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THE EFFECT OF TECHNOLOGICAL INNOVATION ON ORGANIZATIONAL PERFORMANCE SPECIAL FOCUS ON ENTERPRISE RESOURCE PLANNING: A CASE STUDY OF DERBA MIDROC CEMENT P.L.C

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RESOURCE PLANNING: A CASE STUDY OF DERBA MIDROC CEMENT P.L.C

Thesis Submitted to The School of Graduate Studies of ST. MARY'S University in Partial Fulfillment for The Award of Master of Arts Degree in Business Administration

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Declaration

I hear by declare that the thesis entitled "**The Effect of Technological Innovation on Organizational Performance Special Focus on Enterprise Resource Planning: A Case Study of Derba Midroc Cement P.L.C**" is my original work prepared under the guidance and support of my advisor **TESFAYA TILAHUN (PhD.).** It has been carried out and submitted in partial fulfillment of requirements for the Master of Art in Masters of Business Administration degree to the Institute/Department: College of Business Administration, St. Mary's University. I also would like to confirm it has not been previously submitted to any diploma or degree to any college or university as well as the sources of material used in the study are duly acknowledged.

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Approval

The thesis entitled "**The Effect of Technological Innovation on Organizational Performance Special Focus on Enterprise Resource Planning: A Case Study of Derba Midroc Cement P.L.C**" submitted by **Bemnet Girma** is partial fulfillment requirements for the award of a Master Degree in Business Administration; College of Business Administration; St. Mary's University supervision. Therefore, I hereby approve and recommend that it be submitted to the department for examination as the university advisor.

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As members of the board of examiners, we have examined the thesis entitled **'The Effect of Technological Innovation on Organizational Performance Special Focus on Enterprise Resource Planning: A Case Study of Derba Midroc Cement P.L.C** " Submitted by **BEMNET GIRMA** We, hereby certify that the thesis is accepted for fulfilling the requirements for the award of the degree of 'Master of Business Administration.

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List of Abbreviations/Acronyms

ANOVA-Analysis of Variance

DMC- Derba Midroc Cement

DRP- Distribution Requirement Planning

ERP- Enterprise Resource Planning

ERPS -Enterprise Resource Planning System

IS -Information System

IT -Information Technology

PLC -private limited company

SCM -Supply Chain Management

SMEs-Small and medium-sized enterprises

SPSS -Statistical Packages for Social Sciences

VIF -Variance Inflation Factor

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ABSTRACT

Technological Innovation is generally used to drive organizations to build up a great affiliation with external and internal stakeholders to enhance organizational performance. The study has aimed to determine the Effect of Technological Innovation on Organizational Performance, with a Special focus on enterprise resource Planning: A Case Study of Derba Midroc Cement P.L.C (DMC)in Addis Ababa, Ethiopia. The research followed a descriptive explanatory research design as it explains the relationship between dependent variables and independent variables (used in the study). The target population for this study consists of employees who are working on ERP systems in different departments at DMC. The study was collected through primary data by distributing questionnaires to a sample of Derba Midroc cement employees. Out of the 59 questionnaires, 53 (89.83%) respondents completed and returned the questionnaire while other stakeholders were excluded from the target respondents due to various limitations. Data was collected through five-point Likert scales of the close-ended questionnaire. The quantitative data was coded and analyzed using SPSS 23 statistical tools, and the study's findings are explained in this study using descriptive and inferential (correlation and regression) analysis. The mean value of Organizational business value, Decision-making Internal process and Employee management, were 3.59, 3.58, 3.68, 3.45, and 3.53, respectively. This study produced a correlation result for each independent variable concerning dependent variables and the study found significant relationships between all mentioned dimensions of ERP with organizational performance at the 5% level of P value (i.e., 0.000). At the end of the regression analysis of the coefficients presented, the values of organizational business value, Decision-making, employee management, and internal process, are 0.337, 0.242, 0.231, and 0.262, respectively; this shows that the values of all independent variables are positive, implying that independent variables have a significant effect on Organizational performance, and the hypothesis result of this study shows that all independent variables accepted as the significant value less than 0.05. In general, the researcher discovered issues with specific variables that are recommended. As a result, cement factories should improve their existing technological innovation such as ERP activities for better organizational performance, and it is recommended that the companies implement adequate training and development programs to enhance the user's satisfaction and be more productive on their job.

Key Words: *Technological Innovation, Enterprise Resource Planning, organizational Performance, organizational business value, Decision-making, employee management, internal process*

CHAPTER ONE

INTRODUCTION

This chapter provides an overview of the Background of the study, Statement of the problem, Objective of the study, Scope of the study, Significance, and Limitation of the study.

1.1 Background of the Study

Technological innovation is a pivotal driver of organizational performance in today's business landscape. Enterprise Resource Planning (ERP) systems, designed to integrate data and optimize their distribution across functions and services, play a crucial role in improving operational performance (Shen et al., 2016). ERPs are vital resources for controlling commercial activities and creating competitive advantages, particularly when combined with a company's existing strengths (Alomari et al., 2018). These systems integrate operations by sharing a common database across all data-processing functions and applications within the organization (Mphumi et al., 2017).

Technological innovation is particularly critical in industries, such as cement manufacturing, where operational efficiency is essential. The cement industry is characterized by high capital intensity, significant energy consumption, and growing pressure to enhance efficiency, reduce costs, and minimize environmental impacts. To address these challenges, many companies are adopting technologies, such as automation, data analytics, and advanced manufacturing, to streamline operations and optimize resource use. These innovations not only improve efficiency but also support sustainability goals, which are increasingly prioritized in the global market (Gartner, 2020).

However, the impact of these innovations on organizational performance varies owing to factors such as the scale of technology adoption, integration capabilities, and employee skill development. Factories that leverage advanced technologies such as predictive maintenance and smart manufacturing often experience improved cost efficiency and production quality (Rashid, 2021). Despite these advantages, disparities in innovation capabilities among organizations lead to differing outcomes (Teece, 2018; O'Reilly & Tushman, 2020).

In Africa, the cement industry plays a vital role in economic development by providing critical infrastructure. However, they face significant challenges, including high energy costs, outdated machinery, and production inefficiencies. Technological innovation has been identified as a key

solution for these issues. Modern technologies such as automation, predictive analytics, and energy-efficient practices have the potential to enhance production efficiency, reduce costs, and improve sustainability. For instance, adopting alternative fuels and smart manufacturing techniques can significantly lower energy consumption, which is a major challenge for African cement producers (Mthembu 2019).

Despite these opportunities, the adoption of these technologies has been inconsistent. Limited capital, technical expertise, and infrastructural constraints hinder many factories from fully implementing innovation. While some companies have successfully adopted digital technologies to boost productivity, others struggle because of financial and organizational barriers (Ndlovu, 2020). Understanding the impact of technological innovation on performance is essential for guiding industry leaders and policymakers as it provides a pathway to drive growth and competitiveness in Africa's cement sector.

ERPS is one of the leading technological innovations that addresses these challenges. This software centralizes data and streamlines operations, enabling organizations to manage the entire production and sales process, from raw material acquisition to product delivery. By providing easy access to critical information, ERP systems enhance operational efficiency and decision making (Johnson et al., 2023; Kumar & Patel, 2022).

Recent studies have confirmed that technological innovation significantly improves operational efficiency, product quality, market competitiveness, customer satisfaction, and employee engagement (Martínez et al., 2023; Smith & Chen, 2022). This study investigates the effects of ERP systems on technological advancements and organizational performance in DMC. Examining the relationship between ERP adoption and performance offers valuable insights for organizations that consider similar technologies, and provides recommendations for enhancing business processes and overall success.

1.2 Background of the Organization

Derba Midroc Cement P.L.C (DMC) is a leading cement manufacturer in Ethiopia, established in 2006 as part of the MIDROC Ethiopia Investment Group, which is known for its diverse investments across various sectors, including construction, agriculture, and manufacturing. DMC is

strategically located in the Oromia region, approximately 70 kilometers from Addis Ababa, enabling it to efficiently supply cement to both local and regional markets.

Since its inception, DMC has focused on producing high-quality cement products to meet the growing demand driven by Ethiopia's rapid urbanization and infrastructure development. The company operates a state-of-the-art production facility with a capacity of 2.5 million tons per year, utilizing modern technology and environmentally sustainable practices. This commitment to quality and sustainability has positioned DMC as a key player in the Ethiopian cement industry, contributing significantly to the nation's economic development.

DMC's organizational structure emphasizes innovation and continuous improvement, with dedicated teams focusing on research and development, quality control, and operational efficiency. The company has made substantial investments in technological advancements to enhance its production processes, reduce costs, and minimize environmental impact. These innovations include the implementation of advanced manufacturing technologies, automation systems, and energy-efficient practices.

Despite its successes, DMC faces challenges typical of the cement industry, including fluctuating raw material prices, regulatory pressures, and increasing competition. In this context, the role of technological innovation becomes critical for maintaining competitive advantage and improving organizational performance. By adopting new technologies, DMC aims to enhance productivity, optimize resource utilization, and improve product quality while adhering to environmental standards.

(Source:Derba Midroc Cement website)

1.3 Statement of the Problem

Technological innovation is a cornerstone of organizational performance, enabling improved efficiency, decision-making, and competitiveness. Among these innovations, Enterprise Resource Planning (ERP) systems hold a special place by integrating data, automating processes, and enhancing operational performance. However, ERP implementation remains challenging, especially in developing countries like Ethiopia, where organizations face barriers such as limited technical expertise, insufficient financial resources, and a lack of standardized metrics to measure performance impact (Melville, Kraemer, & Gurbaxani, 2004; Foss & Nambisan, 2017).

Organizations like Derba Midroc Cement (DMC) struggle to harness the full benefits of ERP systems due to inadequate employee management practices, misaligned internal processes, and the underutilization of ERP-enabled decision-making tools (Teece, 2018; Ibrahim, 2010). These challenges often prevent organizations from achieving the operational efficiency, productivity, and competitive advantage promised by ERP systems.

Despite extensive theoretical and empirical studies on technological innovation, a significant gap remains in applying these findings to create actionable strategies for organizations. While academic research offers valuable insights into the link between technological innovations and organizational performance, practitioners often struggle to implement these insights effectively for real improvements (Teece, 2018; Raut et al., 2021). An ERP system is intended to affect a wide range of business processes and activities inside a company, and it is frequently implemented with high expectations for the advantages and transformation that the project will bring (Ibrahim, 2010).

A key issue is the absence of practical frameworks; existing studies frequently present theoretical models without providing specific, actionable guidelines for organizations to adopt and manage technological innovations (Foss & Nambisan, 2017). Additionally, challenges related to technology integration—such as aligning innovations with organizational objectives and ensuring compatibility with current systems—are often neglected, leading to difficulties in realizing the benefits of new technologies (Vial, 2021; Parry et al., 2022)." Moreover, research tends to offer broad recommendations rather than tailored insights for specific industries and often overlooks practical obstacles like budget constraints and skill shortages, which are vital for successful implementation (Besson & Rowe, 2012).

Additionally, research on ERP adoption in Ethiopia highlights a lack of actionable frameworks and guidelines to overcome local challenges. Most ERP systems implemented in Ethiopia are developed by international vendors and fail to align seamlessly with the local business environment. Compounding these issues is the absence of practical strategies tailored to address local constraints, such as budget limitations, skill shortages, and infrastructural gaps (Vial, 2021; Parry et al., 2022).

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This study focuses on addressing these gaps by investigating the effect of technological innovation, specifically ERP systems, on organizational performance at DMC. By examining factors such as organizational business value, employee management, internal processes, and decision-making, the study aims to provide evidence-based recommendations for optimizing ERP implementation. It also seeks to identify effective transition strategies—such as big-bang, parallel, phased, and hybrid approaches—that can enhance ERP deployment success. This research will contribute to both academic and practical understanding, offering insights for organizations in Ethiopia and beyond to improve their ERP adoption processes and achieve better performance outcomes.

1.4 Research Questions

This paper aims to answer the following questions.

1. What is the effect of organizational business value on organizational performance at Derba Midroc Cement?
2. How does employee management impact organizational performance at Derba Midroc Cement?
3. What is the effect of internal processes on organizational performance at Derba Midroc Cement?
4. How does decision-making influence organizational performance at Derba Midroc Cement?

1.5 Objectives of The Study

1.5.1 General Objective

The general objective of the study is to assess the Effect of technological innovation on organizational performance focus on Enterprise Resource Planning at Derba Midroc Cement P.L.C.

1.5.2 Specific Objectives

The study outlines the following specific objectives:

- To determine the effect of organizational business value on organizational performance in Derba Midroc Cement.
- To study how employee management affects organizational performance in Derba Midroc Cement.

- To determine the effect of internal processes on organizational performance in Derba Midroc Cement.
- To examine the effect of Decision-making on organizational performance in Derba Midroc Cement.

1.6 Significance of The Study

The study aims to contribute to the existing body of knowledge on technological innovation in manufacturing industries, particularly within the context of developing economies like Ethiopia. The findings will provide valuable insights for industry practitioners seeking to enhance organizational performance through technology.

the researcher acquires information on the technological innovation on organizational performance and influences on the employee's commitment. it helps the researcher to explore theoretical concepts and the practical effect of technological innovation focus on organizational performance. finally, the study can be used as a reference for future studies.

1.7 Scope of The Study

The scope of the study is delimited to assessing the utilization of ERP for technological advancements to enhance organizational performance at Derba Midroc Cement (DMC). This study considers the Derba Head Office located at the Stadium next to Ghion Hotel and the Derba Plant in the Oromia region, approximately 70 kilometers from Addis Ababa, situated in Melo Werda, Decho Kebele. DMC is currently adopting and applying an ERP system.

