

**Addis Ababa University**

**College of Business and Economics, Department of Management**

**Executive Masters of Business Administration program**

**AN ASSESSMENT ON THE EFFECT OF KNOWLEDGE MANAGEMENT PROCESS ON  
ORGANIZATIONAL PERFORMANCE: A MODERATED MEDIATION MODEL OF  
KNOWLEDGE-ORIENTED LEADERSHIP STYLE AND EMPLOYEE ENGAGEMENT IN THE  
CASE OF ZEMEN BANK S.C.**

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OF ZEMEN BANK S.C.**

**A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES  
OF ADDIS ABABA UNIVERSITY  
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EXECUTIVE MASTER OF BUSINESS ADMINISTRATION**

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**Addis Ababa, Ethiopia.**

**Addis Ababa University**

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## **DECLARATION**

I declare that the research title **“Effect of Knowledge Management Process on Organizational Performance: a moderated mediation model of knowledge-oriented leadership style and employee engagement in the case of Zemen bank S.C** is my original work and I would like to confirm that this study has not been presented in Addis Ababa University or other University. In addition to that, all source of material used for the research have been duly acknowledged.

**Getinet Fikre (The Researcher):** \_\_\_\_\_

**Date:** \_\_\_\_\_

## LETTER OF CERTIFICATION

This is to certify that Getinet Fikre has carried out this thesis on the topic entitled **“Effect of Knowledge Management Process on Organizational Performance: a moderated mediation model of knowledge-oriented leadership style and employee engagement in the case of Zemen bank S.C.”** is his original work and is suitable for submission for the award of Executive Masters of Business Administration (EMBA).

The paper is submitted for examination with my approval as a university advisor.

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**June 10, 2025**

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**Date**

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## **LIST OF ACRONYMS**

EE	Employee engagement
KA	Knowledge Acquisition
KAP	Knowledge Application
KC	Knowledge Creation
KOL	Knowledge-oriented Leadership
KP	Knowledge Protection
KM	Knowledge Management
KS	Knowledge Storage
KSH	Knowledge Sharing
OP	Organizational Performance
PLS	Partial Least Square
SEM	Structural Equation Modeling

## **ABSTRACT**

*This study examines the effect of knowledge management processes on organizational performance by considering the mediating role of employee engagement and the moderating effect of knowledge-oriented leadership style within Zemen Bank S.C. in Ethiopia. Knowledge management plays a vital role in enhancing organizational performance, particularly in knowledge-intensive industries such as banking. In an era where businesses must continuously adapt to dynamic market conditions, effective knowledge management processes serve as a strategic tool for improving efficiency, fostering innovation, and sustaining competitive advantage. The purpose of this study is to provide empirical insights into how structured knowledge management process contribute to organizational success, particularly in the Ethiopian banking sector, where knowledge management remains underdeveloped. In order to achieve these objectives, data was collected from 203 employees of Zemen Bank S.C. using a structured survey questionnaire. The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4.4 to analyse the relationships among the key variables. The findings reveal that knowledge management processes significantly influences organizational performance both directly and indirectly through employee engagement. Furthermore, knowledge-oriented leadership style moderates the relationship between employee engagement and organizational performance, although it does not moderate the link between knowledge management processes and employee engagement. The study concludes that organizations can improve their performance by implementing structured knowledge management processes, fostering a knowledge-sharing culture, and promoting employee engagement. However, leadership approaches must be carefully tailored to balance knowledge-driven decision-making with employee needs to prevent unintended consequences on engagement. While the findings are particularly relevant to Zemen Bank S.C., they offer valuable insights for other private banks in Ethiopia seeking to optimize their knowledge management strategies. Future research can explore this conceptual framework in different industries, utilizing alternative analytical approaches to validate and expand these insights.*

**Keywords:** *Knowledge management process, organizational performance, Knowledge - oriented leadership Style, employee engagement, and Zemen Bank S.C*

# CHAPTER ONE

## INTRODUCTION

This chapter provides an overview of the research by presenting the background, problem statement, research questions, objectives, significance, and scope of the study. In addition, it outlines the limitation, definition of key terms and organization of the Study in detail.

### 1.1 Background of the study

Successful organizational leaders are consistently searching for better ways to enhance performance and achieve better results. Frequent disappointments with past management initiatives have motivated managers to explore deeper, fundamental factors-for example knowledge-that influence organization's efficiency. To remain competitive and achieve lasting success, experience shows that enterprises must create and maintain a well-balanced intellectual capital portfolio. This necessitates a structured approach to Knowledge Management. With knowledge as the major driving force behind the 'economics of ideas', we can expect that the emphasis on knowledge creation, development, organization and leverage will continue to be the prime focus for improving society (Wiig, 1997).

In modern world, knowledge is a valuable asset for both markets and organizations. Without effective knowledge management and utilization, businesses struggle to provide high-quality, cost-efficient products and services. The implementation of knowledge management has been a driving force behind the rapid growth and advancement of a knowledge-based economy (Li et al., 2020). In order to improve companies' performance, organizations must improve the effectiveness of their knowledge management (AlMulhim, 2021a). Effective knowledge management facilitates the adoption of new ideas, ultimately contributing to better organizational performance (Imran et al.,2022). Therefore, to have a sustainable competitive advantage, an organization should realize how to create, distribute and utilize knowledge through an organization and how attach it to organizational process (Rahimli, 2012).

However, the impact of knowledge management process on performance is not always straightforward. There are many studies (Dzenopoljac et al., 2018; Ge, 2022; Obeso et al., 2020) on knowledge management process and organizational performance applied to different methods

for analysis, but these studies have left a research gap. For example, Obeso et al. (2020) explain Knowledge management processes and organizational performance: the mediating role of organizational learning, but this study only presents an analysis of knowledge management processes in the context of Spanish SMEs. Dzenopoljac et al. (2018) investigated the impact of knowledge management processes on business performance, providing evidence from Kuwait. The limitation of this study is mainly related to the limited geographical scope of the research, the survey covered only companies from Kuwait. Ge (2022) explains knowledge management capabilities and the performance of organizations very well and highlights the positive impact of dynamic capabilities on product, process, and cooperative innovation, but this study primarily focuses on manufacturing enterprises, which may limit the generalizability of its findings to other industries and its practical implications are unclear for the service sector.

In Ethiopia, knowledge management remains relatively unknown and underdeveloped, though some studies have explored this area and confirmed its significance. The private banking sector heavily depends on the expertise of employees, managers, and coworkers, making staff retention a critical factor (Henok, 2021). Additionally, Ethiopian private banks experience employee turnover for various reasons, leading to a loss of valuable knowledge and experience when individuals leave without transferring their expertise to others or the organization. However, little emphasis has been placed on mechanisms and approaches for knowledge generation and sharing (Seifu et al., 2019).

This study primarily aims to evaluate the effect of knowledge management process on organizational performance focusing on Zemen Bank S.C, with employee engagement acting as a mediating factor and knowledge-oriented leadership style serving as a moderating influence. The researcher believes that this combination of variables is both distinctive and highly effective in explaining organizational performance; particularly within Ethiopia's banking sector.

This research will assess various definitions and interpretations of employee engagement found in existing literature. For example, Anitha (2014) considers employee engagement as a dependent variable, whereas Riyanto, Endri, and Herlisha (2021) describe it as a mediator linking work motivation and job satisfaction to employee performance. However, this study positions employee engagement as a mediator between knowledge management process and organizational performance. This variable is important, as research has shown a positive

correlation between employee engagement and organizational performance outcomes. Additionally, studies indicate that higher levels of employee engagement increase the likelihood of an organization exceeding the industry average in revenue growth (Markos & Sridevi, 2010).

Furthermore, this study has identified unique variables and seeks to establish their role as a moderating factor in relation to other variables. Previous research (AlMulhim, 2023) has explored environmental dynamism and its influence on various aspects of organizational performance. In contrast, this study introduces knowledge-oriented leadership style as a moderating factor, aiming to strengthen the connection between the knowledge management process and employee engagement, as well as between employee engagement and organizational performance. Scholars in the field of knowledge management should recognize the significance of leadership, particularly leadership styles, in facilitating effective knowledge management processes and practices as leadership appears to be a crucial in shaping entirety of knowledge management initiatives within an organization (Hayat et al., 2015).

The study also explores organizational performance which involves financial performance, operational performance, and organizational effectiveness (Venkatrman & Ramanujam, 1986). Traditionally perspective, organizational performance has been primely associated with finical where key factors such as budgets, assets, operations, products, services, markets and human resources are play crucial role in influencing the over-all bottom-line of an organization (Dixon, 1999). The financial benefits of organizational performance are often related with organizational success (Thurbin, 1994). Rezaei et al., (2021) highlights that the relationship between knowledge management and organizational performance is a significant area of interest for researchers and practitioners, and further studies are needed to clarify this relationship. Therefore, this study considers organizational performance as the dependent variable.

## **1.2 Statement of the problem**

On today's dynamic business environment, managers hold very important responsibility of managing and leading their company in order to meet the strategy and objectives set. This requires not only flexibility and knowledge but also effective knowledge management coupled with strong decision-making skills. Many factors influence organizational performance in today's economic landscape, but one that is increasingly recognized as essential is knowledge

management. Therefore, finding the most influencing factors of knowledge management and performance has been one of the most important concerns of managers.

Many studies have been conducted on knowledge management that have emphasized on the critical role of knowledge management in enhancing organizational performance. For instance, Iqbal et al. (2019) studied how knowledge management enablers impact knowledge management processes and, consequently, organizational performance, while also considering the mediating effects of intellectual capital and innovation. These studies reveal that knowledge management processes significantly impact organizational performance, both indirectly and directly, through various mediating and moderating variables.

Despite the recognized strategic value of knowledge management in driving organizational performance especially in knowledge intensive sector such as banking, its effective implementation remains limited in emerging economy like Ethiopia. The Ethiopia Privat banking sector continues to face a high employee turnover, underutilization of tacit knowledge and insufficient emphasis on formal knowledge-sharing practice which collectively hinder long-term competitiveness and innovation. While global research has explored knowledge management's link to organizational performance, few studies had examined these dynamics in developing country context or specifically with in Ethiopian banking industry.

In particular, there is a lack of comprehensive understanding of how knowledge-oriented leadership interacts with knowledge management processes to shape organizational performance even if we have some studies that have examined the influence of leadership styles on knowledge management. Similarly, research on the mediating role of employee engagement in the relationship between knowledge management processes and organizational performance is very limited.

Accordingly, this study aims to address these gaps by evaluating the effect of knowledge management processes on organizational performance within Zemen bank S.C, while examining the mediating role of employee engagement and the moderating effect of leadership style. This investigation offers valuable insight for practical banking operations while also enriching the academic understanding of how knowledge-based system influence organizational performance.

## **Research Question**

The study investigates and seeks to answer the following key research questions:

- Is there any relationship between knowledge management process and organizational performance at Zemen bank?
- Is there any mediating role of employee engagement between knowledge management process and organizational performance at Zemen Bank?
- Is there any moderating role of knowledge-oriented leadership style between knowledge management process and employee engagement at Zemen bank, as well as employee engagement and organizational performance?

## **1.3 Objective of the study**

### **1.5.1 General objectives**

The general objective of the study is to investigate the effect of the knowledge management process on organizational performance, incorporating a moderated mediation model that considers knowledge-oriented leadership style and employee engagement in the case of Zemen Bank S.C.

The specific objectives of the study are:

1. To investigate the relationship between knowledge management process and organizational performance.
2. To explore the mediating role of employee engagement between knowledge management process and organizational performance
3. To find out the moderating role of knowledge-oriented leadership style between knowledge management process and Employee engagement, as well as between employee engagement and organizational performance

## **1.4 Significance of study**

This study will contribute to the existing body of literature on knowledge management and organization performance by providing empirical evidence within the banking sector, specifically focusing on Zemen Bank S.C. It will further enrich the understanding of how knowledge management influences organization performance in real-world organizational settings particularly in Ethiopia. The findings of this study will offer valuable insights for Zemen Bank's stakeholders and other private banks in Ethiopia to review their strategy and policies, to setup functional and formal structure for knowledge management and encourage employee to question the current status and exchange their experience, knowledge, and skill to help them improve the organization performance. Understanding the effect of knowledge management on organization performance can help the bank to designing more effective training programs, recruitment strategies, and leadership assessments tailored to enhance knowledge management competencies among its leaders and employees. Finally, this study will serve as a foundation for future research endeavors in similar organizational contexts or in different industries. It may inspire further investigation into the mechanisms through which knowledge management impacts organizational performance as well as exploring potential interventions for knowledge management process among leaders.

## **1.5 Scope of the study**

This study aims to evaluate the effect of knowledge management processes on organizational performance, with a particular emphasis on the employee engagement role as a mediator and the influence of a knowledge-oriented leadership style as a moderator at Zemen Bank S.C. The research will focus exclusively on the bank's branches and operations within Addis Ababa, including both the head office and other branches across the city. Employees from various departments and organizational levels, encompassing both managerial and non-managerial staff, will be included to ensure a well-rounded representation.

## 1.6 Definition of key terms

**Knowledge Management** – a deliberate approach to ensuring the right knowledge reaches the right individuals at the right moment, enabling them to share and apply information effectively to enhance organizational performance (Grayson & O'Dell, 1998).

**Knowledge Management Process** – a set of organizational capabilities that facilitate the the acquisition, conversion, application and protection of knowledge to enhance organization performance (Gold et al., 2001).

**Knowledge-oriented Leadership** - This leadership model suggests leadership based on knowledge is critical for effectively managing knowledge workers so that they may feel satisfied and productive, which would ultimately lead to enhanced OP (Rehman and Iqbal, 2020).

**Employee Engagement** – is the involvement, enthusiasm, and emotional connection employees have toward their work and workplace. They emphasize that engaged employees are more likely to exhibit higher levels of productivity, customer satisfaction, and organizational loyalty and also link engagement to critical workplace outcomes such as retention, profitability, and overall organizational performance (Harter et al., 2002).

**Organization performance** - Abubakar et al., (2019) defined organizational performance in its basic state and in simple terms it is the realization of organizational objectives. It is important that organizations have objectives that are measurable. Measurable objectives of the organization has been found to be integral to employees' commitment and engagement.

## 1.7 Organization of the paper

This study is organized into several key sections. The introductory part includes the background of the study and details about the company under consideration. The statement of the problem outlines the primary issue being addressed, supported by references to relevant prior research from various sources. The study elaborates on its objectives, divided into two categories: general objectives and specific objectives. Additionally, the study scope is presented. Definitions of

various knowledge management terms are provided, alongside an explanation of the study's significance to organizations, users, and stakeholders.

Chapter two focuses on a literature review that is relevant to the topic under investigation. The third chapter discusses the research design and methodology employed in the study. The fourth section, titled "Results and Discussion," provides an explanation and interpretation of the tables and figures. Additionally, it plays a crucial role in this study, offering an in-depth discussion of the analyzed results. Lastly, the fifth section explores both the theoretical and practical implications of these findings within the context of Zemen bank S.C and outlines the study's limitations and presents recommendations for future research.

# CHAPTER TWO

## 2.1 Literature review

### 2.1.1 Definitions of knowledge

Since classical Greece, philosophers have extensively discovered the concept of knowledge, sparking ongoing debates in epistemology (Alavi & Leidner, 2001). Tzortzaki and Mihiotis (2014) describe knowledge as a fluid and situational construct, while Sveiby (2001) symbolizes it as "the capacity to act." Unlike data, which consists of discrete, unstructured symbols, and information, which facilitates explicit communication, knowledge is a dynamic and highly personal process. A review of the top twenty articles in the knowledge management by Nonaka and Peltokorpi (2006) indicates that scholars generally agree on the definitions of data and information, yet their interpretations of knowledge vary widely. The lack of a universally accepted definition suggests that many fundamental questions remain open to debate (Tzortzaki & Mihiotis, 2014).

According to Davenport and Prusak (1998), knowledge is a combination of contextual information, framed experience, expert's experience and value that results in innovation and original experience. Knowledge is also regarded as organizational culture, skills, reputation, intuition, and codified theory that influences human behavior and thought (Hall & Andriani, 2003). Robert M. Grant (1996), emphasizes the distinction between explicit knowledge which can be articulated and shared, and tacit knowledge which is personal and harder to communicate.

Different perspectives on knowledge shape diverse interpretations of knowledge management. If knowledge is seen as an object or associated with information acquisition, knowledge management should prioritize the establishment and maintenance of knowledge reserves. Conversely, if knowledge is seen as a process, the focus shifts to facilitating the flow of knowledge, in addition to fostering its creation, sharing, and distribution. From a capability standpoint, knowledge management aims to enhance core competitiveness, leverage strategic advantages, and cultivate intellectual capital (Lin, 2019).

Nonaka (1994), a leading authority on this perspective, states that knowledge, unlike information, encompasses elements such as perspectives, intention, beliefs, and commitment. He

directly associates knowledge with corporate values and employee dedication. Davenport and Prusak (1998) define knowledge as a dynamic mix of framed experience, values, contextual information, and expert insight, serving as a foundation for evaluating and integrating new experiences and information. Over the past two decades, various taxonomies have been proposed to refine the concept of knowledge (Tzortzaki & Mihiotis, 2014). Some scholars differentiate between "knowledge-that" and "knowledge-how" (Kogut & Zander, 1996), while others build upon Polanyi's (1967) distinction between tacit and explicit (or articulable) knowledge.

