently identify, handle, and execute the projects required to achieve those objectives. Consequently, it is imperative for organisations to establish a connection between their strategy and project portfolio management.

H0: There is a significant relationship between Corporate Strategy and project Portfolio Management Capabilities.

2.3.2.2. Linking Project Portfolio Capabilities and Employee

Productivity and Business Productivity

The study posits that the three Project Portfolio Management capabilities constructs, namely Project Portfolio Selection Capabilities (PPSC), Project Portfolio Prioritisation Capabilities (PPPC), and Project Portfolio Alignment Capabilities (PPAC), exert a direct influence on the productivity and profitability of financial (banking) institutions. The assertion made by the user aligns with the viewpoint put forth by Meskendahl (2010), which posits that the strategic orientation of an organisation bears a direct influence on the success of its projects and overall business performance. Table 1 presents a summary of the independent variables under investigation, along with their corresponding measures and association with service performance.

Construct	Interpretation	Measures	References
Project Portfolio Selection Capability(PPSC),	Selection of projects that align to business strategy to improve productivity and profitability.	Strategic fit, Efficiency in detecting risks; Market opportunity recognition; single project success, interdependency between projects.	(Oosthuizen et al., 2016). (Njue et al., 2016). (Reza Zeynalzadeh,

			2011)
Project Portfolio Prioritisation Capability (PPPC)	Prioritisation of projects that considers limited resources to improve productivity and profitability.	Project prioritisation, Resource coordination effectiveness; Stakeholder engagement; Collaborative decision-making; Inter-departmental coordination	(Purnus & Bodea, 2014)
Project Portfolio Alignment Capability (PPAC)	Alignment of projects across different teams to improve productivity and profitability.	Stakeholder engagement; Collaborative decision-making; Inter-departmental coordination	(Hannach et al., 2019).

2.3.2.3. Project Portfolio Selection Capability

The Project Portfolio Management (PPM) literature advocates for the selection and prioritisation of projects based on alignment with the organisation's strategic objectives. The aim of Project Portfolio Management (PPM) is to effectively execute projects that align with the overall strategy and attain long-term success while also meeting the specific objectives of each project (Zeynalzadeh, 2011). The definition and evaluation of project success is a crucial strategic management concept that facilitates the alignment of project activities with an organisation's short- and long-term objectives (Oosthuizen et al., 2016). The independent variable for this study is project selection, which can be modified depending on project requirements, selection procedures, selector characteristics, and user involvement. The existing literature proposes different approaches for project selection. However, Njue (2016) has categorised these approaches into three stages: (a) pre-screening, which involves generating project ideas and identifying needs; (b) actual screening, which involves evaluating project concepts and needs; and (c) post-screening, which involves making decisions on the final portfolio projects for implementation, as suggested by Njue et al. (2016).

2.3.2.4. Project Portfolio Prioritisation Capability

The research conducted by Purnus and Bodea (2014) presents a project prioritisation framework that incorporates project risk assessments and various project opportunities metrics, such as the impact on organisational objectives, internal rate of return, and alignment with a long-term strategy. The study further examines the impact of project prioritisation on the overall performance of the project portfolio. Portfolio management aligns the management of the portfolio with the organisational strategy by prioritising resources for projects and programs.

2.3.2.5. Project Portfolio Alignment Capability

The significance of project portfolios in the business realm has prompted managers to seek out efficacious management strategies to address challenging concerns. According to Hannach et al. (2019), making a trade-off to invest in solutions that can facilitate a streamlined portfolio project prioritisation process, which serves as the basis for business investments, is of considerable importance. The prioritisation and planning of multiple projects in a portfolio during the initial stages of their life cycle are commonly based on financial considerations while disregarding the alignment of the portfolio with the corporate strategy and available resources, despite their significance (Hannach et al., 2019).

The formulation of strategies for project implementation is dependent on the management decision to incorporate the capabilities of Project Portfolio Management (PPM), namely selection, prioritisation, and alignment. This raises the research question of how selection, prioritisation, and alignment impact organisational productivity and profitability, leading to the construction of the following hypothesis.

H1: There is a significant relationship between Project Portfolio Management capabilities and employee productivity.

H2: There is a significant relationship between Project Portfolio Management capabilities and business profitability.

2.3.2.6. Linking Knowledge and Skill with Employee Productivity and Business Profitability

According to Ershadi et al. (2020), the utilisation of PPM is deemed a proficient mechanism for accomplishing successful strategy execution. To meet the requirements of an organisation, a diverse range of competencies, expertise, and methodologies across multiple projects are imperative. Flores, Alberto (2020) asserts that cultivating project management skills is crucial for successful portfolio management. This assertion further substantiates the notion that adaptability is an indispensable attribute for effectively navigating dynamic and evolving conditions and contexts. The implementation of portfolio management is faced with various obstacles, such as the need for effective learning and knowledge management, ensuring strategic alignment, maintaining control, and facilitating communication.

According to Ko and Kim (2019), implementing PPM processes is a crucial factor in enhancing efficiency. This suggests that a systematic approach can be more effective than relying solely on human expertise.

Numerous studies have supported the incorporation of knowledge and skills within the framework. The proposed framework places significant emphasis on the role of knowledge and skills as a moderating variable. The resource-based theory pertaining to the tangible and intangible resources of a company has garnered significant attention in the strategic management literature. This is due to the observed correlations between intangible resources and performance metrics (Smriti & Das, 2018). An anticipated outcome is a direct influence on the performance of the business. According to Shahzad et al. (2020), the resource-based view was formulated to comprehend the internal strengths and weaknesses of an organisation and their correlation with its competitiveness and performance. The theory was tested to demonstrate that an organisation's distinct resources are responsible for generating its competitiveness. Abubakar et al. (2019) conducted a study, which revealed that skills have a positive impact on both knowledge creation and organisational performance. The present study's conceptual model was derived from the resource-based theory and subsequently modified to suit the banking industry's context.

Construct	Interpretation	Measures	References
Skills and Competencies for Sustained Competitive Advantage	Improved skills and competencies can lead to value creating for the business.	Willing to improve skills and competencies, Navigate complex challenges, Level of training and development; Problem Solving Skills	(Smriti & Das, 2018)
Organisational Culture	A positive culture that nurture learning and development to improve employee productivity	Willingness to change; Collaboration and knowledge-sharing; Customer orientation; Agility and adaptability.	Shahzad et al. (2020)
Information Technology	Removes obstacles to communication as it facilitates communication and knowledge searching	Collaborating learning, Knowledge searching	(Abubakar et al., 2019)

The hypothesis, emerging from the analysis above with “Knowledge and Skills” as a moderating variable is the following:

- H3: Knowledge and Skills moderates the relationship between project selection capability, project prioritisation capability, project alignment capability and employee productivity and business profitability.

2.4. Conclusion of Literature Review

The primary aim of the literature review was to examine the project portfolio management (PPM) competencies within a project-oriented entity, with a specific focus on the selected commercial bank. Project Portfolio Management (PPM) is commonly recognized as the connection that bridges project management and strategic management at the enterprise level. The prioritization of selecting suitable projects and portfolios is a key focus area within the realm of Project Portfolio Management (PPM). The primary objectives of Project Portfolio Management (PPM) are to prioritise projects and determine the optimal projects from the array of opportunities that organisations encounter. The scholarly literature has also evaluated the function of a project management office in enhancing the capability of project portfolio management to guarantee the execution of organisational strategy. The implementation of project portfolio management techniques as a managerial innovation can enhance the planning and control of intricate project environments with greater effectiveness and efficiency.

The present conceptual framework delves into the effects of project portfolio capabilities on both employee productivity and business profitability. Therefore, the concepts of project selection, project prioritisation, and project alignment are utilised in the literature on project portfolio management and are modified within a conceptual framework. The present study analysed and outlined three propositions regarding the direct relationships between project selection, project prioritisation, project alignment, employee productivity, and business profitability, as well as the moderating effect of management decisions on effective project portfolio management, productivity, and profitability relation. The study presented a comprehensive conceptual framework that encompasses the entirety of the interplay among selection, prioritisation, alignment, and business productivity and profitability. The research findings hold significant implications for both the theoretical and practical aspects of project portfolio management. The conceptual model that has been devised serves to bridge the divide between the development of project portfolio

management capabilities and their practical implementation. Furthermore, it expands upon current theories within project portfolio management. The extant body of project management literature formed the basis for the theoretical underpinnings of project portfolio capabilities, which were subsequently augmented by research from cognate disciplines.

CHAPTER 3 – RESEARCH METHODOLOGY

3. Introduction

The present chapter delineates the fundamental stages involved in the research process, along with an exposition of the methodology employed in carrying out the research, and a justification of the chosen methodology. The chapter expounds on various stages of the research, encompassing the study design, participant selection process, data collection, data analysis, and ethical considerations. According to Gounder (2012), research can be defined as a systematic and rational pursuit of novel and relevant information pertaining to a specific topic. The text explores the potential application of systematic and unbiased analysis in addressing scientific and societal issues. The pursuit of knowledge entails a search for information or the revelation of previously unknown facts. The purpose of this chapter on research methodology is to examine the capabilities of project portfolio management within the selected commercial banking environment located in South Africa. The objective of this research is to develop a project portfolio management framework that facilitates the realisation of corporate strategy, with a particular emphasis on enhancing employee productivity and business profitability as strategic goals. The proposed framework builds upon the existing PPM theory and aims to enhance business performance.

3.1. Research Approach

The manner in which a study and its findings are analyzed and explicated can vary depending on the preference for descriptive language, numerical metrics, or a fusion of both. The utilization of three research methodologies, namely quantitative, qualitative, and mixed, is a common practice among researchers across various research projects (Taherdoost, 2022). Quantitative research prioritises objectivity and is especially appropriate in situations where it is feasible to collect numerical data on variables and draw conclusions from samples of a larger population. Quantitative research employs formal instruments and systematic procedures to gather data. The data is collected in a methodical and unbiased manner. Ultimately, numerical data is analyzed through the utilization of statistical techniques, often with the assistance of software such as SPSS, R, or Stats. According to (Almeida et al., 2017) the utilisation of quantitative research facilitates the extrapolation of data obtained from a sample population to a larger population. The methodology employed in this approach involved utilizing various empirical sources such as case studies, firsthand narratives,

and anecdotes that elucidate the underlying rationales and meanings that are not amenable to quantification, thereby shedding light on the everyday challenges and predicaments encountered by individuals (Taherdoost, 2022).

Quantitative research was employed as the research methodology in this study. The rationale behind selecting this particular methodology was its ability to facilitate rigorous hypothesis testing, establish causal relationships, and ensure the applicability of research findings to a broader population (Gounder, 2012). The study employed a quantitative research methodology to investigate the interrelationships among variables, test hypotheses, and generate predictions based on the Project Portfolio Management Capabilities Theory.

3.2. Survey Method

A popular method in quantitative observational research is the survey, which gives a numerical description of the features of the sample or the entire population being studied. It is frequently used to create information in many different fields. Results obtained by working with a representative sample of data can be applied to the complete population. Standardised questions are typically used in surveys, and descriptive and inferential statistical techniques are employed for analysis (Rana et al., 2020).

The study employed a survey research methodology in answering the research questions:

- What are the factors that hinder effective project selection, project prioritisation and project alignment within banking sector?
- How do PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) improve employee productivity?
- How does PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) impact business profitability?