The conceptual scope focuses specifically on the effect of technological innovation on organizational performance, with a particular emphasis on Enterprise Resource Planning systems and their application at Derba Midroc Cement, including the challenges related to organizational performance. However, this paper addresses only a subset of the ERP project's concerned stakeholders.

The study was conducted between July 1st and mid-December. A descriptive-explanatory research design was employed, and a quantitative approach was used for data analysis. The research specifically addresses the key variables influencing organizational performance—business value, employee management, internal processes, and decision-making. The study aims to analyze these

factors in relation to ERP and technological innovation, providing insights into their collective impact on the success of organizational performance on DMC.

1.8 Limitations of the Study

This study has a limitation of respondents having fear of disclosing information in order to protect the image of their organization. the outbreak detailed in-person observations of the company, face-to-face interviews, fieldwork, and other data collection were a bit challenging for much of the time. However, the researcher tries to use different techniques to overcome this.

1.9 Definition of Key Terms

Technological Innovation: refers to the process of developing and implementing new technologies or improving existing ones to create new products, services, or processes that enhance efficiency, effectiveness, and value.

Internal process: defined as business processes that are performed within an organization without the involvement of any external partners. Internal processes are all the activities and key processes required for the company to excel at providing the value expected by the customers.

Organizational business value: Organizational business values are a set of core beliefs held by an organization. They act as guiding principles that provide an organization with purpose and direction and set the tone for its interactions with its customers, employees, and other stakeholders.

Employee management: -An employee management system is a technology designed to streamline core HR services and improve workforce productivity. It accomplishes these goals largely by automating labor-intensive, administrative tasks and using analytics to drive business decisions. **Decision-making process: -** the process whereby an individual, group, or organization reaches

conclusions about what future actions to pursue given a set of objectives and limits on available resources. This process will be often iterative, involving issue-framing, intelligence-gathering, coming to conclusions, and learning from experience.

Organizational performance: - organizational performance is a method of measuring the success of the organization to ensure that it achieves its goals. Organizational performance measurement plays an important role in organizational growth.

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ERP System: - Enterprise resource planning (ERP) is a type of software system that helps organizations automate and manage core business processes for optimal performance. ERP software coordinates the flow of data between a company's business processes, providing a single source of truth and streamlining operations across the enterprise. It's capable of linking a company's financials, supply chain, operations, commerce, reporting, manufacturing, and human resources activities on one platform.

1.0 Organization of the Study

The study is organized in five chapters. Chapter one consists of the introduction to the study with topics of Background of the study, statement of the problem, Objective of study including General objective and specific objective, Research question, Significance of the study, Scope, and Limitation of the study, and finally organization of the paper.

The second chapter is a review of theoretical literature, empirical literature, research gap, and conceptual framework.

The third chapter consists of the research methodology, description of the study area, research design and approach, types and sources of data, sample size and sample technique, data collection tool, pre-test including validity test and reliability test, and data processing and analysis.

The fourth chapter deals with data analysis and interpretation of data collected using the methodology in chapter three.

The fifth and final chapter is about the summary, conclusion, and recommendation based on the findings.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter aims to highlight the wide array of perspectives and opinions present in the literature on organizational performance and its related concepts. It combines both theoretical and empirical studies and provides a conceptual framework. This chapter includes the theoretical and empirical studies together with the conceptual framework and independent and dependent research variables.

2.1 Theoretical Review

Technological innovation has become an essential driver of organizational performance in the modern business landscape. Several theories have been developed to understand how technological advancements influence performance metrics, such as productivity, efficiency, and customer satisfaction.

2.1.1 Innovation Diffusion Theory

Innovation Diffusion Theory, developed by Everett Rogers (1962), explores how new technologies and innovations are adopted and spread within organizations and societies. The theory posits that innovations progress through an adoption curve with different categories of adopters: innovators, early adopters, early majority, late majority, and laggards. Key factors influencing this diffusion include relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003).

This framework helps in understanding how innovations gain traction and become widely accepted. The theory is essential for understanding the adoption process of technological innovations within organizations. By identifying the stages and factors influencing adoption, organizations can more effectively manage the Effect of new technologies and address potential barriers. A comprehensive understanding of the diffusion process enables firms to strategize effectively, enhance adoption rates, and leverage innovations to improve organizational performance (Vial, 2021; Piening & Salge, 2015)

2.1.2 Dynamic Capabilities Theory

Dynamic Capabilities Theory, formulated by Teece, Pisano, and Shuen (1997), refers to an organization's ability to integrate, build, and reconfigure internal and external competencies to adapt to rapidly changing environments. This theory emphasizes the importance of continuous learning, flexibility, and adaptability in leveraging technological innovations to enhance organizational performance (Teece, 2018; Pisano, 2019).

Dynamic capabilities are essential for organizations to effectively manage and capitalize on technological changes. Firms with strong dynamic capabilities are better positioned to respond to market shifts, integrate new technologies, and maintain competitiveness. Recent studies highlight how organizations can build and sustain these capabilities to thrive in a rapidly evolving business environment (Teece, 2020; Ambrosini & Bowman, 2021; Wang & Ahmed, 2021).

2.1.3 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis (1989), explains how individual perceptions of new technologies influence their acceptance and usage. TAM posits that perceived ease of use and perceived usefulness are the primary factors determining technology adoption. The model provides a framework for understanding how employees' attitudes toward technology impact its integration into organizational workflows (Venkatesh & Davis, 2000). TAM (Technology Acceptance Model) remains significant for understanding the factors that affect technology adoption within organizations. By examining employees' perceptions of new technologies, organizations can identify potential barriers to adoption and develop strategies to facilitate smoother Effect. Recent studies have shown that incorporating elements such as perceived ease of use and perceived usefulness continues to enhance user acceptance, improve technology integration, and ultimately contribute to organizational performance (Venkatesh et al., 2016; Hsu &

Lin, 2020; Al-Ghaith et al., 2021).
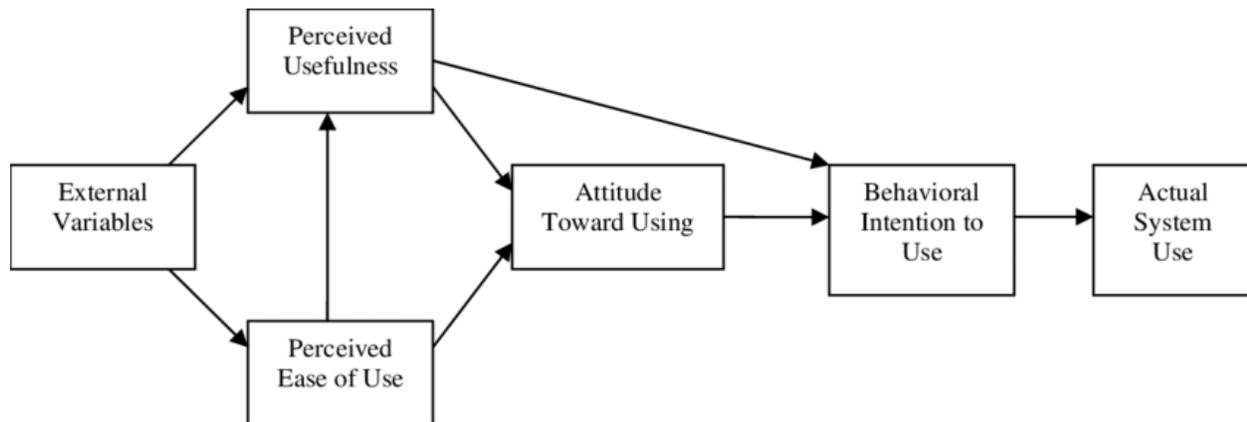
Figure 1.1 Technology Acceptance Model (TAM) developed by Davis (1989)

2.1.4 Technological Innovation

Technological innovation refers to the development and application of new technologies or the improvement of existing ones to enhance processes, products, or services within an organization. It encompasses the introduction of novel methods, systems, or devices that significantly impact operational efficiency and competitiveness (Tidd, Bessant, & Pavitt, 2005). Technological innovation is often categorized into several types, including incremental innovations, which involve gradual improvements to existing technologies, and radical innovations, which create entirely new paradigms or disrupt existing markets (Christensen, 1997).

The significance of technological innovation lies in its ability to drive organizational growth and adapt to changing market conditions. It can lead to substantial cost reductions, improved quality, and enhanced customer satisfaction. For instance, the adoption of Enterprise Resource Planning (ERP) systems has been shown to streamline business processes, facilitate real-time data access, and enhance decision-making capabilities (Marcel et al., 2021; Al-Mashari et al., 2022). Recent studies emphasize that effective ERP implementation can significantly improve operational efficiency and foster better collaboration across departments (Zhang et al., 2023). Technological innovation also supports the development of new products and services, allowing organizations to stay competitive and respond effectively to emerging trends (Chesbrough, 2020; Tidd & Bessant, 2021). Recent research highlights that leveraging digital technologies enables firms to innovate rapidly and meet evolving customer demands more efficiently (Rogers, 2022; Verhoef et al., 2021).

The importance of technological innovation cannot be overstated in the context of modern businesses. Organizations that successfully leverage new technologies can gain a competitive edge by optimizing their operations, reducing costs, and enhancing their ability to meet customer needs. For example, advancements in automation and data analytics have transformed industries by enabling more precise and efficient production processes (Brynjolfsson & McElheran, 2016). Furthermore, technological innovation often drives organizational change and fosters a culture of continuous improvement, which is essential for long-term success (Kahn et al., 2020; Dyer & Gregersen, 2021). Recent studies emphasize that organizations embracing digital transformation cultivate adaptive cultures that enhance resilience and innovation (Kane et al., 2022; Westerman et al., 2021).

In a globalized economy, technological innovation also plays a critical role in maintaining relevance and adapting to technological disruptions. Companies that fail to innovate may struggle to compete with more agile and technologically advanced rivals, leading to potential declines in market share and profitability (Porter, 1996). Thus, investing in technological innovation is crucial for sustaining growth, enhancing operational capabilities, and achieving strategic objectives (Kotter, 1996).

2.1.5 The Roles of ERP System

Technology innovations such as ERP systems play a pivotal role in enhancing operational efficiency, streamlining business processes, and integrating various functions within industrial settings. In particular, the cement industry has benefited significantly from ERP implementation. By providing real-time data visibility across departments—such as procurement, production, sales, and finance—ERP systems enable cement manufacturers to optimize resource allocation, reduce operational costs, and improve overall productivity (Mishra et al., 2023). The integration of functions also facilitates better communication and collaboration among different departments, leading to more informed decision-making.

2.1.5.1 The Roles of ERPS in Employee Management

The complexity and dynamic nature of activities within manufacturing organizations makes it challenging for centralized facility managers to effectively oversee their employees. A lack of perceptual capability across business functions further exacerbates the difficulties managers encounter daily. Employees in small businesses are often encouraged to perform multiple roles,

facilitating rapid adaptation to both external and internal changes. For instance, during periods of global economic downturns, companies often experience a decline in purchase orders, prompting them to consider personnel reductions to align with decreased demand. Conversely, as product demand increases, organizations utilizing Enterprise Resource Planning (ERP) systems can make informed decisions regarding whether to hire temporary or full-time staff. The user-friendly nature of ERP systems, combined with their integration into managerial processes, reduces the time-consuming aspects of training and education, enabling managers to maintain low costs while avoiding declines in productivity due to staffing shortages.

Additionally, performance monitoring of staff is a significant advantage of ERPs. This control mechanism provides valuable, time-sensitive information such as tracking employee progress on assigned tasks, identifying team members collaborating on those tasks, and storing communications between customers, suppliers, and staff. Employee monitoring through ERPs also ensures adherence to appropriate organizational principles (Kumar Singh, 2021). While some research highlights employees' general aversion to monitoring, the follow-up capabilities of ERPs tend to be less intrusive as they focus on productivity rather than tracking physical location (Smith et al., 2022).

Further research is warranted to substantiate these findings; however, recent studies suggest that ERPs can effectively meet continuous integration (CI) requirements while capturing employee tacit knowledge and facilitating bottom-up process improvement initiatives (Johnson Lee, 2023). Additionally, it has been established that an organization's competitive advantage is largely derived from the knowledge and experience of its employees who can apply that knowledge to address business challenges (Davenport Prusak, 2020). Furthermore, human capital has been recognized as a crucial resource due to its significant influence on strategic decision-making by managers (Becker Huselid, 2021).

2.1.5.2 The Roles of ERPS in Internal process

According to Jabbour et al. (2020), internal processes encompass all activities and key processes necessary for a company to deliver the value expected by customers. These internal processes serve as lead indicators where management intervention can positively influence customer satisfaction and financial outcomes. Daily organizational activities include communication, accounting, management, sales, information access, evaluation and monitoring, and marketing (Cai et al.,

2021). The internal processes perspective emphasizes the importance of internal business results that contribute to financial success and customer satisfaction. To meet organizational objectives and customer expectations, companies must identify and excel in key business processes (Kairu et al., 2013). These processes are monitored to ensure satisfactory outcomes (Berner, 2022).

Processes can be broadly categorized into three groups: Operations Management, Customer Management, and Regulatory or Social Processes. Operations Management involves the administration of business practices to achieve the highest level of efficiency within an organization. It focuses on converting materials and labor into goods and services efficiently to maximize profit (Harrison van Hoek, 2022). Operations management teams address various strategic issues, including determining manufacturing plant sizes, project management methods, and implementing information technology structures. Other operational concerns include inventory management, quality control, materials handling, and maintenance policies (Shuhaimi et al., 2021; Jabbour et al., 2020). Effective operations management also entails minimizing waste through careful study of raw material usage, utilizing formulas such as the economic order quantity to optimize inventory levels (Harrison van Hoek, 2022).