## **2.1.2 Knowledge classification**

### ***2.1.2.1 Explicit knowledge and tacit knowledge***

#### **Explicit knowledge**

Explicit knowledge consists of technical or academic information that is systematically structured and expressed in formal language, such as manuals, mathematical formulas, copyrights, and patents. This type of knowledge—often referred to as “know-what”—is easily communicated and shared through printed materials, digital formats, and other organized methods. Acquiring explicit knowledge typically requires formal education or structured learning. Once documented, explicit knowledge is carefully organized within databases, allowing for fast, high-quality retrieval through efficient information systems. When properly codified, these knowledge assets can be repeatedly applied to solve similar problems or facilitate connections between individuals and useful information. However, establishing and maintaining the infrastructure for sharing explicit knowledge often involves significant financial investments, particularly in information technology (Hansen et al., 1999).

#### **Tacit Knowledge**

Robert J. Sternberg examined tacit knowledge as a vital element of practical intelligence. Tacit knowledge consists of the unspoken, informal understanding that individuals gain through personal experiences and interactions. Since it is not typically taught or explicitly expressed, it plays a crucial role in one's ability to navigate and succeed in various situations. Sternberg highlighted that tacit knowledge is fundamental for adapting to, shaping, and selecting environments—key components of practical intelligence (Sternberg, 1997). Tacit knowledge is highly personal, context-dependent, and difficult to articulate or formalize. It includes intuitions,

insights, and instincts that stem from individual experiences and actions (Liebowitz & Beckman, 1998). Similarly, Michael Polanyi described tacit knowledge as the ability to know more than one can explicitly express—such as performing tasks intuitively, like riding a bicycle (Polanyi, 1967).

#### *2.1.2.2 Personal knowledge and organizational knowledge*

##### **Personal knowledge**

In contrast to the aforementioned outlook where knowledge is viewed as an entity, the second theoretical camp examines knowledge as an organizational asset. This viewpoint highlights the distinction between personal and organizational knowledge (Tzortzaki & Mihiotis, 2014). Individual knowledge is the understanding held by individuals, shaped by their unique experiences, beliefs, and contextual influences (Tsoukas & Vladimirou, 2001). Similarly, Daniel H. Kim (1993) described individual knowledge as the internal knowledge embedded within a person, influenced by their education, personal experiences, and skillset.

##### **Organizational knowledge**

Organizational knowledge refers to the ability of an organization's members to make distinctions in their work based on shared understandings that have evolved over time (Tsoukas & Vladimirou, 2001). While a significant portion of organizational knowledge consists of formal, codified procedures, an equally important but often overlooked aspect involves “soft” information. This type of knowledge is more challenging to manage, as it relies on social interaction rather than simple digitization. To put it more simply, organizational knowledge emerges as employees perform their tasks and is further developed when they are encouraged to create, apply their perceptual skills, and draw from their personal experiences (Tzortzaki & Mihiotis, 2014).

#### **2.1.3 Knowledge management**

##### *2.1.3.1 Definitions of knowledge management*

Scholars have defined knowledge management in various ways. Wiig (1994) describes it as a structured set of processes designed to access and utilize valuable knowledge across different knowledge management activities. De Jarnett (1996) expands on this by outlining its core

components, including knowledge creation, interpretation, dissemination, application, retention, and refinement. Quintas et al. (1997) emphasize the importance of managing knowledge thoughtfully to meet present needs, maximize existing knowledge assets, and explore new opportunities. Von Krogh (1998) defines knowledge management as the practice of identifying and leveraging an organization's collective knowledge to enhance competitiveness. Similarly, Gupta, Iyer, and Aronson (2000) highlight its role in identifying and integrating knowledge resources to maintain a competitive edge while promoting knowledge sharing and flow.

Abubakar et al. (2019) stress that a knowledge management framework must include a fundamental understanding of knowledge-related processes, along with the infrastructure necessary to support organizational functions. Knowledge management is widely recognized as a process composed of multiple activities. Although the literature presents slight variations in how these processes are labeled or quantified, the underlying concepts remain consistent. At its core, knowledge management typically involves four essential processes: knowledge creation, knowledge storage/retrieval, knowledge transfer, and knowledge application (Alavi & Leidner, 2001).

#### **2.1.4 The objectives of knowledge management**

In the modern economy, information plays an increasingly crucial role, with most businesses recognizing that knowledge can provide a competitive advantage. However, many organizations are overwhelmed with information, often exceeding their ability to process it effectively. Knowledge management (KM) aims to resolve this complex challenge (Anthes, 1998). Wiig (1997) describes the primary goal of KM as optimizing returns on its knowledge assets and similarly optimizing knowledge-related efficiency while ensuring their continual renewal for the enterprises. Davenport and Prusak (1998) identify three key goals of KM initiatives: (1) increasing the visibility of knowledge and emphasizing its importance within the organization; (2) cultivating a knowledge-oriented culture by encouraging knowledge sharing rather than hoarding, and promoting proactive knowledge-seeking and contribution; and (3) developing a comprehensive knowledge infrastructure that extends beyond technical systems, incorporating a network of interpersonal connections, as well as the necessary space, time, tools, and motivation to facilitate collaboration and interaction.

### **2.1.5 Knowledge management process**

Knowledge management processes refer to the extent to which an organization generates, disseminates, and applies knowledge resources across its functional divisions. Researchers have explored the capabilities of these processes, identifying key elements such as acquisition, conversion, application, storage, and protection (Zaied et al., 2012). Rather than being a singular, independent, or one-dimensional organizational function, knowledge management involves a complex interplay of interconnected activities that shape and reinforce one another (Lin, 2019). Knowledge management is widely acknowledged as a complex process involving various activities. Although there are minor differences in how these processes are defined across the literature primarily in terms of their number and naming rather than their fundamental ideas, there is a general consensus on four fundamental processes: knowledge creation, storage/retrieval, transfer, and application (Alavi & Leidner, 2001).

Ruggles (1998) categorizes knowledge management processes into four primary areas: generating and accessing, facilitating and representing, embedding and usage, and transferring and measuring. Scholars have identified different features of knowledge management, including capture, transfer, and use (DeLong, 1997). For Leonard categorize this process as it is acquire, collaborate, integrate, and experiment (Leonard, 1995) while for Teece it is create, transfer, assemble, integrate, and exploit (Teece, 1998). Spender focuses on create and transfer use (Spender, 1996) and were as for Ivers it is create and process (Ivers, 1998). By examining these various elements, they can be grouped into four basic essential process: Acquisition, Conversion, Application, and Protection (Gold et al., 2001). This paper adopts Gold et al.'s (2001) framework, defining knowledge management as encompassing these four processes—Acquisition, Conversion, Application, and Protection—whose specific details are outlined below.

#### ***2.1.5.1 Knowledge acquisitions***

Knowledge acquisition encompasses activities related to accessing, collecting, and applying acquired knowledge (Zaied et al., 2012). Holsapple & Singh (2001) define knowledge acquisition as the process of identifying knowledge within an organization's external environment and converting it into a format that can be internalized and/or used for the generation or externalization of knowledge. Additionally, Alavi and Leidner (2001) argue that

that while individuals are responsible for developing new knowledge, organizations play a pivotal role in articulating and amplifying this knowledge.

Mills and Smith (2011) described knowledge acquisition as the process of gathering knowledge from diverse sources, highlighting its crucial role in effective KM - knowledge management and improving OP - organizational performance. They emphasized that knowledge acquisition (KA) involves the identification, collection, and assimilation of knowledge to enhance an organization's abilities and competitive edge. Holsapple and Singh (2001) provided various ways of knowledge acquisition, such as undertaking external surveys, acquiring knowledge-intensive companies, offering external training programs to employees, hiring new employees (thus incorporating their expertise), purchasing data sets, monitoring technological advancements, obtaining patented processes, and gathering intelligence on competitors.

#### *2.1.5.2 Knowledge conversions*

Conversion refers to the process of transforming knowledge gained and acquired from both internal and external sources into practical and usable formats that enhance productivity and streamline business operations (Zaied et al., 2012). According to Choi and Lee (2003), knowledge conversion is the process of changing knowledge from one form to another within an organization. This process is characterized by four modes: socialization, externalization, combination, and internalization. These modes play an important role in the creation, sharing, and application of knowledge, thereby improving organizational performance.

#### *2.1.5.3 Knowledge applications*

Application refers to the practical utilization of knowledge. Through its application, organizations can continuously convert their expertise into tangible products and outcomes (Zaied et al., 2012). Grant (1996b) identifies three key approaches to integrating knowledge for improving organizational capability: issuing directives, establishing organizational routines, and forming self-contained task teams. Directives involve clearly defined rules, standards, procedures, and instructions, transforming specialists' implicit knowledge into explicit, accessible formats to facilitate communication with non-specialists. Organizational routines, on the other hand, create structured patterns for task execution, coordination, interaction protocols, and process specifications. These routines enable individuals to apply and integrate their expertise without needing to explicitly explain it to others. The third approach involves

assembling self-contained task teams when task complexity and uncertainty make directives or organizational routines insufficient. These teams consist of individuals with relevant expertise who collaborate to address challenges effectively. Additionally, technology plays a crucial role in enhancing knowledge application by embedding knowledge into organizational routines (Alavi & Leidner, 2001).

#### *2.1.5.4 Knowledge protections*

Knowledge protection is viewed differently by various scholars. Ahmad et al. (2014) define it as preventing unintended knowledge spillovers and addressing the threat of unauthorized individuals gaining access to sensitive information. Lee et al. (2007) describe it as minimizing knowledge visibility, referring to the extent to which external parties can observe organizational knowledge. Jennex and Durcikova (2013) emphasize its role in preventing knowledge loss, which can occur when employees leave or retire, making their expertise unavailable. Zaid et al., (2012) describe protection as the process of securing knowledge assets, ensuring they remain safe and accessible only to authorized personnel. Lin (2019) highlights its significance in knowledge management by safeguarding valuable knowledge from unauthorized access or misuse.

It is essential to distinguish knowledge protection from the broader concept of knowledge security, which includes both external and internal elements such as confidentiality, integrity, and availability (Ilvonen, 2013). Knowledge security represents the intersection between knowledge management and information security (DeSouza, 2006).

#### **2.1.6 Organizational performance**

Performance is a key focus across multiple management disciplines, attracting significant attention from both academic researchers and practicing managers. While its importance is widely recognized, defining and analyzing it within research contexts remains a major challenge for scholars. The expanding body of literature on the subject has led to difficulties in establishing consensus on essential terminology and definitions, causing frustration among some researchers. As a result, Venkatraman and Ramanujam (1986) performance should be considered in terms of organizational effectiveness, financial performance, and operational performance.

Organizational performance, at its core, reflects the accomplishment of an organization's objectives. Establishing measurable goals is crucial, as it enhances employee engagement and commitment to the organization. Performance can be evaluated through financial benefits, profitability, and organizational learning. The responsibility for driving performance primarily rests with organizational leadership, as they are tasked with making and executing decisions and strategies that will lead to the fulfillment of the organization's goals and objectives (Abubakar et al., 2019).

Performance measurement is one of the most essential management activities, reinforcing the idea that "what you measure is what you achieve." It serves as the foundation for both strategy formulation and future success, ensuring that a company's vision and strategic objectives are effectively communicated to all members of the organization, including Chief Executive Officers. Additionally, it plays a crucial role in enabling efficient internal business processes. While traditional financial reporting provides an objective comparison of a company's outcomes, short-term and retrospective financial indicators are no longer sufficient as the sole measure of success and performance measurement. Today, intangible assets—such as knowledge—have become a more significant determinant of a company's value than tangible financial resources (Lee & Lee, 2007).

Organizational performance indicators typically fall into two main categories: financial (tangible) outcomes and nonfinancial (intangible) outcomes. Tangible indicators are traditionally associated with organizational productivity (Abdelwhab Ali et al., 2019). According to Tubigi et al. (2013), financial performance serves as a critical measure of overall organizational success. Metrics such as return on sales, return on equity, and return on capital help assess performance, allowing organizations to monitor trends and evaluate growth.

Intangible benefits, categorized as nonfinancial factors, play a crucial role in shaping organizational performance. These benefits include innovation, dynamic organizational capabilities, organizational learning, and competitive advantage (Abdelwhab Ali et al., 2019). In this study, I opted to link the knowledge management process (KMP) with five essential indicators of organizational performance. The chosen metrics evaluate market share, growth, success, profitability and the range of product and service innovation relative to other organizations within the respondent's industry.

## **2.2 Empirical literature review and hypothesis development**

### **2.2.1 The relationship between knowledge management process (KMP) and organizational performance (OP)-Direct Effects**

Many studies have been conducted to explore the impact of knowledge management on organizational performance. For instance, Zaim, Muhammed, and Tarim (2019) studied the relationship of knowledge management processes (KMP) and organizational performance (OP). This study tested using data collected from 1068 individuals working in primarily service-based organizations in Turkey. The results indicate that knowledge utilization mediates the relationship between rest of the knowledge management processes and organizational knowledge management performance.

Rawashdeh, Almasarweh, Alhyasat, and Rawashdeh (2021) investigated the relationship between knowledge management quality and organizational performance through the mediating role of organizational learning. A questionnaire survey was used to collect data from a sample of 300 employees working at Royal Jordanian Airlines Company. The results showed that knowledge management has a positive direct impact on both organizational learning and organizational performance. Organizational learning has a positive direct effect on organizational performance.

Li, Ashraf, Shahzad, Bashir, Murad, Syed, and Riaz (2020) analyzed the influence of knowledge management practices on entrepreneurial and organizational performance with the mediating effect of dynamic capabilities and moderating role of opportunity recognition. Data were gathered from 486 entrepreneurs and it found that knowledge management practices have a positive and significant influence on dynamic capabilities, as well as have a significant impact on entrepreneurial and organizational performance. Obeso, M., Hernández-Linares, R., López-Fernández, M. C., & Serrano-Bedia, A. M. (2020) analyses the influence of diverse knowledge management practices on organization performance. The results disclosed flow of knowledge and knowledge generation promote performance of the firm, while study also showed there is no direct association between knowledge storage and performance.

The study by Mazdeh and Hesamamiri (2014) explores the influence of how knowledge management reliability concept on organizational performance. The main aim of the study is to develop a theory of KM reliability and empirically evaluate its impact on organizational

performance by creating a reliability measurement instrument. The study found that reliable KM has a multi-dimensional structure. The outcomes highlighted the importance of Knowledge management dependability in creating a condition that is favorable for an organization's success. In addition, the knowledge management positively affect organizational performance indicators that include financial, process, and internal performance.

In 2018, Laeeque and Babar (2018) examines the relationship among knowledge creation, innovation, and firm performance. The study tries to discover if innovation can act as a mediator between knowledge creation and firm performance. The data was collected from 200 Pakistan companies. The result of the study indicate that knowledge creation has a positive and significant impact on firm performance. In addition, the result found that innovation mediate the relationship between knowledge creation and firm performance. This indicate that knowledge creation leads to improved innovation, which in turn enhances firm performance. The findings recommended that firms should focus on promoting knowledge creation and innovation so that the overall organization performance of the company can improve.

Research on the effects of knowledge management enablers on knowledge management processes and their impact on organizational performance in higher education institutions was studied by Iqbal et al. (2019). The research objective was to investigate the effects of knowledge management enablers on knowledge management processes in research universities and to test the direct relationship between knowledge management processes and organizational performance. Furthermore, in this relationship it examines the mediating role of intellectual capital and innovation. The data was collected from 217 respondents. These are administrative and academic personnels of Pakistan universities. The research found that knowledge management enablers have a substantial impact on knowledge management processes and Knowledge management processes were found to impact organizational performance indirectly and directly through intellectual capital and innovation. Furthermore, intellectual capital and Innovation were identified as mediators in the relationship which is highlighting their importance in improving organizational performance.

The association among innovation, knowledge sharing, and firm performance was researched by (Dogan and Dogan, 2020). This study objective is to examine how knowledge sharing and innovation influence organization performance. The study focuses on organizations that are

available in Turkey. The study found that sharing of knowledge has a positive and significant impact on innovation and organization performance. Organizations that actively share knowledge seems to be more innovative and perform better than the others. Furthermore, innovation mediates the relationship between knowledge sharing and organization performance that indicate knowledge sharing leads to improved innovation, which in turn enhances organizational performance. The suggestion of the find is that organizations should focus on fostering a culture of knowledge sharing and promoting innovation to improve their overall performance.

Balasubramanian et al. (2020) undertook a study on how ownership of public sector organizations affects the implementation of knowledge management processes and their subsequent performance. The research aims to explore the impact of federal, state and semi government ownership on the implementation of knowledge management processes and the overall performance benefits in public sector organizations. The data was collected from 268 responses obtained from UAE country-wide survey. The survey assessed the hypothesized differences in the implementation of knowledge management processes and their relationships with outcomes of the performance. Federal government organizations were found to implement all four knowledge management processes to the greatest extent, followed by state and semi-government organizations. All knowledge management processes had a significant positive impact on operational performance, quality and innovation in the public sector but the strength of this impact varied across different public sector organizations.

Alrubaiee et al. (2015) study how knowledge management processes impact organizational performance with the mediating role of organizational innovation. The researchers collected data from telecommunication and information technology companies' managers in Jordan. The study found a strong and positive effect of knowledge management processes on organizational innovation and organizational performance. Organizational innovation was found to mediate the relationship between knowledge management processes and organizational performance, indicating that knowledge management processes lead to better innovation, which in turn enhances organizational performance. The findings recommended that organizations should emphasis on implementing effective knowledge management processes and encouraging innovation to improve companywide performance.

The research by Ali et al. (2019) examines the elements that influence the practice of knowledge sharing and their impact on organization performance in the oil and gas (OG) industry. The study found significant relationships among the model constructs, indicating that knowledge sharing practices positively impact organizational performance through cost reduction, organizational growth, and intangible benefits. In addition, it also found that there are significant relationships among the model constructs. The study addresses the lack of knowledge sharing practices and the loss of technical knowledge within the oil and gas (OG) industry that is happening due to turnover and retirements. It provides practical evidence that knowledge sharing practices positively impact organizational performance. It also offers insights for practitioners to enhance knowledge sharing within their organizations.