3.3. Research Paradigm

The concept of Research Paradigm pertains to the cognitive framework, philosophical stance, or inclination of the researcher that influences the selection of research topics, the methodology employed, and the interpretation of research outcomes. According to Ugwu et al. (2021) the primary research paradigms comprise Positivism, Interpretivism, Critical Realism, Pragmatism, and Critical Realist. Siddiqui (2019) provides support for the notion that a paradigm can be defined as the philosophical stance of researchers regarding the nature of matter, the extent of knowledge attainable, and the means by which such knowledge can be acquired. Thus, based on the objectives and characteristics of the study, the positivist paradigm is deemed appropriate.

Positivism is a philosophical framework that regards individuals as observable phenomena that can be scientifically scrutinised. It relies on empirical observation and rational analysis to comprehend human conduct. According to Ugwu et al. (2021), individuals are transformed into objects that can be studied through scientific research. The objective of this research was to investigate the perspective of project portfolio capabilities within the discipline of Project Management within the selected commercial bank in South Africa. The study concentrated on identifying, measuring, and analysing causal relationships among various variables. The study was based on the assumption that there exists a singular and measurable reality. The theoretical framework of positivism was based on the hypothetico-deductive approach, which was utilised to corroborate pre-existing hypotheses. These hypotheses were expressed in a quantitative manner, and enabled the derivation of functional relationships between independent variables (causes) and dependent variables (effects) ((Park et al., 2020). The present study aimed to establish causal or explanatory connections that facilitate the forecasting and administration of the pertinent project portfolio in the banking industry, as indicated by Park et al. (2020). The aforementioned paradigm was in congruence with the goals of the present research investigation, as it was based on quantitative research (Antwi & Hamza, 2009).

3.4. Research Design

The chosen methodology for this particular research endeavor was survey research design, which was deemed suitable for examining the project portfolio management capabilities that facilitate the implementation of corporate strategy within the selected commercial bank in South Africa. The survey method was chosen as a qualitative approach to investigate a sizable population and facilitate the collection of data from both direct and indirect observations. This method is particularly useful in providing a comprehensive understanding of the present state of project portfolio management in the banking industry (Trivedi, 2017)

The present research study employed a survey research design to collect accurate and reliable data pertaining to the preferences, opinions, behaviors, or factual information on the efficacy of project portfolio management capabilities within the banking environment, located in South Africa. Siva et al. (2019) have noted the availability of online tools that facilitate the creation of questionnaires, communication with sample populations, storage of responses, and visualisation of survey data. Despite the limitations inherent in survey research studies, these can be mitigated through meticulous planning and execution of the study.

3.5. Data Collection

According to Taherdoost (2021), data collection refers to the systematic and intentional acquisition and analysis of information pertaining to pertinent variables, with the aim of addressing specific research inquiries, verifying hypotheses, and evaluating outcomes. Buchanan (1981) asserts that while the methods employed may vary across different occupations, the significance of guaranteeing precise and honest data acquisition remains constant. The primary objective of data collection is to acquire reliable and valid information that can be subjected to rigorous analysis, thereby establishing a robust foundation for addressing a specific research inquiry.

The present investigation meticulously selected a data collection approach to procure the necessary data on the Project Portfolio Management Capabilities that facilitate strategy within the selected commercial bank. The survey participants were comprised of individuals who are employed by the bank. The electronic questionnaire was selected as the principal means of gathering data from participants. Respondents

furnished the necessary information for the study completed this form or instrument. This approach was favored due to its ability to access employees located in various geographic locations within the bank (Taherdoost, 2021). Through the utilisation of this particular approach to data collection, the researcher successfully acquired all the necessary data to address the research inquiries and goals, thereby safeguarding the study's credibility and dependability.

3.6. Population and Sample Size

The term "population" denotes a collection or assemblage of all the entities to which the outcomes of the study are intended for generalisation. According to Shukla (2020), a population refers to a collection of units possessing the variable attribute under investigation, and from which inferences can be drawn based on the research findings. According to Shukla (2020), sample size refers to the subset of individuals or units that are chosen from a larger population for the purpose of conducting research. In order to establish the appropriate population and sample size for the present research investigation, various factors were taken into account, including the organisational structure, the distribution of personnel across distinct business units, and the research's emphasis on Project Portfolio Management (PPM) capabilities.

The study centered on the examination of Project Portfolio Management in Enabling Corporate Strategy within a Selected Commercial Bank, in South Africa. The target population comprised various professionals, including applications developers, testers, project managers, delivery managers, solution architects, lead technology partners, and product owners. These individuals are subject to the influence of project governance and strategy enablement. In order to achieve a sample that is representative, the study will incorporate participants who are employees of the bank.

The study assessed the accessibility and feasibility of reaching respondents across different business units the selected commercial bank, South Africa in order to ascertain an appropriate sample size. Distributing a total of 163 questionnaires to the target group ensured a comprehensive representation of diverse business units, employee experiences, and levels. The adequacy of the sample size was deemed appropriate for the study's objectives, facilitating the acquisition of informative data

and the generalisation of the results to the wider business units within the commercial bank.

3.7. Sampling Procedure

The present study employed purposive sampling technique to gather data from select employees who are affected by project management governance and influence strategy enablement, as per the methodology suggested by (Sekaran, 2016) . Purposive sampling also referred to as judgment sampling, is a non-probability sampling technique that does not necessitate the use of underlying theories or a pre-established number of participants. In essence, the researcher exercises discretion in determining the requisite information and subsequently identifies suitable individuals who possess the requisite knowledge or experience and are willing to provide it. Etikan (2016) notes that quantitative research employs a technique of identifying and selecting instances that offer the most information, with the aim of optimizing the utilization of resources. The chosen sample was deemed appropriate as it adhered to the predetermined criteria of the research study in question. The present investigation centered on the capabilities of Project Portfolio Management (PPM) within the banking sector, with a specific focus on employees who are affected by project governance and have a role in shaping strategy enablement. The target population possesses expertise in project portfolio management and strategy enablement.

Descriptions of targeted respondents include the following:

- Application Developers – employees or individual responsible for the development of applications that are use to enable business value.
- Tester - employees or individual responsible for the testing developed applications for quality assurance.
- Project Manager - employees or individual responsible for the project delivery to enable business value.
- Project Manager - employees or individual responsible for leading the project team and ensuring that issues are resolved and risks are mitigated.
- Product Owner - employees or individual responsible for the defining and prioritizing new features to enable business value.
- Technology Partner - employees or individual responsible for ensuring that the relevant technologies are used across the bank to meet the set architectural landscape.

- Solution Architects - employees or individual responsible for the designing architectural landscape for the solution.
- Business Unit Head - employees or individual responsible for strategy formulation and execution

The selection of a specific sample was imperative for this research as it sought to investigate the contribution of Project Portfolio Management capabilities towards facilitating corporate strategy, enhancing employee productivity, and augmenting business profitability in environments characterized by limited resources. Consequently, due to the geographical focus of the study on the bank, the sample was drawn from this location. The investigators obtained valuable insights regarding the implementation of Project Portfolio Management (PPM) capabilities in the banking industry by selecting a purposive sample of individuals with expertise in PPM and strategy. Purposive sample, also known as judgment sampling, enables the research to deliberately select participants based on the qualities they possess. The researcher determines the necessary information and seeks individuals with the expertise or experience to offer it (Etikan, 2016). The researcher needed to identify and select participants who are knowledgeable and skilled in corporate strategy and project execution. Furthermore, the study encompassed a diverse range of viewpoints from personnel occupying various positions within the bank, including application developers, testers, project managers, delivery managers, solution architects, lead technology partners, business unit heads, and product owners. The significance of comprehending the viewpoints of each employee in the banking industry cannot be overstated, as they each fulfill a distinct function in project implementation. This understanding is crucial in facilitating corporate strategy aimed at enhancing employee productivity and business performance.

3.8. Development of an Instrument

Questionnaire was used for data collection in this research study as it the most cost effective approach, the possibility of missing samples due to problems with internet access has been mitigated as all employees have internet access, it also provides respondent convenience as it can be completed at any place and time and the possibility of high accurate data (Taherdoost, 2021). Questionnaire design aspect included the following:

- Each variable (dependent, independent, moderating and mediating) as defined in the conceptual framework has application questions.
- All question will be set to mandatory, with a selection a button to ensure that respondent respond to all questions.
- Question will be as brief as possible. It will be lengthy enough to obtain the necessary information.

The sections of the questionnaire are arranged as follows:

- Section 1: *Demographic Information* involves personal information, however personal information such as name and surname are not necessary for this research study. Working experience and position will ne included in this section.
- Section 2: *Strategy Orientation*, in this section, the researcher asks questions to find out if Group strategy gets translated into business unit strategy for employee to understand how the day-to-day tasks contribute to the strategy.
- Section 3: *Project Selection*, in this section, the researcher asks questions to understand if the selection method is well define and that projects selected have approved business case and align to corporate strategy.
- Section 4: *Project Prioritisation*, in this section, the researcher asks questions to understand if different business units collaborate to decide on project priority and if priority is communicate to all stakeholders.
- Section 5: *Project Alignment*, in this section, the researcher asks questions to understand if different teams in the business responsible for project delivery understand project priority and work on same prioritized initiatives.
- Section 6: *Knowledge and Skills*, in this section, the researcher asks questions to understand if knowledge and skills play a critical role in the enablement of strategy.
- Section 8: *Employee Productivity*, in this section, the researcher asks questions to understand if effective project portfolio management enables employees to focus on valuable projects, thus improve productivity.
- Section 8: *Business Profitability*, in this section, the researcher asks questions to understand if effective project portfolio management enables employees to

deliver project on time and within budget, therefore, improving business profitability.

The researcher created a questionnaire that was tailored to the research objectives. The researcher required questions that would guide the investigation towards the intended outcome. The questionnaires were distributed in an electronic version.

3.9. Data Analysis

The data analysis section statement provides a comprehensive description of the analytical techniques employed in the data analysis.

3.9.1. Pretesting the Research Instrument

The initial phase of data analysis will encompass the pretesting of the research instrument, as detailed in **Appendix A**. A preliminary investigation will be undertaken to assess the feasibility of the study and identify any potential limitations of the research. The evaluation of the study instrument's efficacy in eliciting the necessary information, comprehensibility of its format, and appropriateness of the selected validated tool for the intended audience are crucial considerations, the duration required to complete the questionnaire and the level of participation interest among individuals in the study (Abu Hassan et al., 2006). A pilot study will be carried out in the bank, comprising a sample of 10 employees. Preceding a more extensive investigation, the researcher will conduct a preliminary examination to evaluate operational aspects, acquire data, and detect any inadequacies in the formulation of the survey that may have impacted its accuracy and effectiveness.

3.9.2. Descriptive Analysis

Chapter four provides insights into the data collected using IBM Statistical Package for Social Sciences (SPSS) (version 28). The utilisation of frequency analysis, a descriptive statistical method, enables the display of the frequency distribution of responses selected by respondents. According to Builder et al. (2010) SPSS Statistics can assist researchers in analyzing data and making conclusions by calculating the mean, median, and mode in conjunction with frequency analysis. The present study involved conducting a descriptive analysis of numeric measures of central tendency, dispersion, and shape using IBM SPSS. The data obtained from the respondents was

imported into the SPSS tool, coded, and validated to ensure its validity prior to analysis.