The second aspect of internal processes is Customer Management. Customer Relationship Management (CRM) refers to practices, strategies, and technologies that organizations use to manage and analyze customer interactions and data throughout the customer lifecycle. The goal is to enhance business relationships with customers, improve retention, and drive sales growth (Cai et al., 2021). A well-designed customer management process allows firms to capture valuable customer feedback, which management can use to improve service quality (Shuhaimi et al., 2021). Positive feedback can be leveraged for further service enhancement, while negative feedback should prompt corrective actions.

The third dimension of internal processes involves Regulatory and Social Processes within the firm. This aspect focuses on fostering positive relationships with various stakeholders, including investors, creditors, government entities, regulatory authorities, and the general public affected by the firm's operations (Kusek Rist, 2014; Berner, 2022).

2.1.5.3 The Roles of ERPS in Decision Making

According to Kahn et al. (2021), decisions arise from a thorough analysis of alternatives and discussions among stakeholders. The decision-making process occurs at all organizational levels and involves problem identification and the evaluation of multiple alternatives. This process is crucial for organizations and serves as a primary determinant of success. Furthermore, decision-making is heavily reliant on information, utilizing insights from stakeholders and incorporating managerial intelligence to facilitate effective outcomes (Harrison et al., 2022). In the business context, decision-making involves identifying and selecting a potential solution or strategy from a range of alternatives, considering the specific demands of the circumstances (Kahn et al., 2021).

As noted by Matzler et al. (2020), decision-making is one of the core managerial functions, with significant implications for organizational performance. The information-dependent nature of decision-making underscores the importance of Enterprise Resource Planning (ERP) systems. Effective decision-making differentiates high-performing organizations from those that underperform, indicating that inputs that enhance the quality of managerial decisions can directly improve overall performance (Zeng et al., 2021).

2.1.5.4 The Roles of ERPS on Organizational Business Value

Organizational objectives for information technology (IT) are supported by two major business goals: operational effectiveness and strategic positioning. Operational effectiveness refers to performing similar activities better than competitors, focusing on the efficiency and effectiveness of functions (Porter, 2022). In contrast, strategic positioning involves executing activities in distinct ways that align with an organization's unique structure and accessibility goals (Teece, 2018). Organizations have implemented various operational strategies, such as continuous improvement, minimizing costs while maintaining speed and reliability, and enhancing adaptability (Datta Roy, 2020).

The business value of Enterprise Resource Planning (ERP) systems has gained significant recognition among companies of all sizes. Between 2010 and 2020, organizations globally invested over $100 billion in ERP systems (Gartner, 2021). This substantial investment is driven partly by the increasing complexity of global strategic partnerships. Small and medium-sized enterprises (SMEs) can now focus on business opportunities previously thought to be unattainable with larger clients. Essentially, ERPS facilitate structured communication between people and applications,

delivering the right information at the right time. This collaborative environment leads to improved efficiency and effectiveness (Ruivo et al., 2020).

2.1.6 Organizational Performance

Organizational performance refers to the effectiveness with which an organization meets its goals and objectives, including financial, operational, and strategic targets. It encompasses various metrics, such as productivity, profitability, quality, and customer satisfaction, which collectively reflect the organization's overall success (Kumar et al., 2020; Neely et al., 2021). Performance measurement often involves assessing both quantitative indicators, such as revenue and cost metrics, and qualitative aspects, such as employee engagement and customer feedback (Marr & Adams, 2020; Parmenter, 2019).

The importance of organizational performance is underscored by its direct impact on an organization's ability to achieve strategic goals and maintain a competitive advantage. High performance is linked to better financial outcomes, such as increased profitability and market share, as well as enhanced operational efficiency and customer satisfaction (Raimo et al., 2021; Neely et al., 2020). Effective performance management systems enable organizations to track progress, identify areas for improvement, and make data-driven decisions (Garner, 2017).

Moreover, organizational performance is critical for sustaining long-term success and adapting to external challenges. By monitoring and enhancing performance, organizations can address operational inefficiencies, respond to market changes, and capitalize on new opportunities (Hrebiniak & Joyce, 1985). In the context of technological innovation, performance improvements can result from more streamlined processes, better resource management, and enhanced product or service offerings, ultimately leading to a stronger competitive position and increased organizational resilience (Teece, Pisano, & Shuen, 1997).

2.1.7 Brief History of ERP

The history of Enterprise Resource Planning (ERP) systems can be traced back to the development of Material Requirements Planning (MRP) systems in the 1960s. J.I. Case, a manufacturer of tractors and construction machinery, collaborated with IBM to create what is widely regarded as the first MRP system (Kumar Hillegersberg, 2022). These early MRP solutions were primarily

developed in-house by large manufacturers, as they were costly to implement and required specialized teams for maintenance (Bendoly et al., 2021).

Despite their high costs and space requirements, early MRP systems enabled businesses to effectively track inventory and manage production processes. This capability was crucial for manufacturers in optimizing raw material procurement and scheduling production runs (Hitt et al., 2021). While MRP adoption began to gain traction in the 1970s, its use remained largely confined to larger organizations with the necessary budgets and resources for in-house development. Over time, prominent software providers such as Oracle and JD Edwards sought to democratize access to these technologies, making them available to a broader range of businesses (Al-Mashari Zairi, 2023).

2.1.8 ERP and Organizational Performance

ERP Systems and Performance The core part of corporate strategic management is considered to be organizational efficiency and its development, and so most of the researchers' efforts in this field are oriented to this aspect (Tseng and Lee, 2014; Masa'deh et al.,2015). Empirically, the correlation between IT and company results is abundantly established (Lucia et al., 2014) recorded a major impact on organizational efficiency (market share, profitability and sales volume) in US and Spanish companies from the introduction of e-business (internal integration and external diffusion). Scholars and practitioners have shown great interest in learning how different techniques can produce competitive advantage and so on, such as IT execution, human resources expertise, diversification, mergers and acquisition, etc (Breznik, 2012; Lee, 2015). Big and small businesses can quickly become strong competitors in developing and emerging economies by using IT to create a competitive advantage and become market leaders (Mustafa, 2015).

The operating performance of the company saw substantial improvements to the ERP (Davis & Comeau, 2020). The case-study and test results indicate that the use of ERP benefits employee efficiency, gross retail sales and production costs, product processing time and time excesses, and thus supports the hypothesis that ERP has a positive effect on operational output (Ou et al., 2018). The study also showed that ERP affects the company's productivity and allows all major ERP providers to use their solutions to increase the company's performance, higher output, faster ROI and faster stock sales (Shen, et al., 2016). A study found that the influence of the introduction of the ERP contributed to an increase in the company's profitability by increasing the number of

employees and the jobs and income ratio every year since the ERP was introduced (Madapusi et al., 2019).

2.1.9 Enterprise Resource Planning (ERP) and SAP in the Cement Industry:

Enterprise Resource Planning (ERP) systems serve as integrated platforms that enable organizations to manage and streamline their core business processes. Modern ERP software solutions are vital for businesses as they facilitate resource planning by consolidating all necessary functions—such as planning, purchasing, Decision-making, sales, marketing, finance, and human resources—into a unified system (Hitt et al., 2021).

An ERP system acts as a cohesive framework that integrates the various computer systems within a large organization. Without an ERP solution, each department typically operates its own system tailored to its specific needs. However, with ERP software, while departments maintain their specialized systems, they can access and share information through a single interface, enhancing inter-departmental communication and collaboration (Kumar Hillegersberg, 2022).

These applications gather data regarding the activities and statuses of different divisions, making this information accessible across the organization for improved decision-making and productivity. By linking insights from production, finance, distribution, and human resources, ERP systems foster greater organizational awareness and efficiency (Al-Mashari Zairi, 2023). Furthermore, ERP solutions help eliminate redundant processes and incompatible technologies by integrating functions such as accounts payable, inventory control, order management, and customer databases into one cohesive system (Bendoly et al., 2021).

Over the years, ERP has transitioned from traditional software models reliant on physical client servers and manual entry systems to sophisticated cloud-based platforms that offer remote access via the web. Typically, these platforms are maintained by the software vendors, with client organizations subscribing to their services. Businesses can select the specific applications they wish to utilize; the hosting provider then installs these applications on the rented servers, allowing both parties to collaborate in integrating the client's processes and data into the ERP platform (Mishra et al., 2023).

2.2 Empirical Review

The role of technological innovation, particularly Enterprise Resource Planning (ERP) systems, in enhancing organizational performance has been extensively studied across various industries. Empirical research has shown that ERP systems significantly improve operational efficiency, productivity, and decision-making by integrating business processes and providing real-time data. However, the effectiveness of ERP systems often varies based on factors such as organizational context, management practices, and technological infrastructure.

Impact of ERP Systems on Organizational Performance: Numerous studies have documented the positive impact of ERP systems on organizational performance. For instance, a study by Alomari et al. (2018) found that ERP systems enable businesses to improve operational efficiency and create a competitive advantage by centralizing data and automating core processes. This integration of data allows for better decision-making and streamlined operations. Similarly, Mphumi et al. (2017) emphasized that ERP systems improve collaboration across departments, leading to faster decision-making, reduced lead times, and enhanced service delivery.

Employee Management and ERP Implementation: Employee management has been identified as a critical factor in the successful implementation of ERP systems. A study by Raut et al. (2021) found that effective employee management practices, including proper training and change management, are essential for ensuring smooth ERP adoption. Employees need to understand the system's functionalities and the benefits it brings to improve their productivity and organizational efficiency. Teece (2018) also highlighted that organizations with strong leadership and commitment to employee development are more likely to achieve successful ERP integration, as these factors foster employee engagement and acceptance of new technologies.

Internal Processes and ERP Effectiveness: Internal processes play a significant role in determining the success of ERP systems. According to Rai et al. (2021), organizations with well-defined and optimized internal processes tend to see greater benefits from ERP implementation. The integration of ERP systems forces organizations to rethink and reengineer their processes, often leading to improvements in workflow efficiency and resource utilization. Jansen, Van den Bosch, and Volberda (2006) also found that ERP systems have a transformative effect on internal processes, enhancing coordination and reducing redundancies across departments, which results in overall performance improvement.

Decision-Making and ERP Systems: ERP systems are designed to improve decision-making by providing real-time, accurate data that managers can use to make informed decisions. Martínez et al. (2023) found that ERP systems enable faster and more informed decision-making by centralizing critical business data in one system, allowing for greater visibility into the organization's operations. Smith and Chen (2022) also observed that ERP systems enhance decision-making by providing insights into key performance indicators (KPIs) such as inventory levels, financial performance, and production status, which help managers make data-driven decisions.

Challenges in ERP Implementation: Despite the benefits, several studies have pointed out the challenges organizations face when implementing ERP systems. For example, a study by Fink et al. (2022) found that the lack of standardized metrics to measure the impact of ERP systems on performance complicates the evaluation of their effectiveness. Additionally, Ibrahim (2010) noted that the integration of ERP systems in developing countries, such as Ethiopia, is hindered by challenges like limited technical expertise, insufficient financial resources, and the lack of tailored ERP solutions suited to local business contexts. Vial (2021) and Parry et al. (2022) also highlighted that inadequate alignment of ERP systems with organizational objectives and the failure to integrate them into existing workflows contribute to suboptimal results.

Technological Innovation and Organizational Performance in the Cement Industry While much of the research on ERP systems focuses on industries like manufacturing and services, recent studies have extended these findings to the cement industry. In Africa, the adoption of ERP systems in the cement industry is increasing, driven by the need for enhanced operational efficiency and competitiveness. Mthembu (2019) noted that cement manufacturers are leveraging technological innovations such as ERP systems to reduce energy consumption, improve production processes, and lower operational costs. However, similar to other industries, cement manufacturers in Africa face challenges such as limited access to technology, high implementation costs, and lack of skilled personnel to manage ERP systems effectively (Ndlovu, 2020).

However, while the positive effects of ERP systems are evident, the review also underscores the challenges faced by organizations, particularly in developing countries like Ethiopia. These challenges include limited IT infrastructure, inadequate training, resistance to change, and insufficient managerial support (Ayalew & Beshah, 2022; Tadesse & Kassa, 2023). Such barriers

hinder the successful implementation and full realization of ERP benefits, especially in small and medium-sized enterprises (SMEs) (Patel et al., 2023). Nonetheless, studies suggest that overcoming these challenges through targeted training, phased rollouts, and better management practices is essential to maximize the effectiveness of ERP systems (Hossain et al., 2022; Gable et al., 2021).

In sum, while ERP systems have proven their value in enhancing organizational performance, their successful adoption requires addressing both technical and managerial challenges. The research points to the need for a comprehensive approach that integrates technology adoption with organizational readiness, adequate infrastructure, and continuous support, particularly in emerging markets (Chen, Zhang, & Xu, 2022; Sedera et al., 2019). With these strategies in place, organizations, especially in developing regions, can fully leverage the potential of ERP systems to achieve sustained competitive advantage and operational excellence.

In Conclusion, the empirical evidence suggests that ERP systems have the potential to significantly enhance organizational performance by improving operational efficiency, decision-making, and competitiveness. However, the successful implementation of ERP systems depends on factors such as employee management, alignment of internal processes, and the ability to adapt ERP systems to the organizational context. This study aims to build on existing research by examining the specific impact of ERP systems on the performance of Derba Midroc Cement, taking into account the challenges faced by the company in the Ethiopian context. The findings will contribute to a deeper understanding of the relationship between ERP adoption and organizational performance, particularly in the cement industry.