The research by Payal et al. (2019) discovers the dynamic relationships among essential knowledge management constructs and their impact on organizational performance. The study found that knowledge management processes, enablers, and strategy have a significant positive relationship with organizational performance. The findings recommended that organizations should focus on developing and executing effective knowledge management processes, enablers and strategies to improve their overall performance of a company. This research provides valuable insights for practitioners and policymakers in the field of knowledge management.

The study by Saqib et al. (2017) studies how knowledge management practices impact organizational performance in the current economic landscape. The research found that the knowledge management practice has a positive and significant impact on organizational performance. Organizations that successfully manage knowledge have a tendency to perform better. This study also identified creation of knowledge, sharing of knowledge and application of knowledge are some of factors that influence the performance of organization positively. The findings suggest that organizations should focus on implementing robust KM practices to enhance their overall performance. Based on these considerations, the following hypothesis has been formulated:

**H1. Knowledge management Process (KMP) have a significant and positive relationship with organizational performance (OP).**

### **2.2.2 Knowledge management and employee engagement -mediating effect**

Employee engagement can be understood as employees fully committing their hands, head, and heart to their work, demonstrating psychological presence while performing their organizational roles (Alfes et al., 2012). Employee engagement is a multidimensional concept encompassing the investment of emotional, cognitive and physical resources to achieve organizational objectives (Kahn, 1990).

Knowledge of employees has been repeatedly convinced as paramount resources for various organizations to attain competitive advantage. knowledge management provides a supportive work environment to determine the level of engagement of employees. Moreover, knowledge management practices were implied as it could facilitate the level of engagement (Juan et al., 2016).

When knowledge is shared, inexperienced or newly hired employees will have access to knowledge resources and gain job-related know-how, which can lead to higher satisfaction, greater engagement and better service performance (Al-Jabri, 2020). Knowledge management process implementation is an essential activity that organizations must execute to achieve competitive advantage through encouraging employees to contribute toward developing organizational knowledge (Vosloban, 2012).

The dimensions of the knowledge management have a significant and positive impact on the work engagement of employees. Because the engaged employees, who will take maximum advantage of their potential, are the key factor of the competitiveness and performance of the company, it must be able to employ, identify, and, in particular, develop and retain their knowledge employees (Rožman et al., 2019). Employee engagement is positively and significantly affected by the three dimensions of knowledge sharing. It suggesting that trust, identification and norms of reciprocity are among the significant determinants of employee engagement (Juan et al., 2018). Based on the reviewed literature above, the following hypothesis has been formulated.

- **H2. Knowledge management process (KMP) has a significant and positive relationship with Employee engagement (EE).**

### **2.2.3 Employee engagement and organization performance**

Engaged employees tend to be more productive, committed, and effective in their roles, reinforcing the importance of fostering engagement to enhance organizational performance (Corbeanu & Iliescu, 2023). Engaged employees are emotionally attached to their organization and highly involved in their job with a great enthusiasm for the success of their employer, going extra mile beyond the employment contractual agreement. Additionally, there is positive relationship between employee engagement and organizational performance outcomes: employee retention, productivity, profitability, customer loyalty and safety. Employee engagement is stronger predictor of positive organizational performance clearly showing the two-way relationship between employer and employee (Markos & Sridevi, 2010).

Employee engagement plays a crucial role in enhancing performance and productivity within the UK economy. It has a positive impact on absenteeism, employee retention, innovation, customer service, and public sector effectiveness. Furthermore, research shows a robust correlation between increased productivity, profitability, and overall business success with employee engagement (Rayton et al., 2012).

Shaping employee work engagement and job satisfaction positively impact organizational performance, with employee work engagement and job satisfaction served as predictors of performance. Positive effects are observed in employee turnover, safety incidents, absenteeism, retention, performance, productivity, company productivity, quality standards, customer satisfaction, financial performance, profitability and organizational development (Kessler et al., 2020).

An individual's perception of rewards and recognition, distributive justice and procedural justice significantly affected employee engagement. It was also confirmed that employee engagement ultimately improved performance outcomes at the individual and organizational levels (Liu et al., 2022). According to (Pillay, 2018), research the study conducted indicated that employee engagement does influence organizational performance. Secondly, communications, job design, incentives and rewards, leadership, employee involvement, culture and career development were

identified as important factors that drive employee engagement. Based on this discussion, it is believed that:

**H3. Employee engagement (EE) has a significant and positive impact on organizational performance (OP).**

#### **2.2.4 Employee engagement as a mediator**

The study previously highlighted the significance of the knowledge management process (KMP) in organizations, emphasizing its strong relationship with organizational performance. According to Obeso et al. (2020), Organizational learning has been playing as a mediating role in the impact of various KMPs on firm performance. Similarly, Migdadi (2021) found that absorptive capacity acts as a mediator in the link between KMP and organizational performance.

Additionally, Iqbal et al. (2018) examined how intellectual capital (IC) and innovation mediate the relationship between KM processes and university performance. However, a comprehensive review of the literature revealed a research gap, as no study has explored the role of employee engagement as a mediating factor in the relationship between KMP and organizational performance. Employee engagement is closely linked to organizational success. Notably, the analysis demonstrated that employee engagement serves as a mediator between knowledge management, core competencies, and organizational success (Alsheikh et al., 2023).

However, no study has yet examined the indirect pathway through which the knowledge management process influences organizational success via employee engagement. This stands in contrast to the extensively documented direct impact of employee engagement on organizational performance found in existing literature. Given the available body of research, the following exploratory mediation hypothesis was formulated.

**H4: Employee engagement significantly mediates the relationship between knowledge management process (KMP) and organizational performance (OP).**

## **2.2.5 Moderating effect**

### ***2.2.5.1 Knowledge-oriented leadership as a moderator***

Effectively handling knowledge is crucial for any organization to survive and prosper in the turbulent environments of the modern era. Leadership is a central element for knowledge creation, acquisition, utilization and integration processes (Donate & Sánchez de Pablo, 2015).

In knowledge organizations leadership is particularly important when knowledge workers distinguish leaders as actively engaging and committing to supporting knowledge and learning activities (DeTienne et al., 2004). Furthermore, knowledge leaders should recognize and reward such attempts by their colleagues (Ribiere & Sitar, 2003), instead of promoting negative behaviors that jeopardize knowledge sharing, transfer, and application (Lakshman, 2009). Leaders adopt different styles of leadership that should fit best to their organizations. Leadership style plays a critical role in management of knowledge and that leadership style is positively related with knowledge management (Andrej et al., 2023).

The term knowledge-oriented leadership is derivative from transformational and transactional leadership and was explained by Donate and de Pablo (2015). This leadership model suggests leadership based on knowledge is critical for effectively managing knowledge workers so that they may feel satisfied and productive, which would ultimately lead to enhanced OP (Rehman & Iqbal, 2020)

Expressing it in a different word, leaders of a company must show the way knowledge workers to learn and use knowledge, in that way achieving the knowledge goals of the firm as a whole. In this regard, knowledge-oriented leaders should champion the development of KM channels and initiatives for both knowledge exploration and knowledge exploitation. Moreover, they should promote best KM practice in the company, essentially through an effective KM leadership style, motivation, communication, and staffing (Donate & Sánchez de Pablo, 2015).

As the above discussion explains, knowledge-oriented leadership in KM development combines aspects of transformative and transactional leadership styles, in addition to including motivation and communicational elements. The main goals for a knowledge-oriented manager are to act as a role model, encourage learning by challenging workers and stimulating them intellectually, institutionalize learning through the provision of incentives and training, foster a pro-learning

culture that tolerates mistakes and encourages cross-functional and-discipline engagement, and develop knowledge transfer, storage and application mechanisms (Williams & Sullivan, 2011).As many researchers confirmed relations between knowledge-oriented leadership and knowledge management, we developed our next hypotheses:

- **H5a. knowledge-oriented leadership (KOL) moderates the relationship between knowledge management process (KMP) and Employee engagement (EE) such that the relationship will be stronger when knowledge-oriented leadership is effective.**

Popli and Rizvi (2016) study reveal significant relationships between leadership styles and employee engagement. A moderating influence of age and education was also found in the relationship between leadership styles and employee engagement. The study highlights the importance and the significant role of employee engagement and the role leadership styles play in developing a culture of engagement. Appropriate leadership styles and human resource (HR) practices that drive engagement need to be fostered in organizations to drive performance.

The way leaders view and are viewed by followers, the degree they influence followers' perceptions, and the quality of the work environment they cultivate can all impact the effectiveness of leadership and enhancement of employee engagement (Carasco-Saul et al., 2015). Park et al. (2022) found that transformational leadership had a significant impact on employee affective organizational commitment and job performance through employee engagement as a mediator.

It is clear that leaders of organization impact efficiency and effectiveness through their followers. In addition, they can have a great impact on employees' engagement within their organization. Nevertheless, transactional leadership style limits the leader to use only reward-based behaviours in order to achieve higher performance from employees that have short-term effects only (Batista-Taran et al., 2013).An increasing behaviour of leader who commit to staying with their company, working toward organizations target success, focusing on achieving goals, and also working toward the success of organizational change, appears to influence the value of organizational performance as well as the engagement levels of employees (Nasomboon, 2014). On the basis of the above discussion, this study has developed the subsequent hypothesis:

- **H5b. knowledge-oriented leadership (KOL) moderates the relationship between Employee engagement (EE) and organizational performance (OP), such that the relationship will be stronger when knowledge-oriented leadership (KOL) is effective.**

### **2.3 Research gaps**

According to the above theoretical literature and empirical review, the researcher concluded that the influence of knowledge management is dynamic for organizational performance. Although there have been some studies examining relationships between knowledge management and organizational performance, there remains a gap in addressing our specific focus: the effect of the knowledge management process on organizational performance, considering the moderated mediation model of knowledge-oriented leadership style and employee engagement. Furthermore, unlike the extensive research conducted in various parts of the world, there is a lack of comprehensive studies on the relationship between knowledge management and organizational performance within the context of Ethiopia. In addition, while some research has examined the role of knowledge-oriented leadership style in knowledge management, there is a gap in understanding how knowledge-oriented leadership style interact with knowledge management processes to influence organizational performance. The role of employee engagement as a mediator in the relationship between knowledge management processes and organizational performance is underexplored. This study aims to fill this gap by examining the effect of the knowledge management process on organizational performance, with a particular emphasis on the moderated mediation model of knowledge-oriented leadership style and employee engagement.

## 2.4 Conceptual framework

For this research the conceptual framework below will be used. Figure 1 illustrates a research framework that outlines a conceptual model for analyzing the effect of knowledge management on organizational performance. The independent variables include acquisition, conversion, application, and protection, while the dependent variable is organizational performance. Conceptual framework adopts with modification from AlMulhim, A.F. (2023).

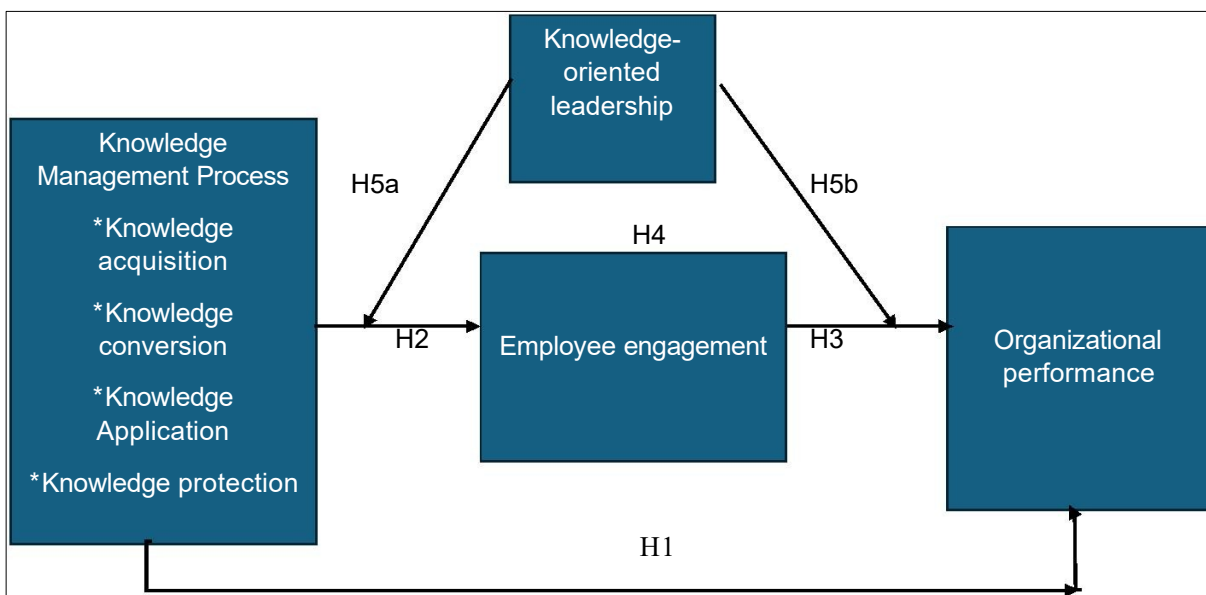


Figure 1: Conceptual Framework. Source (AlMulhim, A.F., 2023)

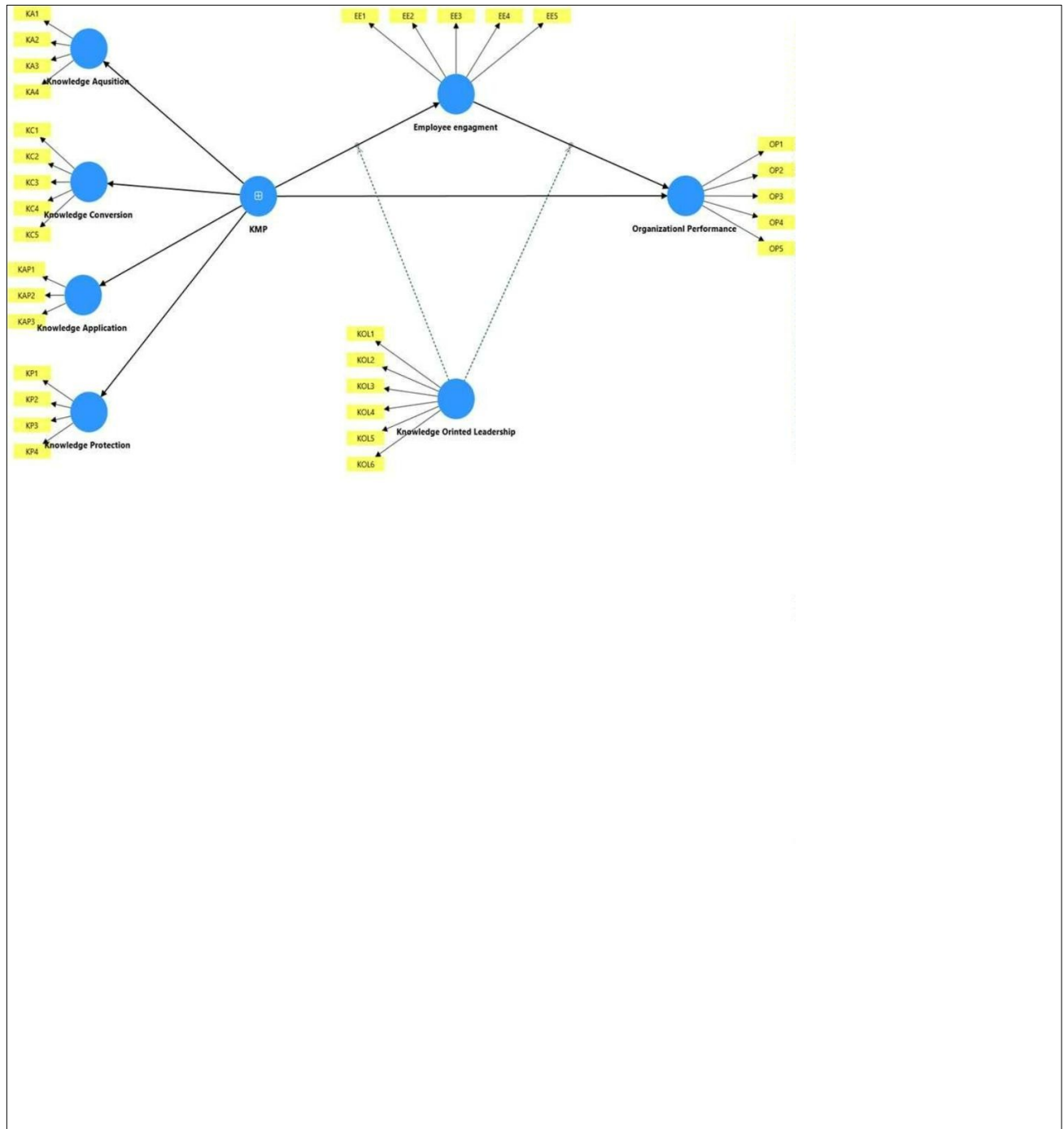


Figure 2: Study model

# CHAPTER THREE

## RESEARCH METHODOLOGY

### 3.1 Introduction

The research methodology is discussed in this chapter by doing that it offers a structured framework which ensure a comprehensive and insightful investigation. The methodology is designed to support coherence and maintain methodological consistency throughout the study. It starts by looking at main aspects such as research approach, research design, and sampling procedures. It then continues to address the sources of data, methods of collection, and techniques for data analysis.