3.9.3. Reliability and Validity

The reliability and validity analysis is addressed in the third section of the data analysis plan. The process of assessing the dependability of a survey in terms of its coherence, constancy, and replicability is commonly referred to as reliability analysis. The assessment aims to evaluate the extent to which consistent outcomes can be achieved in similar conditions over time, by different evaluators, or by utilizing different items that measure the same concept. The primary objective of conducting reliability analysis is to ascertain the consistency and dependability of a survey or instrument, thereby enhancing the quality of research outcomes. A test is deemed legitimate if it solely assesses the intended outcome without any additional factors being taken into account. In order for the outcomes to be dependable, the metric ought to exhibit a substantial degree of both internal and external validity. The present investigation will employ the Cronbach's alpha coefficient (α) as a measure of the internal consistency of a set of items, indicating the degree of interrelatedness or positive correlation among them. Furthermore, the utilization of Exploratory Factor Analysis (EFA), a statistical methodology, will be employed to unveil the fundamental framework of a dataset by identifying the latent factors (unobservable constructs) accountable for the correlations among the observed variables.

3.9.4. Inferential Analysis

The fourth segment of the data analysis plan will pertain to inferential analysis – independent sample t-test, which will be utilised to derive conclusions. This method enables researchers to make inferences about larger populations based on the examination of representative samples. Important techniques in inferential statistics encompass hypothesis testing, which involves researchers evaluating hypotheses about population parameters using sample data; regression analysis, which entails examining relationships between variables and utilising them to make predictions; and confidence intervals, which offer estimations of population parameters and their levels of uncertainty. The purpose of this study is to examine the correlation between the capabilities of Project Portfolio Management, employee productivity, and business profitability within the bank.

3.10. Ethical Consideration

The topic of ethical consideration is of great importance in academic discourse. It is crucial to consider the ethical implications of research and other academic activities in order to ensure that they are conducted in a responsible and morally sound manner. This involves taking into account issues such as informed consent, confidentiality, and the potential impact of research on participants and society as a whole. By carefully considering these ethical considerations, researchers and academics can help to ensure that their work is conducted in a manner that is both rigorous and socially responsible.

The importance of ethical considerations cannot be overstated when undertaking research on Project Portfolio Management within the bank. The present section elucidates the significance of ethical considerations and expounds on the measures that will be taken by the study to ensure adherence to ethical standards.

3.10.1. Permission to Conduct the Study

The study will seek to obtain permission from the bank, pertinent regulatory bodies, and the WBS Research Ethics Committee. The researcher will ensure that the survey is conducted in compliance with the relevant rules and regulations in order to uphold the trust of the participants. This is to corroborate the validity and reliability of the outcomes acquired from the participants.

3.10.2. Informed Consent

Informed consent is a crucial aspect of research ethics as it serves to ensure that participants are fully aware of the study's objectives, potential risks and benefits, and their right to withdraw from the study at any time. Prior to consenting to participate in the study, prospective participants will receive comprehensive information, an opportunity to seek clarification on any ambiguities, and will be required to provide their signature on a consent form. The aforementioned commitments are delineated within the informed consent document that is appended herewith.

3.10.3. Voluntary Participation

Participants will be ensured the right to participate in the study on a voluntary basis. Participants will be duly informed of their entitlement to withdraw from the study at any point without facing any adverse consequences, and they will not be subjected to any coercion or undue pressure to participate. The researcher will obtain informed consent from participants, indicating their voluntary willingness to participate, through the signing of a consent form.

3.10.4. Confidentiality and Anonymity

The maintenance of anonymity and confidentiality is crucial in safeguarding the privacy of study participants. The investigator will take measures to safeguard the confidentiality and anonymity of the participants' data and refrain from collecting any personally identifiable information. The data will be securely stored in electronic files that are password-protected, and exclusive access will be granted to the researcher. The study will ensure anonymity of participants by refraining from requesting personal information such as names, addresses, or identity numbers.

3.10.5. Data Management

The proper management of data is imperative in guaranteeing the security and precision of the collected information. The investigator shall comply with all regulations pertaining to data protection and guarantee that the data is solely employed for the purpose of the inquiry. The research team will implement measures to prevent any unauthorized access to data during the course of the project, and will maintain the obtained data in a secure manner.

3.10.6. Proposed Schedule and Timelines

Tasks	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
Permission to Collect Data								
Pilot Research Instrument (10 - 15 Participants)								
Proposal Resubmission after Panel Feedback								
Ethics Approval								
Data Collection								
Data Analysis								

CHAPTER 4 – DATA ANALYSIS

4. Introduction

The data analysis section serves as the gateway to meticulous exploration of data, wherein we employ rigorous methodologies to dissect, interpret and derive meaningful conclusion. The aim is not to merely present numbers, but to illuminate the underlying narratives that contribute to the advancement of knowledge and understanding within this study.

4.1. Pilot Study

According to Murphy et al.(2015), before data collecting, surveys usually undergo a process of pretesting. The techniques employed for survey pretesting may differ based on the particular objectives, resources at hand, and timeline. However, the primary aim of pretesting is to ensure that survey questions effectively gather the intended information. Pretesting is a useful method to identify and address any errors in the survey instrument before collecting data, ensuring high quality.

For the purpose of this study, pilot study was accomplished by selecting small sample from the selected commercial bank to complete the survey and provide feedback. The research questionnaire was sent to 12 employees and 7 employees provided feedback on the questionnaire. The outcome suggested that the research questionnaire be setup using both multiple choice question type and matrix table question type instead of only multiple choices. Multiple choice question type enables the respondent to select one or more items from a list of potential replies. Matrix table questions enable the consolidation of many questions with identical answer choices. This is particularly beneficial when you have to pose several inquiries that require assessment on a consistent scale.

As the research instrument had 26 questions, it would have resulted in participants just speeding up through the questions, which would have affected the reliability. Control variables were omitted, which were later added. Some of the research questions validation, to enforce a response, was not in place that would have resulted in null responses. Research questions to measure employee productivity were also omitted.

4.2. Descriptive Analysis

Table 1 – Descriptive Analysis presents the data set. Based on the descriptive analysis, the results above show that for Q3 ‘Please select appropriate years of working experience in the project delivery environment’ has a mean = 3.09, Median = 3.00 and Mode = 4.00. Therefore, the mode is the most representative of the sample dataset because total of 20 respondents have more that fifteen (15) years of working Experience in experience in project delivery environment.

Descriptive Statistics

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Variance Statistic	Skewness		Kurtosis	
							Statistic	Std. Error	Statistic	Std. Error
Q1	42	1	8	3.90	2.407	5.796	.183	.365	-1.317	.717
Q2	42	1	2	1.67	.477	.228	-.734	.365	-1.537	.717
Q3	42	1	4	3.10	1.008	1.015	-.649	.365	-.887	.717
Q4	42	1	4	1.90	.932	.869	.766	.365	-.267	.717
Q1_1	42	1	5	1.93	.947	.897	1.232	.365	1.803	.717
Q1_2	42	1	5	1.98	.897	.804	.900	.365	1.451	.717
Q1_3	42	1	4	2.14	.952	.906	.771	.365	-.116	.717
Q1_4	42	1	4	2.02	.897	.804	.591	.365	-.295	.717
Q1_5	42	1	4	2.12	1.064	1.132	.646	.365	-.751	.717
Q1_6	42	1	5	2.00	1.126	1.268	1.183	.365	.840	.717
Q2_1	42	1	5	2.29	1.088	1.185	.584	.365	-.449	.717
Q2_2	42	1	5	2.45	1.234	1.522	.606	.365	-.646	.717
Q2_3	42	1	5	2.14	1.280	1.638	.967	.365	-.173	.717
Q2_4	42	1	5	2.36	1.206	1.455	.660	.365	-.642	.717
Q3_1	42	1	5	2.81	1.330	1.768	.367	.365	-1.174	.717
Q3_2	42	1	5	2.14	1.049	1.101	1.164	.365	1.203	.717
Q3_3	42	1	4	2.07	.947	.897	.756	.365	-.121	.717
Q3_4	42	1	5	2.90	1.265	1.600	.111	.365	-.788	.717
Q3_5	42	1	5	2.33	1.183	1.398	.792	.365	-.069	.717
Q3_6	42	1	5	2.48	1.153	1.329	.462	.365	-.624	.717

Q3_7	42	1	5	2.29	1.019	1.038	.691	.365	.022	.717
Q3_8	42	1	4	1.74	.828	.686	1.075	.365	.862	.717
Q3_9	42	1	5	1.90	.958	.918	1.072	.365	1.260	.717
Q4_1	41	1	5	2.54	1.075	1.155	.282	.369	-.751	.724
Q4_2	41	1	5	2.34	.965	.930	.476	.369	.157	.724
Q4_3	41	1	5	2.41	.999	.999	.326	.369	-.209	.724
Q4_4	41	1	5	2.34	1.153	1.330	.819	.369	.156	.724
Q4_5	41	1	5	2.27	1.049	1.101	.790	.369	.557	.724
Q4_6	41	1	4	2.02	.908	.824	.582	.369	-.364	.724
Q4_7	41	1	4	2.00	.894	.800	.661	.369	-.152	.724
Q4_8	41	1	5	2.24	.943	.889	.796	.369	.745	.724
Q4_9	41	1	5	2.05	1.048	1.098	.859	.369	.235	.724
Valid N (listwise)	41									

Table 1: Descriptive Analysis

		Statistics			
		Q1 - Please select the applicable role that you play in the project environment.	Q2- Which business unit do you represent?	Q3 - Please select appropriate years of working experience in project delivery environment.	Q4 - Please select your highest qualification.
N	Valid	42	42	42	42
	Missing	1	1	1	1
Mean		3.90	1.67	3.10	1.90
Median		3.50	2.00	3.00	2.00
Mode		1	2	4	1
Std. Deviation		2.407	.477	1.008	.932
Range		7	1	3	3

Table 2: Central Tendency Statistics

4.2.1. Ranking Descriptive

	N	Mean	Std. Deviation
Q2	42	1.67	.477
Q3_8	42	1.74	.828
Q3_9	42	1.90	.958
Q4	42	1.90	.932
Q1_1	42	1.93	.947
Q1_2	42	1.98	.897
Q1_6	42	2.00	1.126
Q4_7	41	2.00	.894
Q1_4	42	2.02	.897
Q4_6	41	2.02	.908
Q4_9	41	2.05	1.048
Q3_3	42	2.07	.947
Q1_5	42	2.12	1.064
Q1_3	42	2.14	.952
Q2_3	42	2.14	1.280
Q3_2	42	2.14	1.049
Q4_8	41	2.24	.943
Q4_5	41	2.27	1.049
Q2_1	42	2.29	1.088
Q3_7	42	2.29	1.019
Q3_5	42	2.33	1.183
Q4_2	41	2.34	.965
Q4_4	41	2.34	1.153
Q2_4	42	2.36	1.206
Q4_3	41	2.41	.999
Q2_2	42	2.45	1.234
Q3_6	42	2.48	1.153
Q4_1	41	2.54	1.075
Q3_1	42	2.81	1.330
Q3_4	42	2.90	1.265
Q3	42	3.10	1.008
Q1	42	3.90	2.407
Valid N (listwise)	41		

Table 3: Ranking Descriptive

Descriptive statistics is used to rank variables in ascending order based on standard deviation. Q2 “Which business unit do you represent” has the lowest ranking standard deviation with a corresponding mean of 1.67. Whereas Q1 “Please select the applicable role that you play in the project environment” has the highest-ranking standard deviation