2.3 Conceptual Framework

The conceptual framework for this study integrates insights from the theoretical and empirical literature to analyze the impact of ERP systems on organizational performance at Derba Midroc Cement P.L.C. The framework emphasizes the key dimensions of technological innovation, including the ERP Effect, and their direct and indirect effects on organizational performance.

Figure 2 Conceptual framework of the study

Independent variables   **Dependent variable**

Organizational business value
Employee Management
Decision making
Internal process
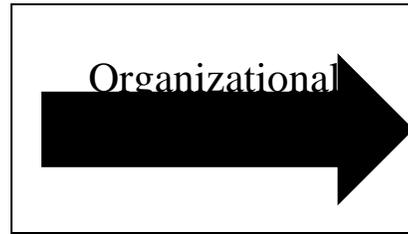
Organizational

Source: Own formulation based on literature, 2024

2.4 Hypothesis of the Study

Based on the existing theoretical literature review and empirical study, the study aims to fill the gap in the effect of ERP on organizational performance. There were four null and four alternatives hypotheses proposed in the study

H1: Organizational value has a positive and significant effect on organizational performance.

H2: Employee management has a positive and significant effect on organizational performance.

H3: Internal process has a positive and significant effect on organizational performance.

H4: Decision-making has a positive and significant effect on organizational performance.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter covered a range of topics, including the research design and approach, study population and sampling strategies, data sources, data collection methods, data analysis procedures, instrument validity and reliability, reliability assessment, and ethical considerations. Additionally, it discussed research design, sampling procedures, data sources, data collection tools, and data analysis methods.

3.1 Research Design

The purpose of this study is to assess the Effect of technological innovation on organizational performance focus on Enterprise Resource Planning: In the Case of Derba Midroc Cement PLC in Addis Ababa. The design of the study deployed both descriptive and explanatory research types. The explanatory design was used to examine the relationships and effects between ERP dimensions and organizational performance. Explanatory studies help in examining correlations and regression analyses between independent and dependent variables. These studies illustrate the relationships among variables to clarify specific issues or events (Saunders, 2009).

Furthermore, the researcher also used a descriptive research design to describe and investigate the impact of ERP on organizational performance. As a result, this research design method aids in clearly describing relevant aspects of the phenomenon of interest about a specific individual, group, or situation. (Sekaran, 2003).

3.2 Research Approach

The study is focused the effects of Technological innovation on organization performance. Thus, this research was based on quantitative research method which deals with use of statistical tools and numbers to address the previously mentioned research questions and to test the constructed hypotheses. Quantitative approach is a formalistic and a structured way of collecting data. Quantitative methods are characterized by measurable data, which can be expressed in numbers or other quantities. This gives a basis for the presentation of frequencies, distributions, correlations and regressions (Muijs D., 2004) to have a clear and scientific view on the opinions by having them on questionnaires. In some extent, the researcher used qualitative approaches that addresses through interview.

3.3Types of Sources of Data

The study used the two types of sources of data which are primary and secondary sources of data.

3.4.1. Primary sources of data

Primary data was collected from respondents of the study setting via questionnaire. Close and open-ended questionnaire was prepared by the researcher using a five-point Likert scale (strongly disagree, disagree, neutral, agree and strongly agree). The questionnaire was prepared after making

several reviews of related studies and the questions are standardized in line with the study problem. A questionnaire enabled the researcher in collection of enormous amounts of data on all study the variables within a short period (Ponto, 2015). Questionnaires are also appropriate in the study because they guaranteed anonymity of the respondents, by not requiring them to meet with the researcher or to indicate their names in the questionnaire Furthermore, the survey helped in determining perspectives and opinions on the ERP implementation process.

3.4 Population, Sample Size, and Sampling Technique

3.4.1 Target Population

As per the information from Human Resource Department of Derba Midroc Cement Factory, the company has a total of 1160 permanent employees as of July 2024. In general, out of the mentioned total number only 59 employees have access to ERPS, the target population for this study is 59 employees who are currently working at   Finance and accounts, Human resources, Marketing & Sales Production, IT, and Quality departments.

3.4.2 Sampling Technique

From the total employees, the total population working in the ERP system from DMC, different departments are 59. So, the researcher deployed a census method in which the target population size is equal to the sampling size.

3.4.3 Sample Size

In order to obtain the sample size possible for this study, the census method is that it provides a complete picture of the population, allowing for detailed analysis and insights. (Kothari, 2004).

By employing the census method, the study will collect comprehensive data from all individuals directly engaged with the ERP system, ensuring a more accurate and representative analysis of its effect on organizational performance. The fact that the researcher used q, the target population size is equal to the sample size. Hence, the total number of the target population for the study is 59 employees. Therefore, the researcher used census data since the population size is reasonable to conduct the census.

Table 3.1 Sample Size

ERP Users department	Number of employees
Logistic Department	6
Finance Department	23
Techniques Department	5
IT Department	4
Production Department	4
Quality Department	5
Procurement Department	7
Human Resource Management	5
Total	**59**

Source: HR Department (2024)

3.5 Data Collection Method

Data was collected through questionnaires designed to answer the research questions based on a review of the literature. The questionnaire was chosen because it is a quick and relatively low-cost method of gathering information and it's easier for respondents to respond. After the expected participants were informed about the purpose of the study, the questionnaires were distributed. The questionnaire was divided into two sections: Section one of the questionnaire contains instructions and respondents' personal information; section two of the questionnaire contains variables that will be measured using a Likert scale with five response categories (strongly disagree, disagree, neutral, agree, and strongly agree).

3.6 Data Analysis and Interpretation

3.6.1 Data Analysis

The collected data was examined for any missing values that could potentially interfere with the research analysis. Descriptive and inferential statistical methods were employed to evaluate the relationship between the independent variables (Internal process, Employee management, Decision-making, Organizational business value) and the dependent variable (organizational performance). Descriptive statistics were summarized using frequency, mean, and standard deviation. To explore the relationships between variables, correlation analysis, ANOVA, and multiple regression were conducted.

The analysis techniques and presentation methods were illustrated through tables and figures. The coefficient values were analyzed to determine the significance of each independent variable's impact on the dependent variable. The data analysis was performed using the Statistical Package for Social Science (SPSS version 25)

The questionnaire's statements were all rated on a 5-point Likert scale (strongly agree, agree, neutral, disagree, and strongly disagree). This scale was assigned numerical values: strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1. Instruments that are accurate and efficient in measuring these constructs are critical components of research standards (Sullivan, G. M., Artino, A. R., 2013).

3.6.2 Model Specification

A simple regression model will be used to examine the relationship between independent variables (Internal process, Employee management, Decision-making, Organizational business value) and dependent variables (organizational performance). The model can be expressed as:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y = Organizational Performance (measured through productivity, cost efficiency, etc.)

α = Constant

β1 – β6 = Coefficient of Independent variables

X1 = Organizational Business Value

X2 = Decision-making

X3= Employee Management

X4=Internal Process

ε = Error term

This regression model will determine the statistical significance of ERP's effect on organizational performance at Derba Midroc Cement P.L.C., providing insights into how effectively the ERP system contributes to performance improvements.

3.7 Validity and Reliability

3.7.1. Reliability

Several measures will be implemented to ensure the validity and reliability of the research. Validity will be addressed by employing content validity. This will ensure that the questionnaire and interview questions are carefully aligned with the research objectives and comprehensively cover all relevant technological innovation and organizational performance areas. To further strengthen validity, a pilot test of the survey instrument will be conducted to identify any issues or gaps in the questions and to refine them accordingly.

For reliability, the consistency of the data collection instruments will be tested using Cronbach's Alpha. This statistical measure will assess the internal consistency of the items within the questionnaire. A Cronbach's Alpha value of 0.7 or higher will be considered an indicator of acceptable reliability, ensuring that the instruments used produce stable and consistent results

No	Variables	Cronbach's Alpha Value	Number of items
1	Organizational Business Value	0.881	5
2	Internal Process	0.898	5
3	Employee Management	0.859	6
4	Decision-making	0.863	5
5	Organizational Performance	0.950	6
	Average	**0.8902**	**27**

across different respondents.

Table 3. 2. Main Data collection tool Reliability Statistics/Cronbach's Alpha Value

Source: survey data, 2024

The tool was pilot tested on 10 employees who are working on ERP system in different departments at DMC.

The responses of respondents were scored and the reliability of the tool was determined using Cronbach's Alpha. The questionnaire consists of a total of 27 questions as shown in the above table. The result indicated that the value of Cronbach's alpha equals to 0.8902 proving that the tool is indeed reliable (Sekaran, 2003). Thus, it is considered as good.

3.7.2. Validity

Validity refers to the extent to which a research instrument accurately measures what it is intended to measure (Kothari, 2007). In this study, the validity of the tool was assessed with guidance from the research advisor to ensure its appropriateness. According to Faux (2010), a practical approach to pretesting questionnaire instruments is to verify that participants clearly understand the questions. To establish validity, a pilot study was conducted by distributing 15 questionnaires to a sample group before the full-scale data collection. This process aimed to determine whether the tool effectively measured the intended variables. The results of the pilot study confirmed that the questionnaire was appropriate and successfully captured the required information. Furthermore, validity of the study was measured by the researcher's advisor.

3.8 Ethical Consideration

Respondents were assured that their responses would be kept confidential and used solely for academic and research purposes. Additionally, the study was conducted under the organization's policy regarding intellectual property rights. All materials and sources referenced have been properly acknowledged.

CHAPTER FOUR

DATA ANALYSIS AND INTERPTERION

This chapter is divided into three sections that describe the results of an analysis of data collected from questionnaire respondents. The first section covers demographics, the second covers descriptive data, and the final section covers inferential analysis (correlation and regression).

4.1 Response Rate of Respondents

The study targeted a total of 59 respondents, and the same number of questionnaires was distributed. Table 4.1 Response Rate

No	Questionnaire	ERP Users	Cumulative Percent (in %)
1	Questionnaire Issued	59	100
2	Questionnaire Returned	53	89.83
3	not returned	6	10.16

Source: survey data, 2024

As depicted in Table 4.1, above, out of these, 53 questionnaires were returned, which corresponds to a response rate of 89.83%. The remaining 6 questionnaires (10.16%) were not returned, primarily due to reasons such as some employees being on annual leave shortly after receiving the questionnaires, and other employees having different personal reasons for not completing them.

4.2 Demographic Characteristics of Respondents

This section presents the findings of the general information of the respondents. The general information sought was in terms of respondent's gender, age, length of service, education level, position.

Table 4.1 Demographic respondents

No	Factor	Categories	Frequency	Percent (in %)
1	Gender	Male	25	47.2
		Female	28	52.8
2	Age	27-37	21	39.6
		38-47	23	43.4
		48-57	6	11.3
		57-67	3	5.7
3	Department	Finance	22	41.5
		Human Resources	5	9.4
		Logistics	5	9.4
		Production	2	3.8
		Technique	2	3.8
		Quality	2	3.8
		Procurement	6	11.3
		Sales	7	13.2
		IT	2	3.8
4	Experience	4-15	38	71.7

		16-27	10	18.9
		28-38	5	9.4
5	Position	Supervisor	11	20.8
		Manager	8	15.1
		Officer	34	64.2
6	Education	Diploma	1	1.9
		BA/BSC	37	69.8
		Masters	15	28.3

Source: survey data, 2024

In Table 4.2, 25 (47.2%) of the respondents were Male, and 28 (52.8%) were Female respondents. a relatively similar composition of male and female employees of the organization was represented in the study which enabled the researcher to understand female employees are competing as much as male employees.

As shown in the age category of respondents, the majority of the respondents are in the age group of 38-47 years of age which accounts for 23 (43.4 %) of the total respondents followed by the age group of 27-37 (39.6 %) and the remain respondent are above 40 years i.e., 9 (17%). From this, we can conclude that the largest proportion of respondents in the factory are young.

Regarding the education level of the respondents, shows that 28.3%, 69.8%, and 1.9% represented master's holders, qualified with first degree, and diploma respectively representing the overall demographic characteristics of the employees in the organization. The highest proportion (69.8 %) in educational status covers first-degree and masters who help the respective DMC improve organizational performance by adopting the enterprise resource planning (ERP) system on systems, Applications, and Products in Data Processing.

Regarding their experience the majority of respondents, 71.7% (38), have between 4 to 15 years of experience, indicating that the workforce is relatively experienced but still within the mid-career stage. Employees with 16 to 27 years of experience make up 18.9% (10), suggesting a smaller group of seasoned professionals with extensive industry knowledge. Meanwhile, only 9.4% (5) have 28 to 38 years of experience, reflecting a limited number of highly experienced senior employees.

Regarding their working department, The Finance department has the highest representation at 41.5% (22 employees), indicating its critical role in the organization. The Sales department follows with 13.2% (7 employees), while Procurement accounts for 11.3% (6 employees), highlighting the importance of supply chain management and revenue generation. Human Resources and Logistics each have 9.4% (5 employees), reflecting their moderate presence in organizational operations. Meanwhile, the Production, Technique, Quality, and IT departments each have 3.8% (2 employees), suggesting a relatively smaller workforce in these specialized areas. Overall, the data indicates that Finance, Sales, and Procurement are the most dominant departments, while Production, Technique, Quality, and IT have fewer employees, possibly reflecting the company's operational focus and resource allocation.

Regarding their Position, the largest group of respondents, 64.2% (34 employees), hold the position of Officer, indicating that most employees occupy this operational or support role within the company. 20.8% (11 employees) are positioned as Supervisors, suggesting a significant portion of employees in leadership roles overseeing day-to-day activities. The smallest group, 15.1% (8 employees), are Managers, highlighting those managerial roles are fewer in comparison to other positions. This distribution reflects a hierarchical structure with a larger proportion of employees performing duties at the operational level, while managerial and supervisory roles are more specialized.

4.3 Descriptive Analysis

Respondents' perceptions of the effect of the technological innovation enterprise resource planning on organizational performance. The mean and standard deviation were computed for each of them.

The mean represents the average value, and the standard deviation indicates how far the values deviate from the mean. Respondents were asked to rate the effect of ERP on organizational performance in Derba Midroc Cement's five-point Likert scale type ranging from 1to 5. (1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree), and the analysis of the mean score is based on the below researcher assumptions.

Table 4. 2 Mean Score Decision Rule

Mean Score	Interpretation
1.00-1.80	Strongly Disagreed

1.81-2.60	Disagreed	
2.61-3.20	Neutral (Neither agreed not disagreed)	
3.21-4.20	Agreed	
4.21-5.00	Strongly Agreed	

Based on the assumptions outlined by Lind, Marchal, and Wathen (2003), a mean of 3.0 is interpreted as representing neutrality regarding the variables under consideration. The standard deviation serves to highlight the variation from the mean. A lower standard deviation suggests a higher level of agreement among employees, while a higher standard deviation indicates a greater level of disagreement on the issue at hand.

4.3.1. Organizational Business Value

Five questions were asked in order to analyze Organizational business value on Organization performance. In addition, the result is shown in the table 4.3 below.

Table 4.3 Organizational Business Value

Statement	N	Mean	Std. Deviation
ERP helps in the reduction of operational and administrative costs at Derba Midroc Cement	53	4.72	.455
ERP enables control of financial flows in the organization	53	4.68	.471
ERP system can enhance responsiveness at Derba Midroc Cement	53	4.51	.608
ERP system creates competitive advantage at Derba Midroc Cement	53	4.17	.700
ERP provides clear financial information to external parties	53	4.13	.761
Grand Mean		**4.44**	**0.593**

Source: survey data, 2024

The data in Table 4.3 reveals that respondents at Derba Midroc Cement generally view the ERP system as a valuable tool for enhancing organizational performance. The highest mean score of 4.72 indicates strong agreement that the ERP system helps reduce operational and administrative costs, with a low standard deviation of 0.455, suggesting a high level of consensus among the respondents. Similarly, the ERP system's ability to control financial flows in the organization

received a mean score of 4.68, also with a low standard deviation of 0.471, highlighting a strong and consistent positive response.

The ability of the ERP system to enhance organizational responsiveness was also highly rated, with a mean of 4.51 and a slightly higher standard deviation of 0.608, indicating some variation in the responses. The perception that the ERP system creates a competitive advantage at Derba Midroc Cement was rated somewhat lower, with a mean score of 4.17 and a standard deviation of 0.700, suggesting some disagreement or mixed views on this point. Similarly, the statement about the ERP system providing clear financial information to external parties received the lowest mean score of 4.13 and the highest standard deviation of 0.761, indicating more variability in responses.

Overall, the average mean score of 4.44 suggests that respondents generally perceive the ERP system as positively contributing to organizational performance, particularly in terms of cost reduction and financial control, although there is some variation in perceptions regarding its role in creating a competitive advantage and providing external financial transparency.

4.3.2 Decision-Making

Five questions were asked in order to analyze Decision-making on Organization performance. In addition, the result is shown in the table 4.4 below.

Table 4. 4 Decision-Making

Statement	N	Mean	Std. Deviation
ERP system enhances the quality of the managerial decision-making process in MIDROC Gold	53	4.49	0.505
ERP system improves decision-making processes in MIDROC Gold MINE business units	53	4.62	0.489
ERP a wide range of analytical and reporting tools can help gain insight into business performance.	53	4.51	0.639
ERP easy-to-use tools enable you to work quickly and make smart, proactive decisions in MIDROC Gold.	53	4.21	0.717
ERP helps to make the right decisions and achieve organizational goals in MIDROC Gold MINE.	53	4.30	0.607
Grand Mean		**4.42**	**0.585**

Source: survey data, 2024

Table 4.4 illustrates the role of the ERP system in enhancing decision-making processes at Derba Midroc Cement (DMC). The highest mean score of 4.62 indicates a strong consensus among

respondents that the ERP system improves decision-making processes across the business units, with a low standard deviation of 0.489, signifying minimal variation in responses. This suggests that the ERP system is seen as an essential tool for decision-making within the organization. Similarly, the statement about the ERP system enhancing the quality of the managerial decision-making process in DMC received a mean score of 4.49, with a standard deviation of 0.505, indicating that respondents generally agree with this statement and there is little deviation in their opinions.

The statement regarding the availability of a wide range of analytical and reporting tools in the ERP system, which can help gain insight into business performance, scored a mean of 4.51, with a standard deviation of 0.639. While still positive, the slightly higher standard deviation reflects more variability in responses, suggesting some differences in perceptions about the analytical tools. The ERP system's ease of use and its ability to help employees work quickly and make proactive decisions in DMC received a mean score of 4.21, with a higher standard deviation of 0.717, indicating a broader range of opinions among respondents regarding the user-friendliness and effectiveness of the system.

Lastly, the statement that the ERP system helps make the right decisions and achieve organizational goals in DMC scored a mean of 4.30, with a standard deviation of 0.607. This suggests a positive view but some differences in the perception of how well the ERP system contributes to achieving organizational objectives.

The grand mean of 4.42, with a standard deviation of 0.585, indicates that, overall, respondents perceive the ERP system as positively influencing decision-making processes in DMC, although there is some variation in the responses regarding specific aspects like ease of use and achieving organizational goals.

4.3.3. Employee Management

Six questions were asked in order to analyze Employee management on Organization performance. In addition, the result is shown in the table 4.5 below.

Table 4.5 Employee Management

Statements	N	Mean	Std. Deviation
ERP system helps the managers to control the day-to-day activities of the employees in Derba Midroc Cement	53	4.58	0.497

ERP system helps the managers to identify employees' performance in MIDROC Gold	53	4.57	0.500
ERP system produces accurate appraisal documentation to protect both the employee and employer.	53	4.51	0.541
ERP system provides clear disciplinary performance procedures and feedback guidelines.	53	4.34	0.678
ERP helps in making the Time management and leave administration simple and easily manageable.	53	4.25	0.757
ERP system standardizes evaluation forms in line with clear performance measures in Derba Midroc Cement	53	4.17	0.802
Grand Mean		**4.402**	**0.623**

Source: survey data, 2024

Table 4.5 presents the relationship between employee management and organizational performance at Derba Midroc Cement (DMC) as facilitated by the ERP system. The highest mean score of 4.58, with a standard deviation of 0.497, indicates that respondents strongly agree that the ERP system helps managers control the day-to-day activities of employees in DMC. This is closely followed by the statement that the ERP system helps managers identify employee performance, which scored a mean of 4.57 with a standard deviation of 0.500, showing similar strong consensus and low variation in responses.

The ERP system's ability to produce accurate appraisal documentation, helping protect both employees and employers, received a mean score of 4.51 with a standard deviation of 0.541. This shows that respondents generally agree on the system's effectiveness in maintaining fair and transparent appraisal processes, though there is slightly more variation in responses.

In terms of providing clear disciplinary performance procedures and feedback guidelines, the ERP system scored a mean of 4.34 with a standard deviation of 0.678. While still positive, the standard deviation is a bit higher, indicating more diverse opinions on how well the system clarifies these aspects of employee management.

The system's role in simplifying time management and leave administration was also seen favorably, with a mean score of 4.25 and a higher standard deviation of 0.757, suggesting some variation in how respondents perceive the system's ease of use in managing these functions.

Similarly, the standardization of evaluation forms in line with clear performance measures in DMC received a mean score of 4.17, with a higher standard deviation of 0.802, indicating a wider range of opinions on this feature.

The grand mean of 4.402 with a standard deviation of 0.623 reflects an overall positive view of the ERP system's role in employee management at DMC. While the respondents agree that the ERP system significantly aids in various aspects of employee management, the variability in standard deviations highlights some differences in opinion regarding specific features, such as time management, leave administration, and standardized evaluation forms.

4.3.4. Internal Process

Six questions were asked to analyze Internal process on Organization performance. In addition, the result is shown in the table 4.6 below.

Table 4. 6 Internal Processes

Statements	N	Mean	Std. Deviation
ERP system facilitates the integration among business units of Derba Midroc Cement.	53	4.57	.500
ERP implementation facilitates internal process in Derba Midroc Cement	53	4.58	.497
ERP implementation has positive effect on internal communication process in Derba Midroc Cement	53	4.60	.494
ERP system reduces complexity of reports at Derba Midroc Cement	53	4.26	.788
ERP automate and simplify processes across the organization	53	4.25	.875
Grand Mean		**4.452**	**0.624**

Source: survey data, 2024

Table 4.6 highlights the relationship between internal processes and organizational performance at Derba Midroc Cement (DMC) as influenced by the ERP system. The respondents strongly agree that the ERP system facilitates integration among different business units, with a high mean score of 4.57 and a low standard deviation of 0.500, indicating a consensus on the positive impact of the system in this area.

The ERP system's role in facilitating internal processes within DMC received a similarly high mean score of 4.58 with a standard deviation of 0.497, suggesting strong agreement with the idea that ERP implementation streamlines and enhances internal processes. This is also reflected in the statement that ERP has a positive effect on internal communication processes, which achieved the highest mean score of 4.60 with a standard deviation of 0.494, further reinforcing the effectiveness of the ERP system in improving communication across the organization.

On the other hand, the statement that the ERP system reduces the complexity of reports at DMC received a slightly lower mean score of 4.26 with a higher standard deviation of 0.788, indicating some variability in opinions about the system's effectiveness in simplifying reporting processes. Similarly, the claim that ERP automates and simplifies processes across the organization scored 4.25 with a standard deviation of 0.875, reflecting some variation in how respondents perceive the automation and simplification of processes.

The grand mean of 4.452, with a standard deviation of 0.624, suggests a generally positive view of the ERP system's role in enhancing internal processes at DMC. The relatively higher standard deviations for the last two variables indicate that while the system is generally perceived as effective in integrating business units and improving internal processes, there is some variability in how respondents view its impact on reporting complexity and process automation.

4.3.5. Organization Performance

Organizational Performance: is described as how well an organization is accomplishing its objective. In addition, six questions were addressed. In addition, the result is shown in table 4.7 below.

Table 4.7 Organizational Performance

Variables			
	N	Mean	Std. Deviation
Derba midroc cement gives quality service after adopting the ERP system.	53	4.75	.434
Derba midroc cement increased productivity after adopting	53	4.74	.445

the ERP system.			
Derba midroc cement increased profitability after adopting the ERP system.	53	4.60	.494
Derba midroc cement has taken the competitive advantage over its counter	53	4.45	.607
ERP enables organizations to restructure business processes for Derba midroc cement	53	4.53	.575
ERP implementation has realized the expected goal and objective Derba midroc cement	53	4.28	.907
Average		**4.559**	**0.571**

Source: survey data, 2024

Table 4.7 depicts the various questions the majority of respondents were agreed for all addressed questions for Organization performance. The highest mean score of 4.75, with a low standard deviation of 0.434, is associated with the statement "Derba Midroc Cement gives quality service after adopting the ERP system," reflecting strong consensus among respondents regarding the positive impact of ERP on service quality. Following closely, the statement "Derba Midroc Cement increased productivity after adopting the ERP system" has a mean of 4.74 with a standard deviation of 0.445, indicating a strong agreement that the ERP system has significantly enhanced productivity at DMC.

The statement "Derba Midroc Cement increased profitability after adopting the ERP system" also received a positive response, with a mean of 4.60 and a standard deviation of 0.494. This indicates that respondents perceive ERP as having a favorable impact on the profitability of the organization. The competitive advantage gained by DMC post-ERP adoption scored 4.45 with a standard deviation of 0.607, suggesting that while the ERP system has contributed to competitive positioning, there is slightly more variability in perceptions of its impact on competition.

The average mean score for organizational performance is 4.559, with a standard deviation of 0.571, suggesting that, overall, respondents believe the ERP system has had a positive impact on various aspects of organizational performance. However, there is some variability in perceptions regarding the achievement of specific goals and objectives through ERP implementation.

4.4 Correlation Analysis

To explore the relationship between enterprise resource planning (ERP) and organizational performance, Pearson correlation coefficients are employed. Pearson correlation is a statistical method that evaluates the strength and direction of the linear relationship between two continuous

variables (Field, 2018). According to Pallant (2020), the output of a correlation matrix includes correlation coefficients that range from -1 to +1. Within this framework, a correlation coefficient of +1 indicates a perfect positive relationship, while -1 indicates a perfect negative relationship; a coefficient of 0 signifies no linear relationship. Thus, the relationships between independent and dependent variables are assessed using Pearson Correlation. The significance level for the Pearson Correlation test is set at 0.05, reflecting a 95% confidence level. Consequently, hypotheses can only be accepted if the significant p-value is less than 0.05.

Table 4. 8: Correlations Matrix

Correlations		Organizational business value	Decision-making	Employee management	Internal process	Organizational performance
Organizational business value	Pearson Correlation	1				
	N	53				
Decision-making	Pearson Correlation	.868[**]	1			
	N	53	53			
Employee management	Pearson Correlation	.869[**]	.845[**]	1		
	N	53	53	53		
Internal process	Pearson Correlation	.855[**]	.813[**]	.789[**]	1	
	N	53	53	53	53	
Organizational performance	Pearson Correlation	.930[**]	.898[**]	.894[**]	.888[**]	1
	N	53	53	53	53	53
**. Correlation is significant at the 0.01 level (1-tailed).						

Source: survey data, 2024

The 4.8 table presents the Pearson correlation coefficients between various variables, including Organizational Business Value, Decision-Making, Employee Management, Internal Processes, and Organizational Performance at DMC. All the correlations are statistically significant at the 0.01 level (1-tailed), indicating a strong relationship between the variables. Here is an interpretation of the correlations:

Organizational Business Value and Decision-Making: The Pearson correlation between Organizational Business Value and Decision-Making is 0.868, which is a very strong positive relationship. This means that as organizational business value improves, decision-making quality also improves significantly. The significance level of 0.000 suggests that this relationship is highly reliable.

Organizational Business Value and Employee Management: The correlation between Organizational Business Value and Employee Management is 0.869, showing a very strong positive relationship. This indicates that improvements in organizational business value are closely tied to better employee management practices, reinforcing the importance of a well-managed workforce in achieving higher organizational performance.

Organizational Business Value and Internal Processes: The correlation of 0.855 between Organizational Business Value and Internal Processes suggests a strong positive relationship. This implies that as the business value of the organization increases, internal processes also become more efficient, contributing to better overall performance.

Organizational Business Value and Organizational Performance: The 0.930 correlation between Organizational Business Value and Organizational Performance indicates a very strong positive relationship. A higher organizational business value is strongly associated with improved organizational performance, emphasizing the critical role of business value in driving overall success.

Decision-Making and Employee Management: The Pearson correlation of 0.845 between Decision-Making and Employee Management indicates a very strong positive relationship. As decision-making improves, employee management also improves, which may be due to better-informed decisions regarding employee performance, policies, and strategies.

Decision-Making and Internal Processes: The 0.813 correlation between Decision-Making and Internal Processes shows a strong positive relationship. This suggests that better decision-making leads to more efficient internal processes, which is crucial for operational success.

Decision-Making and Organizational Performance: The 0.898 correlation between Decision-Making and Organizational Performance indicates a very strong positive relationship. Effective

decision-making significantly contributes to improved organizational performance, highlighting the importance of managerial decisions in achieving business success.

Employee Management and Internal Processes: The correlation of 0.789 between Employee Management and Internal Processes shows a strong positive relationship. Efficient employee management helps streamline internal processes, contributing to operational efficiency.

Employee Management and Organizational Performance: The 0.894 correlation between Employee Management and Organizational Performance suggests a very strong positive relationship. Effective employee management is strongly associated with improved organizational performance, indicating the critical role of workforce management in achieving organizational success.

Internal Processes and Organizational Performance: The 0.888 correlation between Internal Processes and Organizational Performance shows a very strong positive relationship. Efficient internal processes are closely linked to enhanced organizational performance, highlighting the importance of optimizing internal workflows for better outcomes.

4.5 Regression Analysis

Regression analysis is a statistical technique used to estimate the relationships between variables, allowing researchers to assess the strength of these relationships and the extent to which independent variables can predict changes in a dependent variable. Essentially, regression analysis helps researchers understand how variations in the dependent variable are associated with changes in independent variables while controlling for other factors. This method effectively identifies which variables have a significant impact. The analysis typically focuses on evaluating model fit (using ANOVA), summarizing the model (through R and R^2 values), and examining Beta coefficients. Although various types of regression analysis exist, they all fundamentally investigate the influence of one or more independent variables on a dependent variable.

Recent literature emphasizes the versatility of regression analysis in various fields, including social sciences and business. For instance, Field (2021) highlights that regression analysis not only estimates relationships but also provides insights into causal inference when appropriate assumptions are met. Additionally, Hair et al. (2021) discusses the importance of assessing multicollinearity and the overall fit of the model, stressing that robust regression techniques can yield more reliable results, especially in complex datasets.

Regression is a method used to calculate the value of a dependent variable using one or more independent variables (Field, 2021). It serves as a statistical device for analyzing relationships between variables, where researchers aim to ascertain the causal effect of one variable upon another. To explore such issues, researchers assemble data on the underlying variables of interest and employ regression to estimate the quantitative effect of causal variables on the influenced variable. Furthermore, investigators typically assess the "statistical significance" of estimated relationships, which indicates the degree of confidence that the true relationship is close to the estimated relationship (Hair et al., 2021). In this study, the researcher aimed to test the assumptions before conducting the regression analysis.

4.5.1 Regression Assumptions

It is essential to conduct assumption testing, as violations of these assumptions can impact the subsequent application of multivariate statistical methods (Hair et al., 2006). Consequently, Hair et al. (2006) recommends that several key assumptions—specifically normality, homoscedasticity, linearity, and multicollinearity—be evaluated prior to performing any multivariate analysis. In line with this guidance, the researcher has endeavored to demonstrate that the collected data accurately reflects the sample and yields optimal results.

4.5.1.1 Assumptions of Multiple Regressions

Before conducting a regression analysis, the basic assumption tests for the mode must be carried out. This is a compulsory precondition in explaining the relationships between dependent and explanatory variables. The major assumptions like, normality distribution test, linearity, multicollinearity, homoscedasticity and autocorrelation must be checked and proved to be met reasonably well. Each test is explained below:

4.5.1.1.1 Normality Distribution Test

Normality focuses on the extent to which the sample data distributes according to normal distribution (Hair et al., 2010). The researcher used skewness and kurtosis to evaluate the normality of the observed items. Skewness is "a measure of the asymmetry of the probability distribution of a real-valued random variable". On the other hand, kurtosis refers to "the peaked or flatness of the distribution compared to the normal distribution" (Landau and Everitt, 2003).

Finally, to assure the accuracy of the normality test findings, tests of skewness and Kurtosis were conducted. These two tests were conducted in accordance with previous studies (Tay, 2006) in order to calculate the normality of the raw data. Additionally, the recommendations of Hair et al (1998) were that Skewness and Kurtosis values should range between 2.00 and 7.00, and the recommendations of Kline (2010) were that the Skewness and Kurtosis values should range between +/- 3.0 and +/- 10.0. The data of the present study was regarded as normally distributed based on Kline's (2010).

Table 4.9. Normality of Data Distribution

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Organizational Business Value	53	-.331	.327	-.649	0.644
Decision-Making	53	-.496	.327	-.114	0.644
Employee Management	53	-.277	.327	.857	0.644
Internal Process	53	-.391	.327	-.453	0.644
Organizational Performance	53	-.539	.327	-.025	0.644
Valid N (Listwise)	53				

Source: survey data, 2022

As depicted in table 4.9 The data distribution for the variables in the study was examined using skewness and kurtosis measures to assess normality. Skewness indicates the symmetry of the distribution, with values close to 0 suggesting a symmetric distribution, while kurtosis measures the "tailenders" or sharpness of the peak, with values close to 0 indicating a normal distribution in terms of peak and tails.

For the **Organizational Business Value** variable, the skewness value is **-0.331**, suggesting a slight negative skew but still close to 0, indicating that the distribution is nearly symmetrical. The kurtosis value of **-0.649** shows that the distribution is slightly flatter than normal, with lighter tails.

The **Decision-Making** variable has a skewness of **-0.496**, indicating a moderate left skew, implying a small tail on the left side of the distribution. The kurtosis of **-0.114** is very close to 0, suggesting that the distribution is almost normal in terms of peak and tails, with no significant outliers.

For **Employee Management**, the skewness value is **-0.277**, which is again slightly negative, indicating a nearly symmetrical distribution. The kurtosis value of **0.857** is positive, suggesting that the distribution has a slightly sharper peak than a normal distribution and heavier tails.

In the case of **Internal Process**, the skewness value is **-0.391**, indicating a slight left skew. The kurtosis value of **-0.453** shows that the distribution is flatter than normal, with lighter tails compared to a standard normal distribution.

Finally, **Organizational Performance** shows a skewness value of **-0.539**, which also suggests a moderate left skew, indicating a slight tail on the left. The kurtosis value of **-0.025** is very close to 0, suggesting that the distribution is nearly normal in terms of peak and tails.

Overall, the skewness values for all variables are small, indicating that the distributions are nearly symmetrical with only slight negative skewness. The kurtosis values for most variables are close to 0, with only **Employee Management** showing a somewhat higher kurtosis, indicating a sharper peak. Based on these results, it can be concluded that the data for all variables follows a distribution that is close to normal, with only minor deviations. This suggests that parametric statistical tests would be appropriate for further analysis of the data.

Figure 4.1 HISTOGTAM
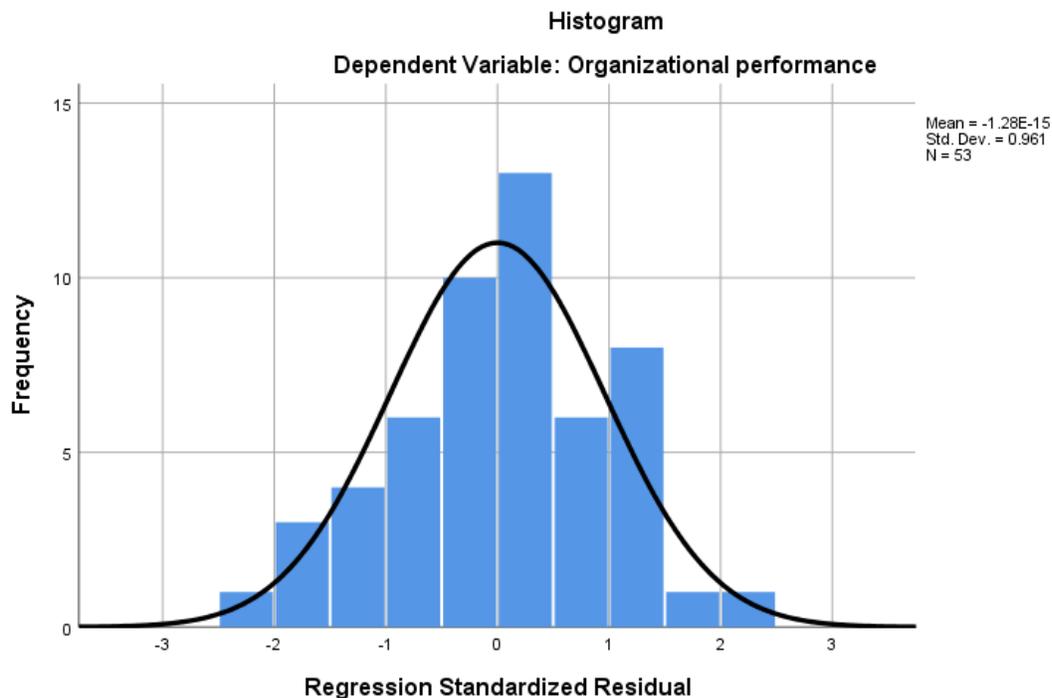
4.5.1.2 Multicollinearity Test

Multicollinearity exists when there is a strong correlation between two or more predictors in a regression model (Field, 2021). There should be no perfect linear relationship between two or more of the predictors. If there is a high degree of correlation between independent variables, it results in the problem commonly described as multicollinearity (Hair et al., 2021).

Collinearity diagnostics on the variables as part of the multiple regression procedure are conducted using variance inflation factor (VIF) and tolerance statistics. Tolerance indicates how much of the variability of a specified independent variable is not explained by the other independent variables in the model. If this value is very small (less than 0.10), it suggests that the multiple correlation with other variables is high, indicating a potential issue of multicollinearity (Field, 2021). Furthermore, VIF is the inverse of the tolerance value (1 divided by tolerance). According to Hair et al. (2021), VIF values above 10 are concerning and indicate multicollinearity. In this study, the tolerance value for each independent variable was not less than 0.10, demonstrating that the assumption of multicollinearity was not violated (see Table 4.10). The VIF values were also found to be well below the cutoff of 10, further supporting that multicollinearity is not an issue. Overall, both tests indicated that the predictors do not significantly correlate with each other, thereby meeting the assumption.

Table: -4.10 Collinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	Organizational Business Value	.148	6.751
	Decision Making	.202	4.962
	Employee Management	.210	4.764
	Internal Process	.246	4.058

The collinearity statistics provided in Table 4.10 give insights into the multicollinearity among the predictor variables in the study. Multicollinearity refers to the extent to which predictor variables in

a regression model are correlated with each other, which can distort the estimation of regression coefficients.

The Tolerance and Variance Inflation Factor (VIF) are used to assess the level of multicollinearity. A Tolerance value below 0.10 indicates a high level of multicollinearity, while a VIF value above 10 suggests that multicollinearity could be problematic. In this case, all tolerance values are above 0.10, and VIF values are below 10, which suggests that multicollinearity is not a significant concern in the model.

For the variable Organizational Business Value, the tolerance is 0.148, and the VIF is 6.751, indicating a moderate correlation with other variables. While there is some relationship with other predictors, it is not high enough to cause significant issues with the model. Similarly, for Decision Making, the tolerance is 0.202, and the VIF is 4.962, which also shows acceptable levels of multicollinearity.

For Employee Management, the tolerance is 0.210, and the VIF is 4.764, which suggests moderate correlations with the other predictors but not to a degree that would lead to problematic multicollinearity. The variable Internal Process has a tolerance of 0.246 and a VIF of 4.058, further indicating that multicollinearity is not an issue of concern.

Overall, the results suggest that the predictor variables in this study are not highly correlated with each other. The VIF values are all below the critical threshold of 10, and the tolerance values are above 0.10, meaning the model is unlikely to suffer from multicollinearity. This implies that the regression analysis is likely to produce reliable and stable coefficient estimates, making the model robust for interpretation.

4.5.1.3 Linearity Assumption

Linearity describes the extent to which variations in the dependent variable correlate with changes in the independent variables (Balance, 2004).