### 3.2 Research approach

A quantitative research approach is followed to achieve the study proposed objectives. A quantitative approach heavily depends on postpositivist principles that will help to develop knowledge, focusing on cause-and-effect relationships, simplifying concepts into explicit variables, formulating hypotheses, and designing structured research questions (Creswell, 2003). This method enables the testing of hypotheses, statistical analysis, and the drawing of conclusions from numerical data (J.F. et al.,2020). Therefore, quantitative research used in the investigation of the connection among the knowledge management process (KMP) and organizational performance (OP) through measurable data/information.

### 3.3 Research design

The plan or blueprint that outlines how a research study will be conducted, including the overall strategy, methods, and procedures used to gather and analyse data to address research questions or hypotheses is called research design (Trochim & Donnelly, 2008). Various types of research designs are commonly employed in business research to list few: descriptive, experimental, exploratory, and explanatory are some of the research design types employed for business research. For Trochim & Donnelly (2008) and Hair et al. (2014) Explanatory research is that seeks to understand the reasons behind observed relationships and phenomena, that focuses on detecting causal relationships and providing explanations for observed patterns or trends.

This study used explanatory research design implemented through a survey questionnaire. By using explanatory methods and structural equation modelling, researchers can uncover knowledge management processes that most strongly influence organizational performance. This will provide valuable insights for improving organizational performance strategies. The selection of an explanatory research design is primarily driven by the existing conditions within the knowledge management discipline. Since there are no variables to manipulate, this approach ensures that the findings can be applied to a broader population.

A cross-sectional survey design is adopted for this study to examine the relationship between the knowledge management process and organizational performance at a specific point in time. Moreover, a deductive approach that starting with established theories and hypotheses to guide data collection and analysis was used in the research as it enables the testing of existing theories and concepts by providing insights into the effect of the knowledge management process on organizational performance.

### **3.4 Target population**

A population is the entire group of individuals, events, or objects that a scholar is concerned in studying (Saunders et al., 2007). This group serves as the source from which a sample is drawn for research purposes. Customers of a business, residents of a specific area and employees in an organization can be a population depending on the context of the research. Similarly, for Ngechu (2004) a population is the entire group of individuals, objects, or events that share common characteristics and are of interest to an investigator. For this study the target population consisted of all staff member of Zemen Bank S.C working all over the country. According to Zemen Bank's Annual Report (June 14, 2024), the bank's total staff count had reached 1,831.

### **3.5 Study population**

The study population refers to a set of cases that is limited, determined, and accessible, forming the foundation for selecting a sample (Arias-Gómez et al., 2016). It is from the study population that researchers draw the sample. The study population for this research consists of all 760 employees currently working in Addis Ababa at Zemen Bank S.C. These employees are distributed across the head office and 69 branches within the city. The primary reason for

selecting staff based in Addis Ababa is to facilitate a smooth research process by ensuring accessibility, cost efficiency, and ease of management. As a result, the bank's 760 employees in Addis Ababa constitute the study population.

### **3.6 Sample size determination**

Catherine Dawson (2002), in *Practical Research Methods*, defines a sample as a subset of a population selected for a research study. The sample should be representative of the larger population to ensure that findings can be generalized. Dawson emphasizes the importance of sampling techniques, such as random sampling, stratified sampling, and convenience sampling, to enhance the validity and reliability of research conclusions.

The researcher employed Yamane's formula (Yamane, 1967) to determine a representative sample, using it as a guide to select the appropriate sample size for the proposed study.

$$n = N / (1 + N * e^2)$$

Where:

- n = required sample size
- N = total population size
- e = margin of error (commonly 0.05 or 5%) for 95% confidence level

$n = 760 / (1 + 760(0.05)^2) = 263$ , therefore, 263 is desired sample for this study

The chosen sample size of 263 staff members is adequate for drawing meaningful conclusions while ensuring that both time and costs remain manageable. Given the specified sample size and population, the present study carefully selected this sample to balance accuracy and efficiency.

### **3.7 Data sources.**

This study utilizes both primary sources of data. Information gathered at firsthand which makes it original in nature is primary data (Kothari, 2004). In this case, primary data was collected from head office and branch employees at Zemen Bank S.C through survey questionnaires. Many articles, that are published on well-known journals, on knowledge management and organization performance used as sources for this study.

### **3.8 Data collection instrument**

A questionnaire has been used as the primary tool for collecting primary data in this study. Questionnaire is a research tool/instrument comprising a set of queries designed to obtain information from respondents (Kombo et al., 2002). It is widely used in studies and research to gather data on characteristics, opinions, and behaviors. Closed-ended questions were employed in this study as they are well-suited for surveys like this and tend to yield higher response rates. Additionally, responses from closed-ended questions are easier to code and analyze which makes them particularly valuable for establishing the statistical significance of survey results.

A standardized questionnaire is used in the research which is modified from previous research on knowledge management and organizational performance. More specifically, it is adapted from Liu et al. (2022), Naqshbandi & Jasimuddin (2018) and Payal et al. (2019). The questioners were distributed by email to clerical staff, first-line managers middle managers, and top managers of Zemen bank S.C to complete it via Google forms. To ensure that responses were obtained from the sampling frame and that all participants provided informed consent, the researcher employed random sampling.

### **3.9 Pilot study**

Before distributing the questionnaires and conducting formal data collection, the researcher ensured the questionnaire's effectiveness through a preliminary test involving 25 participants from the head office staff across various departments, as well as branch managers. After confirming its validity, 263 questionnaires were distributed to participants, who responded via Google Forms. Personal visits conducted in April 25 for a brief introduction and questionnaire were sent through email to key organizational member. These members disseminated 263 questionnaires to individual departments and managers of branches while the department heads and managers facilitated circulation through the bank's Outlook email and Telegram addresses to the staff.

### **3.10 Data analysis**

Smart PLS 4.4, a statistical tool, was used in this study to analyze the data using partial least square equation modeling (PLS-SEM). The justification for picking this analysis approach is

based on the data/sample attributes and the moderation and mediation analysis. Likewise, this methodology has become increasingly popular in research on marketing, human resource management, and related domains (Iqbal et al., 2021). Partial least squares structural equation modeling, a component-based technique for predicting intricate cause-effect linkages in route models with latent variables, is recommended in a different study by (Karnadi, 2023a) In contrast to covariance-based techniques (CB-SEM), it is a second-generation multivariate data analysis methodology within the structural equation modeling family.

PLS-SEM gives numerous advantages over other approaches (Hair et al., 2019a). It's first advantage is that it can handle complex models with many constructs, indicators, and relationships. Secondly it can also work with skewed data (no distribution assumptions) and depending on the model complexity and effect sizes, it can accommodate both small and large sample sizes. Thirdly it may make use of primary or secondary data.

Moreover, SmartPLS is a software program used to carry out partial least squares structural equation modelling (PLS-SEM). It is user-friendly and intuitive graphical user interface. SmartPLS integrates cutting-edge techniques that includes PLS-POS, IPMA, and Complex bootstrapping processes with a variety of applications that includes data exploration, theory testing, prediction, and measurement model assessment (Karnadi, 2023a). Based on these features of the PLS-SEM (Karnadi, 2023a) proposed utilizing PLS-SEM to forecast the impacts of dependent variables on independent variables. With the reason provide above PLS-SEM is used in this study to do robust analysis.

### **3.10.1 Measurement**

As shown in figure 3 this research establishes a research model to achieve the study objective. Items modified from Payal et al. (2019) were used to measure the variables of knowledge management process and organizational performance while items related to knowledge-oriented leadership were sourced from Naqshbandi and Jasimuddin (2018). Similarly, for items related to employee engagement were drawn from Liu et al. (2022).

This study adapted variables to fit the research context and assessed them using various items sourced from existing literature works. To evaluate the knowledge management process (KMP) items from Payal et al. (2019) were employed, which encompasses four primary categories i.e.

knowledge Acquisition, knowledge conversion, knowledge application, and knowledge protection. To assess employee engagement five items from Liu et al. (2022) were used and to measure knowledge-oriented leadership (KOL), six items from Naqshbandi and Jasimuddin (2018) were selected. Lastly, organizational performance was evaluated using five items related to market share, innovation, and financial performance Payal et al. (2019).

The questionnaire was structured into two sections: the first part gathered demographic data, while the second part covered variables relevant to this study. A Likert scale which has seven points was used in this survey. All items will be measured on a 1 to 7 scale (1= strongly disagree to 7 = strongly agree). The data has been collected while following ethical rules.

### **3.10.2 Reliability and validity of the instruments**

Since this was a quantitative study, validity and reliability of the survey /questionnaire's items were assessed by looking at AVE-average variance extracted (AVE), CR - composite reliability, Cronbach's alpha, and factor loading. The questionnaire consisted of two sections: the first covered demographic information, while the second focused on data related to each variable examined in this paper.

To validate the structural and measurement models, we applied the Fornell-Larcker Criterion, convergent validity, discriminant validity, the HTMT matrix, R-squared values (regression analysis), and F-squared values. The measurement model representing the outer relationship among observable and unobserved variables was assessed for convergent validity using factor loading, convergent validity, Cronbach's alpha, AVE, and CR. Though, the Fornel-Larcker Criterion, the HTMT matrix, the average variance retrieved, and the cross-loading are used to validate the discriminant validity. As a result, our changed outer model (measurement model) is validated concurrently with the items and constructions.

The structural model, in contrast, represents an internal framework that incorporates independent, dependent, and indirect variables. Its validation relies on R-squared values (regression analysis), F-squared values besides proposed direct and indirect linkages. Consequently, Smart-PLS 4.4 is employed to validate the fully redesigned study model, integrating both measurement and structural models. Furthermore, the bootstrapping method is

utilized to assess the mediation model, with Smart-PLS 4.4 performing the bootstrapping technique by defaulting.

### **3.10.3 Data treatment**

A critical stage in the research is the evaluation of hypotheses, as it helps the researcher to see whether the results support the initial theories. Various approaches might be used to assess hypotheses with each of them having distinct advantages and limitations. In this research, several methods were used to evaluate our hypotheses. We relied on Cronbach's alpha coefficient to assess and measures internal consistency by evaluating how closely the items within a scale correspond to the same concept. Additionally, to assess the reliability of our constructs we examined composite reliability. This metric indicates how consistently a scale's items evaluate the same construct. For both measurement a value of 0.7 considered acceptable and satisfactory.

Convergent validity evaluates the proportion of a construct's variance explained by its indicators which was examined using the average variance extracted (AVE). A construct is considered valid if its AVE exceeds 0.5. Discriminant validity was assessed by comparing the correlations among constructs with the square roots of their respective AVEs. To have a discriminant validity each AVE square root must be higher than the correlations between constructs. Moreover, Harman's one-factor test was utilized to identify potential common method bias, which occurs when a study's results are influenced by the data collection method.

To evaluate the effectiveness of our statistical model in predicting an outcome Pearson's determination of coefficient of ( $R^2$ ) was used, as it designates the share of variance in the dependent variable accounted for by the independent variables. If the value of  $R^2$  is higher it suggests a better fit between the model and the observed data. Furthermore, the effect size ( $F^2$ ) was analyzed to quantify the impact of independent variables on the dependent variable, where a larger  $F^2$  value signifies a greater influence. To examine the mediating effect, the Variance Accounted For (VAF) metric was used to measure how much variability in the exogenous variable can be explained by the mediating variable. A high VAF suggests a substantial mediating effect.

The outcomes of all hypothesis assessment confirmed the validity of our theories, demonstrating that our model's constructs were reliable, consistent, and one-dimensional. Additionally, the mediating effect was significant, and the model displayed a strong fit with the data.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1. Demographic characteristics of respondents

According to Table 1, a total of 203 employees from Zemen Bank S.C. including top managers, middle managers, first-line managers, and clerical staff participated in the survey. The participant profile exhibited that 64% of the participants were male (130 employees) and female were 36% (73 employees); regarding ages, 37% were 30 years old or younger (76 employees), 48% were 31–30 years old (98 employees), and 15% were 41+ years old (29 employees). Looking at their education levels, 36% had a bachelor’s degree (73 employees), and 64% held a master’s degree and above (130 employees).

*Table 1: Personal characteristics of participants*

Demographic Variable	Groups	Frequency	Percent
Gender	Male	130	64%
	Female	73	36%
Educational Level	Bachelors	73	36%
	Masters and above	130	64%
Age	20-30 year,	76	37%
	31-40 years,	98	48%
	More than 41	29	15%
Banking Experience	Less than 1 year	3	1%
	1 - 5 years	48	24%
	6 -10 years	73	36%
	11-15 years,	58	29%
	More than 15years	21	10%
Position in the Bank	Clerical Staff	76	38%
	First-line Manager	75	37%
	Middel Manager	49	24%
	Top Manager	3	1%

*Source: Own Survey data (2025)*

## 4.2. Descriptive statistics

The results of the descriptive statistics are presented in a Table 2 below. The data distribution appears relatively symmetric overall, though some skewness is present. Most variables have standard deviation values varies between 0.99 and 1.45, demonstrating some variability in responses, though not excessively high, indicating moderate variability. A lower SD suggests responses are closely clustered around the mean, while a higher SD implies greater dispersion. The majority of variables exhibit negative skewness, meaning the data is slightly skewed to the left, with responses tending toward higher values (closer to 6 or 7) and fewer occurrences at the lower end. Excess kurtosis values fluctuate, with some items exhibiting relatively high kurtosis (e.g., OP1 at 5.071), signalling a peaked distribution with concentrated responses around certain values. Conversely, lower kurtosis values indicate more spread-out responses. Additionally, the p-values listed are all zero, indicating statistical significance in the tests performed, which confirms reliability and validity in capturing meaningful patterns.

Table 2: Descriptive Statistics

HOC	LOC	Items	Mean	Median	Min	Max	SD	Excess kurtosis	Skewness	N	P value
KMP	EE	EE1	5.719	6	1	7	1.238	4.042	-1.744	203	0
		EE2	5.251	5	1	7	1.408	1.159	-1.074	203	0
		EE3	5.852	6	1	7	1.243	2.195	-1.299	203	0
		EE4	5.586	6	1	7	1.27	0.996	-0.973	203	0
		EE5	5.369	6	1	7	1.413	0.754	-0.982	203	0
	KA	KA1	5.887	6	1	7	1.023	2.833	-1.273	203	0
		KA2	5.502	6	1	7	1.111	0.565	-0.744	203	0
		KA3	5.823	6	1	7	1.161	2.811	-1.419	203	0
		KA4	5.675	6	2	7	1.129	0.767	-0.97	203	0
	KC	KC1	5.562	6	1	7	1.286	0.827	-1.026	203	0
		KC2	5.409	6	1	7	1.265	1.211	-1.057	203	0
		KC3	5.571	6	1	7	1.174	1.303	-1.029	203	0
		KC4	5.222	6	1	7	1.304	0.526	-0.915	203	0
		KC5	5.783	6	1	7	1.12	1.912	-1.197	203	0
	KAP	KAP1	5.773	6	2	7	1.045	1.131	-0.892	203	0
		KAP2	5.65	6	1	7	1.175	2.484	-1.293	203	0
		KAP3	5.478	6	1	7	1.241	1.763	-1.172	203	0
	KP	KP1	5.567	6	1	7	1.29	2.639	-1.41	203	0
		KP2	5.542	6	1	7	1.329	1.396	-1.144	203	0
		KP3	5.709	6	2	7	1.182	-0.247	-0.734	203	0
		KP4	5.709	6	2	7	1.14	0.247	-0.877	203	0
	KOL	KOL1	5.783	6	1	7	1.256	2.878	-1.535	203	0
		KOL2	5.473	6	1	7	1.209	0.797	-0.889	203	0
		KOL3	5.35	6	1	7	1.26	1.658	-1.161	203	0
		KOL4	5.34	6	1	7	1.32	1.888	-1.204	203	0
		KOL5	5.433	6	1	7	1.207	1.555	-1.07	203	0
		KOL6	5.158	5	1	7	1.447	1.057	-1.094	203	0
	OP	OP1	6.089	6	1	7	1.119	5.071	-1.917	203	0
		OP2	5.32	6	1	7	1.365	0.936	-0.993	203	0
		OP3	6.089	6	1	7	1.097	4.684	-1.823	203	0
OP4		6.207	6	1	7	0.991	4.509	-1.712	203	0	
OP5		5.744	6	1	7	1.401	0.887	-1.201	203	0	

Note: HOC=Higer order construct, LOC=Lower order construct, SD = Standard deviation, P = Probability (P) value, KMP= Knowledge management processes, KA=knowledge acquisition, KC=knowledge conversion, KAP=knowledge application, KP=knowledge protection, EE= Employee engagement, KOL= knowledge-oriented leadership, OP= organizational performance

### 4.3 Measurement model assessment

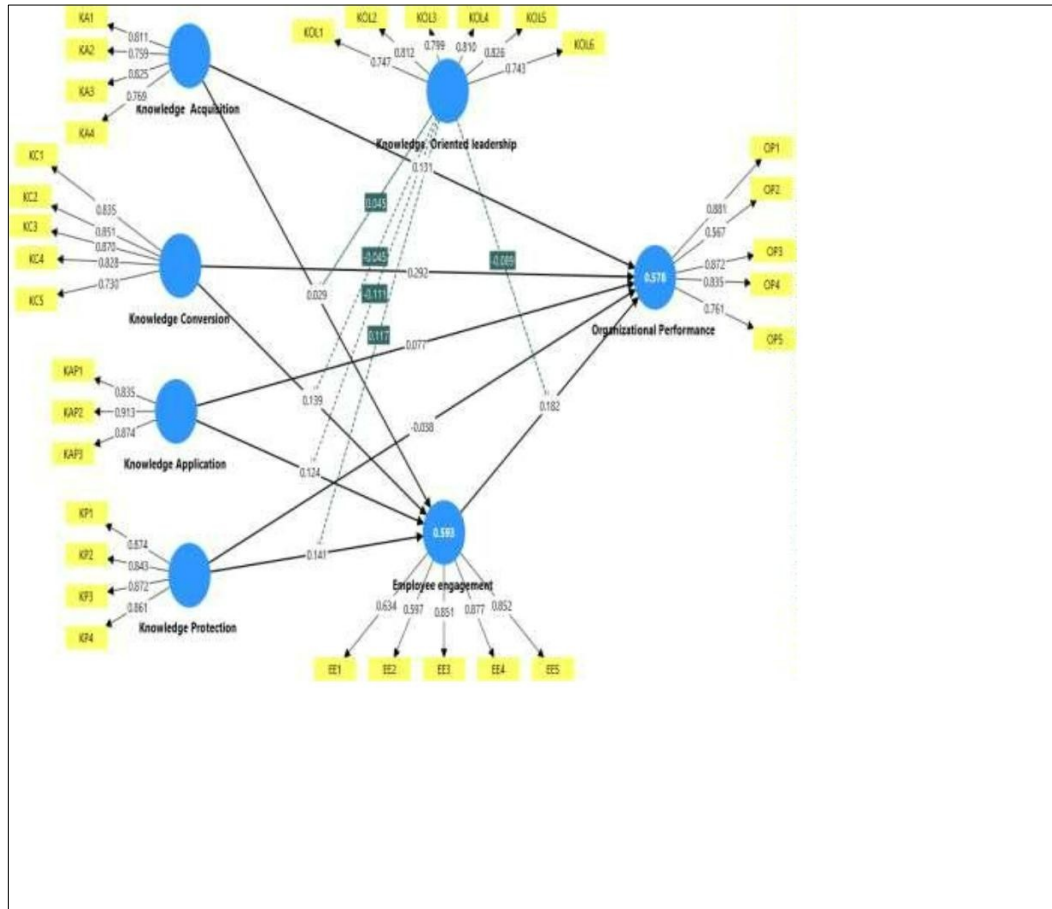


Figure 3: Measurement model for lower order construct (LOC)

#### 4.3.1 First Level: Reflective lower order construct

The measurement model assessment aims to confirm the validity and reliability of the measurements used in the study. Key components of this assessment include content reliability (consistency reliability and Cronbach alpha) and validity (discriminant validity, convergent validity) of individual items. The outer loadings are also used to evaluate the reliability of individual constructs. (Hair et al., 2020).