4.2.2. Checking Normality

Descriptive Statistics								
	N Statistic	Mean		Std. Deviation Statistic	Skewness		Kurtosis	
		Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error
Q3_8	43	1.72	.126	.826	1.105	.361	.915	.709
Q3_9	43	1.88	.146	.956	1.098	.361	1.296	.709
Q1_1	43	1.95	.145	.950	1.144	.361	1.522	.709
Q1_6	43	1.98	.171	1.123	1.211	.361	.903	.709
Q1_2	43	2.00	.137	.900	.823	.361	1.216	.709
Q1_4	43	2.00	.137	.900	.617	.361	-.293	.709
Q4_7	42	2.00	.136	.883	.669	.365	-.081	.717
Q4_6	42	2.02	.138	.897	.591	.365	-.295	.717
Q4_9	42	2.05	.160	1.035	.872	.365	.318	.717
Q3_3	43	2.07	.143	.936	.770	.361	-.046	.709
Q1_5	43	2.12	.160	1.051	.661	.361	-.687	.709
Q1_3	43	2.14	.143	.941	.790	.361	-.036	.709
Q3_2	43	2.16	.159	1.045	1.103	.361	1.078	.709
Q2_3	43	2.19	.198	1.296	.877	.361	-.416	.709
Q3_7	43	2.26	.156	1.026	.703	.361	.009	.709
Q4_8	42	2.26	.145	.939	.739	.365	.658	.717
Q4_5	42	2.29	.161	1.043	.741	.365	.504	.717
Q2_1	43	2.30	.165	1.081	.540	.361	-.476	.709
Q3_5	43	2.33	.178	1.169	.818	.361	.015	.709
Q4_2	42	2.33	.147	.954	.504	.365	.233	.717
Q4_4	42	2.36	.176	1.144	.781	.365	.134	.717
Q2_4	43	2.40	.186	1.218	.587	.361	-.799	.709
Q4_3	42	2.43	.153	.991	.287	.365	-.206	.717
Q2_2	43	2.44	.186	1.221	.635	.361	-.579	.709
Q3_6	43	2.47	.174	1.141	.493	.361	-.565	.709
Q4_1	42	2.52	.164	1.065	.317	.365	-.705	.717
Q3_1	43	2.84	.202	1.326	.313	.361	-1.217	.709
Q3_4	43	2.91	.191	1.250	.107	.361	-.733	.709
Valid N (listwise)	42							

Table 4: Checking Normality

In order to assess the normality of a distribution using skewness and kurtosis values, it is necessary to examine the standard errors associated with each value and identify the acceptable ranges within which skewness and kurtosis would be considered normal. The acceptable range for skewness is below 3, and for kurtosis, it is below 10. Any number that falls within this range is deemed normal for subsequent analysis (Effendi Ewan Mohd Matore & Zamri Khairani, 2020). A non-extreme value is inherently capable of addressing any research inquiries without any issues. Based on the above

statistics of both skewness is < 3 and kurtosis <10 therefore, it can be estimated that the data is normally distributed (Effendi Ewan Mohd Matore & Zamri Khairani, 2020).

4.2.3. Research Population and Sample Size

The study planned to include a population of 25 719 employees within the retail and business banking and corporate and investment banking business units of the selected commercial bank (Report, 2022). Although the population within the bank is 25 719, the population of the study will constitute only employees that are working in the project delivery space, those responsible for projects initiation and those responsible for project execution. A formula with a desired confidence interval and confidence level was used to estimate the sample size of the population and the standard deviation. The prevailing confidence interval and levels employed are 0.05 and 0.80, correspondingly. Given the lack of knowledge about the population's standard deviation, 0.5 was selected to accommodate a range of potential outcomes (McCombes, 2019). The below table converts the confidence level to z-Score (Kibuacha, 2021)

Confidence Level	z-Score
80%	1.28
85%	1.44
90%	1.65
95%	1.96
99%	2.58

Table 5: Sample Size (Kibuacha, 2021)

$$\begin{aligned}
 \text{Sample Size} &= \frac{(z\text{-score})^2 * \text{StdDev} * (1\text{-StdDev})}{(\text{Confidence level})^2} \\
 &= \frac{(1.28)^2 * 0.5(0.5)}{(0.5)^2} \\
 &= \frac{1.6384 * 0.25}{0.0025} \\
 &= \frac{0.4096}{0.0025} \\
 &= 163
 \end{aligned}$$

As it is impractical to collect data from the entire population, a sample size equation resulted in a sample size of hundred (163) questionnaires for distribution. Judgment sampling was used to select respondents from the population that meet the inclusion criteria of employees that play a role in project or product delivery. This is the group that the online survey was sent to obtain results on project portfolio management as an enabler of corporate strategy for a selected commercial bank in South Africa (SA). The sample was based on the role and business unit in the organization (McCombes, 2019).

4.2.4. Research Response Rate

The data analysis indicated that a total of forty-seven (47) responses were obtained, resulting in a response rate of 47%. Of the 47 responses, only 42 were usable. The study's research response rate aligns with the response rate patterns observed for individual respondents, as stated in the (Murphy et al., 2015). Effective survey research reports yield outcomes that offer accurate and dependable responses to the research inquiry, achieved through a satisfactory response rate of between (20% and 30%) and precise measurements (preferably a margin of error of 5% or lower).

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Q3	42	3.10	1.008	.155

One-Sample Test

Test Value = 0

	t	df	Significance		Mean Difference	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p		Lower	Upper
Q3	19.910	41	<.001	<.001	3.095	2.78	3.41

One-Sample Effect Sizes

		Standardizer ^a	Point Estimate	95% Confidence Interval	
				Lower	Upper
Q3	Cohen's d	1.008	3.072	2.340	3.797
	Hedges' correction	1.026	3.016	2.297	3.727

a. The denominator used in estimating the effect sizes. Cohen's d uses the sample standard deviation. Hedges' correction uses the sample standard deviation, plus a correction factor.

Table 6: Sample Size Estimation

The initial box of the output reveals that all 42 employees possess experience working in the project delivery environment. The average level of experience is 3.10 years, with a standard deviation of 1.008. By utilising the given standard deviation, SPSS calculates the standard error (which is the standard deviation of the sampling distribution of means) as .155. The 95% confidence interval's lower and upper borders, derived from this data, are displayed in the final two columns of the second box. The remaining four columns in the second table indicate if the sample mean is 3.095. The confidence interval results suggest a 95% level of confidence that the employees' degree of experience in the project delivery environment falls within the range of 2.78 to 3.41 years.

4.2.5. Respondent Role

The roles of the respondents as gathered from the survey questionnaire are shown graphically below. The majority of the forty-three (43) responses related to IT development. IT Developer contributed twelve (12) responses in total. Nine (9) Project Managers were the next highest responding group, while the remaining respondents made up a minimum of two (2) Testers.

#	Answer	%	Count
1	Application Developer	26.67%	12
2	Tester	4.44%	2
3	Project Manager	20.00%	9
4	Product Owner	6.67%	3
5	Delivery Lead	11.11%	5
6	Technology Lead	11.11%	5
7	Scrum Master	11.11%	5
8	Solutions Architect	8.89%	4
	Total	100%	45

Table 7: Respondent Role

4.2.6. Respondent's Tenure in a Project Delivery Environment

The purpose of the graphical depiction below was to ascertain the respondent's length of service in the project delivery setting. As shown below, participant's years spent working in a project delivery environment was grouped into annual intervals. The data shows that most participants had more than 15 years of expertise in project delivery. There are ten individuals with 6-10 years of experience, another ten with 11-15 years of experience, and three with 1-5 years of experience.

#	Answer	%	Count
1	1 - 5 years	6.98%	3
2	6 - 10 years	23.26%	10
3	11 - 15 years	23.26%	10
4	>15 years	46.51%	20
	Total	100%	43

Table 8: Years of Working Experience

4.2.7. Respondent's Business Unit in the Organisation

In section 1 of the research technique, the questionnaire provided a list of business unit alternatives within the selected commercial bank. Twenty-eight (29) respondents support the corporate and investment-banking unit, while fourteen (14) support the retail and business-banking unit, according to the data gathered. The business unit measure was essential to establish the units that formed part of the study. Both units have defined strategy that link to the corporate strategy and are responsible for developing portfolio of projects to be executed within a set period.

#	Answer	%	Count
1	Retail & Business Banking (RBB)	32.56%	14
2	Corporate & Investment Banking (CIB)	67.44%	29
	Total	100%	43

Table 9: Respondent Business Unit

4.2.8. Respondent's Highest Level of Qualification

The purpose of the graphical depiction below was to ascertain the respondent's highest level of qualification. The data indicates that 39.53% of respondents hold a post-graduate degree. 37.21% of the participants hold an undergraduate degree. 16.28% possess a diploma. 6.98% possess a high school certificate.

#	Answer	%	Count
1	Post Graduate Degree	39.53%	17
2	Undergraduate Degree	37.21%	16
3	Diploma	16.28%	7
4	High School Certificate	6.98%	3
	Total	100%	43

Table 10: Respondent Highest Level of Qualification

4.3. Testing Goodness of Data

Evaluating the quality of data involves assessing its dependability and accuracy. The dependability of a metric is determined by assessing its consistency and stability. Consistency refers to the degree to which the items in a questionnaire, which are used to measure a particular notion, are coherent and interconnected as a whole. Cronbach's alpha is a measure of dependability that quantifies the extent to which the items in a collection are positively associated with each other (Ochara, 2023).

4.3.1. Reliability Analysis

The questionnaire comprises inquiries and assertions pertaining to the independent and dependent variables, which were formulated based on a comprehensive examination of existing literature. Each statement was evaluated using a five-point (1 to 5) Likert scale, where a score of 5 indicates a strong agreement with the statement. The statements were crafted to convey the concepts of corporate strategy, project portfolio management, project selection, project prioritisation and alignment, project management skills and knowledge, employee productivity and business profitability. The data were collected between the first week of November 2023 and the 2nd week of January 2024.

In this study, reliability measurement was assessed using the Cronbach coefficient alpha. Additionally, Exploratory Factor Analysis (EFA) was used to identify concepts in the data. According to (Morgan, 2015), sample size of 20 is insufficient for most practical applications. Due to the substantial standard errors linked to the limited sample size, the statistical tests will exhibit a very low "power," hence making it challenging to identify significant outcomes. However, (Yurdugül, 2008) argues that the accuracy of an estimate for the coefficient alpha is influenced by both the size of the sample and the maximum eigenvalue of the sample dataset. Therefore, as the greatest eigenvalue increases, it becomes feasible to obtain an unbiased estimate of the population coefficient alpha, even if the sample size is small. The minimal sample size required to estimate the coefficient alpha depends on the magnitude of the first (biggest) eigenvalue derived by Principal Component Analysis. If the value of the first eigenvalue of the sample data set exceeds 6.00, the sample coefficient alpha remains a highly reliable predictor of the population coefficient alpha, even when the sample size is 30.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.939	.940	28

Table 11: Cronbach Alpha

According to (Olaniy, 2019) Cronbach's Alpha is often represented as a decimal ranging from .00 to 1.0. A score of 0.00 signifies a lack of consistency in measurement, whereas a value of 1.0 denotes flawless uniformity in measurement. The permissible range falls within 0.70 and 0.90 or above, contingent upon the nature of the research. A Cronbach's Alpha value of 0.70 is deemed appropriate for exploratory research, whereas values of 0.80 and 0.90 are considered suitable for fundamental research and applied scenarios, respectively. However Shrestha (2021) states that an appropriate Cronbach's alpha value is more than 0.7. A high level of alpha indicates a strong correlation among the items in the test. If Cronbach's alpha is lower than the threshold (<0.7), survey items would have to be revised or further

investigate the quality of the data. [L_{SEP}]The Cronbach alpha of the variables is 0.941 as per figure above, which indicates that the data is acceptable.