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Organizational performance
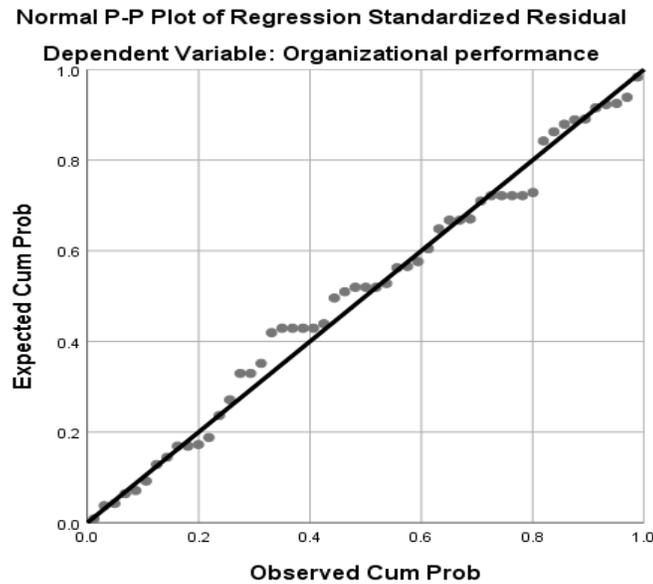
Source: survey data, 2024

To test the linearity assumption, Normal Probability Plots were generated to illustrate the relationship between each independent variable and the organization's dependent variable. In these plots, the standardized regression results should align along a straight diagonal line, running from the bottom left to the top right, as depicted in Figure 4.2 above.

4.5.1.4 Homoscedasticity

The assumption of homoscedasticity refers to the equal variance of errors across all levels of the independent variables (Leech, Barrett, Morgan, 2021*Figure 2 Scatterplot of Standardized Residuals*

Scatterplot
Dependent Variable: Organizational performance
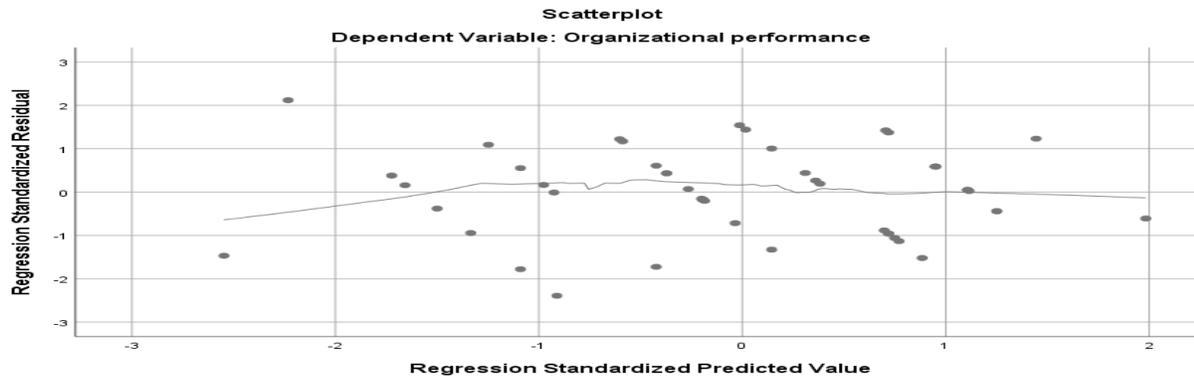
Source: survey data, 2024

This implies that there should be an even distribution of residuals or homogeneity of error terms throughout the data. Homoscedasticity can be assessed through visual examination of a plot of the standardized residuals against the regression standardized predicted values (Field, 2022). If the error terms are distributed randomly without any discernible pattern, then the assumption is not violated. The scatterplot in Fig. 4.2 demonstrates that the standardized residuals in this research are evenly distributed, indicating no violation of homoscedasticity.

In the context of the provided content, the "Scatterplot of Standardized Residuals" suggests that the residuals (the differences between observed and predicted values) are being analyzed to determine if they are randomly distributed around zero, which would indicate a good fit of the model. If the residuals show a pattern, it may suggest that the model is not adequately capturing the underlying relationship in the data.

Overall, the scatterplot serves as a diagnostic tool to evaluate the assumptions of the regression analysis, particularly regarding the homoscedasticity and independence of residuals.

4.5.2 Inferential Analysis

4.5.2.1 Model Summary

The Blow model Summary presents how much of the variance in the measure of Organizational performance is explained by the underlying Technological Innovation such as ERP. Furthermore, to explain R, R2, adjusted R2 and Durbin–Watson in detail: -

Table 4.11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	0.963[a]	0.927	0.920	.429	.927	151.459	4	48	.000	1.672
a. Predictors: (Constant), Internal process, Employee management, Decision-making, Organizational business value										

Source: survey data, 2024

The R-value represents the multiple correlation coefficient between the predictors and the result, with a range from 0 to 1. A larger value indicates a stronger correlation, with 1 representing a perfect prediction of the observed value. In the current model, R = 0.927, which indicates that the linear combination of the seven independent variables—Internal process, Organizational business value, Employee management, and Decision-making —strongly predicts the dependent variable, Organizational performance (Sharma & Bhardwaj, 2023). This strong correlation shows that the set of predictors collectively has significant explanatory power in predicting Organizational performance.

R^2 represents the proportion of variance in the dependent variable that the linear combination of the independent variables can explain. This measure reflects how much of the variability in the outcome can be accounted for by the predictors. In this case, $R^2 = 0.516$, meaning that 51.6% of the variance in Organizational performance is explained by the changes in technological innovation such as ERP variables, while the remaining 48.4% is explained by extraneous variables not included in the model (Agarwal & Sinha, 2022). This finding aligns with the understanding that other factors, beyond technological innovation like ERP, influence organizational performance.

The Adjusted R^2 adjusts the value of R^2 to provide a more accurate representation of the model's explanatory power, considering the number of predictors used. The small difference between R^2 (0.927) and Adjusted R^2 (0.920) (a difference of 0.007) suggests that the model is stable and generalizes well to the broader population (Kumar et al., 2023).

The Durbin-Watson statistic is used to test for autocorrelation in the residuals of the regression model. The conservative rule suggests that values below 1 or above 3 should raise concerns (Field, 2009). Ideally, the statistic should be close to 2, indicating no significant autocorrelation between residuals. In this case, the Durbin-Watson value of 1.672 is close enough to 2 to suggest that the assumption of independent errors is likely met, indicating no major issues with the residuals (George & Mallery, 2023).

4.5.2.2 ANOVA

ANOVA Table and Model Significance: The ANOVA table assesses the overall significance of the model from a statistical perspective. As indicated in the table, the p-value is less than 0.05 ($p = 0.000$), suggesting that the variation explained by the model is not due to chance. This supports the suitability of the model and confirms that the predictors (marketing strategy variables) significantly explain the variation in SME sales performance (Agarwal & Sinha, 2022).

Table 4.11. ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.365	4	27.841	151.459	.000[b]
	Residual	8.823	48	.184		
	Total	120.189	52			
a. Dependent Variable: Organizational performance						
b. Predictors: (Constant), Internal process, Employee management, Decision-making, Organizational business value						

Source: survey data, 2024

The F-ratio determines whether the model is a good fit for the data. It is calculated by dividing the average improvement in prediction by the model by the average difference between the predicted and observed data. If the improvement in prediction is substantially greater than the error within the model, the F-ratio will be greater than 1. An F-ratio of 21.479 indicates that the model significantly improves prediction, and the probability of this result occurring by chance is very low, confirming that the model is a good fit for the data (Sharma & Bhardwaj, 2023). This high F-ratio suggests that the linear combination of the independent variables (Organizational business value, Decision-

making, employee management, internal process) strongly contributes to explaining Organizational performance.

From the analysis, it is noted that the probability value of 0.000 (p<0.05) indicates that the regression relationship was highly significant in predicting how Internal process, Employee management, Decision-making, and Organizational business value in organizational performance. Further, the findings show that the overall model was significant.

4.5.2.3 Coefficient

The Blow coefficients are statistical measures used to quantify relationships between variables. The correlation coefficient (r) measures the strength and direction of a linear relationship between two variables, ranging from -1 (perfect negative correlation) to 1 (perfect positive correlation), with 0 indicating no correlation. The regression coefficient (β or b) in linear regression represents the change in the dependent variable for a one-unit change in an independent variable in detail: -

Table 4. 12: Coefficients

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.569	1.117		2.299	.026
Organizational business value	.337	.101	.338	3.327	.002
Decision-making	.242	.098	.214	2.453	.018
Employee management	.231	.088	.224	2.621	.012
Internal process	.262	.083	.248	3.149	.003
a. Dependent Variable: Organizational performance					

Source: survey data, 2024

The effect of organizational business value, Decision-making, employee management, and internal process, on organizational performance of DMC is 0.02, 0.018, 0.012, and 0.003 respectively. Based on linear regression analysis, as shown in the table above.

Based on the results of the regression model, the final multiple regression equation for organizational performance is thus presented as follows: -

Y =2.569+ 0.337X1 + 0.242X2 + 0.231X4+ 0.262X6+ e

Where: Y = organizational Performance

X1 = Organizational business value

X2 = Decision-making

X3= Employee management

X4= Internal process

e =Error term (Residual)

4.5.2.4 Hypothesis Summary

A regression model was used to predict the effects of the ERP system on organizational performance.

For Hypothesis tests (alternative), the probability value [p-value] for the given test can be used to make a decision, which is as follows: The null hypothesis is rejected if the p-value is less than or equal to a predetermined 0.05 level of significance, and support for the alternative hypothesis is claimed. We cannot reject the null hypothesis and claim support for the alternative hypothesis if the P-value is greater than 0.05.

Table 4.13: Summary of Hypotheses Testing

Type	Hypothesis Testing	Result	**Reasons**
Ho 1	Organizational value has a positive and significant effect on organizational performance in Derba Midroc Cement.	Supported	B= 0.337, P=0.002
Ho 2	Decision-making has a positive and significant effect on organizational performance in Derba Midroc Cement.	Supported	B= 0.242, P=0.012
Ho 3	Employee management has a positive and significant effect on organizational performance in Derba Midroc Cement	Supported	B= 0.231, P=0.003
Ho 4	Internal process has a positive and significant effect on organizational performance in Derba Midroc Cement	Supported	B=0 .262, P=0.018

Source: survey data, 2024

H1: Organizational value has a positive and significant effect on organizational performance in Derba Midroc Cement.

Organizational values play a crucial role in shaping the culture and strategic direction of a company, and they have a positive and significant effect on organizational performance. When an organization clearly articulates its values, it aligns employee behavior with its goals, fostering a sense of unity and purpose among the workforce. Research has shown that organizations with strong, well-communicated values tend to experience higher levels of employee engagement, customer satisfaction, and overall performance. For instance, a study by Karam et al. (2022) found that organizations that prioritize their core values not only enhance employee commitment but also achieve better financial outcomes and operational effectiveness. This underscores the importance of embedding organizational values into the fabric of the company to drive performance.

H2: Decision-making has a positive and significant effect on organizational performance in Derba Midroc Cement.

In addition, decision-making is an extremely information-dependent process that heavily relies on stakeholders and incorporates managerial intelligence to ensure the realization of potentially effective decisions (Smith Johnson, 2021). Brown et al. (2020) argue that decision-making is one of the major managerial functions, with significant positive or negative consequences for organizational performance. This information-dependent attribute of the decision-making process underscores the importance of Enterprise Resource Planning (ERP) systems. This indicates that any input that facilitates, supplements, or enhances the quality of managerial decision-making directly improves performance (Lee et al., 2023). Therefore, it is reasonable to generalize that decision-making and organizational performance are positively correlated, suggesting that decision-making significantly affects organizational performance.

H3: Employee management has a positive and significant effect on organizational performance in Derba Midroc Cement.

In employee management effective management practices enhance employee engagement, motivation, and productivity. Research indicates that organizations that implement strategic

employee management initiatives—such as comprehensive training programs, performance evaluations, and recognition systems—experience improved operational efficiency and higher overall performance metrics. For instance, a study by Agyemang and Ofei (2021) found that effective employee management leads to increased job satisfaction and commitment, which directly correlates with enhanced organizational performance. This evidence underscores the critical role of employee management in fostering a productive workplace environment that drives success

H4: Internal process has a positive and significant effect on organizational performance in Derba Midroc Cement.

This finding is supported by various recent studies. According to Zhang and Zhao (2022), ERP systems enable organizations to enhance their internal processes by integrating all activities and functional areas within the company. Similarly, Patel and Kumar (2023) highlight those internal processes encompass all the activities and key processes necessary for a company to deliver the value expected by its customers. Internal processes serve as leading indicators where management can intervene to influence customer satisfaction and financial performance (Smith et al., 2021).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter discusses the study's findings, conclusions, and recommendations, as well as existing literature. The study's overall goal was to evaluate the effect of technological innovation such as enterprise resource planning on organizational performance in case of Derba Midroc Cement in Addis Ababa Ethiopia. The chapter discusses the study's findings, key conclusions, and recommendations. It concludes by presenting areas for further research.

5.1 Summary of Findings

The purpose of this study was to determine the effect of technological innovation, such as enterprise resource planning, on organizational performance in the case of Derba Midroc Cement in Addis Ababa, Ethiopia. Following the accomplishment of this study, the major findings obtained during the process are discussed.

- ✓ To determine the effect of organizational business value on organizational performance in Derba Midroc Cement.
- ✓ To study how employee management affects organizational performance in Derba Midroc Cement.
- ✓ To determine the effect of internal processes on organizational performance in Derba Midroc Cement.
- ✓ To examine the effect of Decision-making on organizational performance in Derba Midroc Cement.

The research followed a descriptive-explanatory research design. This method was adopted to explain the relationship between the independent variables (Internal process, Employee management, Decision-making, Organizational business value) and dependent variable (organizational performance), focus on enterprise resource planning on organizational performance in the case of Derba Midroc Cement).