Individual indicators with loadings above 0.70 suggest strong reliability. Loadings that range amongst 0.40 and 0.70 may be removed if their elimination enhances composite reliability beyond the recommended threshold. Though, it is essential to consider the impact of removing indicators on validity. The weaker indicators might be retained if they contribute to content

validity. Generally, reflective scales should eliminate indicators with loadings below 0.40 (Hair et al., 2019b).

When assessing the validity of reflective measurement models Convergent and discriminant validity are essential considerations. Convergent validity can be confirmed using the average variance extracted (AVE), where a value of 0.50 or higher signifies that the dependent variable accounts for more than half of the variance in its indicators. On the other hand, the Fornell-Larcker criterion can be used to validate discriminant validity in addition to cross-loadings. For the Fornell-Larcker criterion, a construct that is latent should demonstrate greater variance with its designated indicators than with any other unobserved variables in the structural model. Statistically, the AVE- average variance extracted- value of any latent variable must exceed the squared correlation between it and any other construct. Additionally, according to the second requirement for discriminant validity to be maintained, an indicator's factor loading with its respective latent concept must be higher than its loadings with all other constructs and this is called the cross-loadings.

#### ***4.3.1.1 Factor loadings***

Factor Loading is an essential metric within a correlation matrix which provides valuable insights into the relationship between each item and its corresponding principal component. A tabular format presentation for Factor loading will enhance transparency is enhanced, facilitating and give a clearer understanding which enables stakeholders to effectively assess the validity and reliability of the study's findings. A strong correlation is indicated by higher absolute Factor Loading values demonstrating that an item accurately reflects the underlying factor, whereas values closer to zero suggest weaker associations, though they do not necessarily weaken the item's relevance.

In this study, as indicated in table 3 below the analysis revealed that all items—except one—exceeded the recommended Factor Loading threshold of 0.7, confirming the robustness of the dataset. When an item falls below this threshold, additional statistical measures such as Composite Reliability (CR) and Average Variance Extracted (AVE) must be examined. In our evaluation, both CR and AVE exceeded the required threshold of 0.7 for CR and 0.5 for AVE and, ensuring that no items needed to be removed. This careful examination reinforces the

consistency of the research methodology and strengthens the credibility of the study's findings, instilling confidence in the conclusions drawn.

Table 3 Outer loading- Matrix (LOCs) /Factor loading

	EE	KA	KOL	KAP	KC	KP	OP
EE1	0.679						
EE2	0.657						
EE3	0.833						
EE4	0.852						
EE5	0.823						
KA1		0.808					
KA2		0.763					
KA3		0.820					
KA4		0.773					
KAP1				0.837			
KAP2				0.908			
KAP3				0.878			
KC1					0.839		
KC2					0.849		
KC3					0.864		
KC4					0.830		
KC5					0.732		

KOL1			0.747				
KOL2			0.820				
KOL3			0.810				
KOL4			0.814				
KOL5			0.822				
KOL6			0.724				
KP1						0.874	
KP2						0.841	
KP3						0.875	
KP4						0.861	
OP1							0.886
OP2							0.580
OP3							0.880
OP4							0.853
OP5							0.721

*Note: KA=knowledge acquisition, KC=knowledge conversion, KAP=knowledge application, KP=knowledge protection, EE= Employee engagement, KOL= knowledge-oriented leadership, OP= organizational performance*

#### *4.3.1.2 Reliability analysis (Cronbach's alpha and Composite Reliability) - lower order construct*

Composite reliability (CR) is commonly used to evaluate the internal reliability of a construct. Traditionally, social science research has relied on "Cronbach's alpha" for measuring internal consistency reliability. However, in PLS-SEM, Cronbach's alpha tends to be conservative,

leading prior research to recommend "Composite Reliability" as an alternative metric (Hair et al., 2020). According to Karnadi (2023b), a composite reliability (CR) score exceeding 0.7 is considered satisfactory. A composite reliability (CR) value of above 0.7 signifies strong internal consistency across items, confirming that each of the construct assesses distinct concepts. Likewise, a values greater than 0.7 for Cronbach's alpha influence the structural integrity of the model. Table 4 below indicate all reflective latent variables exhibit composite reliability scores above 0.7 suggesting and demonstrating a high degree of internal reliability.

*Table 4: Constructs Reliability for lower order construct (LOC)*

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Employee engagement	0.829	0.841	0.880
Knowledge Acquisition	0.801	0.802	0.870
Knowledge Oriented leadership	0.879	0.882	0.909
Knowledge Application	0.846	0.848	0.907
Knowledge Conversion	0.881	0.885	0.914
Knowledge Protection	0.885	0.886	0.921
Organizational Performance	0.845	0.869	0.892

*4.3.1.3 Validity analysis - convergent validity for lower order construct (LOC)*

To assesses the strength of relationships among different measures of the same construct convergent validity is an important validity test and it suggests that all indicators measuring a given concept are correlated well and reflect mutual variables as per relevant theoretical foundations. We use average variance extracted (AVE) to determine convergent validity. The AVE for each latent variable is analysed to confirm convergent validity. For Fornell and Larcker

(1981) AVE value above 0.50 is considered appropriate. Table 5 below confirms that all AVE values are above 0.50 which validates convergent validity criteria of the measurement model.

*Table 5: Convergent Validity for lower order construct (LOC)*

	Average variance extracted (AVE)
Employee engagement	0.598
Knowledge Acquisition	0.626
Knowledge Oriented leadership	0.625
Knowledge Application	0.765
Knowledge Conversion	0.679
Knowledge Protection	0.744
Organizational Performance	0.629

#### *4.3.1.4 Validity analysis - discriminant validity for lower order construct (LOC)*

Discriminant validity is a measure of how different notions differ from one another (Cable & DeRue, 2002). There are three criteria that has been used to evaluate the discriminate validity. These are: Cross-loading, the Heterotrait-Monotrait (HTMT) ratio, and the Fornell-Larcker criterion.

#### *4.3.1.5 Validity analysis - the fornell-larcker criterion*

Finding each latent variable's Average Variance Extracted (AVE) square root is necessary to prove discriminant validity under Fornell-Larcker Criterion (Fornell & Larcker, 1981). Discriminant validity is demonstrated if the AVE values exceed the correlation values between the latent variables. Additionally, the Fornell-Larcker criterion calculates the difference between a construct's squared correlations with its indicators and other constructs. The construct is different from other constructions if there is a significant difference.

Each variable's square root of the AVE must be higher than the correlation between that construct and any other construct, according to the Fornell-Larcker criterion. Each factor's discriminant validity is demonstrated by the results in Table 6 (highlighted bold values), which compare a latent variable with the square root of AVE the variance of each variable. Crucially, each factor's square root of the AVE is higher than the correlation between the components, demonstrating how unique they are from other concepts. Discriminant validity has so been demonstrating (Hair et al., 2020).

For example, the square root of the variable KAP, which has an AVE value of 0.765 (as indicated in Table 3), is 0.874. This value of .874 is higher than KAP correlation values (0.662 and 0.703) in the row and KAP (0.844, 0.692, 0.682, and 0.653) in the column. Based on the structure of table 5 Employee Engagement, Knowledge Acquisition, Knowledge Application, Knowledge Conversion, Knowledge-Oriented Leadership, Knowledge Protection, and Organizational Performance all have their square root of AVE values exceeding the corresponding correlation values and for all constructs, discriminant validity is confirmed—indicating that each construct is distinct and not excessively related to others. These results demonstrate the successful establishment of discriminant validity.

Table 6: Discriminant validity for lower order construct - Fornell-Larcker Criterion

	EE	KA	KOL	KAP	KC	KP	OP
Employee Engagement	0.771						
Knowledge Acquisition	0.561	0.791					
Knowledge Oriented leadership	0.721	0.606	0.79				
Knowledge Application	0.663	0.700	0.682	0.874			
Knowledge Conversion	0.662	0.783	0.696	0.842	0.824		
Knowledge Protection	0.625	0.541	0.684	0.692	0.674	0.863	
Organizational Performance	0.631	0.615	0.632	0.654	0.694	0.530	0.792

Note: KA=knowledge acquisition, KC=knowledge conversion, KAP=knowledge application, KP=knowledge protection, EE= Employee engagement, KOL= knowledge-oriented leadership, OP= organizational performance

#### 4.3.1.6 Validity analysis - Discriminant validity for LOC- Bootstrapped HTMT confidence interval bias corrected

The HTMT ratio via bootstrapping procedure is an advanced method for assessing discriminant validity by calculating confidence intervals for the HTMT values. This helps determine whether constructs are truly distinct - If the upper bound of the 95% confidence interval is below 1.00, discriminant validity is supported. If the confidence interval includes or exceeds 1.00, discriminant validity may be problematic. The table 7 below indicates that if the upper bound of the 95% confidence interval is below 1.00 and constructs are truly distinct.

Table 7: HTM ratio (via bootstrapping procedure)

	Original sample (O)	Sample mean (M)	95% Confidence Interval	
			LL	UL
Knowledge Acquisition <-> Employee engagement	0.657	0.658	0.542	0.765
Knowledge-oriented leadership <-> Employee engagement	0.835	0.834	0.743	0.911
Knowledge -oriented leadership <-> Knowledge Acquisition	0.720	0.719	0.605	0.816
Knowledge Application <-> Employee engagement	0.761	0.759	0.662	0.846
Knowledge Application <-> Knowledge Acquisition	0.852	0.853	0.756	0.936
Knowledge Application <-> Knowledge Oriented leadership	0.790	0.787	0.699	0.862
Knowledge Conversion <-> Employee engagement	0.739	0.737	0.646	0.817
Knowledge Conversion <-> Knowledge Acquisition	0.930	0.93	0.873	0.983
Knowledge Conversion <-> Knowledge Oriented leadership	0.790	0.788	0.703	0.862
Knowledge Conversion <-> Knowledge Application	0.978	0.978	0.932	1.021
Knowledge Protection <-> Employee engagement	0.722	0.721	0.624	0.806
Knowledge Protection <-> Knowledge Acquisition	0.640	0.641	0.508	0.762
Knowledge Protection <-> Knowledge Oriented leadership	0.778	0.776	0.692	0.851
Knowledge Protection <-> Knowledge Application	0.799	0.799	0.705	0.883
Knowledge Protection <-> Knowledge Conversion	0.764	0.763	0.66	0.856
Organizational Performance <-> Employee engagement	0.700	0.699	0.577	0.808
Organizational Performance <-> Knowledge Acquisition	0.733	0.731	0.613	0.835
Organizational Performance <-> Knowledge Oriented leadership	0.725	0.721	0.589	0.832
Organizational Performance <-> Knowledge Application	0.751	0.747	0.626	0.848
Organizational Performance <-> Knowledge Conversion	0.791	0.789	0.695	0.87
Organizational Performance <-> Knowledge Protection	0.605	0.603	0.455	0.734

Note: The upper bound of the 95% percentile bootstrap confidence interval is below for all HTM ratio (via bootstrapping procedure); LL - lower limit and UL - upper limit

#### 4.3.1.7 Cross-loading for lower order construct

The cross-loading matrix is another way to assess discriminant validity in structural equation modelling. It helps determine if indicators load more strongly on their intended construct than on other constructs. The item's loading on its assigned construct should be higher than its loadings on other constructs. Each item loading (those are bolded below) of the latent variables is bigger than the cross loading (those with other scale items), as seen in Table 8 below showing good discriminant validity.

Table 8: Discriminant validity for LOC-Cross loadings

	<b>EE</b>	<b>KA</b>	<b>KOL</b>	<b>KAP</b>	<b>KC</b>	<b>KP</b>	<b>OP</b>
EE1	<b>0.634</b>	0.277	0.497	0.384	0.345	0.403	0.312
EE2	<b>0.597</b>	0.234	0.418	0.285	0.285	0.368	0.217
EE3	<b>0.851</b>	0.493	0.57	0.622	0.615	0.533	0.606
EE4	<b>0.877</b>	0.546	0.636	0.596	0.623	0.549	0.596
EE5	<b>0.852</b>	0.507	0.635	0.572	0.573	0.528	0.562
KA1	0.436	<b>0.811</b>	0.478	0.495	0.627	0.387	0.527
KA2	0.436	<b>0.759</b>	0.483	0.522	0.548	0.425	0.439
KA3	0.454	<b>0.825</b>	0.536	0.635	0.705	0.518	0.535
KA4	0.45	<b>0.769</b>	0.419	0.563	0.59	0.376	0.439
KAP1	0.522	0.638	0.561	<b>0.835</b>	0.732	0.557	0.557
KAP2	0.634	0.626	0.644	<b>0.913</b>	0.757	0.637	0.623
KAP3	0.578	0.575	0.581	<b>0.874</b>	0.719	0.619	0.53
KC1	0.493	0.772	0.586	0.733	<b>0.835</b>	0.548	0.585
KC2	0.596	0.673	0.584	0.716	<b>0.851</b>	0.514	0.587

KC3	0.603	0.64	0.599	0.706	<b>0.87</b>	0.622	0.637
KC4	0.558	0.598	0.599	0.649	<b>0.828</b>	0.542	0.528
KC5	0.465	0.541	0.497	0.667	<b>0.73</b>	0.553	0.515
KOL1	0.532	0.453	<b>0.747</b>	0.586	0.583	0.577	0.512
KOL2	0.545	0.478	<b>0.812</b>	0.584	0.578	0.553	0.498
KOL3	0.524	0.475	<b>0.799</b>	0.5	0.523	0.602	0.485
KOL4	0.571	0.429	<b>0.81</b>	0.492	0.479	0.542	0.471
KOL5	0.596	0.534	<b>0.826</b>	0.552	0.591	0.561	0.513
KOL6	0.636	0.495	<b>0.743</b>	0.516	0.538	0.416	0.508
KP1	0.555	0.437	0.592	0.58	0.561	<b>0.874</b>	0.452
KP2	0.547	0.44	0.557	0.592	0.548	<b>0.843</b>	0.44
KP3	0.533	0.495	0.593	0.585	0.588	<b>0.872</b>	0.439
KP4	0.522	0.494	0.617	0.631	0.628	<b>0.861</b>	0.498
OP1	0.572	0.47	0.549	0.596	0.582	0.506	<b>0.881</b>
OP2	0.307	0.317	0.361	0.288	0.381	0.301	<b>0.567</b>
OP3	0.473	0.555	0.523	0.55	0.593	0.396	<b>0.872</b>
OP4	0.517	0.452	0.471	0.433	0.479	0.376	<b>0.835</b>
OP5	0.57	0.585	0.555	0.633	0.654	0.48	<b>0.761</b>

*Note: KA=knowledge acquisition, KC=knowledge conversion, KAP=knowledge application, KP=knowledge protection, EE= Employee engagement, KOL= knowledge-oriented leadership, OP= organizational performance*

#### 4.3.2 Second Level: reflective higher order construct (HOC)

##### 4.3.2.1 Factor loadings

Table 9 indicates all the outer loading values that range between 0.816 and 0.940, highlighting the internal consistency and dependability of the constructs.