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1_1	44.34	191.080	.551	.818	.928
Q1_2	44.29	191.262	.578	.864	.928
Q1_3	44.15	187.978	.697	.900	.926
Q1_6	44.27	188.051	.550	.641	.928
Q2_1	44.00	187.650	.600	.849	.927
Q2_2	43.83	183.295	.650	.920	.927
Q2_3	44.15	182.528	.652	.864	.927
Q3_1	43.49	180.406	.694	.667	.926
Q3_2	44.12	184.860	.711	.771	.925
Q3_3	44.20	186.561	.730	.852	.925
Q3_4	43.34	183.180	.621	.889	.927
Q3_5	43.93	183.670	.657	.821	.926
Q3_8	44.54	196.705	.393	.666	.931
Q3_9	44.37	196.888	.319	.754	.932
Q4_1	43.71	189.812	.519	.781	.929
Q4_4	43.90	184.990	.638	.874	.927
Q4_5	43.98	188.674	.575	.865	.928
Q4_6	44.22	189.526	.640	.787	.927
Q4_7	44.24	187.989	.716	.739	.926
Q4_8	44.00	192.200	.507	.528	.929
Q4_3	43.83	186.595	.687	.879	.926

Table 12: Item-Total Statistic

The Item-Total Correlations in this study represent the degree of association between the score of each individual item in the measuring instrument and the overall score of all items in the instrument. Furthermore, it is indicated that the item-total correlations of the items in the measuring instrument will fall within the range of 0.30 to 0.80, and items with these correlation values are deemed appropriate (Surucu & Msdlskci, 2020). If the correlation is below 0.3, the items do not accurately reflect the conceptual structure. However, if the correlation is above 0.80, the items are considered to represent only a certain feature or area of the conceptual structure. Hence, correlation values ranging from 0.3 to 0.8 indicate that the items are adequately homogeneous and retain the original variance (Surucu & Msdlskci, 2020). Analyzing the Item Total Statistic Table, each of the items on the corrected item-total correlation refers to the relationship between each item and based on the results the total score is > 0.3.

Reliability Statistics		
Cronbach's Alpha Based on		
Cronbach's Alpha	Standardized Items	N of Items
.853	.855	6

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.031	1.953	2.140	.186	1.095	.006	6
Item Variances	.962	.810	1.261	.452	1.558	.033	6

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1_1	10.23	14.992	.553	.520	.844
Q1_2	10.19	14.584	.665	.570	.825
Q1_3	10.05	14.141	.698	.531	.818
Q1_4	10.19	14.726	.641	.457	.829
Q1_5	10.07	13.828	.643	.539	.828
Q1_6	10.21	13.360	.651	.567	.828

Table 13: Cronbach Alpha for Project Portfolio Management and Corporate Strategy

Reliability Statistics		
Cronbach's Alpha Based on		
Cronbach's Alpha	Standardized Items	N of Items
.848	.850	4

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.331	2.186	2.442	.256	1.117	.013	4
Item Variances	1.455	1.168	1.679	.511	1.437	.045	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q2_1	7.02	9.833	.735	.625	.790
Q2_2	6.88	9.200	.715	.589	.794
Q2_3	7.14	8.742	.726	.542	.789
Q2_4	6.93	10.019	.582	.374	.851

Table 14: Cronbach Alpha for Project Selection

Reliability Statistics		
Cronbach's Alpha Based on Standardized Items		
Cronbach's Alpha	Standardized Items	N of Items
.883	.883	9

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.292	1.721	2.907	1.186	1.689	.158	9
Item Variances	1.179	.682	1.759	1.076	2.578	.121	9

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q3_1	17.79	37.169	.644	.516	.871
Q3_2	18.47	39.255	.686	.619	.866
Q3_3	18.56	39.633	.749	.629	.862
Q3_4	17.72	38.206	.619	.555	.872
Q3_5	18.30	37.740	.712	.616	.863
Q3_6	18.16	37.282	.771	.714	.858
Q3_7	18.37	39.573	.675	.615	.867
Q3_8	18.91	43.848	.439	.541	.884
Q3_9	18.74	43.243	.412	.600	.887

Table 15: Cronbach Alpha for Project Prioritisation and Alignment

Reliability Statistics		
Cronbach's Alpha Based on Standardized Items		
Cronbach's Alpha	Standardized Items	N of Items
.826	.828	9

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.251	2.000	2.524	.524	1.262	.035	9
Item Variances	.995	.780	1.308	.528	1.676	.029	9

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q4_1	17.74	27.613	.448	.582	.819
Q4_2	17.93	31.922	.086	.068	.855
Q4_3	17.83	25.850	.687	.712	.790
Q4_4	17.90	24.527	.699	.814	.786
Q4_5	17.98	26.560	.569	.724	.804
Q4_6	18.24	26.479	.702	.627	.791
Q4_7	18.26	26.783	.677	.549	.794
Q4_8	18.00	27.415	.556	.503	.806
Q4_9	18.21	28.124	.416	.455	.822

Table 16: Cronbach Alpha for Project Portfolio Management Skill and Knowledge

Cronbach's alphas internal reliabilities were assessed for each construct (project portfolio management and corporate strategy, project selection, project prioritisation and alignment and project portfolio management skill and knowledge). The Cronbach's Alpha value and internal consistency indicated for this study align with Cronbach's findings by Habidin et al. (2015) and are summarised in Table 7. This aligns with the study conducted by Kane et al. (2016) where Cronbach criteria between 0.6 and 0.7 is considered doubtful and > 0.7 is considered "very good".

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Table 17: Cronbach Alpha Rule of Thumb

The results show that the Cronbach alpha values for the constructs were as follows: project portfolio management and corporate strategy (0.853); project selection (0.848); project prioritisation and alignment (0.883); and project portfolio management skill and knowledge (0.826). Thus, according to the benchmarks above, all the constructs were “Good”, and were therefore retained for further analysis. ^[11]_[SEP]

4.3.2. Validity Analysis

4.3.2.1. KMO and Bartlett's test of Sphericity

KMO and Bartlett's test of sphericity: The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy evaluates the suitability of the data for factor analysis, with values ranging from 0 to 1. Higher KMO values (> 0.6) indicate that the data is suitable for factor analysis. Bartlett's test of sphericity tests the null hypothesis that the correlation matrix is an identity matrix (i.e., no significant correlations between variables). A significant p-value (< 0.05) for Bartlett's test indicates that the data is appropriate for factor analysis.

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.734
Bartlett's Test of Sphericity	Approx. Chi-Square
	Df
	Sig.
	869.081
	325
	<.001

Table 18: KMO and Bartlett's Test

The KMO test is designed to assess the appropriateness of data for factor analysis. Put simply, it assesses the appropriateness of the sample size. The test assesses the sufficiency of the sample for each variable in the model, as well as for the entire model (Shrestha, 2021). The KMO value ranges from 0 to 1. KMO values ranging from 0.8 to 1.0 suggest that the sampling is sufficient. KMO scores ranging from 0.7 to 0.79 are considered average, while values ranging from 0.6 to 0.69 are considered below average. KMO values below 0.6 indicate insufficient sampling and necessitate remedial action. If the number is below 0.5, the outcomes of the factor analysis will certainly not be very appropriate for the data analysis. When the sample size is less than 300, it is necessary to assess the average communality of the kept items. Average values greater than 0.6 are considered acceptable for sample sizes less than 100. For sample sizes between 100 and 200, average values between 0.5 and 0.6 are considered acceptable (Shrestha, 2021). In this table, the KMO value is 0.734, which indicates that the sampling adequacy is good and that the data is suitable for factor analysis. Variables (Q4_2 and Q4_9) were removed from the test to strengthen correlation between variables.

Bartlett's Test of Sphericity examines if the correlation matrix of the observed variables deviates significantly from an identity matrix, which is a matrix with ones on the diagonal and zeros elsewhere. A statistically significant result (p -value < 0.05) suggests that there are enough correlations between the variables to support the application of factor analysis (Shrestha, 2021).

In this table 7, the approximate Chi-Square value for Bartlett's Test is 869.081 with 325 degrees of freedom, and the p -value (Sig.) is less than 0.001. This result is significant, suggesting that there are meaningful correlations among the variables, and factor analysis is appropriate for the data. In summary, both the KMO measure (0.734) and Bartlett's Test of Sphericity (p -value < 0.001) indicate that the data is suitable for factor analysis, as there is adequate sampling and sufficient correlations among the observed variables.

Total Variance Explained						
Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.155	42.905	42.905	11.155	42.905	42.905
2	2.483	9.550	52.455	2.483	9.550	52.455
3	2.056	7.907	60.362	2.056	7.907	60.362
4	1.364	5.247	65.609	1.364	5.247	65.609
5	1.297	4.988	70.597	1.297	4.988	70.597

Table 19: Total Variance Explained

Based on the given table, we can interpret the results as follows:

- Factor 1 explains 42.907% of the total variance in the dataset, and the cumulative variance explained is 42.905%. ^[1]_[SEP]
- Factor 2 explains 9.550% of the total variance, and the cumulative variance explained by Factors 1 and 2 is 52.455%. ^[1]_[SEP]
- Factor 3 explains 7.907% of the total variance, and the cumulative variance explained by Factors 1, 2, and 3 is 60.362%. ^[1]_[SEP]
- Factor 4 explains 5.247% of the total variance, and the cumulative variance explained by Factors 1, 2, 3, and 4 is 65.609%. ^[1]_[SEP]
- Factor 5 explains 4.988% of the total variance, and the cumulative variance explained by all five factors (Factors 1, 2, 3, 4, and 5) is 70.597%. ^[1]_[SEP]

The findings indicate that the combination of the five extracted components accounts for 70.597% of the overall variability in the dataset. This data assists in evaluating the sufficiency of the factor solution and offers valuable insights into the extent to which the extracted factors accurately represent the underlying structure of the observable variables. Consequently, these factors encompass a significant proportion of the information available in the original variables, thereby offering a more streamlined and comprehensible depiction of the dataset's structure.

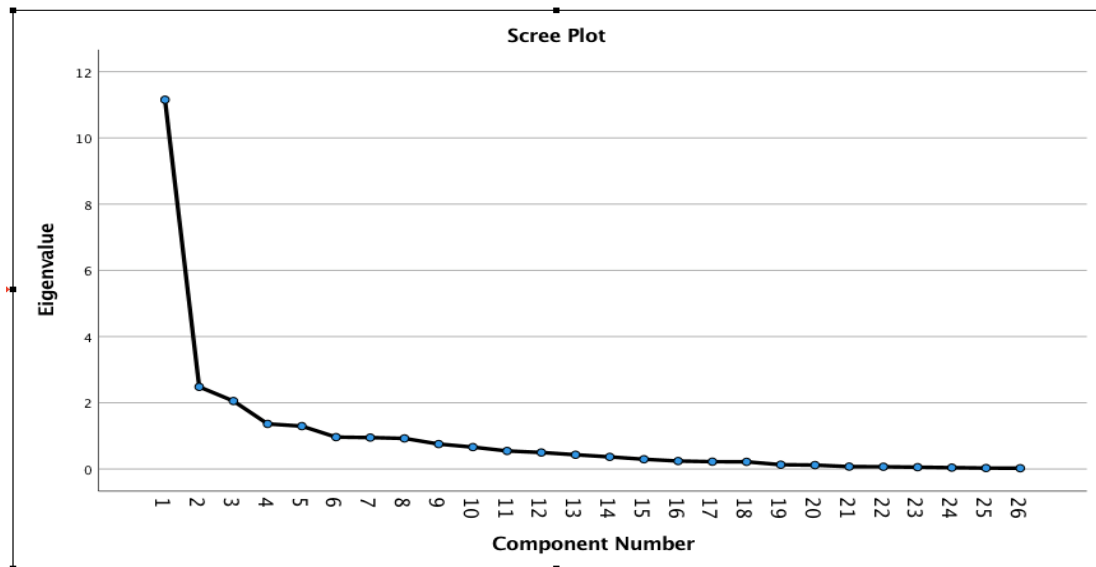


Figure 1: Scree Plot

The scree plot was, together with the KI rule (Table 8: Total Variance Explained) are normally used together to determine the most appropriate factor solution. The K1 rule advocates for retention of those factors with eigenvalues of at least 1, while the scree plot considers only those factors that appear before the elbow of leveling of the plot. This test aims to determine the ideal number of components that can be extracted before the quantity of distinct variance becomes more significant than the shared variance structure (Shrestha, 2021). The scree plot (Figure 1 above) generated four (5) factors (f1, f2, f3, f4, f5) that have eigenvalue > 1 . For the KI rule, the degree of variance, which is explained by factors as you go down the table, becomes smaller and smaller, therefore it can be assumed that the first few factors are the most important ones. In the K1 Table 8: Total Variance Explained, it is evident that the first five factors are the most important with a cumulative explained variance of 71 percent. Thus, for this research, the table 10 of communalities was relied upon for factor extraction.