- ➢ Data for the study was collected through close-ended.
- ➢ The target population for this study consists of employees who are working on ERP systems in different departments at DMC. Fifty–nine (59) respondents were targeted for the survey and hence the same number of questionnaires was distributed. However, out of this

number, 53(89.83%) questionnaires were received. 8 (10.16%) questionnaires were not returned at all because of some reasons like some employees weren't in their respective offices to have annual leave just three days after receiving the questionnaire and others with different reasons.

➢ The study captured a nearly balanced gender representation among respondents, with 47.2% male and 52.8% female, reflecting a similar composition within the organization. This balance highlights the competitiveness of female employees alongside their male counterparts.

➢ In terms of educational qualifications, the respondents primarily held first degrees (69.8%) or master's degrees (28.3%), with only a small proportion (1.9%) having diplomas. The dominance of highly educated employees (98.1%) supports the organization's adoption of advanced systems like ERP, enhancing performance.

➢ Experience levels showed that the majority of respondents (53.3%) had 11 to 20 years of service, indicating their substantial contributions to the success of the ERP system. A smaller group (9.4%) with less than 5 years of experience reflects the organization's inclusion of younger employees gaining knowledge from senior staff to ensure continuity and sustain the ERP system's effectiveness.

This researcher raised four major the respective variable under investigation, two of the study variables independent variables (Organizational Business Value, Decision-Making, Employee Management, Internal Process)

➢ **Organizational Business Value on Organization Performance:** -regarding with the overall descriptive result: the majority of respondents were agreed with a mean value of (M=4.44, SD=0.593). It implies that philanthropic responsibility has a positive impact on organization performance in Derba cement factory. In addition, standard deviation shows there is a spread of ideas of the respondents, we can say that even the majority of respondents were agreed but there is a significant number of variations of that deviate from the mean value.

In other ways, the majority of respondents not decided that the company's level of awareness about ERP in Organizational Business Value is high relative especially required top management encouragement for actively participated in ERP.

- **Decision-Making on Organization Performance: -** regarding with the overall descriptive result: the majority of respondents were agreed with a mean value of (M=4.42, SD=0.585). It implies that ethical responsibility has a positive impact on organization performance in Derba cement factory. In addition, in addition, standard deviation shows there is a spread of ideas of the respondents, we can say that even the majority of respondents were agreed but there is a significant number of variations of that deviate from the mean value.

  In other ways, it suggests that although the majority perceive internal processes as effective in enhancing performance, there are differing opinions on specific aspects of these processes. On the other hand, the general agreement emphasizes that the ERP Decision-Making are well-structured and significantly contribute to improving overall performance.

- **Employee Management on Organization Performance:** the majority of respondents agreed with a mean value of (M=4.402, SD=0.623). This implies that employee management has a positive impact on organizational performance in Derba Cement Factory. Additionally, the standard deviation indicates some variation in the respondents' views. While most respondents agreed, there is a noticeable spread of opinions deviating from the mean value.

  In other ways, it suggests that while the majority recognize the positive role of employee management, there are varying perspectives on specific practices or implementations. On the other hand, the general consensus highlights that employee management practices align well with the organization's objectives and contribute to performance improvement.

- **Internal process on Organization Performance: -** regarding with the overall descriptive result: the majority of respondents were agreed with a mean value of (M=4.452, SD=0.624). This implies that internal processes have a positive impact on organizational performance in Derba Cement Factory. Additionally, the standard deviation indicates some variation in the respondents' views. While most respondents agreed, there is a noticeable spread of opinions deviating from the mean value

  In other ways, it suggests that although the majority perceive internal processes as effective in enhancing performance, there are differing opinions on specific aspects of these processes. On the other hand, the general agreement emphasizes that the ERP in internal processes is well-structured and significantly contribute to improving overall

performance.

➢ **Organizational Performance: -** regarding with the overall descriptive result: the majority of respondents were agreed with a mean value of (M=4.559, SD=0.571). It implies that the vast majority of respondents were agreed. It implies that technological innovation like ERP systems has a significant impact on organization performance, while the performance still needs to be improved as a company market share, sales, profitability employee and customer satisfaction and retention and overall organization performance Moreover, standard deviation, which ranges from 0.434 to 0.907, which indicates it, was a big variation. As it shows there is a spread of ideas of the respondents, we can say that respondents were agreed in similar ideas but significant number of variations of that deviate from the mean value.

➢ Correlation results of the four independent variables (Organizational Business Value, Decision-Making, Employee Management, Internal Process) with the dependent variable (organization performance) results a positive Pearson correlation p<.0.5 and the magnitude of relational strength Organizational Business Value, Decision-Making, Employee Management and Internal Process level of strength with organization performance is high as the r valve greater than 66 %.

➢ The significance in the ANOVA analysis is 0.000, indicating that the results are significant.

➢ Overall, the multiple regression made for the four independent variables (predictors) explained the dependent variable (organization performance) by 92.7 percent

➢ The coefficients of standardized estimation result indicate that, out of the four independent variables considered in the model Organizational Business Value, related factors have the highest beta coefficient, which is (B=0.337), this confirms that it has higher level of sensitivity to the subject organization performance. Employee Management, on the other hand, have had little impact on organization performance. Which is (B=0.231).

➢ Hypothesis test result: Since the concern of this study is on testing the multiple effects of technological innovation like ERP systems variables on the dependent variable (organization performance), all ERP variables were supported and accepted as P< 0.05.

➢ The Cronbach alpha for all twenty-seven variables average 0.8902, as shown in the table

above. According to the literature, this confirmed the research instrument's internal consistency.

5.2 Conclusions

This study aimed to examine the effects of technological innovation, specifically enterprise resource planning (ERP) systems, on organizational performance in the case of Derba Midroc Cement (DMC) in Addis Ababa, Ethiopia. It contributes to the understanding of how ERP systems influence organizational performance, a topic that has received limited attention in prior research, particularly with such a comprehensive approach.

The findings demonstrate that DMC has implemented ERP systems to enhance performance across various organizational aspects, including decision-making, internal processes, employee management, and organizational business value. Respondents highlighted the positive impact of ERP systems on performance metrics such as market share, sales growth, employee and customer satisfaction, and overall profitability.

According to the results, ERP systems have significantly contributed to the organization's efficiency by integrating business operations and providing real-time information to employees. The study also revealed that internal processes and decision-making have the most substantial impact on organizational performance, as supported by high beta coefficients and significant correlation values.

The regression analysis showed that technological innovation via ERP systems accounts for 92.7% of the variance in organizational performance. This underscores the critical role of ERP in driving operational success. Additionally, the study confirmed that the research instruments used were reliable, as evidenced by a Cronbach alpha exceeding 0.7 across all variables.

For Derba Midroc Cement (DMC), ERP systems contribute to performance by enabling efficient information sharing across departments, ensuring accuracy and reliability of data, and facilitating timely information retrieval. Additionally, ERP systems help in problem identification and resolution, thereby improving operational efficiency. The combined benefits

of adopting ERP systems ultimately drive the overall organizational performance of DMC, underscoring the importance of continued investment in and optimization of these systems.

In general, this study found ERP systems have a positive impact on organizational performance by enhancing decision-making, streamlining internal processes, and improving employee management and organizational business value. These systems offer a foundation for sustainable growth and competitive advantage.

5.3 Recommendations

From different perspectives and results of the research, the researcher has made the following recommendations.

➢ For organization business value the organization should provide comprehensive training programs to ensure employees fully understand and utilize operations, offerings, and interactions effectively. This will enhance productivity and align employees' efforts with the company's strategic goals. Additionally, fostering a culture of continuous learning will maximize the benefits of ERP adoption.

➢ For Technological innovation the organization Sustaining and Expanding ERP Utilization the strong correlation between ERP systems and organizational business value highlights the need for continued investment and development of ERP initiatives. Management should actively promote ERP awareness and encourage participation at all levels, particularly among top executives, to reinforce the system's strategic importance and drive overall organizational performance.

➢ Enhancing Decision-Making Processes given the significant impact of ERP on decision-making, regular training sessions and workshops should be conducted to improve employees' analytical and decision-making skills. Ensuring that the ERP system is fully leveraged will contribute to more effective decision-making and improved ethical responsibility within the organization.

➢ Strengthening Employee Management Strategies: The positive influence of ERP on employee management suggests the need for targeted strategies to optimize workforce performance. DMC should implement professional development programs, performance-based incentives, and a supportive work environment to enhance employee engagement and productivity, ultimately contributing to improved organizational performance.

➢ Optimizing Internal Processes: Since ERP plays a crucial role in streamlining internal operations, DMC should regularly review and refine internal processes to maintain efficiency. Establishing employee feedback mechanisms can provide valuable insights into potential areas of improvement, ensuring that ERP systems continue to support seamless operational integration.

Direction for future research: -

In the Future research is essential to build upon the findings of this study and enhance the generalizability of its results. Specifically, studies should explore the effects of technological innovations like enterprise resource planning (ERP) systems on organizational performance in other industries across Ethiopia, including the manufacturing and service sectors.

It is recommended that future research focus on examining ERP implementation and its role in improving organizational performance. Additionally, Derba Cement Factory is encouraged to consider the findings and recommendations of this study to address existing gaps in empirical ERP-related activities and enhance its operational efficiency.

Given the limited studies conducted on this topic in Ethiopia, it is crucial for researchers, especially those within the country, to prioritize empirical studies in this area. Such research will provide valuable insights, inform best practices, and support organizations in optimizing technological innovations for improved performance.

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Appendix I

ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES
MASTERS OF BUSINESS ADMINISTRATION
Questionnaires to be filled by Derba Midroc Cement P.L.C (DMC)

Researcher: Bemnet Girma

Dear Respondent,

This questionnaire is designed to prepare research titled "The Effect Technological Innovation on Organizational Performance Special focus to Enterprise Resource Planning: A Case Study of Derba Midroc Cement P.L.C (DMC)" for partial fulfillment of the requirement for the Degree of Master of Science in Business Administration. I kindly request you to take the time to complete the questionnaire to the best of your knowledge and then send it back to me. Hereby, I would like to express my gratitude for your dedicated cooperation in participating in this study. It would have not been possible to conduct this thesis. All your responses are confidential and will only be used for this research. Thank you in advance for taking the time to complete this survey.

Kindly be assured that all information that you provide will be kept strictly confidential and used for academic purposes only. If you require any further information, want feedback on the study, or are unclear situation please contact me at the following address;

- Email: bemnetgds26@gmail.com

☐ - Cell phone: +251 920834239

Thank you in advance for your Space Time and Cooperation!

General Instruction:

1. No need to write your name.

2. Instruction is given at the beginning of each part of the questionnaire.

Part -I: Demographic Information

<u>Instruction</u>: General Information (Demographic Information) - Please put (√) in the box.

1. Gender

        A. Male ☐   B. Female ☐

2. Age _____

3. Education

   A. Diploma ☐   B. BA/BSC ☐   C. Masters ☐   D. Above Masters ☐

4. Your Experience in the enterprise _____

5. In which department/division are you working in?

   A. Finance ☐   B. Human Resources ☐   C. Logistics ☐

   D. Production ☐   E. Techniques ☐   F. Quality ☐

   G. Procurement ☐   H. Sales ☐   I. IT ☐

6. The position you hold in the organization Staff

   A. Supervisor ☐   B. Manager ☐   C. Officer ☐ D. Other, please specify__

Please rate the degree of the effect of ERP that affect organizational Performance listed below by ticking (√).

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

STATEMENT	SCALE				
Organizational business value	**1**	**2**	**3**	**4**	**5**
ERP helps in the reduction of operational and administrative costs at Derba Midroc Cement					
ERP enables control of financial flows in the organization					
ERP system can enhance responsiveness at Derba Midroc Cement					
ERP system creates competitive advantage at Derba Midroc Cement					
ERP provides clear financial information to external parties					

Decision-making	**1**	**2**	**3**	**4**	**5**
ERP system minimizes labor-intensive system at Derba Midroc Cement					
An ERP system can save time and cost in Derba Midroc Cement					
ERP helps Decision-making and scheduling in DERBA MIDROC CEMENT					
ERP helps in Real- time access to inventory turnover in Derba Midroc Cement					
ERP helps Decision-making helps in the effective store's management of Derba Midroc Cement					

Employee management	**1**	**2**	**3**	**4**	**5**
ERP system helps the managers to control the day-to-day activities of the employees in Derba Midroc Cement					
ERP system helps the managers to identify employees' performance in Derba Midroc Cement					
ERP system produces accurate appraisal documentation to protect both the employee and employer.					

	1	2	3	4	5
ERP system provides clear disciplinary performance procedures and feedback guidelines.					
ERP helps in making the Time management and leave administration simple and easily manageable.					
ERP system standardizes evaluation forms in line with clear performance measures in Derba Midroc Cement					
Internal process	1	2	3	4	5
ERP system facilitates the integration among business units of Derba Midroc Cement.					
ERP implementation facilitates internal process in Derba Midroc Cement					
ERP implementation has positive effect on internal communication process in Derba Midroc Cement					
ERP system reduces complexity of reports at Derba Midroc Cement					
ERP automate and simplify processes across the organization					
Organizational performance	**1**	**2**	**3**	**4**	**5**
Derba Midroc Cement gives quality service after adopting the ERP system.					
Derba Midroc Cement increases productivity after adopting the ERP system.					
Derba Midroc Cement increase profitability after adopting the ERP system.					
Derba Midroc Cement has taken the competitive advantage over its counter					
ERP enables organizations to restructure business processes or					
ERP implementation has realized the expected goal and objective					

THANK YOU