Table 9: Outer loading- Matrix (Higher Order Construct \_ Knowledge Management Process)

	Knowledge Management Process
Knowledge Acquisition	0.856
Knowledge Application	0.921
Knowledge Conversion	0.940
Knowledge Protection	0.816

##### 4.3.2.2 Reliability (Cronbach's alpha and Composite Reliability) - Higher order construct

Cronbach's alpha values greater than 0.7 influence the structural integrity of the model. Similarly, A Composite reliability (CR) value above 0.7 signifies strong internal consistency across items, confirming that each construct assesses distinct concepts. As reflected in Table 10, variables show composite reliability and Cronbach's alpha scores above 0.7, demonstrating a high degree of internal consistency and reliability.

*Table 10: Construct reliability (Higher Order Construct\_ Knowledge Management Process)*

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Knowledge Management Process	0.906	0.913	0.935

*4.3.2.3 Convergent validity for higher order construct- AVE*

According to Fornell and Larcker (1981), an AVE value above 0.50 is considered appropriate. As shown in Table 9, AVE value is 0.783 which exceed this threshold, validating convergent validity (Hair et al., 2020). Furthermore, Tabel 11 shows all outer loading values that range between 0.816 and 0.940, highlighting the internal consistency and dependability of the constructs.

*Table 11: Convergent Validity for higher order contract (KMP)*

	Average variance extracted (AVE)
Knowledge Management Process	0.783

*4.3.3.4 Discriminant validity for higer order construct*

*4.3.3.5 HTMT ratio for higher order construct (KMP)*

The HTMT ratio values must be less than 0.85 to demonstrate discriminant validity. Since each HTMT is less than 0.85, as shown in Table 12, the discriminant validity requirements have also been met.

*Table 12: Discriminant validity for Higher Order Construct\_ Knowledge Management Process: Heterotrait-monotrait ratio (HTMT)*

	Employee Engagement	Knowledge Oriented leadership	Knowledge Management Process
Knowledge Oriented leadership	0.835		
Knowledge Management Process	0.790	0.846	
Organizational Performance	0.700	0.725	0.791

*4.3.3.6 Discriminant validity for HOC(KMP)- Bootstrapped HTMT confidence interval bias corrected*

When we assessed bootstrapped if the upper bound of the 95% confidence interval is below 1.00 it indicates constructs are truly distinct. Table 13 below gives confirmation that HOC(KMP) construct is truly distinct.

*Table 13: Discriminant validity for Higher Order Construct\_ Knowledge Management Process - Bootstrapped HTMT confidence interval bias corrected.*

	Original sample (O)	Sample mean (M)	Bias	95% Confidence Interval	
				LL	UL
KOL <-> EE	0.835	0.833	-0.002	0.739	0.911
KMP <-> EE	0.790	0.790	-0.001	0.708	0.858
KMP <-> KOL	0.846	0.844	-0.002	0.772	0.901
OP <-> EE	0.700	0.699	-0.001	0.575	0.806
OP <-> KOL	0.725	0.720	-0.005	0.585	0.829
OP <-> KMP	0.791	0.788	-0.003	0.675	0.874

*Note: The upper bound of the 95% percentile bootstrap confidence interval is below for all HTM ratio (via bootstrapping procedure); LL - lower limit and UL - upper limit*

#### 4.3.3.7 The fornell-larcker criterion

Each factor's discriminant validity is demonstrated by the results in Table 14 (highlighted bold values), which compare the square root of AVE with a latent variable. Crucially, each factor's square root of the AVE is higher than the correlation between the components, demonstrating how unique they are from other concepts.

*Table 14: Discriminant validity for Higher Order Construct\_ Knowledge Management Process - Fornell-Larcker Criterion*

	Employee Engagement	Knowledge Oriented leadership	Knowledge Management Process	Organizational Performance
Employee Engagement	<b>0.771</b>			
Knowledge Oriented leadership	0.721	<b>0.790</b>		
Knowledge Management Process	0.709	0.754	<b>0.885</b>	
Organizational Performance	0.631	0.631	0.707	<b>0.792</b>

#### 4.3.3.8 Cross-loading for higher order construct

Each item loading of the latent variables (highlighted) is bigger than the cross loading of the other scale items, as seen in Table 15 below showing good discriminant validity.

Table 15: Discriminant validity for Higher Order Construct\_ Knowledge Management Process - Cross loadings

	Employee Engagement	Knowledge Oriented leadership	Knowledge Management Process	Organizational Performance
EE1	0.633	0.497	0.397	0.313
EE2	0.596	0.418	0.329	0.217
EE3	0.851	0.570	0.642	0.607
EE4	0.877	0.636	0.653	0.596
EE5	0.852	0.635	0.616	0.562
KOL1	0.532	0.747	0.623	0.512
KOL2	0.546	0.812	0.621	0.499
KOL3	0.524	0.799	0.593	0.485
KOL4	0.571	0.810	0.548	0.471
KOL5	0.596	0.826	0.632	0.513
KOL6	0.636	0.743	0.556	0.508
KA	0.561	0.607	0.856	0.614
KAP	0.662	0.682	0.921	0.653
KC	0.660	0.696	0.940	0.694
KP	0.624	0.684	0.816	0.531
OP1	0.572	0.549	0.611	0.883
OP2	0.307	0.361	0.364	0.567
OP3	0.473	0.523	0.594	0.871
OP4	0.517	0.471	0.493	0.835
OP5	0.571	0.555	0.666	0.761

Note: KA=knowledge acquisition, KC=knowledge conversion, KAP=knowledge application, KP=knowledge protection, EE= Employee engagement, KOL= knowledge-oriented leadership, OP= organizational performance, KMP=knowledge management process

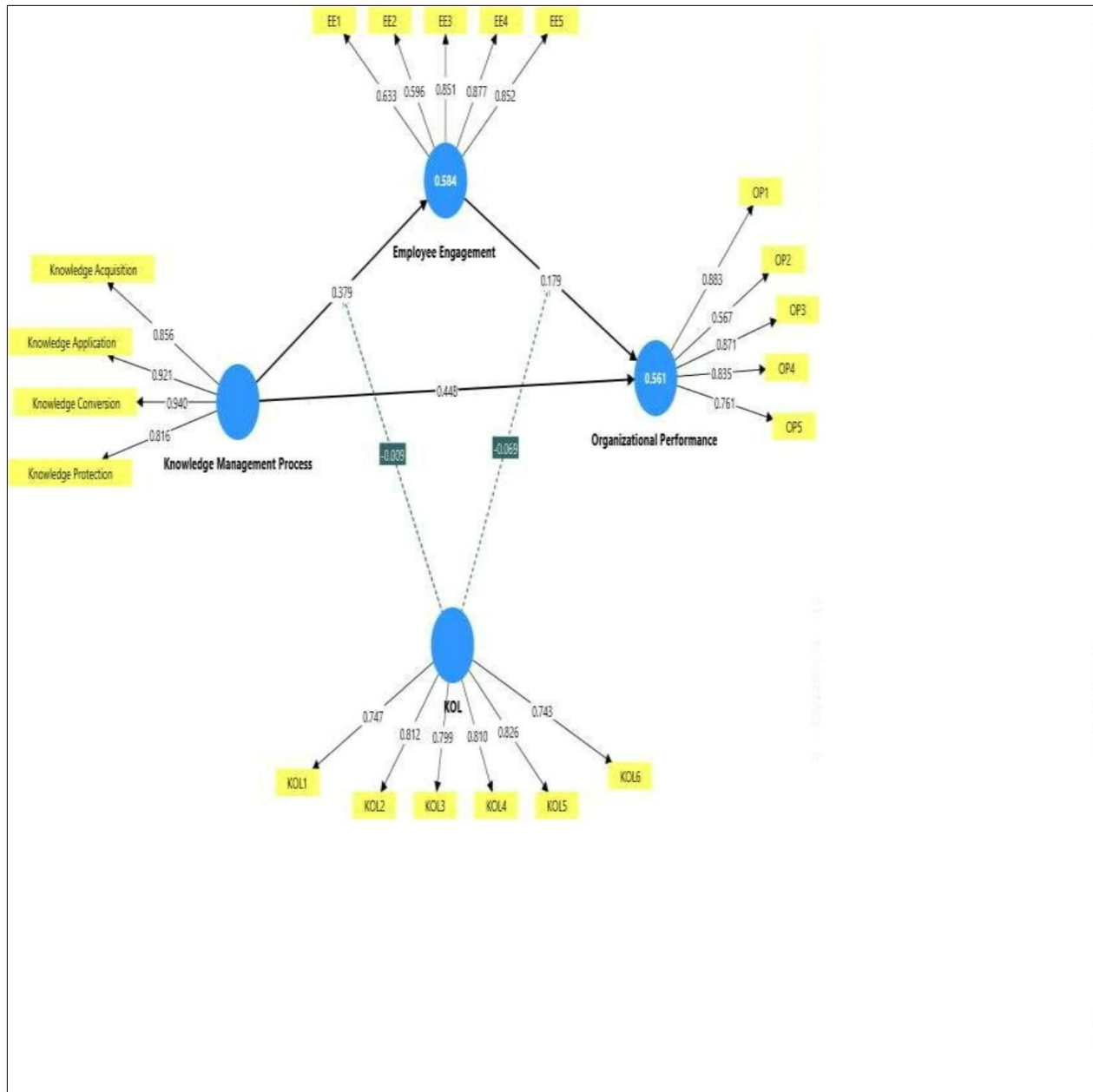


Figure 4: Measurement Model Assessment for Higher order Construct: Knowledge Management Process (KMP)

## **4.4 Structural model analysis**

Structural model assessment is a critical phase in evaluating the structural equation model (SEM) or partial least squares SEM (PLS-SEM). It allows to determine whether the inner or structural model reliably captures the relationships among constructs while providing adequate explanatory and predictive power. The importance of the path coefficients and the R<sup>2</sup> measurements are the primary determinants used to evaluate the structural model. When the objective is to explain the variance of the endogenous latent variables to have a high R<sup>2</sup> for the key target constructs is vital in prediction-oriented PLS-SEM. The standardized beta coefficients of ordinary least squares regressions can be used to understand the path coefficients that were derived from the path model analysis in the PLS structural model. A bootstrapping procedure can be used to ascertain the significance of each of path coefficient which is similar to how wights and loading indicators measured.

### **4.4.1 Collinearity**

It is important to verify that multicollinearity among predictor constructs is not distorting the estimates before interpreting the path coefficients. Collinearity occurs when independent variables in a regression model are highly correlated, making it difficult to determine their individual effects on the dependent variable. This can lead to inflated standard errors, unstable coefficient estimates, and misleading statistical significance. Collinearity is detected using Variance Inflation Factor (VIF). A VIF value above 5 or 10 suggests problematic collinearity (Bahovec, 2011). Based on Table 16, every VIF value is below 5, suggesting low multicollinearity and that the individual impact of each variable on the dependent variable is minimal.

Table 16: Collinearity Statistics (VIF)-Inner Model-list

	VIF
Employee Engagement -> Organizational Performance	2.449
Knowledge Management Process -> Employee Engagement	2.390
Knowledge Management Process -> Organizational Performance	2.674
Knowledge Oriented Leadership -> Employee Engagement	2.448
Knowledge Oriented Leadership -> Organizational Performance	2.903

Note: VIF= Variance Inflation Factor

#### 4.4.2. Structural model.

Figure 4 presents a model comprehensive view of the structural, demonstrating the dynamic relationships among the independent, dependent, mediating, and moderating variables.

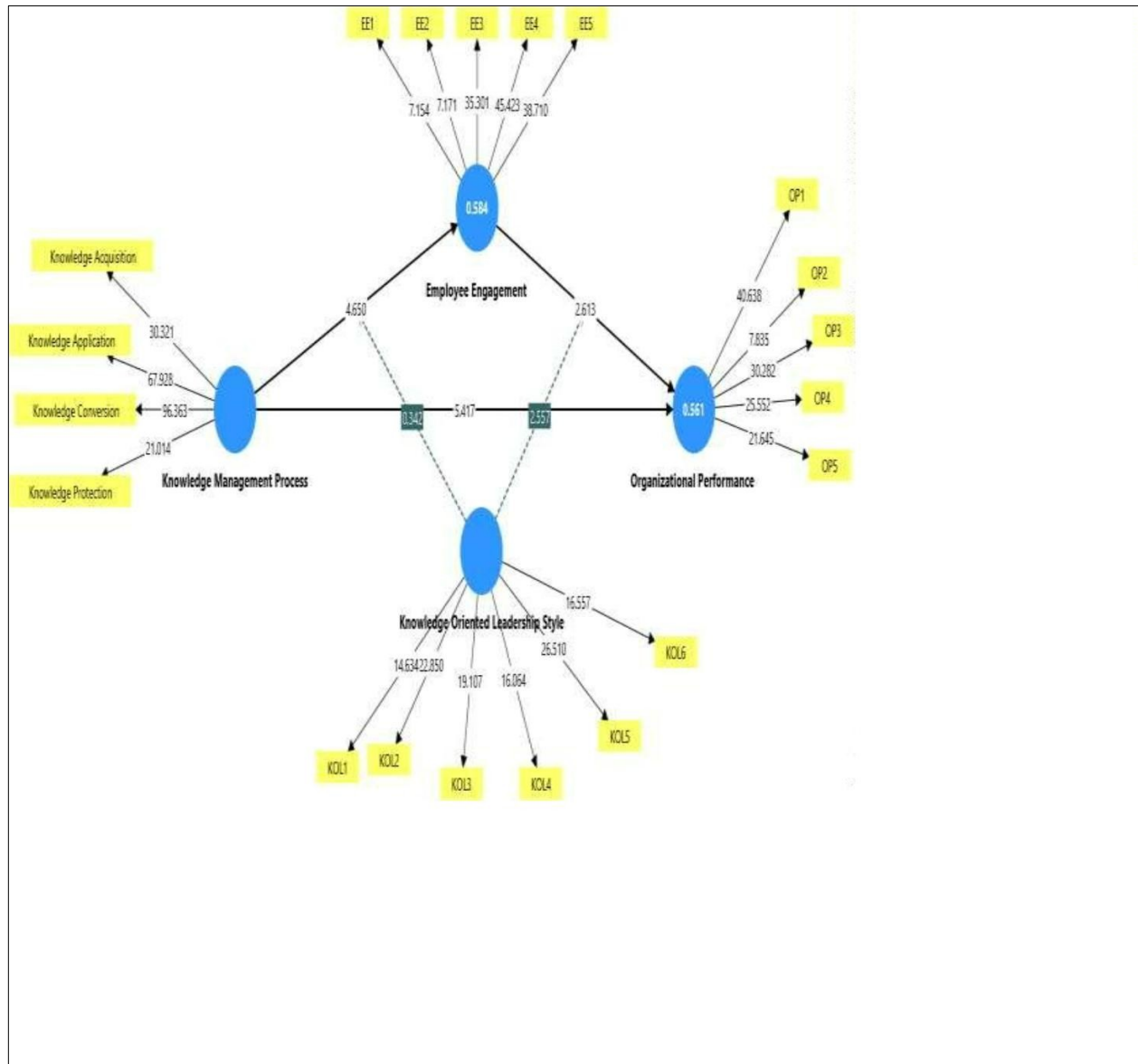


Figure 5: Structural Model Assessment: Bootstrapped Graphic output

#### **4.4.3. Checking structural path significance in bootstrapping**

Bootstrapping is employed to evaluate the significance of structural path coefficients by generating numerous resampled datasets (with replacement) that simulate the sampling distribution of the estimates. To determine the magnitude of these coefficients and assess their relevance to the proposed hypotheses, this study utilized the PLS algorithm with 5000 bootstrap resamples. As shown in Tables 17, 18, and 19, hypotheses were accepted or rejected based on the values of the path coefficients, p-values, and t-statistics. Path coefficients reflect the strength of the relationships among variables where values near +1 indicate a strong association, and lower values signify weaker links (Hair et al., 2020). In order to accept or reject the hypotheses we are guided by t-statistics and the p-values. Furthermore, a low or zero standard deviation suggests that respondents consistently used the same response or pattern for most of the survey questions. To determine the significance and strength of relationships within the model we use the bootstrapped path coefficients derived from the SEM analysis as it provides critical insights into the relationships between constructs, supported by their corresponding p-values and t-values.

#### **4.4.4 The direct effect Test**

A high t - value of 5.417 and a significant p - value of 0.000 for the link from knowledge management process (KMP) to organizational performance (OP) exhibits robust and significant relationship. This finding highlights the fundamental role that knowledge management process activities that play in boosting organizational performance.

Likewise, when we see the path from knowledge management process to employee engagement it demonstrates a high t - value of 4.650 and a significant p - value of 0.000, again indicating that knowledge management process contributes significantly to Employee Engagement. This indicates that knowledge management process substantially contributes to employee engagement, highlighting their importance in fostering high levels of engagement.

Additionally, a high t-value of 2.613 and a significant p-value of 0.004 for the path that links employee engagement to organizational performance is established. This underlines the vital impact of employee engagement initiatives in improving organizational performance. This strong association supports the value of using employee engagement to enhance performance. Collectively, these findings offer a strong basis for comprehending the pivotal relationships

within the model while also affirming the presence of a direct effect.