4.3.2.2. Tests of Normality

According to (Mishra et al., 2019) several methods can be used to assess the normality of continuous data. Among these, the most commonly used methods are the Shapiro-Wilk test, Kolmogorov-Smirnov test, skewness, kurtosis, histogram, box plot, P-P plot, Q-Q plot, and mean with standard deviation. The Kolmogorov-Smirnov test and the Shapiro-Wilk test are commonly employed to assess the normality of

data, making them the two most popular tests for this purpose. The Shapiro-Wilk test is the preferred method for small sample sizes (less than 50 samples), however it can also be applied to higher sample sizes. On the other hand, the Kolmogorov-Smirnov test is employed for sample sizes greater than or equal to 50. For both of the aforementioned tests, the null hypothesis posits that the data is derived from a population that follows a normal distribution. When the p-value is greater than 0.05, the null hypothesis is accepted and the data is referred to as regularly distributed.

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Q3	.292	42	<.001	.796	42	<.001
Q1	.172	42	.003	.892	42	<.001

a. Lilliefors Significance Correction

Table 20: Test of Normality

This output shows the results of normality tests (Kolmogorov-Smirnov and Shapiro-Wilk) conducted on the variables Q3 “Experience in the project delivery environment” and Q1 “Role played in the project delivery environment”. The Kolmogorov-Smirnov test produced a statistic of 0.292 with a corresponding p-value < 0.001 for Q3 and statistic of 0.172 with corresponding p-value < 0.001 for Q1, while the Shapiro-Wilk test produced a statistic of 0.796 with a corresponding p-value less than 0.001 for Q3 and statistic of 0.892 with corresponding p-value < 0.001 for Q1. The Shapiro-Wilk test showed for Q3, a departure from normality $W(42) = .79$, p-value <.001 therefore, the data is not normally distributed. Null hypothesis is that there is no statistically significant difference in distribution whereas the alternative hypothesis is that there is significant difference in the distribution since the p-value < 0.05, we can reject the null hypothesis which says that there is no statistically significant difference therefore, the data is not normally distributed.

Similarly, The Shapiro-Wilk test showed for Q1, a departure from normality $W(42) = .89$, p-value <.001 therefore, the data is not normally distributed. Null hypothesis is that there is no statistically significant difference in distribution whereas the alternative hypothesis is that there is significant difference in the distribution since the p-value < 0.05, we can reject the null hypothesis which says that there is no statistically significant difference therefore, the data is not normally distributed

4.3.2.3. Communalities

Communalities refer to the extent of unique information included in each variable that can be derived from a shared factor. In other words, a higher communality value (approaching 1) indicates a greater amount of extractable information. An effective method for assessing factor analysis is to ensure that the communality is no less than 0.40. By default, the initial communality value for each variable is set to 1.00 or 100% because, at the start of the factor analysis, none of the information has been extracted yet.

Communalities		
	Initial	Extraction
Q1_1	1.000	.829
Q1_2	1.000	.805
Q1_3	1.000	.820
Q1_4	1.000	.745
Q1_5	1.000	.759
Q1_6	1.000	.603
Q2_1	1.000	.764
Q2_2	1.000	.828
Q2_3	1.000	.844
Q2_4	1.000	.753
Q3_1	1.000	.768
Q3_2	1.000	.704
Q3_3	1.000	.793
Q3_4	1.000	.860
Q3_5	1.000	.869
Q3_6	1.000	.815
Q3_7	1.000	.658
Q3_8	1.000	.726
Q3_9	1.000	.820
Q4_1	1.000	.811
Q4_2	1.000	.824
Q4_3	1.000	.807
Q4_4	1.000	.882
Q4_5	1.000	.844
Q4_6	1.000	.748
Q4_7	1.000	.728
Q4_9	1.000	.721

Extraction Method: Principal Component Analysis.

Table 21: Communalities

According to (Taherdoost et al., 2004), the item communalities represent the degree to which an item is related to the underlying construct, have a value of 0.8 or higher. This is considered to be "high", but it is rare to occur in actual data. Additional often seen values range from 0.40 to 0.70 and are referred to be low to moderate communalities. Based on the results on Table 10, all the variables have an extraction value from 0.60 to 0.8 or higher. Off the variable Q1_1 82.9% of the variance can be described with the 5 factors. Off the variable Q1_2 80.5% of the variance can be described with the 5 factors. Variable Q4_8 had an extraction value < 0.40 therefore was deleted from the dataset.

4.4. Inferential Analysis and Hypothesis Testing

This section analyses data about the project portfolio management as an enabler of corporate strategy based on the assessment questionnaire as described in the research methodology chapter. The data collected was analysed which included section 1 – Corporate Strategy and Project Portfolio Management, Section 2 – Project Selection, Section 3 – Project Prioritisation and Alignment and Section 4 - Project Management Skill and Knowledge. Each section comprised questions based on the 5-point Likert scale with weighted scales from one (1) to five (5) based on the respondent's role in the project delivery environment. The scales in each section were weighted based on the number of responses and Likert scale weightings to make up the aggregated measures of central tendency and dispersion.

4.4.1. Corporate Strategy and Project Portfolio Management

This section is concerned with analyzing the corporate strategy and project portfolio management domains and it details the data options in line with the research instrument for the selected commercial bank. SPSS application was used to calculate the data results. The table below depicts the data results based on central tendency and dispersion measures.

Statistics

		Q1_1	Q1_2	Q1_3	Q1_4	Q1_5	Q1_6
N	Valid	42	42	42	42	42	42
	Missing	1	1	1	1	1	1
Mean		1.93	1.98	2.14	2.02	2.12	2.00
Median		2.00	2.00	2.00	2.00	2.00	2.00
Mode		2	2	2	2	2	1
Std. Deviation		.947	.897	.952	.897	1.064	1.126
Range		4	4	3	3	3	4

Table 22: Central Tendency

Based on the results above, the mean if Q1_3 has the highest mean value of 2.14, which suggest that average respondent somewhat agree, “In my organisation, employees understand how their day-to-day activities contribute to the business unit strategy”. The median value suggests that the value in the middle is 2.00 “somewhat agree”, meaning that the respondent somewhat agree. With regards to the mode, the value that was most selected by respondent is 2 which is “somewhat agree”, with standard deviation of 0.952.

Group Statistics					
	Q2	N	Mean	Std. Deviation	Std. Error Mean
Q1_1	1	14	2.07	1.207	.322
	2	28	1.86	.803	.152

Table 23: Group Statistics

Q2 (1 = RBB and 2 = CIB)

Q1_1 – “In my organisation, the formulated group strategy is communicated to all employees on a regular basis”.

The results above show that respondent from retail and business banking somewhat agree that corporate strategy is communicate to all employees on a regular basis than the respondent in corporate and investment banking. The mean value is 2.07, which is higher than that of corporate and investment banking.

Independent Samples Test											
		Levene's Test for Equality of Variances			t-test for Equality of Means				95% Confidence Interval of the Difference		
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Q1_1	Equal variances assumed	1.052	.311	.687	40	.248	.496	.214	.312	-.416	.845
	Equal variances not assumed			.601	18.954	.277	.555	.214	.356	-.532	.960

Table 24: Independent Sample Test

With the independent sample test, we check if the mean difference is statistical significance to allow us to generalise the sample to the whole population. The p-value of equal variances assumed and equal variance not assumed is > 0.05 therefore, suggests that we cannot be 95% sure that the difference that exists between retail and business banking and corporate and investment banking respondent with regards to strategy communication to all employees is statistically significant therefore, we fail to reject null hypothesis that assumes that there is statistical difference between RBB and CIB responses.

4.4.2. Project Selection

This section is concerned with analysing the project selection domain and it details the data options in line with the research instrument for the selected commercial bank. SPSS application was used to calculate the data results. The table below depicts the data results based on central tendency and dispersion measures.

		Statistics			
		Q2_1	Q2_2	Q2_3	Q2_4
N	Valid	42	42	42	42
	Missing	1	1	1	1
Mean		2.29	2.45	2.14	2.36
Median		2.00	2.00	2.00	2.00
Mode		2	2	1	2
Std. Deviation		1.088	1.234	1.280	1.206
Range		4	4	4	4

Table 25: Central Tendency

According to the given data, the variable Q2_2 has the highest mean value of 2.45. This indicates that the average responder somewhat agrees with the statement: "In my organisation, the process to select projects is communicated clearly to ensure employees understand why projects have been selected." The median value indicates that the middle value is 2.00, which corresponds to a "somewhat agree" response, indicating that the respondent has a moderate level of agreement. In terms of the mode, the value that was most frequently chosen by the respondents is 2, which corresponds to "somewhat agree". Finally, the standard deviation is 1.234 indicating that the sample exhibits heterogeneity in terms of attitude.

Group Statistics					
	Q2	N	Mean	Std. Deviation	Std. Error Mean
Q2_4	1	14	2.07	1.269	.339
	2	28	2.50	1.171	.221T

Table 26: Group Statistics

Q2 (1 = RBB and 2 = CIB)

Q2_4 – “In my organisation, the process to select projects is communicated clearly to ensure employees understand why projects have been selected”.

The results above show that respondent from corporate and investment banking somewhat agree that the consolidate view of selected project is shared with employees. The mean value is 2.50, which is higher than that of retail and business banking with standard deviation of 1.171.

Independent Samples Test											
		Levene's Test for Equality of Variances			t-test for Equality of Means						
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
Q2_4	Equal variances assumed	.400	.531	-1.088	40	.142	.283	-.429	.394	-1.225	.368
	Equal variances not assumed			-1.058	24.301	.150	.300	-.429	.405	-1.264	.407

Table 27: Independent Sample Test

The independent sample test is used to determine if the difference in means is statistically significant, enabling us to make generalisations about the entire population. The p-value for both assuming equal variances and not assuming equal variances is greater than 0.05. This suggests that we cannot be 95% confident that there is a statistically significant difference between the responses of retail and business banking and corporate and investment banking regarding the consolidated view of selected projects communicated to all employees. Therefore, we fail to reject the null hypothesis, which assumes that there is no statistical difference between the responses of RBB and CIB.

4.4.3. Section 3 – Project Prioritisation and Alignment

This section is concerned with analyzing collaboration between retail and business banking and corporate and investment banking with regards to prioritization and alignment of projects. It details the data options in line with the research instrument for the selected commercial bank. SPSS application was used to calculate the data

results. The table below depicts the data results based on central tendency and dispersion measures.

		Statistics								
		Q3 1	Q3 2	Q3 3	Q3 4	Q3 5	Q3 6	Q3 7	Q3 8	Q3 9
N	Valid	42	42	42	42	42	42	42	42	42
	Missing	1	1	1	1	1	1	1	1	1
Mean		2.81	2.14	2.07	2.90	2.33	2.48	2.29	1.74	1.90
Median		2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00
Mode		2	2	2	3	2	2	2	1	1
Std. Deviation		1.330	1.049	.947	1.265	1.183	1.153	1.019	.828	.958
Range		4	4	3	4	4	4	4	3	4

Table 28: Central Tendency

Based on the provided data, the variable Q3_4 has the highest average value of 2.90. This suggests that the typical respondent holds a neutral stance on the statement: "In my organisation, business unit executives consistently oversee projects in the execution phase to ensure that employees are working on prioritised projects." The median score of 3.00 signifies the midway value, which corresponds to a response of "neither agree nor disagree." This suggests that the respondent has misgivings. The mode of the respondents' choices is 3, indicating, "neither agree nor disagree" was the most commonly selected option. The sample displays heterogeneity in attitude, as seen by a standard deviation of 1.265.

		Group Statistics			
Q2	N	Mean	Std. Deviation	Std. Error Mean	
Q3_1	1	2.93	1.492	.399	
	2	2.75	1.266	.239	

Table 29: Group Statistics

Q2 (1 = RBB and 2 = CIB)

Q3_1 – "In my organisation, the different business units (i.e. Retail and Business Banking and Corporate Investment Banking) collaborate to prioritise projects that align to the corporate strategy".

The results above show that respondent from retail and business banking somewhat-agree that the different business units collaborate to prioritise projects that align to group strategy than the respondent in corporate and investment banking. The mean value is 2.93, which is higher than that of corporate and investment banking.

		Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	Lower	Upper
						One-Sided p	Two-Sided p				
Q3_1	Equal variances assumed	1.828	.184	.406	40	.343	.687	.179	.440	-.710	1.067
	Equal variances not assumed			.384	22.631	.352	.705	.179	.465	-.784	1.141

Table 30: Independent Samples Test

The p-value for both assuming equal variances and not assuming equal variances is greater than 0.05. This suggests that we cannot be 95% confident that there is a statistically significant difference between the responses of retail and business banking and corporate and investment banking regarding the collaboration of different business units to prioritise projects that align to group strategy. Therefore, we fail to reject the null hypothesis, which assumes that there is no statistical difference between the responses of RBB and CIB.

4.4.4. Section 4 – Project Management Skill and Knowledge, employee productivity and business profitability

This section is concerned with analyzing project management skills and knowledge within the group, the effectiveness of the project management office, business profitability and employee productivity. It details the data options in line with the research instrument for the selected commercial bank. SPSS application was used to calculate the data results. The table below depicts the data results based on central tendency and dispersion measures.

		Statistics								
		Q4 1	Q4 2	Q4 3	Q4 4	Q4 5	Q4 6	Q4 7	Q4 8	Q4 9
N	Valid	41	41	41	41	41	41	41	41	41
	Missing	2	2	2	2	2	2	2	2	2
Mean		2.54	2.34	2.41	2.34	2.27	2.02	2.00	2.24	2.05
Median		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Mode		2	2	2 ^a	2	2	2	2	2	1
Std. Deviation		1.075	.965	.999	1.153	1.049	.908	.894	.943	1.048
Range		4	4	4	4	4	3	3	4	4

a. Multiple modes exist. The smallest value is shown

Table 31: Central Tendency

According to the given data, the variable Q4_1 has the highest mean value of 2.54.

This indicates that the average participant maintains a neutral position towards the statement: "Within my organisation, employees possess the ability and knowledge to effectively manage project portfolios." The median score of 2.00 represents the exact midpoint number, indicating a response of "somewhat agree". The respondents' selections have a mode of 2, indicating that "somewhat agree" was the most often selected option. The sample exhibits variety in attitude, as seen by a standard deviation of 1.075.

	Q2	N	Mean	Std. Deviation	Std. Error Mean
Q4_9	1	14	2.21	1.311	.350
	2	27	1.96	.898	.173

Table 32: Group Statistics

Q2 (1 = RBB and 2 = CIB)

Q4_9 – "In my organisation, the timely and cost-effective completion of projects in accordance with the group's strategic objectives has a positive impact on profitability".

The data indicates that respondents from the retail and business banking sector have a moderate level of agreement on employees possess the ability and knowledge to effectively manage project portfolios. This level of agreement is higher compared to respondents from the corporate and investment banking sector. The average value is 2.21, surpassing that of corporate and investment banking.

		Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference			
		F	Sig.	t	df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Q4_9	Equal variances assumed	2.260	.141	.724	39	.237	.473	.251	.347	-.451	.953
	Equal variances not assumed			.643	19.512	.264	.528	.251	.391	-.565	1.068

Table 33: Independent Sample Test

The p-value for both the assumption of equal variances and the assumption of unequal variances is greater than 0.05. This implies that we lack 95% confidence in the existence of a statistically significant distinction between the responses of retail and business banking and corporate and investments banking regarding employees' ability and knowledge to effectively manage project portfolios. Thus, we do not reject the null hypothesis, which posits that there is no significant disparity between the reactions of RBB and CIB.

CHAPTER 5 – RESULTS AND DISCUSSIONS

5. Introduction

The data analysis section serves as the gateway to meticulous exploration of data, wherein we employ rigorous methodologies to dissect, interpret and derive meaningful conclusion. The aim is not to merely present numbers, but to illuminate the underlying narratives that contribute to the advancement of knowledge and understanding within this study.

5.1. H0 – There is Significant Relationship between Corporate Strategy and Project Portfolio Management

The results evaluate the regularity with which the communication of strategy occurs. It examines whether the overarching strategy of the group is effectively translated into the strategy of individual business units, so ensuring that employees comprehend how their daily tasks and responsibilities contribute to the overall strategy. Additionally, it evaluates the effectiveness of project portfolio management in order to assist businesses in achieving their strategic goals

A significant number of employees (13.95%) in both RBB and CIB some what disagree as they do not understanding how their day-to-day activities link up to the corporate strategy. Organisation achieves project portfolio management maturity by closing the divide between strategic and operational levels (Editor et al., 2018). Savion's (2021) study revealed that employees who possess a clear comprehension of their strategic position attain a competitive advantage. Additionally, Cattini Junior and Zatti (2013) found that it is imperative that individuals across all tiers of an organisation possess a comprehensive comprehension of the benefits of project management in the daily execution of strategic initiatives. Heide et al. (2018) discovered that a lack of purposeful communication leads to a drop in organisational performance.

5.2. H1 - There is a significant relationship between Project Portfolio Management capabilities and employee productivity.

The results show that there are inherent challenges with project selection in the selected bank. Employees (20,93% and 4.65%) disagree that consolidate view of

selected projects get shared. Jafarzadeh et al. (2018b) found that lack of clarity regarding selection criteria for new projects poses a challenge for businesses during the selection process and existing project portfolio selection methods do not effectively incorporate selection. Therefore, it is crucial for the bank to improve the project selection capability. The study by Kovach and Ingle (2020) found that ineffective selection has led to a significant incidence of project failure, with a tendency for projects to be prematurely terminated prior to their intended completion. In specific instances, the Information Technology department produces a projects that fail to yield any commercial benefit or lacks congruence with the overall objectives of the enterprise. Kovach and Ingle (2020) assert that inadequate project selection practices have resulted in dissatisfaction among practitioners.

5.3. H2 - There is a significant relationship between Project Portfolio Management capabilities and business profitability.

The results suggest that employees hold varying degrees of disagreement, ranging from "somewhat disagree" to "strongly disagree," about the collaboration and prioritisation of projects across the different business groups. The study points out lack of collaboration as a factor that hinders effective project portfolio management within the selected bank, as a result negatively impact on business profitability. The results also suggest that prioritization of projects get handled in silos therefore, inconsistent throughout the organization. Romera (2023) found that alignment occurs when a project team engages in effective collaboration, comprehends business objectives comprehensively, and maintains a lucid vision for long-term prosperity. The fundamental output of efficient project selection is increasing the return on investment (EcoSys Team, 2018).

5.4. H3 - Knowledge and Skills moderates the relationship between project portfolio management, employee productivity and business profitability.

The results evaluate the effectiveness of project management skills and knowledge when managing project and the establishment of project management office. Additionally, it analyses if effective project management help improve employee productivity and business profitability. Employees are not certain of the effectiveness of project portfolio management skills and knowledge in improving business

productivity and business profitability. Performance is attained through the ability of employees to deliver projects that yield business value (Rahaman et al., 2020). In cases where the work environment is not favorable, characterised by inadequate management and planning, it will have a negative impact on the productivity of employees and business profitability.

5.5. Conclusion

This chapter analysed the collected data for project portfolio management as an enabler of corporate strategy within a selected commercial bank in SA. The data collection process consisted of an online questionnaire based on the effectiveness of project portfolio management in enabling strategy and improving employee productivity and business profitability. Data was analysed using IBM SPSS and Qualtrics assessment tools. The questionnaire comprised respondent options categorised in the “Corporate Strategy and Project Portfolio Management”, “Project Selection”, “Project Prioritisation and Alignment”, and “Project Management Skills and Knowledge” project management capabilities. The data analysis started with testing the goodness of data, reliability analysis, factor analysis, validity of data and testing normality. The data analysis process further included the descriptive analysis median, skewness and kurtosis and standard deviation calculations. The data analysis employed the standard normal distribution of the sample population to derive indicative results for the broader population.

Furthermore, the data shows that the overall research sample consisted of forty-three (43) responses. The responses consisted of fourteen (14) “Retail and Business Banking” employees and twenty-nine (29) “Corporate and Investment Banking” employees. This reality is prone to present the data results with bias, especially in cases where the analysed responses were very minimal. Therefore, it would be ideal to have a protracted study to derive more indicative results about effectiveness of project portfolio management within the banking environment SA. The scope to be broadened to include other financial institution. The next logical step would also be for the organisation to define processes to support project portfolio management in banking. The subsequent chapter will focus on the study's findings, referencing observations from the survey that align with the research questions and objectives.

CHAPTER 6 – CONCLUSIONS AND RECOMMENDATIONS

6. Introduction

This chapter will provide a concise summary of the findings in relation to the research questions and objectives, so concluding the study. The researcher draws conclusions about the effectiveness of project portfolio management based on the obtained data by addressing the research questions and objectives. The researcher also acknowledges certain limits of the study and discusses the practical implications and potential approval of the findings.

6.1. Research Objectives

The study sought to understand the effectiveness of project portfolio management within the selected commercial bank in SA by answering the questions:

- To investigate the factors that hinder effective project selection, project prioritisation and project alignment within banking sector.
- To assess the impact of PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) on employee productivity
- To evaluate the impact of PPM capabilities (Project Selection, Project Prioritisation and Project Alignment) on business profitability.

6.2. Corporate Strategy and Project Portfolio Management

The findings suggest that the selected commercial bank needs to improve its group strategy communication and project portfolio management. After analysing the data, it was found that employees who are neutral are not participating in strategy development but are accountable for project implementation. This investigation aimed to establish a correlation between the employee's role and their response. To enhance project delivery, the chosen bank should empower workers to suspend any project that does not generate corporate value. There must be a continuous effort to effectively convey the organization's plan at all levels, customised for each audience. The organisation should aim to regularly get input from employees regarding their comprehension of the communicated strategy to bridge any existing gaps. Enhancing strategic communication in businesses requires a thorough awareness of the obstacles.