*Table 17: Direct hypothesis testing*

Hypothesis	Relationship	Path (Beta) coefficient	Standard deviation	T statistics	P values	Results
H1	Knowledge Management Process -> Organizational Performance	0.448	0.083	5.417	0.000	Supported
H2	Knowledge Management Process -> Employee Engagement	0.379	0.081	4.650	0.000	Supported
H3	Employee Engagement -> Organizational Performance	0.179	0.069	2.613	0.004	Supported

#### 4.4.5 Mediation analysis results

Examining how a third variable influences or intervenes in the relationship between two other variables is known as mediation (Hayes, 2009). An intervening model, for instance, hypothesizes that a variable X influences an outcome variable Y through one or more intervening variables, also referred to as mediators (Hayes, 2009). Researchers use mediation analysis to understand how an intermediate variable transmits the effect of an antecedent variable to an outcome

In order to test mediation Knock, (2014) offered a new methodology, that builds on Hayes, (2009) which is more effective and less prone to errors than the conventional method of evaluating mediation offered by (Baron & Kenny, 1986), which does not rely on standard errors. The mediating effect analysis was computed in this study and the result is shown in table 19. The study's hypothesis 4 was that the association between KMP and OP would be mediated by the

variable of EE. The objective is to reveal significant and relevant indirect impact relationships in addition to verifying the significant path coefficient ( $\beta$ ).

*Table 18: The results of the Mediation effect*

Hypothesis	Relationship	Path (Beta) coefficient	Standard deviation	T statistics	P values	Decision
<b>H4</b>	KMP -> EE-> OP	0.068	0.03	2.299	0.011	Complementary partial mediation

*Note: EE= Employee engagement, OP= organizational performance, KMP=knowledge management process*

PLS-SEM was used to assess the mediating effects of EE on the link between KMP and the OP. the result showed we have a Complementary partial mediation and Hypothesis H4 was supported since the data demonstrated that EE significantly and favorably mediates the effect of KMP and OP ( $\beta$  - 0.068, t - 2.299, p - 0.011). This can be read as the existence of mediation, and the path coefficient of 0.068 explains how the use of KMP affects OP. This suggests that the use of KMP has an indirect effect on the OP through the mediation of EE, with a p-value of 0.011, a t-statistic of 2.299, and a coefficient value of 0.068. As a result, we might say that the hypothesis has validity. Complementary partial mediation refers to a type of mediation in which both direct and indirect effects of an independent variable on a dependent variable are significant and point in the same direction. This means that the relationship between the independent and dependent variables is partially affected by the mediator however the direct effect still remains significant.

#### **4.4.6 Moderation analysis**

According to (Dawson, 2014) A phrase in the context of management research, a moderator is any variable that influences the relationship between two or more other factors; the moderator's impact on this relationship is known as moderation. The most basic type of moderation in statistics is when the value of a moderator variable, Z, affects the connection between an

independent variable, X, and a dependent variable, Y. The regression equation of Y on X would provide a simple test of a linear relationship between X and Y.

The association between KMP and EE was thought to be moderated by the variable KOL in this study. In addition, the association between EE and OP and was thought to be moderated by the variable KOL. The objective is to reveal significant and relevant indirect impact relationships in addition to verifying coefficient ( $\beta$ ) i.e. the significant route. In this case is (o) original mean is the ( $\beta$ ) coefficient and it is observed in table 20 below.

*Table 19: Moderation effect Analysis Results*

Hypothesis	Relationship	Original sample (O)	Sample mean (M)	Standard deviation	T statistics	P values	Moderation
<b>H5b</b>	KOL x EE -> OP	-0.069	-0.063	0.027	2.557	0.005	Supported
<b>H5a</b>	KOL x KMP -> EE	-0.009	-0.005	0.028	0.342	0.366	Not supported

*Note: EE= Employee engagement, KOL= knowledge-oriented leadership, OP= organizational performance, KMP = knowledge management process*

#### 4.6.7 Moderation Analysis: Moderating Role of Knowledge-Oriented Leadership (KOL) on the Relationship Between Employee Engagement (EE) and Organizational Performance (OP)

Using the latest version of SmartPLS 4 moderation analysis was conducted to establish the conditional effect of employee engagement on organizational performance moderated by Knowledge-Oriented Leadership (KOL).

#### **Interaction term and path coefficient**

The interaction term (Employee Engagement  $\times$  KOL) was created using SmartPLS4. The outcome (Table 20) revealed a statistically significant negative interaction effect on Organizational Performance ( $\beta = -0.069$ , SE = 0.027, t = 2.557, p = 0.005), which suggests that

the relationship between Employee Engagement and Organizational Performance is contingent on the level of KOL.

The beta coefficient ( $\beta$ ) of -0.069 indicates that as knowledge-oriented leadership strengthens, the positive correlation between employee engagement and organizational performance weakens. In other words, while higher knowledge-oriented leadership may still influence employee engagement in relation to organizational performance, its effect appears to be negative in this setting.

The significance of the moderating effect is determined by the t-value, where a result is considered statistically significant if the t-value exceeds 1.96 at a 95% confidence level. In this analysis, the moderating effect of knowledge-oriented leadership on employee engagement and organizational performance is statistically significant, as indicated by the t-value of 2.613, which exceeds the threshold. Conversely, the moderating effect of knowledge-oriented leadership on knowledge management process and employee engagement is statistically insignificant, as reflected by a t - value of 0.339 which is below the required threshold value.

#### 4.6.8 Moderation Analysis: Moderating Role of Knowledge-Oriented Leadership (KOL) on the Relationship Between Knowledge management process (KMP) and Employee Engagement (EE)

Using the latest version of SmartPLS 4 moderation analysis was conducted to establish the conditional effect of knowledge management process on employee moderated by Knowledge-Oriented Leadership (KOL).

##### **Interaction term and path coefficient**

The interaction term ( $KMP \times KOL$ ) was created using SmartPLS4. The outcome (Table 20) revealed the interaction effect ( $KMP \times KOL$ ) is negative and statistically insignificant on employee engagement ( $\beta = -0.009$ ,  $SE = 0.028$ ,  $t = 0.342$ ,  $p = 0.366$ ).

$\beta$  (Beta coefficient) = -0.009, this suggests that the interaction between knowledge management process and knowledge-oriented leadership has a very small negative effect on employee engagement. T - value = 0.342: This is quite low and indicates that the effect is not statistically distinguishable from zero. P - value = 0.366: Since this is far greater than 0.05, the effect of the interaction is not statistically significant at conventional levels. Hence, the interaction between

knowledge management process and knowledge-oriented leadership does not have a meaningful or significant impact on employee engagement in this model. In simpler terms, there's no evidence that the effect of knowledge management process on employee engagement depends on the level of knowledge-oriented leadership (or vice versa) in this particular dataset.

#### **4.4.9 Simple slopes and interaction plot**

To further examine the interaction, simple slopes analysis was conducted and plotted with the interaction plot in Figure 6. Test was employed to examine the impact of Employee Engagement on Organizational Performance at three levels of KOL: Low KOL ( $-1$  SD), Mean KOL, High KOL ( $+1$  SD). The results were that: at low levels of KOL, the slope was extremely positive, indicating that Employee Engagement significantly impacts Organizational Performance. When at mean levels of KOL, the positive effect persisted but was just modest. When at high levels of KOL, the slope was not as steep, reflecting a weaker relationship between engagement and performance. These findings confirm the interaction term's negative coefficient, suggesting an inhibiting (dampening) moderation effect.

#### Theoretical Interpretation

This interaction can then be interpreted as reverse buffering or redundancy of resources. In companies where KOL is originally high— Knowledge acquisition, knowledge conversion, knowledge application and protection —marginal value through individual participation to enhance performance may decline. Employees in these organizations might already be benefiting from access to leadership support for strategy, with decreased additional contribution from engagement.

Conversely, under low KOL environments, employee commitment is increasingly a critical compensatory force for organizational performance, since committed employees are able to compensate for the lack of knowledge infrastructure by leadership.

These results advance the literature in organizational behavior and leadership by indicating the contextual limits of effectiveness for engagement. Whereas both KOL and employee engagement have been shown to have a positive impact on performance outcomes, what this research implies is that their collective impact is not merely additive.

In practice, organizations should not take for granted that increasing leadership knowledge orientation and worker engagement will have a direct performance-enhancing effect. Instead, decision-makers need to align engagement practices to the leadership context in such a manner that investment in human capital is compatible with existing leadership and knowledge systems.

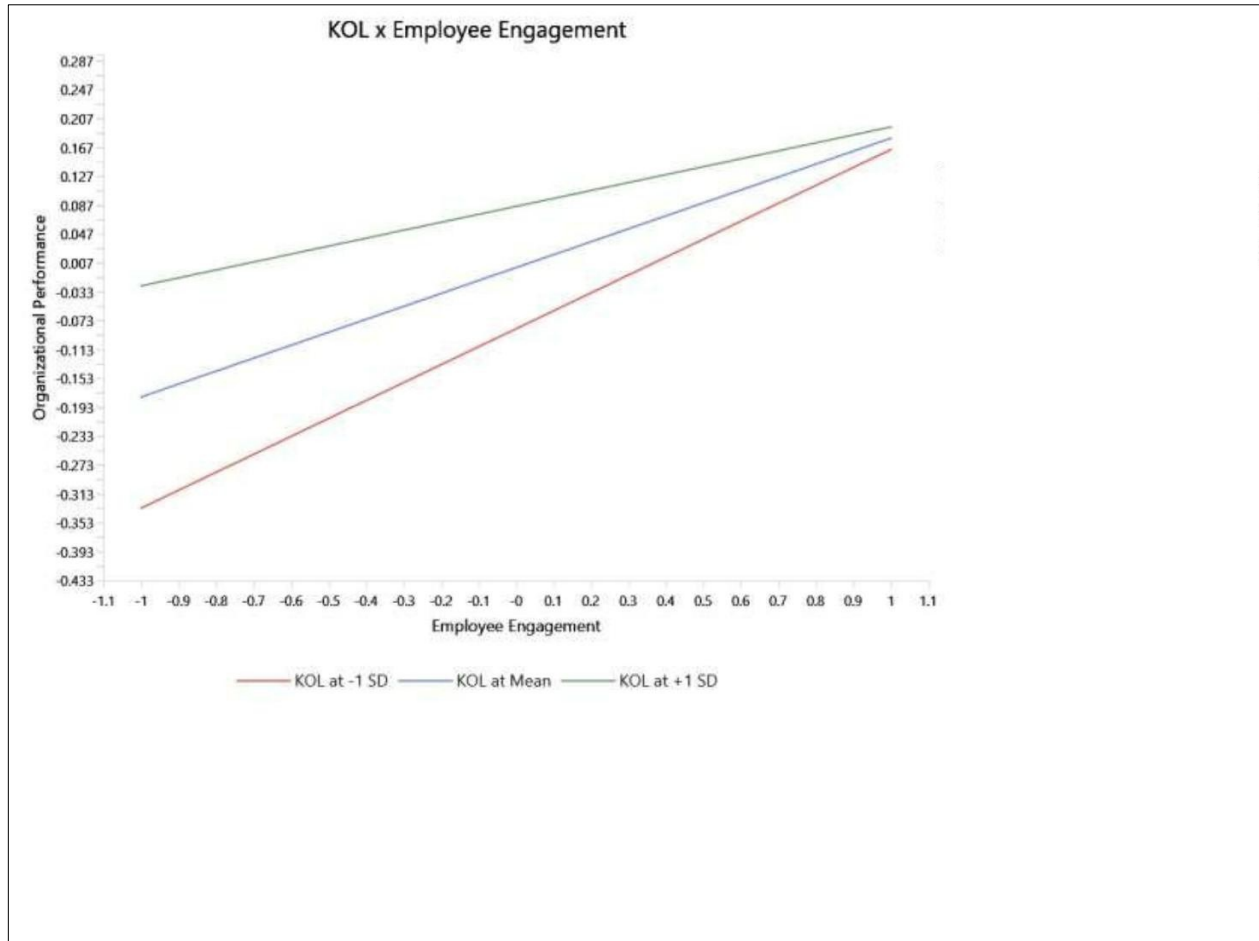


Figure 6: Simple slopes analysis of the interaction between Employee Engagement and Knowledge-Oriented Leadership (KOL) on Organizational Performance. The effect of Employee Engagement is highest when KOL is low (-1 SD) and lowest when KOL is high (+1 SD), providing evidence for the existence of a negative moderation effect

#### 4.4.10 R-squared value R<sup>2</sup>

The R-squared value, that ranges 0 to 1, measures how well a regression model explains the inconsistency of the dependent variable. R<sup>2</sup> = 0 indicates the model does not explain any variation and R<sup>2</sup> = 1 shows the model perfectly explains all variation (Frost, 2019). The results in

Table 20 demonstrated that both R<sup>2</sup> values are above 0.50, indicating the model provides good explanatory power.

*Table 20: Regression analysis or R-squared values*

	R-square	R-square adjusted
Employee Engagement	0.584	0.580
Organizational Performance	0.561	0.555

#### 4.4.11 F-squared analysis

F-squared ( $f^2$ ) analysis is a measure of effect size in regression models, particularly in structural equation modelling (SEM). It helps assess the impact of an independent variable on the dependent variable by analysing how much variance is explained (Latif, 2024). For Cohen, (1988) if  $F^2 \geq 0.02$  it is little,  $F^2 \geq 0.15$  it is medium, and  $F^2 \geq 0.35$  it is large. As shown in Table 21 the f-squared value of EE and OP is 0.03, indicating small effect suggesting it has limited impact on OP in the model. The value between KMP → EE is 0.144 and KMP → OP is 0.171, indicating medium effect, meaning it contributes meaningfully but not overwhelmingly.

*Table 21: Regression analysis or F-squared values*

	Employee Engagement	Organizational Performance
Employee Engagement		0.030
Knowledge-oriented leadership	0.177	0.006
Knowledge Management Process	0.144	0.171
Knowledge-oriented leadership x Employee Engagement		0.047
knowledge-oriented leadership x Knowledge Management Process	0.001	

## 4.5. Discussion

This section presents detail discussion on the study findings and examining them with literature review and previous studies. It explores the mediating roles of employee engagement and the moderating roles of knowledge-oriented leadership in shaping the relationship between the knowledge management process and organizational performance. Recognizing their importance for organizational success, the research aims to address a gap in the existing literature, which has largely overlooked the effect of employee engagement as a mediator and the moderating impact of knowledge-oriented leadership. The study is particularly relevant to Ethiopian banks, an area that has received limited academic attention. By employing the proposed model, the research also contributes to theoretical advancements in the field.

**Hypothesis 1. Knowledge management Process (KMP) have a significant and positive relationship with organizational performance (OP).**

Initially the study finds knowledge management process had a major and favorable impact on organizational performance. With all other variables held equal, the coefficient ( $\beta$ ) of 0.448 shows that organizational performance rises by 0.448 units for every unit increase in knowledge management process. According to the t-value of 5.418, there is a statistically significant correlation between knowledge management process and organizational performance. This indicates strong empirical support for the hypothesis, reinforcing findings from Payal et al., (2019), who found that the knowledge management processes had a significant positive relationship with the organizational performance. This aligns with Zaied et al. (2012), who found that knowledge acquisition, conversion, application, and protection enhance OP. This aligns with Manfredi Latilla et al. (2018), who emphasized the importance of knowledge management on increases organization performance. Additionally, the study builds on Nodari et al. (2016), who indicate interorganizational knowledge collection is found to have a positive effect on organizational performance. Therefore, the observed results demonstrated that knowledge management process plays a crucial role in the performance of the organization.

**Hypothesis 2. Knowledge management process (KMP) has a significant and positive relationship with Employee engagement (EE).**

Second, the findings also showed that knowledge management process has a favorable and notable impact on the employee engagement. The coefficient ( $\beta$ ) of 0.379 means that, while all other parameters are remained constant, the employee engagement grows by 0.379 units for each unit increase in knowledge management process. The statistical significance of the association between knowledge management process and employee engagement is indicated by the t-value of 4.513. This indicates strong empirical support for the hypothesis in line with another research by Al-Jabri (2020) who found that knowledge-sharing practices enhance employee satisfaction and engagement, reinforcing the study's findings. Additionally, Juan et al. (2018) emphasized that trust, identification, and reciprocity in knowledge-sharing significantly impact employee engagement, further validating the study's conclusions. Rožman et al. (2019), who also argued that engaged employees maximize their potential, contributing to organizational competitiveness. Thus, the culture of knowledge management should be enhanced in the organization to help improve employee engagement. This indicates that knowledge management process plays a crucial role in employee engagement.

**Hypothesis 3. Employee engagement (EE) has a significant and positive impact on organizational performance (OP).**

Third, the study's findings supported the hypothesis that using employee engagement is positively correlated with OP. Organizational performance was strongly and favorably impacted by employee engagement. With all other variables held equal, the coefficient ( $\beta$ ) of 0.179 shows that the organizational performance increases by 0.179 units for every unit growth in EE - employee engagement. According to the t-value of 2.619, The organizational performance and employee engagement are statistically correlated. This aligns with Liu et al. (2022) highlighted that employee engagement improves financial performance, retention, and innovation, reinforcing the study's findings. Similarly, Kessler et al. (2020) highlighted that employee engagement improves financial performance, retention, and innovation, reinforcing the study's findings. Markos & Sridevi (2010) also demonstrated that work engagement and job satisfaction predict OP, further supporting the study's conclusions. The research demonstrates that

organization are more likely to have better organizational performance when they have more engaged employee and employee engagement increases organizational performance.

**Hypothesis 4: Employee engagement significantly mediates the relationship between knowledge management process (KMP) and organizational performance (OP).**

The fourth major finding of this study is that employee engagement acts as a mediator in the relationship between knowledge management process and organizational performance. Therefore, by using knowledge management process, organizations are likely to increase their employee engagement, which contributes to better organizational performance. This aligns with Alsheikh et al. (2023), who found that employee engagement mediates the relationship between KM and organizational success. It means getting into knowledge management process can increase organizational performance through employee engagement.

However, a comprehensive review of the literature revealed a research gap, as no study has explored the role of employee engagement as a mediating factor in the relationship between knowledge management process and organizational performance. However, employee engagement is closely linked to organizational success and this study found that employee engagement mediates the relationship knowledge management process and organizational performance.

**Hypothesis 5a. knowledge-oriented leadership (KOL) moderates the relationship between knowledge management process (KMP) and Employee engagement (EE) such that the relationship will be stronger when knowledge-oriented leadership is effective.**

Fifth, we rejected the **Hypothesis 5a** since the data demonstrate that Knowledge-Oriented Leadership does not have a statistically significant moderating effect ( $p < 0.05$ ). The Path Coefficient ( $\beta$ ) of -0.009 indicates a minimal moderation effect, as it is nearly zero. The t -Value of 0.339 falls below the standard threshold of 1.96 demonstrating that the effect is statistically insignificant. Additionally, the p - value of 0.367 is well above 0.05, further confirming its insignificance. Therefore, knowledge-oriented leadership does not play a significant moderating role in the relationship between Knowledge Management Process (KMP) and Employee Engagement (EE). These results suggest that leadership approaches must be carefully designed to avoid unintended consequences on employee engagement. However, the findings support

Popli & Rizvi (2016), who found that leadership styles do not always improve employee engagement which is also in alignment with, Carasco-Saul et al. (2015) who noted that leadership effectiveness depends on organizational context, suggesting that knowledge-oriented leadership may not be a strong moderator in Ethiopian banking.

**Hypothesis 5b. knowledge-oriented leadership (KOL) moderates the relationship between Employee engagement (EE) and organizational performance (OP), such that the relationship will be stronger when knowledge-oriented leadership (KOL) is effective.**

Finally, we have accepted the **Hypothesis 5b** since the data demonstrate KOL- knowledge-oriented leadership does have a significant moderating effect ( $p < 0.05$ ). The moderation effect of Knowledge-Oriented Leadership (KOL) on the relationship between Knowledge Management Process (KMP) and Employee Engagement (EE) is reflected in the Path Coefficient ( $\beta$ ) of -0.069, indicating a negative moderation effect. The t - value of 2.613 exceeds the standard threshold of  $\geq 1.96$ , confirming that the effect is significant. Additionally, the p - value of 0.004 falls below 0.05, further validating the significance. This aligns with Batista-Taran et al. (2013), who found that that transactional leadership styles limit long-term employee engagement, reinforcing the study's findings. Similarly, Nasomboon (2014) noted that leaders who focus solely on organizational goals may unintentionally reduce employee engagement. Therefore, Knowledge-Oriented Leadership moderates the relationship between Employee Engagement (EE) and Organizational Performance (OP), but in a negative direction.

Furthermore, the study highlights the importance of tailoring leadership strategies to strike a balance between knowledge-driven decision-making and employee needs. This aligns with Rehman & Iqbal (2020), who advocate for knowledge-oriented leadership to encourage a collaborative environment rather than enforcing rigid structures. Similarly, Hayat et al. (2015) highlight that leadership styles must be closely integrated with knowledge management initiatives to optimize organizational success. Williams & Sullivan (2011) further stress that leaders should serve as facilitators of knowledge rather than authoritative controllers, reinforcing the study's recommendations.

# CHAPTER FIVE

## CONCLUSION, IMPLICATIONS AND RECOMMENDATION

### 5.1 Summary of key findings

This section presents a summary that highlights the most important findings of the study.

**Demographic analysis:** The study gathered data from 203 employees across different managerial levels and departments. Most respondents held master's degrees, and the workforce had a balanced distribution across different age groups.

**Descriptive statistics:** The analysis revealed strong knowledge management practices, high employee engagement, and notable organizational performance metrics, with employees rating their bank's success, profitability, and innovation favourably.

**Measurement model assessment:** The construct's reliability and validity were confirmed using factor loading, Cronbach's alpha, composite reliability, and discriminant validity ensuring the robustness of the data.

#### **Structural model analysis:**

Knowledge Management Process (KMP) significantly impacts organizational performance (OP), ( $\beta = 0.448$ ,  $p < 0.001$ ), highlighting its crucial role in driving success.

Knowledge management process (KMP) positively influences employee engagement (EE), ( $\beta = 0.379$ ,  $p < 0.001$ ), confirming its role in fostering employee commitment.

Employee engagement (EE) has a positive effect on organizational performance (OP), ( $\beta = 0.179$ ,  $p = 0.004$ ), demonstrating engaged employees contribute to better performance.

#### **Mediation analysis:**

Employee engagement partially mediates the relationship between knowledge management process (KMP) and organizational performance (OP), strengthening the idea that knowledge management improves engagement, which in turn boosts performance

### **Moderation analysis:**

Knowledge-oriented leadership (KOL) moderates the employee engagement (EE) - organizational performance (OP) relationship negatively, ( $\beta = -0.069$ ,  $p = 0.005$ ), suggesting that highly structured knowledge leadership may suppress engagement's impact on organizational performance.

Knowledge-oriented leadership (KOL) does not significantly moderate the KMP-EE relationship, ( $\beta = -0.009$ ,  $p = 0.366$ ), indicating leadership approach does not strongly influence engagement through knowledge management

### **Regression analysis:**

The model demonstrated strong explanatory power with  $R^2$  values above 0.50 for EE and OP, confirming the effectiveness of knowledge management frameworks.

Overall, these findings highlight the importance of well-structured knowledge management and active employee engagement in enhancing organizational performance. They also warn against rigid leadership styles that may unintentionally dampen engagement. These study insights can guide Zemen Bank S.C and similar institutions in optimizing their knowledge strategies for sustainable growth.

## **5.2 Conclusion**

In contemporary landscape of privatization, liberalization, and globalization, knowledge management have become essential for banks striving to maintain a competitive edge (Misra, 2007). Organizations face growing pressures to innovate, optimize costs, and enhance service quality for stakeholders, making this study particularly relevant for advancing knowledge management applications in the banking sector. Given the limited research on how Ethiopian banks implement knowledge management processes to influence organizational performance, the findings of this study offer critical insights.

Banks, as knowledge-driven institutions, require leadership that effectively manages knowledge assets to foster innovation and improve organizational performance. Knowledge-oriented leadership has gained scholarly attention within leadership and knowledge management related

studies, yet its impact on performance—especially in Ethiopia’s banking sector—remains largely unexplored. Additionally, existing research has not sufficiently examined how knowledge management processes and employee engagement mediate and translate the effects of Knowledge-oriented leadership into organizational success. Thus, this study aims to bridge this gap by investigating the relationships between knowledge management processes, employee engagement, Knowledge-oriented leadership, and organizational performance in Zemen Bank S.C. Specifically, it examines the direct effect of knowledge management on organizational performance, the mediating role of employee engagement, and the moderating role of Knowledge-oriented leadership.

To test the proposed research model, staff members of Zemen Bank S.C. in Addis Ababa, Ethiopia were surveyed. Results from the PLS-SEM analysis indicate that knowledge management processes positively impact organizational performance both directly and indirectly through employee engagement. Hence, this research validates a research model that offers valuable managerial implications emphasizing on the importance of effective knowledge management process, employee engagement and, knowledge-oriented leadership in enhancing the banking industry overall performance.

The study further underlines the vital role of knowledge management process in improving organization performance, particularly for Zemen bank and Ethiopian banking industry. The findings from the study confirm that knowledge management process significantly influences employee engagement and organizational performance which reinforce the importance of structured knowledge management strategies in corporate environments. Moreover, employee engagement serves as a mediator between knowledge management and organizational performance which highlighting the positive effects of employee participation on organizational success. However, the research also revealed that the moderating role of knowledge-oriented leadership presents mixed outcomes. The result indicates knowledge-oriented leadership negatively moderates the relationship between knowledge management and employee engagement and it does not significantly impact knowledge management’s effect on organizational performance. This suggests that leadership styles must be carefully tailored to prevent unwanted consequences on employee engagement and performance.

### **5.3 Practical implications**

In this study the findings highlight the vital role of knowledge management (KM), employee engagement (EE), and knowledge-oriented leadership (KOL) in driving organizational performance (OP) within the banking sector in Ethiopia, specifically at Zemen bank S.C. Based on these insights, banks—particularly in Ethiopia—should adopt knowledge management strategic approaches to enhance their overall sustainable organization performance.

Developing strong knowledge management systems that facilitate effective knowledge creation, sharing, application, and protection should be a priority for banks. Innovation and Decision-making can be strengthened by investing in training programs, digital knowledge repositories, and collaborative platforms. Furthermore, It can improve efficiency and competitive advantage by fostering a knowledge-sharing culture within the organization where by employees actively contribute and utilize knowledge assets.

Organizations should focus on strategies that enhance motivation and involvement since employee engagement significantly mediates the relationship between knowledge management and organizational performance. This might include encouraging open communication, empowering employees through training, and recognizing their contributions and this will ultimately leads to higher job satisfaction and improved organizational performance.

Leadership strategies must be carefully tailored to balance knowledge-driven management with employee needs as the effects of knowledge-oriented leadership on engagement is mixed. Managers and leaders should nurture an environment that supports knowledge exchange without negatively impacting the morale by adopting a participatory leadership style that encourages innovation and collaboration.

Generally integrating effective knowledge management process, having employee engagement, and adaptive knowledge-oriented leadership can support Ethiopian private banks to enhance their organizational performance and sustain long-term growth in the increasingly competitive and dynamic financial environment.

### 5.3 Recommendations

Based on the findings and the conclusions of the of the research, the following key recommendations are proposed for Ethiopian banks, particularly Zemen Bank S.C.:

- Implement a well-structured knowledge management system that enables seamless knowledge acquisition, conversion, application, and protection. This system should be technology-enabled but people-centered and integrate resource center, interactive tools, and training creativities to empower employees in effectively managing and utilizing organizational knowledges. It should also support continual learning and process improvements. This can be done by implemented by first conducting a knowledge audit and then designing the system framework around a knowledge management process.
- Development of comprehensive training programs is essential to encourage effective knowledge creation, knowledge sharing, knowledge application and knowledge protection. These initiatives will equip employees with the essential skills that enhance innovation and organizational performance. This can be achieved by hosting regular ‘knowledge café’ and by recognizing and rewarding employees who actively contribute to the knowledge management environment
- Cultivating a strong, organization-wide culture of knowledge sharing is important to unlocking collective intelligence across departments and hierarchical levels. This requires embedding collaboration, mutual trust, and open communication into the bank’s core values and daily workflows. By systematically dismantling silos and incentivizing peer-to-peer learning, Zemen Bank can transform tacit knowledge into actionable insights. This not only accelerates decision-making and operational efficiency but also encourages a continuous cycle of innovation. In an environment where financial services competition is intensifying, such a knowledge-sharing ecosystem becomes a powerful strategic asset which enhance adaptability, improving customer solutions, and reinforcing long-term competitive advantage.
- Improve employee engagement by encouraging open communication, ensuring leadership transparency, implementing effective recognition programs, promoting active participation in decision-making, offer career development opportunities, and nurturing a workplace culture that appreciates and values employee contribution

- Implement leadership development programs that integrate employee needs with knowledge-oriented leadership. Leaders should encourage participatory approaches that empower employees while ensuring strategic, knowledge-driven decision-making to optimize organizational performance. By creating a supportive and collaborative work environment leaders can enhance productivity and contribute to the organization's long-term success.
- Regularly assessing leadership effectiveness is essential for sustaining positive employee outcomes, enabling organizations to refine strategies that increase engagement, productivity, and overall success. Embracing knowledge-oriented leadership (KOL) styles fosters innovation and collaboration, ensuring employees feel valued and motivated to contribute. Therefore, Zemen Bank should enhance knowledge-oriented leadership (KOL) practices to strengthen organizational performance. Leaders must carefully balance knowledge-driven decision-making with employee needs to prevent disengagement and create a more supportive and dynamic work environment.

#### **5.4. Limitations and future scope of this study**

This study serves as a valuable contribution to the field of knowledge management, yet few limitations provide opportunities for possible research in the future. Primary, the research was conducted within a specific time frame in Ethiopia, and findings may vary across different periods, organizations, or economies due to cultural and contextual differences. Second, the study's relatively small sample size presents a constraint, and future research could expand the model using a larger and more diverse sample to enhance generalizability. Third, while this study focuses on the banking sector, which heavily relies on knowledge management for improved organizational performance, future research could extend the analysis to other service industries and the manufacturing sector to evaluate whether similar empirical results hold across different fields. Additionally, transitioning from quantitative methods to qualitative approaches could enrich our understanding of the subject by capturing more refined perspectives and experiences.

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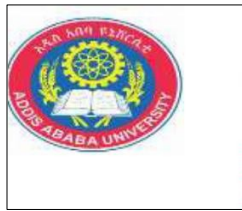
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# Appendix

Survey questionnaire



**Addis Ababa University**

**College of Business and Economics, Department of Management**

**Executive Masters of Business Administration Program**

**A survey on Effect of knowledge management on organization performance**

**Questionnaires to be filled by Zemen Bank employees**

**Dear respondents;**

My name Getinet Fikre, I am currently pursuing my Executive Masters of Business Administration (MBA) at the Addis Ababa University. As partial fulfillment towards the completion of my postgraduate degree, this research titled as **“Effect of Knowledge Management Process on Organizational performance: a moderated mediation model of Knowledge-oriented Leadership and Employee Engagement in the case of Zemen Bank S.C”** is undertaken. Hence, I kindly request you to fill in this questionnaire while assuring you the information that you provide will be treated with confidentiality and shall only be used for the purpose of this academic research. I would also like to remind you that your fair and impartial feedback will make this research a very successful one. You can contact me through my cell phone +251-911-16-29-32 or email me at [getinet6@gmail.com](mailto:getinet6@gmail.com).

**Thank you for your cooperation and assistance sincerely,**

**Part One: General Information**

**Direction: Please answer this part of the questionnaire, by using tick (✓) mark in the boxes provided.**

**1. Gender?**

1. Male                       2. Female

**2. Educational background?**

1. Less than bachelor                       2. Bachelor                       3. Master's and above

**3. Age?**

1. 22 years old or younger                       2. 23-30                       3. 31-40                       4. 40+

**4. Banking Experience?**

1. Less than one year                       2. 1-5 years                       3. 6-10 years                       3. 11-15 years   
4. More than 15 years

**5. Your position in Zemen Bank?**

1. Clerical staff                       2. First-line manager                       3. Middle manager                       4. Top manager

**Part Two: Knowledge management on organization performance related questions**

The following statements are used to exploit the needed information so as to achieve research objective. Thus, please indicate the level of agreement with each statement by making tick on the appropriate number.

**Where, 7 = Strongly Agree, 6 = Agree, 5 = Somewhat Agree, 4 = Neither Agree nor Disagree, 3 = Somewhat Disagree, 2 = Disagree, 1 = Strongly disagree**

S-No	Item	1	2	3	4	5	6	7
<b>Knowledge Management Processes</b>								
<b>Please specify to what extent the following statements fit the knowledge management process in Zemen company:</b>								
<b>1</b>	<b>Knowledge acquisition</b> Adapted from Payal et al. (2019)							
1.1.	The bank has processes for acquiring knowledge about our customers							
1.2.	The bank has processes for acquiring knowledge about our suppliers.							
1.3.	The bank has processes for acquiring knowledge about new products/services within our industry.							
1.4.	The bank has processes for acquiring knowledge about competitors within our industry							
<b>2</b>	<b>Knowledge conversions</b> Adapted from Payal et al. (2019)							
2.1.	The bank has processes for converting knowledge into the design of new products/services.							
2.2.	The bank has processes for converting competitive intelligence into plans of action.							
2.3.	The bank has processes for transferring organizational knowledge to individuals.							

2.4.	The bank has processes for absorbing knowledge from individuals.							
2.5.	During initial conversation, the bank successfully addresses its customer's concern.							
<b>3</b>	<b>Knowledge applications</b> Adapted from Payal et al. (2019)							
3.1.	The bank has processes for applying/using knowledge learned from experiences.							
3.2.	The bank has processes for applying/using knowledge in the development of new products/services.							
3.3.	The bank has processes for applying/using knowledge to solve new problems.							
<b>4</b>	<b>Knowledge protections</b> Adapted from Payal et al. (2019)							
4.1.	The bank has processes to protect knowledge from inappropriate use inside the organization.							
4.2.	The bank has processes to protect knowledge from inappropriate use outside the organization.							
4.3.	The bank has processes to protect knowledge from theft from within the organization.							
4.4.	The bank has processes to protect knowledge from theft from outside the							

	organization.							
<b>5</b>	<b>Questions related to Knowledge-oriented Leadership</b> Adapted from Naqshbandi and Jasimuddin (2018)							
5.1.	Leadership has been creating an environment for responsible employee behavior and teamwork.							
5.2.	Managers are used to assuming the role of knowledge leaders, which is mainly characterized by openness, tolerance of mistakes, and mediation for the achievement of the firm's objectives.							
5.3.	Managers promote learning from experience, tolerating mistakes							
5.4.	Managers behave as advisers, and controls are just an assessment of the accomplishment of objective.							
5.5.	Managers promote the acquisition of external knowledge.							
5.6.	Managers reward employees who share and apply their knowledge							
<b>6.</b>	<b>Questions related Employee engagement</b> Liu et al. (2022).							
6.1.	I really "throw" myself into my job							
6.2.	Sometimes I am so into my job that I lose track of time.							
6.3.	Being a member of this organization is very fascinating							
6.4.	One of the most exciting things for me is getting involved with things							

	happening in this organization							
6.5.	Being a member of this organization makes me come “alive.”							
<b>7.</b>	<b>Organizational Performance</b> Adapted from Payal et al. (2019)							
	Compared with competitors, my organization [...]							
7.1.	Is more successful							
7.2.	Has a greater market share							
7.3.	Is growing faster							
7.4.	Is more profitable							
7.5.	Is more innovative							

Thank you for your time and support!!