6.3. Project Selection

Bringing different business units together and expecting them to collaborate towards common objectives might lead to confusion if there are no fundamental standards to ensure alignment. Consistency in project selection and communication with employees should be maintained across different business units and initiatives. It is crucial for the bank's goal of improving project success rates, enhancing ROI, reducing expenses, and expanding its knowledge base. Consistent application of the methodology enables organisations to effectively comprehend trends, recognise possibilities for enhancement, and assess the performance of their team. This method yields improved project results over time and provides a clearer understanding of how process modifications impact project outcomes.

6.4. Project Prioritisation and Alignment

The analysed data concluded that second highest number of employees somewhat disagree or strongly disagree that retail business banking and corporate investment banking collaborates to prioritise projects that align to the corporate strategy. Large population agrees that project alignment across different team enables greater collaboration; it requires business units to also foster a culture of collaboration for project delivery. The analysis also concludes that working on prioritised projects enables the team to deliver quality solutions. Therefore, improving project prioritisation and alignment capability is very crucial for the selected bank. Establishing consistent processes throughout all projects in a portfolio can prevent adverse effects resulting from judgments influenced by individual biases, favoritisms, or fear. Consistency in project prioritisation, project approval criteria, and other project activities will eliminate subjective factors and allows the bank to make unbiased decisions based on factual data.

6.5. Project Management Skills and Knowledge

The analysis concluded suggest that employees somewhat disagree that employees are empowered with project management skills and knowledge. Therefore, the organisation needs to assess the project management skill and offer training opportunities to employees to improve on this capability. The other large population agrees that delivery of projects in accordance with the group's strategic objectives positively impacts on business profitability and improves employee productivity.

Therefore, the conclusion is that employees should have the right skills and knowledge to effectively manage project for the selected bank to remain profitable.

6.6. Recommendations

The study suggests that the chosen commercial bank should incorporate "business collaboration" as a key strategic element for enhancing the competence of its various business units. While the business provides training opportunities, it is necessary to evaluate the project management abilities and expertise and promote a culture of continuous learning. An effective project portfolio management approach must be comprehensive in order to enhance employee productivity and ultimately improve business profitability. Some of the factors that hinder effective project portfolio management include Factors that hinder effective PPM lack of clarity on how employee's day-to-day activities link to the strategy, lack of a consistent method to select project, lack of consolidated view of selected project, lack of collaboration between the different business units to prioritise projects for the group. The organisation must have a consistent methodology for selecting and prioritising initiatives. Project delivery is a comprehensive method that is guided by the organization's objectives. An organisation is a business entity that serves external clients. Customers lack visibility into the various business units within the bank; product commercialization is managed under the bank's brand therefore, highlighting the importance of collaboration.

6.7. Research Limitations

The study comprised a research sample of forty-three (43) responses from the initially envisaged hundred and sixty-three (163), 32.54% from retail and business banking and 67.44% from corporate and investment banking, 50% from each business units would have provided a good representative sample for employees in the selected commercial bank in SA. The employee role variable excluded business executives who would have provided a better insight on strategy formulation communication and highlight existing challenges with project portfolio management that they have sight of. As a result, the researcher ensured that other roles responsible for strategy formulation and communication were represented such as Product managers and Technology Lead. The research was also limited to one commercial bank although project portfolio management is a disciplined that is employed by other financial

institution. The research only focused on project selection, project prioritisation, project alignment and skills and knowledge however, PPM has other capabilities e.g. risk management, budget control that could also be explored. Furthermore, given the time limitation of the study, 2 months for data collection, as ethics application was approved end of October and data analysis was planned to start in January, the research survey could not be prolonged. Extended time would have allowed for a better response rate.

6.8. Suggestions for Further Research

Insufficient collaboration among various business units is a significant obstacle to successful project portfolio management, as stated in the literature. This lack of collaboration extends to the delivery team, resulting in reduced staff productivity and decreased corporate profitability. Furthermore, the absence of a uniform and systematic approach to choose and prioritise initiatives has a detrimental effect on the delivery of business value. Future study might investigate the characteristics that promote a culture of collaboration between retail and business banking, as well as corporate and investment banking. Furthermore, it is advisable to explore a framework that can assist the organisation in selecting and prioritising initiatives that are in line with the group's strategic objectives.

CONCLUSION

The research study focused on Project Portfolio Management as an Enabler of Corporate Strategy within a Selected Commercial Bank in South Africa. While project portfolio management is a well-established phenomenon, it still presents challenges for the selected bank to implement the strategy. The evidence is clear that for the selected bank to effectively implement projects that align to the corporate strategy, it should enhance the project portfolio management capabilities. As well as improve strategy communication by tailoring it to suit the relevant audiences. This management strategy enables the identification of top projects and provides significant advantages to the company by aligning projects with goals, efficiently allocating resources, and reducing investment risks (Ershadi et al., 2020).

A comprehensive literature assessment revealed a scarcity of empirical evidence about the implementation and effectiveness of PPM methods and methodologies in South Africa. This article aims to establish a basis for an empirical investigation into the correlation between Project Portfolio Management (PPM) implementation and a company's effectiveness in attaining its strategic PPM objectives. A framework was developed based on a literature review, including 7 areas of excellent Project Portfolio Management practices. The criteria are: 1) company strategy; 2) project selection; 3) project prioritisation and alignment; and 4) staff productivity and business profitability (Oosthuizen et al., 2016).

Prior studies emphasise the significance of Project Portfolio Management (PPM) in businesses and the strategic competitive edge it provides to organisations. The level of project management maturity has been found to have a positive impact on project performance, as demonstrated by Ko and Kim (2019). It is difficult to replicate established PM and PPM capabilities that have been refined over time and tailored to the specifics of an organisation. These proven skills are consistently linked to improved results (Killen et al., 2012).

This research further elucidated the connection between Project Portfolio Management (PPM) and strategy execution by focusing on the aspects of structure

and process. These are three capabilities that describe the elements of a PPM system and its role in identifying bottlenecks inside systems.

By testing the relationship between corporate strategy and project portfolio management, this study established that corporate strategy is realised when organisations execute and implement projects that align to the strategy in an effective manner to improve business profitability. Also that when employees understand how they contribute to the strategy, it helps in focusing on high priority projects.

In this study factors that hinder effective project portfolio management within the selected bank were identified such as lack of collaboration between the business units to prioritise projects, lack of clear communication of the corporate strategy, lack on consolidated view of prioritised projects and inconsistent methods to select and prioritise project. Additionally, the study assesses the impact of PPM capabilities (selection, prioritisation, alignment and skills and knowledge) on employee productivity and business profitability.

The study has revealed areas for enhancement in the selected bank to elevate PPM maturity. Enhancing the maturity of project portfolio management involves consistently applying its principles, formalising processes, enhancing existing processes, and implementing new ones (Kononenko & Kpodjedo, 2022). In testing the relationship between PPM and employee productivity and business profitability, the study has revealed that efficient PPM positively influences employee productivity and business profitability. Future study can investigate a framework that organisations can use to connect corporate strategy with implementation. Lastly, the study will aid the selected bank to consider a project portfolio management policy framework that describes the management of projects that may be undertaken within the bank.

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Appendix A (Research Instrument)

710175 MBA Research Report

Start of Block: Default Question Block

Dear Participants

My name is Rabothe Mosia, and I am a student at Wits Business School enrolled for a Master of Business Administration degree. This questionnaire is designed to generate information on the research project titled: Project Portfolio Management as an Enabler of Corporate Strategy in a selected Commercial Bank.

The objective of this research is to assess the impact of project portfolio management particularly, project selection, project prioritisation and alignment on employee productivity and business profitability as enablers of group strategy. Your participation in this study would be greatly appreciated and will contribute to the advancement of knowledge in the project portfolio management area.

The questionnaire will take approximately 5 -10 minutes to complete, and your responses will remain confidential and anonymous. Your participation is voluntary, and you may choose to withdraw at any time. There is no compensation or benefit for participating in this study, however, your participation will be a valuable contribution to this research, which could be leveraged by other researchers.

If you have any questions or concerns, please feel free to contact me at 710175@students.wits.ac.za. Alternatively, you may contact my supervisor, Dr Rob Venter, at robert.venter@wits.ac.za.

Consent (1)

No Consent (2)

Q1 Please select the applicable role that you play in the project environment.

- Application Developer (1)
- Tester (2)
- Project Manager (3)
- Product Owner (4)
- Delivery Lead (5)
- Technology Lead (6)
- Scrum Master (7)
- Solutions Architect (8)

End of Block: Default Question Block

Start of Block: Section 1

Q1 Section 1: Project portfolio management and group strategy.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)
1. In my organisation, the formulated group strategy is communicated to all employees on a regular basis. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. In my organisation, each business units executive translates group strategy to the business unit strategy. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. In my organisation, employees understand how their day-to-day activities contribute to the business unit strategy. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. In my organisation, strategic objectives are related to short-term, medium-term and long-term plans. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. In my organisation, efficient project portfolio management capabilities such as project selection and prioritisation, enable employees to focus on projects that will bring value to the business. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Section 1

Start of Block: Section 2

Q2 Section 2: Project Selection

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)
6. In my organisation, the process and method to select projects are well defined, documented and available for reference. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. In my organisation, the method to select projects is communicated clearly to ensure employees understand why projects have been selected. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. In my organisation, selected projects have a defined and approved business case that is shared with the project delivery team. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. In my organisation, once the projects have been selected, employees get a consolidated view of all the selected projects. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Section 2

Start of Block: Section 3

Q3 Section 3: Project Prioritisation and Alignment

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)
10. In my organisation, the different business units (i.e. Retail and Business Banking and Corporate Investment Banking) collaborate to prioritise projects that align to the group strategy. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. In my organisation, business unit executives communicate prioritised projects to the project delivery team (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. In my organisation, business unit executives regularly monitor projects in the execution phase to ensure employees work on prioritised projects. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. In my organisation, the different business units use similar and consistent methods to prioritise projects. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. In my organisation, different project delivery teams are made aware of upcoming projects, for capacity planning (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. In my organisation, project alignment across different delivery teams is well managed to ensure the effective coordination of project activities. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. In my organisation, the different project delivery teams consistently work together to agree on a date to implement projects. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. In my organisation, focusing on prioritised project helps employees to implement quality solutions. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. In my organisation, project alignment across different teams enables employees to collaborate. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Section 3

Start of Block: Section 5

Q4 Section 4: Project portfolio management skills and knowledge.

	Strongly agree (1)	Strong agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
19. In my organisation, employees are empowered with project portfolio management skills and knowledge. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. In my organisation, employee's skill and knowledge in project portfolio management have adverse impact on enabling group strategy through project implementation. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. In my organisation, employees apply the best project portfolio management practices that aid in enabling group strategy through project implementation. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. In my organisation, project management office is well established and provides a consolidated view of all projects in a portfolio. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. In my organisation, efficient project portfolio management improves employee productivity. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. In my organisation, effective project portfolio management enables project delivery on time and within budget. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. In my organisation, the timely and cost-effective completion of projects in accordance with the group's strategic objectives has a positive impact on profitability. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Section 5

Appendix B (Ethics Clearance Certificate)

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg



Wits Business School Ethics Committee

Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/BA710175/695

This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below)

Project title	Project portfolio management as an enabler of corporate strategy in a selected commercial bank
Investigator / Researcher	Mrs Rabothe Rapola-Mosia
Nature of Project	MBA (Research Article)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed anonymity and confidentiality.
Issue Date of Certificate	2023/10/27
Expiry date	Date of submission of the project / research report
Chairperson	Dr Pius Oba  ☎ +27 11 717 3976 ☎ +27 82 733 6587 ✉ pius.oba@wits.ac.za

Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethics Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

Signature

31 October 2023

Date: