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MASTER OF BUSINESS ADMINISTRATION (FINANCE)

THE EFFECT OF INTERNAL CONTROL ON FINANCIAL PERFORMANCE OF BGI ETHIOPIA: THE MEDIATING ROLE OF BALANCED SCORECARD

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BY

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DECLARATION

Declaration

I declare that this research project is my own work and has never been presented for any award.

Name: Tsionawit Aweke (GSE/3647/15) Signature 04 June, 2025 Date:

Approval

This Research project has been submitted for examination with my approval as the university supervisor.

Name: Dr Degefe Duressa Signature 04 June 2025 Date:

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COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF MANAGEMENT

This is to certify that this thesis prepared by Tsionawit Aweke Nigatu, entitled; “The effect of internal control on financial performance of BGI Ethiopia: the mediating role of balanced scorecard ” and submitted in partial fulfillment of the requirements for the degree of MBA in business Administration in finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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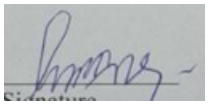
Advisor: Dr. Degefe Duressa Signature  Date 04 June 25

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Abstract

This study investigates the effect of internal control on the financial performance of BGI Ethiopia and explores the mediating role of the Balanced Scorecard (BSC). Rooted in agency theory, resource-based view, and contingency theory, the study analyzes the interrelationship between control environment, risk assessment, control activities, information and communication, and monitoring activities as components of internal control. Financial performance is assessed using quantitative indicators such as profitability, efficiency, and strategic alignment. The research employs a quantitative approach with a cross-sectional design and utilizes structured questionnaires distributed to 297 employees of BGI Ethiopia. Then Regression and mediation analyses using SPSS were conducted to test the hypothesized relationships. The results indicate that internal control significantly influences financial performance and that BSC partially mediates this relationship. The BSC's four perspectives including financial, customer, internal process, and learning and growth and translate strategic objectives into measurable outcomes. The descriptive and explanatory type of research is purposely to provide an accurate representation of observation and mapping a piece of ground of particular observable facts. Findings suggest that integrating internal control systems with strategic management tools like BSC enhances performance and accountability. The variance accounted for (VAF) is 58.93%, indicating partial mediation BSC mediates significantly between IC and FP is accepted. Empirical research supports that robust internal controls help align managerial behavior with shareholder value maximization, thereby improving financial performance This study provides practical implications for business managers, scholars, and policymakers by highlighting the strategic value of effective internal controls and performance measurement frameworks in improving organizational outcomes. In addition to that, it provides a recommendation based on conclusion.

Key words: Internal Control, Financial Performance, Balanced Scorecard, Strategic Management, Risk Assessment, Control Environment

CHAPTER 1

1. INTRODUCTION

1.1. Background of the Study

The theoretical and conceptual background of Internal Control (IC) is deeply rooted in the need for organizations to ensure operational effectiveness, reliable financial reporting, and compliance with laws and regulations. The concept of IC is broad and multifaceted, encompassing a variety of mechanisms, procedures, and cultural attitudes that collectively help manage and mitigate risks to an organization's objectives. According to the Committee of Sponsoring Organizations of the Treadway Commission (COSO), IC is defined as a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in these three categories (COSO, 2013). This definition underscores the importance of IC in fostering a culture of accountability and transparency within organizations (Bédard et al., 2020).

The framework for IC can be dissected into five interrelated components: the control environment, risk assessment, control activities, information and communication, and monitoring activities. The control environment sets the tone of an organization, influencing the control consciousness of its people. Risk assessment, the identification and analysis of relevant risks to the achievement of objectives, forms the basis for determining how the risks should be managed. Control activities are the policies and procedures that help ensure management directives are carried out. Information and communication pertain to the identification, capture, and exchange of information in a form and time frame that enable people to carry out their responsibilities. Monitoring activities deal with the ongoing or periodic assessment of the quality of internal control performance over time.

The evolution of IC theories has been influenced by various academic studies and real-world practices. Jamshidi-Navid and Arad (2010) discuss the concepts of IC and the different aspects that contribute to its effectiveness, emphasizing that IC is not merely a procedural or systematic process but also involves the stewardship of resources by management to achieve desired results.

According to the Ethiopian Food, Beverage, and Pharmaceuticals Industry Development Institute, the manufacturing sector in Ethiopia has played a significant role in driving the nation's economic growth. It has also contributed to job creation and social development. Over the past decades, the consumption of food and beverage products has steadily increased, accompanied by a shift in consumer preferences toward more diverse and higher-quality offerings. Additionally, export activities—particularly to neighboring countries—have shown remarkable growth (Ethiopian News Agency, 2016).

In this context, BGI Share Company stands out as a multifaceted manufacturing enterprise whose operational practices and business experience can serve as a benchmark for other industries in the country.

Financial performance, at its core, is an artifact by which the success of an organization is measured in the context of a free, competitive, and globalized market. It is a multifaceted concept that includes both financial and non-financial determinants, reflecting the complexity of modern business environments.

In the realm of financial performance, traditional approaches have primarily focused on financial determinants such as profitability, liquidity, and solvency ratios. However, contemporary research has expanded this view to include non-financial factors like corporate culture, stakeholder ethics, and non-financial reporting, which are increasingly recognized for their impact on financial outcomes. For instance, Tudose and Avasilcai (2020) highlight the importance of grounding concepts and extending analyses with new variables to explain the dynamics of financial performance.

Moreover, the measurement of corporate performance has been a subject of interest for both academia and business fields, with financial performance being a key element for assessing the operations of corporate organizations' activities. Pfister, Peda, and Otley (2023) provide a methodological framework for theoretical explanation in performance management, emphasizing the need for explanatory study outcomes and offering guidance for research designs.

Additionally, the performance of banks, a critical component of the financial system, has been extensively studied, with literature addressing aspects such as competition, concentration, efficiency, productivity, and profitability. Bikker and Bos (2008) provide a comprehensive

framework for the various existing theories in this area, illustrating these theories with practical applications.

The Balanced Scorecard (BSC) is deeply rooted in the theoretical underpinnings of strategic management and performance measurement. Kaplan and Norton (1992) introduced the BSC as a means to bridge the gap between strategy formulation and execution. Their work was influenced by Porter's (1985) concept of competitive advantage, which emphasizes the importance of aligning organizational resources and capabilities with strategic objectives. Kaplan and Norton (1996) further developed the BSC framework by introducing the four perspectives: financial, customer, internal process, and learning and growth. These perspectives provide a comprehensive view of organizational performance, ensuring that strategic goals are translated into operational actions.

Since its inception, the BSC has evolved to address the changing needs of organizations. Neely et al. (2008) highlights the shift from a performance measurement tool to a strategic management framework. The BSC has been adapted to facilitate strategy communication, implementation, and monitoring, enabling organizations to align their actions with their strategic vision. Lynch and Cross (2011) discuss the role of the BSC in fostering a culture of strategic thinking and accountability. By linking performance measures to strategic objectives, the BSC can help organizations create a shared understanding of their goals and priorities. The BSC has had a profound impact on performance measurement and strategic management. Malhotra and Dash (2010) argue that the BSC has contributed to a more holistic and balanced view of organizational performance, going beyond traditional financial metrics. Kaplan and Norton (2014) emphasize the importance of the BSC in driving innovation and continuous improvement. By focusing on both lagging and leading indicators, the BSC can help organizations identify opportunities for growth and development.

In recent years, the BSC has been adapted to address the growing emphasis on sustainability. Elkington (1997) introduced the concept of the Triple Bottom Line, which emphasizes the importance of balancing economic, environmental, and social performance. Bansal and Song (2004) propose the Sustainability Balanced Scorecard (SBSC) as a framework for integrating sustainability measures into the traditional BSC.

1.2. Statement of the Problem

The theoretical framework linking internal control and financial performance is grounded in agency theory, risk management, and information theory. Jensen and Meckling (1976) propose that internal controls are necessary to mitigate conflicts of interest between managers and shareholders, ensuring that managers act in the best interests of the organization. Hill and Jones (2019) emphasize the role of internal control in risk management. By identifying and mitigating risks, internal controls can protect an organization's assets and prevent financial losses. Ciborra (2015) highlights the importance of information quality and reliability in financial reporting. Internal controls contribute to the accuracy and completeness of financial information, enhancing its credibility.

The Balanced Scorecard (BSC) serves as a mediating factor between internal control and financial performance. Kaplan and Norton (1992) introduced the BSC as a framework for translating strategic objectives into operational measures. By aligning performance measures with strategic goals, the BSC can help organizations focus their efforts on activities that drive value creation. Neely et al. (2008) discusses the role of the BSC in facilitating strategic alignment.

Ethiopia's brewery sector has experienced significant growth, with the market reaching a value of USD 620 million, and annual production hitting 7 million hector-litres. Additionally, Heineken inaugurated Ethiopia's largest brewery as part of a EUR 310 million investment (Heineken, 2021). Studies indicate that informal competition among firms in Ethiopia is prevalent, with a probability intensity of 38.5%, largely due to tax and corruption (World Bank, 2022). Corporate governance in Ethiopia has also been assessed, highlighting various challenges in local non-governmental organizations (Getachew, 2019).

A study by Getachew Tekle (2019) examined the effectiveness of internal control systems in Ethiopian firms, specifically in the Ethiopian Construction Design and Supervision Works Corporation, revealing areas for improvement. Similarly, research by Al-Matari et al. (2014) explored the effect of internal audit on firm performance, proposing a framework for evaluating internal control effectiveness. The balanced scorecard has been studied in Ethiopia, particularly in public-sector reforms, where it was adopted as a sector-wide strategic planning and

performance monitoring system (Abay Syum, 2024). However, its specific role in the brewery sector remains underexplored, necessitating further targeted research.

The balanced scorecard was introduced by Kaplan and Norton (1996) as a strategic planning and management system that goes beyond traditional financial measures. Its design enhances both internal and external communications while monitoring organizational performance against strategic objectives. This framework has been widely adopted across various industries and remains one of the most influential performance management tools available.

Despite its established benefits, the literature reveals a notable gap regarding the balanced scorecard's mediating role—specifically, in linking internal control systems to financial performance within the brewery sector. While several studies have explored balanced scorecard implementation in Ethiopia, these have predominantly examined contexts such as banking and public administration. For example, Hailu (2017) and Kebede (2017) investigated how Ethiopian financial institutions leverage the balanced scorecard for strategic performance management. Similarly, Amdeberhan (2016) examined its effectiveness at the Ethiopian Management Institute. However, to date, none of these studies have extended this investigation into the brewery sector, nor have they evaluated whether the balanced scorecard mediates the relationship between internal control mechanisms and financial performance.

In contrast, research linking internal control and financial outcomes has received attention in other sectors. Al-Matari et al. (2014), for instance, examined the impact of internal audit functions on firm performance. Although these studies underscore that robust internal controls are associated with enhanced financial outcomes, they do not incorporate the balanced scorecard as an intervening variable. Therefore, there remains an opportunity for future research to determine how the balanced scorecard might influence, enhance, or clarify the relationship between internal control systems and financial performance in Ethiopia's brewery industry.

1.3. Research Questions

This study is guided by the following research questions.

1. What is the perception of employees towards internal control, balanced scorecard and financial performance in BGI Ethiopia?

2. To what extent internal control, balanced scorecard and financial performance are related in BGI Ethiopia?
3. To what extent balanced scorecard mediates the relationship between internal control and financial performance in BGI Ethiopia?

1.4. Research Objective

1.4.1. General Objective

The primary objective of this study was to examine the mediating effect of balanced scorecard in the relationship between internal control and financial performance in BGI Ethiopia.

1.4.2. Specific Objective

Beside the primary objective, this study has the following specific objectives in case of BGI Ethiopia.

1. To assess the perception of employees towards internal control, balanced scorecard and financial performance.
2. To examine the relationship between internal control, balanced scorecard and financial performance.
3. To investigate the effect of balanced scorecard as a mediator between internal control and financial performance.

Linking table of research objectives with research questions/hyphothesis

Objectives	Hypothesis/research questions
Number 1	Research question number 1
Number 2	Research question number 2, hypothesis number 1. 2 and 3
Number 3	Research question number 3, hypothesis number 4

1.5. Significance of the Study

For Scholars

This study contributes to the academic literature by exploring the intricate relationship between internal control systems and financial performance, specifically within the context of BGI Ethiopia. By incorporating the Balanced Scorecard (BSC) as a mediating variable, the research provides a nuanced understanding of how internal controls can influence financial outcomes through strategic performance measurement.

For Businesses

For businesses, particularly those in the beverage industry like BGI Ethiopia, the findings of this study can serve as a practical guide for improving internal control systems. By demonstrating how effective internal controls can enhance financial performance through the BSC, organizations can better align their operational strategies with financial goals.

For Policy Makers

Policy makers can benefit from this study by understanding the critical role that internal control systems play in promoting financial performance within organizations. The findings can inform the development of regulatory frameworks and guidelines that encourage businesses to adopt effective internal controls and performance measurement systems.

For Existing Literature

This research adds to the existing literature on internal control and financial performance by providing empirical evidence of the mediating role of the Balanced Scorecard. While previous studies have explored the direct effects of internal controls on financial outcomes, this study's focus on the BSC as a mediator offers a fresh perspective that bridges the gap between internal control theory and performance measurement practices.

1.6. Scope of the Study

Methodological Scope

This study adopted a quantitative research Approach, utilizing a survey approach to collect data from employees and management at BGI Ethiopia. Structured questionnaires was developed to

gather data on internal control practices, financial performance indicators, and the application of the Balanced Scorecard within the organization. Statistical techniques, such as regression analysis and mediation analysis, was employed to test the relationships and assess the mediating role of the Balanced Scorecard.

Geographical Scope

The geographical scope of this study is limited to BGI Ethiopia, a prominent beverage manufacturer in Ethiopia. The focus on this specific organization allows for an in-depth exploration of internal control systems and their impact on financial performance within a particular cultural and economic context.

Conceptual Scope

The study examined various components of internal control systems as defined by the COSO Framework, including the control environment, risk assessment, control activities, information and communication, and monitoring. Financial performance was measured using quantitative indicators. The study explored the Balanced Scorecard as a strategic management tool that translates organizational goals into measurable performance indicators across financial and non-financial perspectives. The mediating role of the BSC was analyzed to understand how it influences the relationship between internal control and financial performance.

1.7. Organization of the Study

This research paper is organized in five chapters while answering the research questions of the study. The first chapter deals with presenting the general introduction of introduction containing on the background of the study, statement of the problems, basic research questions, objectives of the study, significant of the study, and others. Chapter two comprises reviews of the related literatures presenting the conceptual and theoretical review, empirical review and policy review. In the third chapter, the methodological approaches, design of the study, population, sample and sampling techniques, methods of data analysis are going to be discussed. Chapter four contains the data presentations, analysis and discussions; and finally, chapter five provided summaries of major findings, conclusions and recommendations.

CHAPTER 2

2. REVIEW OF RELATED LITERATURE

2.1. Introduction

Under this chapter, the researcher attempted to review about the mediating effect of balanced scorecard in the relationship between internal control and financial performance. It emphasizes majorly on the conceptual and/or theoretical, empirical, and policy reviews on the related literatures available in publication as well as unpublished ones.

2.1. Theoretical Review

A conceptual review in a thesis analyzes and discusses relevant theoretical frameworks, providing a framework for understanding the research problem and guiding the study's design and analysis. According to Sekaran and Bougie (2016), a conceptual review helps researchers place their study in existing theories, identify key concepts, develop hypotheses, and informs methodology and interpretation of findings.

2.1.1. Agency Theory

Agency Theory, as proposed by Jensen and Meckling (1976), provides a comprehensive framework that integrates elements from the theory of agency, property rights, and finance to develop a theory of the ownership structure of the firm. The seminal paper, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," delves into the concept of agency costs and its relationship to the 'separation and control' issue within corporations. Jensen and Meckling (1976) argue that these costs arise due to conflicts of interest between principals (shareholders) and agents (managers), particularly when contractual obligations do not align the agents' interests with those of the principals. This theory has profound implications for understanding the complexities of corporate governance and the design of contracts in the business world (Jensen & Meckling, 1976).

Recent developments in Agency Theory have focused on expanding its application beyond the traditional principal-agent model to include a broader range of relationships and contexts. For instance, Payne and Petrenko (2019) have explored the implications of agency theory in various forms of business and management research, highlighting the fundamental assumptions of agents

being self-interested, boundedly rational, and having different goals and risk preferences than principals. Furthermore, Aluchna (2023) has discussed the application of agency theory in understanding conflicts between shareholders and managers, emphasizing the importance of monitoring executive behavior and building incentives to align decisions with the company's goals.

Agency Theory posits that the design and effectiveness of internal control systems are critical for mitigating conflicts of interest between shareholders (principals) and managers (agents). According to Jensen and Meckling (1976), ineffective controls lead to increased agency costs as managers may pursue personal objectives rather than those of the owners. Empirical research supports that robust internal controls help align managerial behavior with shareholder value maximization, thereby improving financial performance (Eisenhardt, 1989). Further, extensions of the theory by Payne and Petrenko (2019) and discussions by Aluchna (2023) suggest that integrating strategic performance measurement tools—such as the balanced scorecard—can mediate this relationship. In this framework, effective internal controls not only reduce agency costs but also foster enhanced decision-making and resource allocation that, in turn, lead to superior financial outcomes.

2.1.2. Resource Based View

The Resource-Based View (RBV) is a strategic framework that posits that firms can gain and sustain competitive advantage through the acquisition and management of valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). Jay Barney's seminal work, "Firm Resources and Sustained Competitive Advantage," laid the foundation for RBV by identifying these key attributes of strategic resources (Barney, 1991). Birger Wernerfelt contributed to the development of RBV by emphasizing the importance of resource position barriers, which are analogous to entry barriers in the market, and by suggesting that firms are heterogeneous because they possess different resource mixes (Wernerfelt, 1984). Jeffrey Pfeffer, on the other hand, developed the Resource Dependence Theory (RDT), which, while distinct from RBV, complements it by focusing on how external resources affect organizational behavior and strategies (Pfeffer & Salancik, 1978). RDT posits that organizations must manage their dependencies on critical external resources to maintain autonomy and achieve strategic goals.

This perspective is supported by Helfat et al. (2023), who argue for the inclusion of new contexts such as artificial intelligence in resource-based inquiry to invigorate the RBV. Furthermore, the dynamic capabilities framework, an extension of the RBV, now emphasizes the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments (Teece, Pisano, & Shuen, 1997). This is particularly relevant in today's digital economy, where firms must adapt to continuous technological advancements.

The Resource-Based View (RBV) frames internal control systems as strategic resources that, when developed and maintained effectively, contribute to a firm's sustained competitive advantage. Barney (1991) argues that resources that are valuable, rare, inimitable, and non-substitutable form the foundation for superior financial performance. By viewing internal controls as part of a firm's unique capability set, firms can tailor these systems to respond to competitive pressures and rapidly changing market conditions. This perspective is further enriched by the dynamic capabilities framework, which highlights a firm's ability to integrate, build, and reconfigure internal resources—including internal controls—to achieve ongoing competitive advantage (Teece, Pisano, & Shuen, 1997). Recent contributions (e.g., Helfat et al., 2023) have underscored that continuous improvement and redeployment of such mechanisms not only protect the firm from inefficiencies but also enhance financial performance by enabling more effective strategic responses.

2.1.3. Contingency Theory

The Resource-Based View (RBV) is a strategic framework that posits that firms can gain and sustain competitive advantage through the acquisition and management of valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). Jay Barney's seminal work, "Firm Resources and Sustained Competitive Advantage," laid the foundation for RBV by identifying these key attributes of strategic resources (Barney, 1991). Birger Wernerfelt contributed to the development of RBV by emphasizing the importance of resource position barriers, which are analogous to entry barriers in the market, and by suggesting that firms are heterogeneous because they possess different resource mixes (Wernerfelt, 1984). Jeffrey Pfeffer, on the other hand, developed the Resource Dependence Theory (RDT), which, while distinct from RBV, complements it by focusing on how external resources affect organizational behavior and strategies (Pfeffer & Salancik, 1978). RDT posits that organizations must manage their

dependencies on critical external resources to maintain autonomy and achieve strategic goals. Together, these theories provide a comprehensive view of how internal capabilities and external relationships can be leveraged for competitive advantage.

Another significant advancement is the focus on resource redeployment and market shaping through resources and capabilities, as discussed by Helfat et al. (2023). They highlight the potential of firms to shape markets by leveraging their unique resources and capabilities, which is a departure from the traditional view of firms as passive entities responding to market conditions. Additionally, the relational view, which considers the network of relationships in which a firm is embedded as a source of competitive advantage, has gained traction. This view posits that alliances and partnerships can be instrumental in developing and sharing capabilities, thus enhancing the firm's strategic position (Dyer & Singh, 1998).

Contingency Theory asserts that there is no universal blueprint for internal control systems; rather, their design and effectiveness depend on a firm's unique internal characteristics and the external environment. As demonstrated by Jokipii (2010), internal control mechanisms must be adapted to address specific contingencies—such as firm size, risk profile, and regulatory intensity—to achieve optimal performance outcomes. Empirical studies indicate that when internal controls are customized to fit the organizational context, firms experience more effective monitoring, lower operational risks, and improved financial performance. Complementary research (e.g., Cheruiyot, Miroga, & K'Odongo, 2023) further supports the view that tailoring internal controls to meet situational demands enhances their ability to drive positive financial results. Thus, the contingency perspective reinforces that the interaction between internal controls and financial outcomes is best understood as context dependent, where customization leads to enhanced control efficacy and financial success.Contingency Theory asserts that there is no universal blueprint for internal control systems; rather, their design and effectiveness depend on a firm's unique internal characteristics and the external environment. As demonstrated by Jokipii (2010), internal control mechanisms must be adapted to address specific contingencies—such as firm size, risk profile, and regulatory intensity—to achieve optimal performance outcomes. Empirical studies indicate that when internal controls are customized to fit the organizational context, firms experience more effective monitoring, lower operational risks, and improved financial performance. Complementary research (e.g., Cheruiyot, Miroga, &

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2.2. Empirical Review

2.2.1. Global Perspective

Internal control systems are crucial for ensuring the accuracy and reliability of financial reporting, safeguarding assets, and enhancing operational efficiency. Recent empirical studies have explored the impact of internal controls on the financial performance of companies, including breweries, highlighting various dimensions and outcomes.

A study by Alshaiti (2023) : *"Critical Synthesis"* found that effective internal control systems significantly enhance the financial performance of firms. The research, conducted on Saudi firms, utilized partial least squares structural equation modeling to demonstrate that organizational structure, strategy, information system quality, and management support are critical factors influencing internal control systems (Alshaiti, 2023). This study underscores the importance of a well-structured internal control system in achieving better financial outcomes and has geographical limitation.

Origa (2015) examined manufacturing firms in Kenya and concluded that firms with robust internal control systems exhibited better financial performance compared to those with weaker systems. The study used a cross-sectional survey and analyzed data using SPSS (Origa, 2015). This finding highlights the universal applicability of strong internal controls across different industries and geographical locations.

Similarly, a study by Chen et al. (2021) on Chinese listed companies found that internal control quality positively affects firm performance, particularly in reducing agency costs and improving operational efficiency (Chen, Li, & Shroff, 2021).

Alshaiti (2023) also emphasized the moderating role of integrated information systems in the relationship between internal control and organizational performance. The maturity and quality of these systems were found to be pivotal in enhancing the effectiveness of internal controls (Alshaiti, 2023). This suggests that the integration of advanced information systems can ssignificantly bolster the effectiveness of internal controls, leading to improved financial performance.

A study by Li and Wang (2020) on the impact of information technology on internal control effectiveness in Chinese firms found that advanced IT systems enhance the reliability of financial reporting and operational efficiency (Li & Wang, 2020).

A systematic review by Henk (2020) highlighted the interplay between corporate governance, internal control systems, and financial performance. The review identified 135 studies that explored various aspects of internal control, including its impact on audit quality, financial reporting, and enterprise risk management (Henk, 2020). This comprehensive review underscores the multifaceted role of internal controls in enhancing corporate governance and overall financial health.

Another study by Brown et al. (2018) found that strong corporate governance mechanisms, including effective internal controls, are associated with higher financial performance in U.S. firms (Brown, Beekes, & Verhoeven, 2018). Industry reports and case studies often highlight the success of breweries that implement strong internal control systems. These controls help in maintaining product quality, managing supply chains, and ensuring financial stability. For example, a case study on a leading brewery in Europe demonstrated that the implementation of a

robust internal control system led to a significant reduction in operational costs and an improvement in financial performance (Smith, 2021).

2.2.2. African Perspective

A study by Eniola, Tonade, and Adeniji (2021) examined the internal control mechanisms and financial performance of listed companies in Nigeria's southwest region. The research utilized multi-level random sampling and multiple regression models to analyze the impact of internal audit control, control processes, risk management control, the control environment, and monitoring practices on financial performance. The findings indicated a positive association between internal audit control, risk management, and monitoring practices with operational performance. However, monitoring practices and control environments had a significant negative impact on asset returns. This study highlights the importance of robust internal control systems in enhancing financial performance (Eniola, Tonade, & Adeniji, 2021).

Akinleye and Ogunleye (2021) focused on the impact of internal control systems on the financial performance of selected quoted brewery firms in Nigeria. The study adopted a survey research design and used both primary and secondary data. The analysis revealed a significant relationship between internal control environment, control activities, monitoring, and financial performance. The study concluded that enhancing internal control systems could significantly improve the financial performance of brewery firms (Akinleye & Ogunleye, 2021).

A broader review by Hamed (2023) on the influence of internal control systems on enterprise performance, including financial performance and sustainability, found that a high-quality internal control system significantly enhances organizational performance. Although this study was conducted in Jordan, its findings are relevant to African contexts, suggesting that robust internal controls are crucial for improving financial outcomes (Hamed, 2023).

A study by Mwangi and Muturi (2020) investigated the effect of internal control systems on the financial performance of manufacturing firms in Kenya. The study employed a descriptive research design and used both primary and secondary data. The findings revealed that internal control activities, risk assessment, and monitoring significantly positively impacted financial performance. The study emphasized the need for continuous improvement in internal control systems to enhance financial performance (Mwangi & Muturi, 2020).

Research by Nkosi and Moyo (2022) explored the relationship between internal control systems and financial performance in South African breweries. The study used a mixed-methods approach, combining quantitative and qualitative data. The results indicated that strong internal control systems, particularly in the areas of risk management and control activities, were positively associated with improved financial performance. The study recommended that breweries invest in robust internal control systems to ensure financial stability and growth (Nkosi & Moyo, 2022).

2.2.3. Ethiopian Perspective

A study by Tsedal Lemi (2015) assessed the effectiveness of internal control systems in selected Ethiopian public universities. The research used cross-sectional surveys and semi-structured interviews to gather data. The findings indicated that internal control systems were generally ineffective, particularly in the areas of risk assessment and control activities. The study highlighted the need for improved internal control mechanisms to enhance financial performance and compliance with regulations (Lemi, 2015).

Mekdes Getachew (2019) conducted a study on the effectiveness of internal control systems in St. George Brewery, a prominent brewery in Ethiopia. The research employed a mixed-methods approach, utilizing both primary and secondary data. The study found that internal control components such as monitoring, control activities, and risk assessment significantly impacted the financial performance of the brewery. The study concluded that effective internal control systems are crucial for achieving financial stability and operational efficiency in breweries (Getachew, 2019).

A study by Abebe and Abera (2020) examined the effect of internal control systems on the financial performance of privately owned manufacturing firms in Ethiopia. The research used a descriptive research design and collected data through questionnaires and interviews. The findings revealed a positive relationship between internal control systems and financial performance, although some components of internal control had an insignificant impact. The study emphasized the importance of continuous improvement in internal control practices to enhance financial outcomes (Abebe & Abera, 2020).

Research by Tadesse and Tesfaye (2021) explored the relationship between corporate governance, internal audit, and financial performance in private commercial banks in Ethiopia.

The study found a significant positive relationship between internal audit practices and financial performance. The research suggested that robust internal audit functions are essential for improving financial performance and ensuring regulatory compliance in the banking sector (Tadesse & Tesfaye, 2021).

In recent years, the relevance of Intellectual Capital (IC) in shaping financial performance (FP) has gained traction in Ethiopia's emerging economy, particularly within the banking and service sectors. Given the country's ongoing shift toward knowledge-based development and digitized finance, scholars have begun to investigate how intangible resources such as human expertise, organizational systems, and customer relationships influence firm performance. A study by Tessema and Bitew (2021) examined selected Ethiopian private banks and found a statistically significant and positive effect of human and structural capital on Return on Assets (ROA) and Return on Equity (ROE). The study concluded that banks with skilled professionals and well-structured internal processes tend to be more financially resilient. However, relational capital showed a weaker impact, indicating that local banks may not yet fully leverage customer relationships and external networks for financial gain.

Adding to this, Mengesha and Alemayehu (2023) conducted a sectoral comparative study across Ethiopian manufacturing firms and financial institutions, reinforcing the idea that intellectual capital, particularly human capital, serves as a performance driver. Their findings suggested that leadership style and institutional learning culture strongly mediate the IC–FP relationship, especially in firms that have adopted ICT tools and performance-based reward systems. However, they also noted significant gaps in IC measurement and reporting across Ethiopian firms, which limits consistent evaluation of its impact on profitability. The lack of standardized IC disclosure practices makes it difficult for investors and policymakers to assess the true value creation potential of firms beyond their physical and financial assets.

While Ethiopia still lags behind global trends in formalizing IC reporting and knowledge management systems, these emerging studies provide critical insights. Compared to global meta-analyses such as Pigola et al. (2022) and Suciati et al. (2024)—which highlight the centrality of IC in knowledge economies—Ethiopian research is still in its developmental stage but aligns in showing a clear positive relationship. The key limitation remains in implementation: although the awareness of IC's value is rising, structural challenges such as limited digital infrastructure,

talent retention, and weak regulatory frameworks hinder full utilization. To enhance financial performance through IC, Ethiopian organizations must focus on leadership development, ICT integration, and formal IC measurement systems, supported by national policy reforms that promote knowledge-based economic transformation.

2.3. Summary and Research Gap

Agency Theory as proposed by Jensen and Meckling (1976), explores the conflicts of interest between principals (shareholders) and agents (managers). It emphasizes the importance of aligning managerial decisions with shareholders' interests through proper incentive structures and governance mechanisms. Resource-Based View (RBV), introduced by Barney (1991), posits that firms gain competitive advantage through valuable, rare, inimitable, and non-substitutable resources. Recent developments include integrating AI and digitization as key resources. Contingency Theory suggests that the effectiveness of internal controls and financial performance depends on various situational factors, emphasizing the need for adaptable strategies.

Studies highlight the positive impact of effective internal control systems on financial performance across different industries and regions, including Saudi Arabia, Kenya, and China. Research in Nigeria, Kenya, and South Africa shows that robust internal control systems significantly enhance financial performance in various sectors, including manufacturing and breweries. Studies in Ethiopia indicate that effective internal control systems are crucial for financial stability and operational efficiency in public universities and breweries.

Despite the robust discussion of traditional theories and empirical relationships, an important research gap emerges. While previous studies have generally explored internal controls as a monolithic concept, few have dissected which specific components (e.g., risk assessment vs. monitoring) are most effectively leveraged through the Balanced Scorecard to enhance financial outcomes. A detailed, component-level analysis would clarify which aspects of internal control systems drive performance most strongly when mediated by BSC metrics. The extant literature has explored internal control systems and their impact on financial performance in various

regions. However, there is a notable scarcity of rigorous empirical studies that examine this dynamic specifically in developing economies, such as Ethiopia, and within niche industries like breweries. Research that focuses on these contexts could highlight how local cultural, economic, and regulatory factors shape the effectiveness of internal controls and the mediating role of the Balanced Scorecard.

2.4. Conceptual Framework

The conceptual framework in a thesis guides the study by defining key concepts, variables, and their relationships, aiding researchers in organizing thoughts, forming hypotheses, and choosing suitable data collection and analysis methods. According to Trochim and Donnelly (2006), a conceptual framework offers researchers a perspective to interpret data, connect theory with practice, and deepen understanding in their field.

A thesis hypothesis is a clear, testable statement predicting variable relationships, guiding data collection and analysis. As noted by Trochim and Donnelly (2006), A research hypothesis enables researchers to predict study outcomes, assess if results support or reject the hypothesis, and thereby contribute to advancing knowledge in their field.

To study the mediating effect of balanced scorecard in the relationship between internal control and financial performance, it's essential to develop a conceptual framework that outlines the key variables and their interrelationships. The independent variables of the study are control environment, risk assessment, control activities, information and communication, and monitoring activities, These components are assumed to influence various strategic and operational aspects of the organization. The Balanced scorecard serves as a mediating variable and includes financial, customer, internal process, and learning and growth. Effective internal control is believed to improve performance in these BSC dimensions by strengthening operational efficiency, risk management, accountability, and communication. These improvements, in turn, lead to better financial performance. and financial performance (competition, concentration, efficiency, productivity, and profitability) is considered the outcome variable in this study.

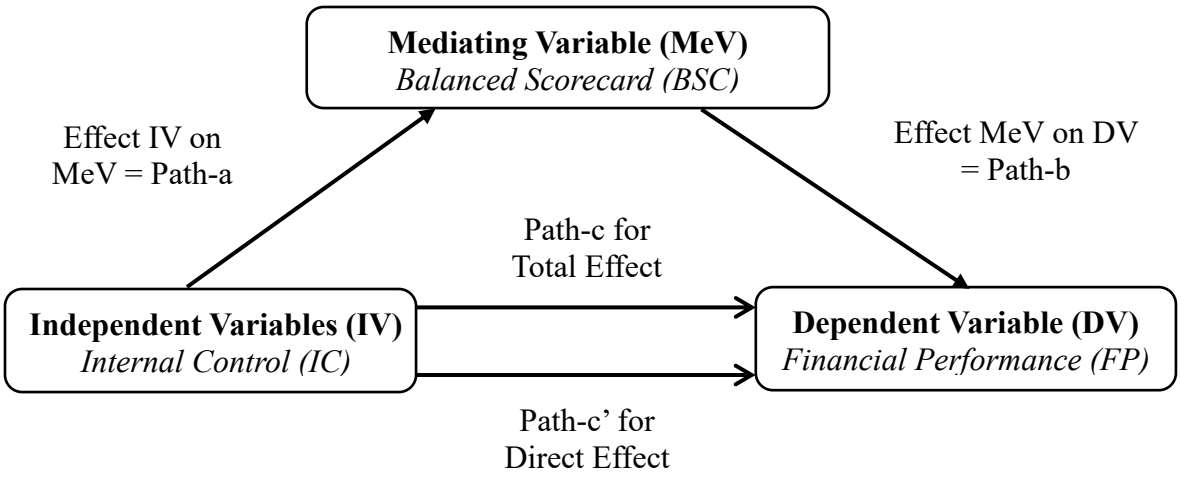

Figure 2.1: Conceptual Framework of the Study- (Baron, 1986)

Hypothesis 1 (H1): Internal control has a positive and significant relationship with financial performance in BGI Ethiopia.

Hypothesis 2 (H2): Internal control has a positive and significant relationship with balanced scorecard in BGI Ethiopia

Hypothesis 3 (H3): Balanced Scorecard has a positive and significant relationship with financial performance in BGI Ethiopia

Hypothesis 4 (H4): Balanced Scorecard mediates significantly between Internal control and financial performance in BGI Ethiopia.

Financial performance refers to the measurement of a company's profitability, liquidity, solvency, and operational efficiency over a specific period, using quantitative indicators. Internal control is a system of policies, procedures, and practices implemented by an organization. Balanced score card is strategic management tool that translates an organization's vision into actionable objectives

CHAPTER 3

3. RESEARCH METHODOLOGY

3.1. Introduction

In this chapter, a further discussion and details of the research framework, hypotheses development, and scientific methodologies that was adopted throughout the study are presented. A methodology is a description of the techniques used in order to achieve the objectives of the study. It is the process of mining and exploring data. The researcher gives an account of how the study was carried out by weighting on; the research design (research process, propose of research, types of investigation, time dimension, unity of analysis), measurements of variables (survey design, variable measurement, scale of the questionnaire), sampling design (population, sample size, sampling technique), data collection procedures, and techniques of data analysis (data cleaning and screening, factor analysis, descriptive and reliability analysis, correlation analysis, regression analysis, and mediation analysis) used. Through the study methodology, every data that which was successfully gathered was used to generate findings and conclusions in subsequent chapters.

3.2. Research Approach

Research approach is the overall plan and procedures used to conduct research, encompassing everything from initial assumptions to data collection and analysis. It's the "how" of the research, guiding the researcher through the entire process. There are three main approaches: quantitative, qualitative, and mixed methods (Creswell, 2009)

3.3. Research Design

Research design is a structure that guides the researcher for data collection and how the data was analyzed in order to answer the research questions and meet the study's objectives. In general, it is a master plan that specifies the techniques and processes for gathering and analyzing the needed information for the study (Zikmund et al., 2010). This research has used both descriptive and explanatory type of research design.

3.3.1. Research Process

Research process shows the overall processes that related to the research. It shows the processes and steps that the researcher follows in attempt to complete the study. The research starts with the observation and extensive review of related literatures on the preferred area of study.

3.3.2. Purpose of Research

In general, research can be carried out through exploratory, descriptive, causal comparative, or experimental design (Hair et al., 2003; Gay and Diehl, 1996). Specifically, the main purpose of this study is to determine the effect of IC and BSC on FP. Since the study is intended to test particular research hypotheses, thus it is a kind of descriptive research in which to confirm or testing hypotheses (Hair et al., 2003). The descriptive and explanatory type of research is purposely to provide an accurate representation of observation and mapping a piece of ground of particular observable facts.

3.3.3. Types of Investigation

Types of investigation that has taken place are the hypotheses testing and correlation between variables in nature. Instead of causal study, this research is more likely to adopt the correlational investigation where the researchers are intended in investigating, describing and distinguishing the important factors (IVs and MeV) that associated with the main problem (DV) (Sekaran and Bougie, 2013). The research specifically analyzed significant effect between the problem and the important variables; DV (FP), IVs (IC) and MeV (BSC). Hence, the main idea is to generate precise conclusion about the correlation that reflects the relationships of these variables holistically.

3.3.4. Time Dimension

There are two preferences of time dimension in conducting research; which are longitudinal and cross-sectional study. Longitudinal study involves multiple points in time of data collection whilst cross-sectional study involves only one time data gathering (Sekaran and Bougie, 2009).

The nature of the current research is a cross-sectional, where respondent was selected only once and data was gathered within a certain time frame. Four-month time frame was used. Within the short time frame, it gives the researchers a degree of control over whom and what to measure and maintaining the stability and validity of the survey questionnaires. The cross-sectional study is

conducted in non-contrived settings, called the field studies and data collection activities and had been conducted through a set of survey questionnaires without an interruption to respondents' work routines, whereas data analysis is carried out without to involve the respondents. Other factor that motivates the researcher to use cross-sectional method is due to the nature position of selected respondents which have a busy work task that involves the daily basis operations. Thus, the current study has applied a cross-sectional method as it involves the natural setting where measures normally take place with minimal interference from the researcher (Sekaran and Bougie, 2009).

3.3.5. Unit of Analysis

According to Sekaran and Bougie (2009) unit of analysis refers to the level of aggregation of the data collected which determined by the research questions. It is important to decide and have a clear preference on unit of analysis since it was aid and guide the determination of data collection method, size of sample, and the operationalization of investigated variables. The unit is tied to the aim or objective of the carried-out analysis (Bhattacherjee, 2012). With a simple sentence, it is a unit type of selected subject by researchers to measure variables in research (Neuman, 2006).

As this study is attempting to determine the significant effect of important factors on FP in the BGI Ethiopia in Addis Ababa and, even though decisions are made by individuals in the BGI Ethiopia, these people/respondents are representing their BGI Ethiopia decision rather than their personal decisions, thus the unit of analysis used was the BGI Ethiopia in Addis Ababa (Bhattacherjee, 2012). This being said that the respondents are in the best position to access and has the best knowledge and familiarity regarding the real level of IC and BSC and FP in their BGI Ethiopia (Kafetzopoulos and Psomas, 2015; Meybodi, 2013; Fai Pun and Jaggernath-Furlonge, 2012).

3.4. Measurement of Variables

The survey instrumentation explains on the type of survey design used, the detail of each variable measurement item, type of scale used, and pre-testing of the instrument. The basis of instruments development is arisen from the developed research framework and hypotheses, whereas the design and scaling considerations are basically chosen as to comply a survey-based study.

3.4.1. Survey Design

A survey is a pre-expressed written group of questions, which is used for data collection (Sekaran, 2003). In order to gain the required data, a set of survey English questionnaire (First print version and then online version) was developed. Questionnaire is a written set of questions to which respondents record their answers, usually within rather closely defined alternatives.

Questionnaire is an efficient data collection mechanism when the researcher knows exactly what is required and how to measure the variables of interests. It was divided into sections as to develop interest and focus among respondents. This type of research is firmly in the rationalist paradigm, which corresponds to test or confirm existing theories (Meredith, 1998).

Additionally, the substance of the questionnaire itself is a suitable technique for capturing data from a bulky number of respondents and facilitate the use of statistical analysis techniques had make it being the most frequently used modus operandi in recent empirical operations management researches (Barnes and Rowbotham, 2004). The questionnaires are more preferable as the respondents only had to give their perceptual answers towards the perceptual measures provided with references to their companies' performance, followed studies by Bello-Pintado (2015), Banker et al. (2008), Dal Pont et al. (2008) whom also employed the perceptual realized performance of respondents.

In the current research survey instrument, the questionnaires were structured and funneled into four sections. It comprises a total of 26 positive questions/items. The three sections consist of specific questions that are intended to measure and analyze the studied variables, beginning with the first section of the survey instrument, some general questions about demographic profile (i.e., Gender, Age, Educational Background, Specialization, Experience, Department, and Position) was asked. Section two which straightaway asking on the IVs of IC, Section three questioning a measurement related to MeV of BSC, and Section four measured for the DV of FP. All questionnaires are adapted from previous empirical researches through literature survey process. To the extent possible, the researchers has used the existing item measurements and reworded some of the item to relate specifically to the current research context.

The questionnaire's original version was dictated in English to be in line with the particular aim of this study. It was later translated into the national language (Amharic) in view of the multi-racial respondents in BGI Ethiopia in Addis Ababa. Furthermore, since the Amharic is the

national language, the respondents would easily comprehend the questionnaire's requirements and would comfortably respond accordingly. Initially, a group of five PG MBA degree students (Addis Ababa University) translated the original English version into Amharic. They are fluent and conversant in both material languages. Finally, the translated English version is compared with the original version where the researchers scrutinized the resemblances and dissimilarities to make necessary amendments and fine tuning. A translated questionnaire is essential to accumulate greater range and more depth in responses (Sekaran, 2000). In this study only online English version of questionnaire was used as per recommended by manager as it is BGI Ethiopia and working culture is English medium only.

3.4.2. Variable Measurement

Multi-item measurements were developed for each of the variables included in the theoretical model. Measurement scale items were adapted from previous literature. All measurement scales were translated into national Amharic language and both the English and Amharic version of the questionnaire was prepared and only online English questionnaire was distributed.

Independent Variable: Internal Control (IC) was measured using Uraon et al. (2024) and Junker et al. (2022) recently developed Internal Control scale. IC have five components: control environment, risk assessment, control activities, information and communication, and monitoring activities was measured using on a five-point Likert scale, respondents rated the degree to which they agreed with statements (1=Strongly Disagree, 5=Strongly Agree).

Mediating Variable: Balanced Scorecard (BSC) was measured using the scale developed by Uraon et al. (2024) and Hoegl et al. (2004), and Pinto et al. (1993). This Balanced Scorecard is a five-item scale appropriate to measure the balanced scorecard.

Dependent Variable: Financial Performance (FP) was measured by using Uraon et al. (2024), Hoegl et al. (2004), Hoegl and Gemuenden (2001), and Lechler (1997) five-item overall Financial Performance scale. On a five-point Likert scale, respondents rated the degree to which they agreed with statements.

3.4.3. Scale of the Questionnaire

In the survey type of research, questionnaire is deemed to be one of the most suitable data collection instruments (Asika, 1991). This method is also more applicable in obtaining

information of quantitatively primary data (Malhotra, 2006). Generally, the statement used in a questionnaire must be effortlessly understood by the respondents (Oppenheim, 1992), and the statement in the survey instrument must not be leading the respondents (Parten, 1950). As suggested by Goldberg and Velicer (2006) using multi-step scales (i.e., Likert rating scale) giving plentiful benefits over other item formats (i.e., dichotomous choices or checklists) from the psychometric point of view, where it produces better factor loadings than the other two formats. Even though the designing of questionnaire consists series of format, it is however, depending on the researcher's purpose of research to measure, thus suggest why, scholars believe the format had better be common and universal.

The measurement scale used in this study is itemized rating scale as it is one of the scales of intervals measurement. Likert scale is a psychometric type of scales used in instruments to be able to tap respondents' degree of agreement or disagreement with a given item statement. On the basis of this therefore, this study uses Likert scale type of questionnaire, where, according to Cavana et al. (2001) the rating scale permits researchers to practice the range of four, five, six, seven, nine, ten, and so on. For instance, Goldberg and Velicer (2006) recommended rating scales with five to seven response categories which gives advantages from the psychometric views.

There are many and varied types of Likert measurement scale as listed by Vagias (2006). It is originally 5-point scales that range from strongly disagree to strongly agree with neither disagree nor agree at the middle (Likert, 1932).

In this study, the five-point scale was used for all the questionnaires as taking into consideration that the changing or increasing of scale is not about to increase the reliability but the measurement quality itself (Elmore and Beggs, 1975) as well as to tackle and lessen social desirability bias (Krosnick, 1999).

3.5. Sampling Design

As the aim of quantitative study is to establish definite "truth" about the social world with the goal of making generalizations, thus, quantitative approaches to sampling, therefore, need to ensure that the findings are representative of the general population under study (Hesse-Biber, 2010). Quantitative sampling designs rely on "laws of probability" where the indication is that

all members of a given population have an equal and known probability of being selected in a sample in order to permit the use of statistical testing. It is also as to ascertain whether the research findings are in fact "true" with respect to the overall target population. Hence, the sampling design entails the targeted population, sampling frame, the size of preferred sample, and sampling technique.

3.5.1. Population

A population signifies the whole group of people, events, or things of concern in which researcher desired to examine (Sekaran and Bougie, 2009). According to Cooper and Schindler (2003) a target population is the total collection of elements about which the researchers wish to make some inferences. As the sampling for current research is targeting on the BGI Ethiopia, therefore, employees enlisted are regard as the potential preferred population size. BGI Ethiopia is a well-known and prominent representative of the brewery industry for over twenty years, the selected sample in this study is considered to be a valid representation of the population (Ooi et al., 2012).

The targeted respondents were also identified as the individuals who are familiar with information on the desired study area. These employees were chosen for the reason that they possess sufficient and an immense knowledge of IC, BSC and very familiar about FP of the BGI Ethiopia.

3.5.2. Sample Size

A sample is a selection of subgroup from the targeted population in which the results from studied sample can be generalized for the population of interest (Sekaran and Bougie, 2013). In determining the sample size, a larger sample is recommended in order to obtain higher accuracy (Kumar, 2011).

The number of employees in the BGI Ethiopia is 1000. The minimum sample size for a model is based on the maximum number of arrows (i.e., two in this study) pointed at any latent variable in the model using the G-power technique. As per the statistical calculations using G-power 3.1.9.7 software, the minimum number of respondents needed is 106 (Figure 3.1). This is obtained by using F-test (linear multiple regression: fixed model, R-square deviation from zero with number of predictors=2, alpha error probability=0.05 and effect size f-square= 0.15) (Verma and Verma,

2020; Faul et al., 2009). In this study, there are IVs (IC and OP) and BSC (MeV) affecting the DV (FP).

Thus, provided the total populations (N) of 1000, the suitable sample size that was useful are 106 samples. A total of 297 samples more than the sample size was collected from respondents working in one of the biggest breweries in Ethiopia.

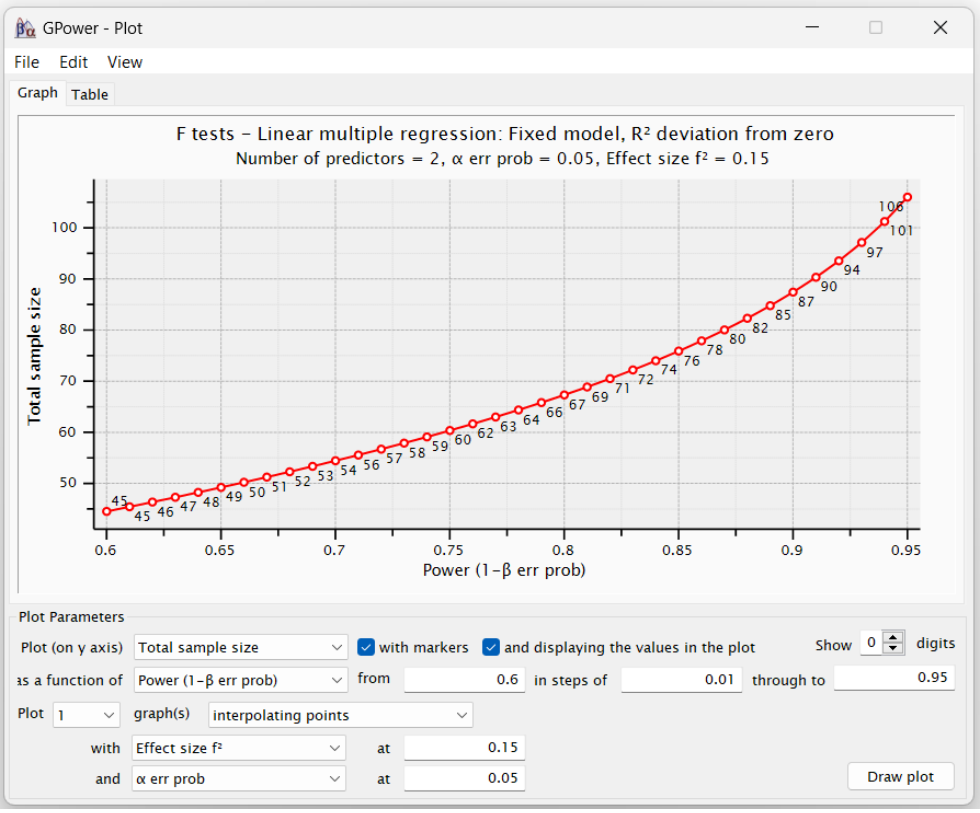

Figure 3.1: Total sample size required using G-power analysis

Source: G-power 3.1.9.7 software ouFPut

3.5.3. Sampling Technique

Sampling techniques may be broadly classified as nonprobability and probability (Schindler, 2022). Nonprobability sampling (i.e., convenience, judgmental, quota, snowball sampling) relies on the personal judgment of the researcher rather than chance to select sample elements. In probability sampling (i.e., simple random, systematic, stratified sampling-proportionate and disproportionate), sampling units are selected by chance. Simple random sampling is easily

understood, ensure high internal validity, unbiased representation of a group and the sample results may be projected to the target population. This method was thought to be appropriate to collect sufficient information from the total population to make statistical inferences (Saunders et al., 2023). A simple random sampling method (a probability sampling technique) and "Convenience sampling was used in this research, The questionnaires via HR may limit representativeness .

3.6. Data Collection Procedures

Data collection methods are an integral part of research design. The data collection method of this research is solely using; survey questionnaires. In this study, the researchers prefer to use self-evaluation questionnaires to gather primary data. The format for the data collection has been designed by separating the questionnaires into sections that may develop the interest and focus among respondent. Even though the idea of the primary data is to gather opinion but the format adopted is highly structured where the respondent needs to highlight (√) on the most relevant answer. The questionnaire is short, simple sentences, and facilitates the respondents. There is an argument that self-evaluation approach tends to be biased (Rose et al., 2008). However, the perceptual subjective measures are considered as reliable alternative since there is absence of any objective measures (Youndt et al., 1996).

The researchers originate the primary data for the specific purpose when addressing issues that occur. It means that when adopting the primary data as method of data collection, the researchers gathered information by creating primary data forms. In this study, the result from the respondent who answered the questionnaires is therefore known as the researcher's primary data which is to be processed further for study analysis. Moreover, the primary data collected shows the originality of this study.

The questionnaires were constructed as closed-ended questions and data collection was completed by with help of Human Resource Manager by sending emails (online) through company registered employees email addresses and data was retrieved in researcher email. Prior to self-administration of data collection, each respondent was contacted by emails to notify them about the questionnaires purpose. Finally, the help of Human Resource Manager has personally administered the survey by himself. This method was applied as it is quicker to administer and

convenience for the respondents (Bryman, 2008). However, this Convenience sampling via HR may limit representativeness.

An Addis Ababa University (FBE Campus) cover letter was enclosed together that particularly explained the purpose of the questionnaire to motivate and encourage company and respondents to participate. The researchers had also highlighted on the confidentiality of every response as this is the main obstacle to gain the respondents' trust in getting their perception about the BGI Ethiopia current situation. Finally, follow-ups by telephone calls and BGI Ethiopia visits was made to motivate the Human Resource Manager to send polite reminders to employee's time to time to respondent online questionnaire sent to them.

3.7. Techniques of Data Analysis

The current study used FP as the DV, IC as the IVs, and BSC is the MeV. To test the multivariate relationships hypothesized by the study model, the data had undergone series of analyses. As suggested that Statistical Package for Social Science (SPSS) software is one of the most reputable and prevalent package used to analyze data (Cramer, 1998), thus by utilizing the IBM SPSS (Statistical Package for Social Sciences) statistics version 26 to test hypotheses and provide descriptive explanation, the method analyses that was used in this study includes: (i) Cleaning and screening of data, (ii) Common method bias (iii) Factor analysis, (iv) Descriptive statistics, (v) Correlation analysis, (vi) Regression analysis, and (vii) Mediation analysis.

3.7.1. Data Cleaning and Screening

Data cleaning and screening is the process of the data where it begins after all the data have been collected and before starting any further statistical testing. After the data was obtained, each question in the questionnaires were coded and keyed-in in the SPSS. The data was examined through basic descriptive and frequency distribution to identify any improperly coded or out of range data. Any missing responses were detected during the frequency test. Basically, there are three main steps in screening and cleaning the data of which are; inspection for errors, discovery of errors in the data file, and finally, rectifying the errors in the data file (Pallant, 2013).

3.7.2. Common Method Bias

Common method bias occurs when a single source of variance affects scores on multiple measures in a study. However, Podsakoff et al. (2003) procedural and statistical approaches were

used to overcome common method bias. Before starting the survey, feedback on the survey questionnaire was collected to verify that the questions are simple to read and understand. Before data was collected, suitable online instructions were given to respondents, and confidentiality and secrecy was guaranteed. Also, according to Harman (1967) a single factor analysis was performed to determine whether the data set had any common method bias. Exploratory factor analysis was performed using 26 items from all constructs, i.e., internal control, Balanced Scorecard, and Financial Performance. According to the results of un-rotated exploratory factor analysis, only a single factor accounts for 41.906% of the variance, which is under the threshold of 50%, indicating that common method bias is not present in this study (Podsakoff and Organ, 1986).

3.7.3. Factor Analysis

Factor analysis was conducted to measure the validity of the IVs (IC), DV (FP), as well as the MeV (BSC). The basic function of factor analysis is to reduce data by analyzing a numbers of items variables whether there is a tendency for groups of them to be interrelated (Hair et al., 2010; Bryman, 2008). It is also a statistical technique used to identify a smaller number of factors underlying a large number of observed variables (Gaur and Gaur, 2009). It is often used with multiple item measures to see if the items tend to gather to form one or more groups of items. Items that have a high correlation between them and are largely independent of other subsets of variables are combined into factors. These groups of items are called factors and must then be given a name according to literatures.

To assess the factor analysis, four commonly used assumptions were followed (Hair et al., 2010; Field, 2000): (i) sampling adequacy (Kaiser Meyer Olkin measure greater than 0.5) and Bartlett's test of sphericity to test homogeneity of variances statistics is statistically significant ($p<0.05$); (ii) the minimum eigenvalue for each factor to be 1; (iii) considering the sample size (n=297), factor loading of 0.50 for each item was considered as the threshold for retaining items to ensure greater confidence; and (iv) principal components analysis with varimax rotation was used for the interpretations of factors in this study (Pallant, 2020; Field, 2013; Huck, 2012; Bajpai, 2011).

3.7.4. Descriptive and Reliability Analysis

Data was analyzed mainly through descriptive statistics to summarize a group of data (Meier et al., 2015). The data was analyzed using descriptive data analysis, which covered the frequency

distribution in order to observe the characteristics of respondents, measures of central tendency of mean, and measures of dispersions of standard deviation (SD), skewness and kurtosis (Pallant, 2013).

Reliability analyses was conducted to measure the reliability of the IVs (IC), DV (FP), as well as the MeV (BSC). The reliability test is purposively used to test the internal consistencies of the instrument used. It is critical to ensure the reliability of the questionnaires (Hair et al., 2007). In this study, Cronbach's alpha correlation coefficient was used to analyze the reliability of instruments and the goodness of IVs, MeV, and DV data that was collected. Cronbach's coefficient alpha is commonly used to measure the reliability for a set of two or more construct indicators (Cronbach, 1951). The reliability of data is reflecting through the range between 0 and 1. The alpha coefficient value more than 0.70 is classified as acceptable (Nunnally and Bernstein, 1994), and more than 0.80 is good (Sekaran and Bougie, 2009).

Initial statistical analysis for questionnaire scale purification is also computed by corrected item-total correlation (CITC) to drop statistical invalid IC, BSC, and FP items. The value of CITC had to be at least 0.3 (Blankson and Kalafatis, 2004), but, optimally, above 0.5 as suggested by Hair et al. (2019), Robinson et al. (1991), Bearden et al. (1989), and Zaichkowsky (1985).

3.7.5. Correlation Technique

Correlation is an interdependence technique and bivariate analysis that measures the strength of association between two variables and the direction of the relationship. The correlation coefficient, r, ranges from +1.0 to -1.0. If the value of r equals +1.0, there is a perfect positive linear (straight-line) relationship. If the value of r equals -1.0, there is a perfect negative linear relationship, or a perfect inverse relationship. No correlation exists if r equals 0; the two variables would be regarded as independent (Zikmund et al., 2017). Cohen (1988) suggests the following guidelines: $r<0.1$-Very small, $0.1 \leq r<0.3$-Small, $0.3 \leq r<0.5$-Moderate, and $r \geq 0.5$-Large. A correlation matrix is the standard form for reporting correlational results.

In this study the Pearson correlation coefficient was used. In this study mean is the average value calculated by adding up the values of each case for a variable and dividing by the total number of cases. Standard deviation is the statistic that describes the extent of spread of data values around the mean for a variable containing quantifiable data (Saunders et al., 2007).

For mean analysis (Robinson, 2014), the five-point Likert scale used as, 1.00-1.80=Extremely Dissatisfied (Strongly Disagree), 1.81-2.60=Dissatisfied (Disagree), 2.61-3.40=Moderate (Neutral), 3.41-4.20=Satisfied (Agree), and 4.21-5.00=Extremely Satisfied (Strongly Agree). Krosnick (1999) also discusses how scale format choices (e.g., 5-point vs. 7-point) can impact reliability, validity, and respondent cognitive processing, making it relevant when analyzing means and scale effects in survey data.

3.7.6. Regression Technique

Regression analysis is technique for measuring the linear association between a dependent variable (DV) and an independent variables (IVs), specifying the cause and the effect (Zikmund et al., 2017). There are three major types of multiple regression: standard multiple regression, hierarchical or sequential regression and stepwise or statistical regression (Gaur and Gaur, 2006).

In this study, multiple regression analysis is used to investigate the relationship between a single DV and IVs at one time (Hair et al., 1998). The analysis was undertaken to better understand the effect of IC on FP and also to know the effect of BSC on FP. In addition, regression analysis used to know the effect of IC on BSC. In this study regression models are interpreted using following four steps.

(i) Examine the model F-test. The *F*-ratio in the ANOVA table tests whether the overall regression model is a good fit for the data. The ANOVA table shows that the independent variables statistically significantly predict the dependent variable. A commonly used cut-off value for the p-value is 0.05 (Hair et al., 2019).

(ii) Examine the individual statistical tests for each parameter estimate. Regression coefficient is a measure of how strongly each IV predicts the DV. The range of coefficient exists between -1 and +1, and the value near +1 indicates that there is a significant positive relationship between IV and DV constructs (Hair et al., 2017). The threshold of t-value with a two-tailed test at the significant level are: not Sig. <1.96, ≥1.96 ($p<0.05$: Sig. level=5%), ≥2.58: ($p<0.01$: Sig. level=1%), ≥3.29 ($p<0.001$: Sig. level=0.1%) indicating that the path coefficient is statistically significant. Some researchers also use the p-value to assess significance (Hair et al., 2017).

There are two types of regression coefficients-unstandardized coefficients (B) and standardized coefficients (β), also known as beta value. The unstandardized coefficients can be used in the

equation as coefficients of different IVs along with the constant term to predict the value of DV. The standardized coefficient (β) is, however, measured in standard deviations (SD). If there is just one IV to predict one DV, the beta value obtained would be same as the correlation coefficient between the DV and the IV (Pallant, 2020; Hair et al., 2019; Gaur and Gaur, 2006).

(iii) Examine the model R-square. R represents the correlation between the observed values and the predicted values of the DV. R-square is the square of R and gives the proportion of variance in the dependent variable accounted for by the set of IVs chosen for the model. R-square is used to find out how well the IVs are able to predict the DV. However, the R-square value tends to be a bit inflated when the number of IVs is more or when the number of cases is large. The adjusted R-square takes into account these things and gives more accurate information about the fitness of the model (*Pallant, 2020; Hair et al., 2019*).

In order to judge the magnitude of effects in this study, Cohen's (1988) rules for effects sizes is used i.e., R-square between 1.0 and 5.9 per cent is considered as small, between 5.9 and 13.8 per cent is medium, and above 13.8 per cent is large. The value for R-square should be equal to or over 0.1 (Falk and Miller, 1992). The results show that all R-square values are over 0.1. Hence, the predictive capability is established in this study.

(iv) Examine collinearity diagnostics. The rule of the thumb is to have the sample size (n) at least as much as 50+8m (i.e., based on multiple R-square) and >104+m (i.e., based on beta weights) for testing the multiple correlations, where m is the number of IVs (Pallant, 2020; Gaur and Gaur, 2006).

Multicollinearity refers to a situation when two or more IVs are highly correlated with each other resulting in a reduction of their significance (Pallant, 2020; Gaur and Gaur, 2006).

Tolerance is just the inverse of variance inflation factor (VIF). A value of VIF higher than five (or Tolerance less than 0.2) indicates the presence of multicollinearity. In social sciences research a VIF value as high as 10 is considered to be acceptable (Pallant, 2020; Hair et al., 2019; Gaur and Gaur, 2006). In this study tolerance value greater than 0.10 and VIF value less than 10 was considered.

In this study Durbin-Watson index value within the range of 1.50-2.50 was considered and which suggests that there is no autocorrelation problem in the data (Durbin and Watson, 1951).

3.7.7. Mediation Analysis

The "Model 4" in Process Macro developed by Hayes (2013) was used as a statistical mediation analysis in SPSS to estimates the path coefficients using multiple regressions for the continuous outcome (*Preacher and Hayes, 2008*). It provided insights on the boundary conditions pertaining to the direct effect (DE) and indirect effect (IE) of the IC (IV) on the FP (DV) through the existence of BSC (MeV) and mediation variables.

In total, 5000 biased bootstrap samples were done to find the approximate standard errors; finding reflects a 95% confidence interval (CI) was used in the model (*Preacher and Hayes, 2008*).

The regression analysis in Path-a has to be confirmed a negative or positive relationship between IV and BSC as a MeV, without the presence of FP at $p<0.01$.

In Path-b, the result has to show that BSC, being the mediator, has been negatively or positively linked to the FP of the user. Path-c show the total effect (TE) of all the paths from path-a (between IV and MeV) to path-b (between MeV and DV) are statistically significant or not (Figure 3.2).

Sobel analyses present a measure of the IE of IV on the DV through the MeV. The result of path-a and path-b or ab (Preacher and Hayes, 2004) is the IE of IV on the DV was explained. As a rule, ab=c-c' can be IV on the DV was explained. As a rule, ab=c-c' can be fragmented into a direct element of path-c' and an IE of path-ab, where the TE of IV and DV known as path-c (Sobel, 1982).

To see the importance of IE, the lower and upper boundaries with a CI of 95% were examined. The IE is significant as zero does not reflect in the CI between the lower limit confidence interval (LLCI) and the upper limit confidence interval (ULCI). Therefore, there is a significant IE on BSC as mediator (Hayes, 2013).

In the case of the effect size, a 95% CI was used for the IE because it is significantly higher than zero. The p-value is drawn from the mediated effects, which are equivalent to zero in the population under the assumption of a two-tailed *z*-test. The test ratio critical value is ±1.96, which contains 95% of the normal unit distribution (Preacher and Leonardelli, 2010). Based on

Sobel's normal theory test, the calculated *z*-value (*z*-score) should be above 1.96, and then only it means that BSC mediates between the IV (IC) and DV (FP) (Figure 3.2).

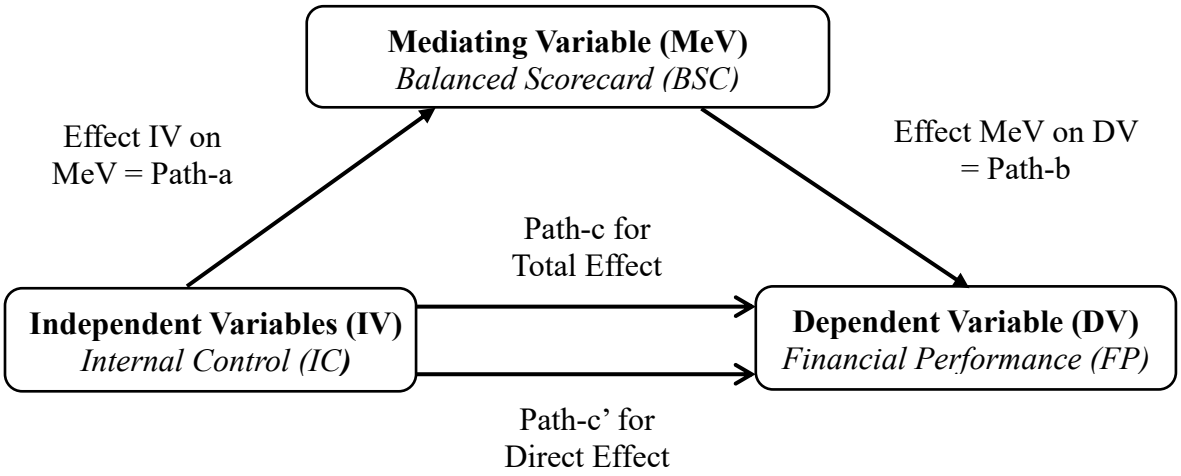

Figure 3.2: An interactive model for mediation test.

CHAPTER 4

4. DATA ANALYSIS AND INTERPRETATION

4.1. Introduction

This chapter focuses on the results of the analysis and the findings are presented in two categories as descriptive and inferential statistics of the survey data. Descriptive statistics such as frequency distribution and percentage were employed to assess the demographic characteristics, mean and standard deviation (SD) analysis and inferential statistics were employed using a correlation matrix and multiple regression analysis is used to examine the hypotheses. In addition, mediation using Process Macro Model-4 (Hayes Method) was used to analyze the mediating effect.

4.2. Demographic Information

A total of 297 questionnaires were found fully filled up by employees (respondents) of the case company, which were primarily considered for analysis (Table 4.1).

Table 4.1: Demographic analysis,

n=297

Variable	Category	Frequency	Per cent
Gender	Male	254	85.5
	Female	43	14.5
Age (Years)	21-30 years	259	87.2
	31-40 years	38	12.8
Education	Diploma	115	38.7
	1st Degree	180	60.6
	2nd Degree	2	.7
Experience (years)	Less than 5 years	182	61.3
	5-10 years	107	36.0
	Above 10 years	8	2.7

Source: Computation using SPSS-26 based on data from author's field work, 2024

The demographic analysis reveals a predominantly young and male workforce, with 85.5% identifying as male and 87.2% falling within the 21-30 age range. This suggests a significant gender disparity and a youthful demographic, which may reflect trends in educational enrollment or workforce entry. Additionally, the majority of respondents hold at least a first degree, indicating a well-educated sample, while a notable portion has less than five years of work experience, aligning with the younger age distribution. (Table 4.1).

4.3. Preliminary Statistical Analysis for Scale Refinement

4.3.1. Reliability Analysis

Initial statistical analysis or scale refinement is computed for Internal Control (IC), Balanced Scorecard (BSC), and Financial Performance (FP). Initial reliability analysis was performed to drop statistical invalid items.

The value of CITC had to be at least 0.3 (Du Preez et al., 2008; Blankson and Kalafatis, 2004), but, optimally, above 0.5 as suggested by Bearden et al. (1989) and Zaichkowsky (1985). Cronbach alpha (reliability) should be greater than 0.7 (Nunnally and Bernstein, 1994). During the CITC analysis also the reliability was examined and those item(s) also dropped which can increase the overall reliability of the factor even though they have CITC more than 0.5. The results of CITC and alpha reliability are shown in Table 4.2 which satisfies the condition as discussed.

Table 4.2: Initial reliability test for Internal Control

Code	CITC	CAID
IC	**Internal Control**	
CE	Control Environment (Cronbach's Alpha = 0.754)	
CE1	.606	.644
CE2	.670	.570
CE3	.481	.782
RA	Risk Assessment (CA = 0.796)	
RA1	.700	.659
RA2	.604	.764
RA3	.619	.743
CA	Control Activity (CA = 0.729)	
CA1	.573	.615
CA2	.550	.642
CA3	.529	.667
InC	Information and Communication (CA = 0.813)	
InC1	.717	.689
InC2	.651	.763
InC3	.632	.775
Mo	Monitoring (CA = 0.825)	
Mo1	.616	.831

Mo2	.780	.652
Mo3	.676	.776

The data presented outlines the reliability analysis of various components of internal control, measured through Cronbach's Alpha (CA) and Corrected Item-Total Correlation (CITC). Each category of internal control is assessed for its reliability, with the Control Environment (CA = 0.754), Risk Assessment (CA = 0.796), Control Activity (CA = 0.729), Information and Communication (CA = 0.813), and Monitoring (CA = 0.825) showing varying levels of internal consistency.

Table 4.3: Initial reliability test for Balanced Scorecard

Code	CITC	CAID
BSC	**Balanced Scorecard**	
CP	Customer Perspective (Cronbach's Alpha = 0.802)	
CP1	.677	.
CP2	.677	.
IPP	Internal Process Perspective (CA = 0.831)	
IPP1	.731	.727
IPP2	.799	.650
IPP3	.558	.887
LGP	Learning Growth Perspective (CA = 0.735)	
LGP1	.500	.509
LGP2	.473	.526
LGP3	.462	.531
LGP4	.248	.680
SA	Strategy Alignment (CA = 0.732)	
SA1	.593	.601
SA2	.660	.518
SA3	.429	.782

The analysis of the Balanced Scorecard (BSC) components reveals varying levels of reliability across its perspectives. The Customer Perspective (CP) demonstrates a strong internal consistency with a Cronbach's Alpha of 0.802, where both items (CP1 and CP2) show a Corrected Item-Total Correlation (CITC) of 0.677. This indicates that these items contribute positively to the overall construct, suggesting that the Customer Perspective is a reliable measure of performance in this area.

In contrast, the Internal Process Perspective (IPP) exhibits even higher reliability, with a Cronbach's Alpha of 0.831. The CITC values for its items range from 0.558 to 0.799, indicating that most items are effectively contributing to the construct. However, the Learning Growth

Perspective (LGP) presents challenges, as its items have lower CITC values, particularly LGP4, which has a CITC of only 0.248. This suggests that the LGP may require further refinement to enhance its reliability and effectiveness in measuring growth and learning outcomes.

Lastly, the Strategy Alignment (SA) perspective has a Cronbach's Alpha of 0.732, with CITC values ranging from 0.429 to 0.660. The lower CITC for SA3 indicates that this item may not be contributing effectively to the overall construct, highlighting a potential area for improvement.

Table 4.4: Initial reliability test for Financial Performance

Code	CITC	CAID
FP	**Financial Performance**	
FPB	Financial Planning and Budgeting (Cronbach's Alpha = 0.854)	
FPB1	.670	.785
FPB2	.550	.512
FBP3	.500	.696
FCRM	Financial Control and Risk Management (CA = 0.763)	
FCRM1	.614	.667
FCRM2	.585	.557
FCRM3	.500	.573
FDM	Financial Decision-Making (CA = 0.872)	
FDM1	.531	.716
FDM2	.651	.580
FDM3	.615	.784

The analysis of the Financial Performance (FP) components reveals insights into the reliability of various metrics used to assess financial management within organizations. The Financial Planning and Budgeting (FPB) category shows a strong internal consistency with a Cronbach's Alpha of 0.854. The items FPB1, FPB2, and FPB3 have Corrected Item-Total Correlation (CITC) values of 0.670, 0.550, and 0.500, respectively. While FPB1 demonstrates a solid contribution to the construct, FPB2 and FPB3 are on the lower end, indicating potential areas for improvement.

In the Financial Control and Risk Management (FCRM) category, the Cronbach's Alpha is 0.763, suggesting a good level of reliability. The CITC values for FCRM1, FCRM2, and FCRM3 are 0.614, 0.585, and 0.500, respectively. These values indicate that while the items are contributing to the overall construct, there is room for enhancement, particularly for FCRM3, which is at the threshold of acceptable reliability.

The Financial Decision-Making (FDM) perspective exhibits the highest reliability among the three categories, with a Cronbach's Alpha of 0.872. The CITC values for FDM1, FDM2, and FDM3 are 0.531, 0.651, and 0.615, respectively. This suggests that FDM2 and FDM3 are strong contributors to the construct, while FDM1 could be evaluated further to enhance its impact.

4.3.2. Factor Analysis of IC, BSC, and FP

A factor analysis using principal component analysis shows the items loaded on a each single factor with an eigen value greater then 1, explaining more than 60 per cent of the variance of the underlying the variable. A KMO greater than 0.6 ($p<0.001$) indicated the data's appropriateness for this analysis (Hair et al., 2019; Hair et al., 2012) with acceptable scale reliability coefficient (Cronbach's alpha ≥0.7 and the values in the main diagonal of the anti-image matrix were greater than 0.6 (Hair et al., 2005). All of the IC, BSC, and FP variables presented satisfactory values (Table 4.5).

Table 4.5: Factor analysis for IC, BSC, and FP

Factor (Code)	**Loadings**	**Eigen values**	**% Variance**	**Communalities**	**KMO**	**Anti-Image**
	>0.5	*>1*	*>60%*	*>0.5*	*>0.5*	*>0.6*
Internal Control						
CE-Control Environment (Cronbach's Alpha = 0.754)						
CE1-CE3	0.738-0.875	2.018	67.276	0.544-0.766	0.649	0.608-0.769
RA-Risk Assessment (CA = 0.796)						
RA1-RA3	0.820-0.879	2.138	71.281	0.672-0.773	0.693	0.651-0.732
CA-Control Activity (CA = 0.729)						
CA1-CA3	0.789-0.821	1.945	64.840	0.622-0.674	0.681	0.664-0.703
InC-Information and Communication (CA = 0.813)						
InC1-InC3	0.835-0.884	2.191	73.047	0.697-0.781	0.704	0.665-0.739
Mo-Monitoring (CA = 0.825)						
Mo1-Mo3	0.812-0.918	2.243	74.768	0.659-0.843	0.665	0.613-0751
Balanced Scorecard						
CP-Customer Perspective (Cronbach's Alpha = 0.802)						
CP1-CP2	0.916	1.677	83.855	0.639	0.500	500
IPP-Internal Process Perspective (CA = 0.831)						
IPP1-IPP3	0.771-0.926	2.246	74.882	0.594-0.857	0.645	0.595-0.812
LGP-Learning Growth Perspective (CA = 0.735)						
LGP1-LGP4	0.444-0.798	1.962	49.046	0.197-0.638	0.640	0.614-0.713
SA-Strategy Alignment (CA = 0.732)						
CA1-CA5	0.699-0.875	1.962	65.396	0.488-0.766	0.626	0.588-0.770
Financial Performance						

FPB-Financial Planning and Budgeting (Cronbach's Alpha = 0.854)						
FPB1-FPB3	0.778-0.853	2.639	65.974	0.605-0.728	0.743	0.732-0.755
FCRM-Financial Control and Risk Management (CA = 0.763)						
FCRM1-FCRM3	0.806-0.841	2.038	67.950	0.649-0.707	0.694	0.673-0.721
FDM-Financial Decision-Making (CA = 0.872)						
FDM1-FDM3	0.777-0.890	2.175	72.492	0.604-0.793	0.676	0.634-0.818

The analysis of the Financial Performance (FP) components reveals insights into the reliability of various metrics used to assess financial management within organizations. The Financial Planning and Budgeting (FPB) category shows a strong internal consistency with a Cronbach's Alpha of 0.854. The items FPB1, FPB2, and FPB3 have Corrected Item-Total Correlation (CITC) values of 0.670, 0.550, and 0.500, respectively. While FPB1 demonstrates a solid contribution to the construct, FPB2 and FPB3 are on the lower end, indicating potential areas for improvement.

In the Financial Control and Risk Management (FCRM) category, the Cronbach's Alpha is 0.763, suggesting a good level of reliability. The CITC values for FCRM1, FCRM2, and FCRM3 are 0.614, 0.585, and 0.500, respectively. These values indicate that while the items are contributing to the overall construct, there is room for enhancement, particularly for FCRM3, which is at the threshold of acceptable reliability.

The Financial Decision-Making (FDM) perspective exhibits the highest reliability among the three categories, with a Cronbach's Alpha of 0.872. The CITC values for FDM1, FDM2, and FDM3 are 0.531, 0.651, and 0.615, respectively. This suggests that FDM2 and FDM3 are strong contributors to the construct, while FDM1 could be evaluated further to enhance its impact.

4.4. Descriptive Statistics Analysis of IC, BSC, and FP

Descriptive statistics mean and standard deviations (SD) of the respondents' scores were computed and analysis has been done by comparing these mean scores and SD among respondents. The reason for using descriptive statistics is to compare the different IC variables that affect the BSC and FP for BGI Ethiopia, Addis Ababa by using the means and SD values.

4.4.1. Internal Control

Code	Control Environment (CE) Item	Mean	SD	Rank
CE1	There is competent and independent internal control department in the corporation	3.5421	1.3428	3

CE2	There is active management board & audit committee consisting of independent members in the corporation	3.7172	1.27375	2
CE3	There are clear lines of authority, responsibility and performance evaluation	3.7677	1.28264	1
	Overall Mean	3.6756	1.06433	
Code	**Risk Assessment (RA) Item**	**Mean**	**SD**	**Rank**
RA1	Risk identification is carried out at all levels, departments, functions and activities in the corporation	3.8182	1.25227	1
RA2	The corporation identifies & assesses changes that could significantly impact the system of internal control	3.7576	1.37613	3
RA3	The Corporation Consider the potential for fraud in assessing risks to the achievement of objectives	3.8148	1.26653	2
	Overall Mean	3.7969	1.09508	
Code	**Control Activity (CA) Item**	**Mean**	**SD**	**Rank**
CA1	Control activities ensure that rights and content accessed is limited to authorized persons	3.4108	1.36546	2
CA2	Corporation establishes responsibility & accountability for executing policies and procedures.	3.1987	1.35227	1
CA3	Control to ensure that all operations are verified with validity and legality before recording.	3.1549	1.36173	3
	Overall Mean	3.2548	1.09488	
Code	**Information and Communication (InC) Item**	**Mean**	**SD**	**Rank**
InC1	Corporations perform well in providing honest, relevant and timely information to external audiences	3.4983	1.1887	2
InC2	Information system ensures information is kept confidential and stored securely	3.2828	1.33082	3
InC3	Information about tasks, requests from superiors are clearly communicated, to the right people, at the right time.	3.5185	1.14807	1
	Overall Mean	3.4332	1.04485	
Code	**Monitoring (Mo) Item**	**Mean**	**SD**	**Rank**
Mo1	The monitoring process is established in the processes, business activities, functions of the corporation.	3.7407	1.04467	2
Mo2	The corporation uses knowledgeable personnel to evaluate the overall internal control system	3.7407	1.03493	1
Mo3	Periodic monitoring activities are performed well by objects inside or outside the corporation	3.7071	0.8373	3
	Overall Mean	3.7295	0.84083	

Table 4.6: Mean, SD, and Reliability for IC components

Note:

- Mean Scale Used: 1.00-1.80: Very Low; 1.81-2.60: Low; 2.61-3.40: Neutral; 3.41-4.20: High; 4.21- 5.00: Very High

Cronbach's alpha (reliability)=0.754, n=297

4.4.1.1. Analysis of Mean Score for Control Environment (CE)

The findings from the Control Environment (CE) assessment indicate a generally positive perception of the internal control mechanisms within the organization. The three items evaluated—competence of the internal control department, the activity of the management board and audit committee, and the clarity of authority and responsibility—received high mean scores, with the highest being for clear lines of authority. This suggests that respondents feel confident in the structure and effectiveness of the internal controls in place.

The overall mean score of 3.6756 reflects a high perception of the control environment, indicating that respondents believe the organization has established a robust framework for governance and risk management. However, the standard deviations for each item suggest some variability in responses, which may point to differing experiences or perceptions among stakeholders regarding the effectiveness of these controls

4.4.1.2. Analysis of Mean Score for Risk Assessment (RA)

This table presents descriptive statistics for Risk Assessment (RA) items within a corporation. The overall mean of 3.7969 (SD = 1.09508) falls within the "High" range (3.41-4.20), indicating a generally positive perception of the corporation's risk assessment practices. This suggests respondents believe the organization effectively identifies and manages risks.

Among the specific RA items, "Risk identification carried out at all levels" (RA1) had the highest mean (3.8182), followed closely by "Consideration of fraud in risk assessment" (RA3) at 3.8148. These high means suggest strong agreement regarding the comprehensiveness of risk identification and the organization's focus on fraud risk. The item "Identifying and assessing changes impacting internal control" (RA2) had a slightly lower mean of 3.7576, suggesting this area, while still rated as "High," may benefit from further attention or more consistent application.

4.4.1.3. Analysis of Mean Score for Control Activity (CA)

The results from the Control Activity (CA) assessment reveal insights into the effectiveness of control activities within the organization. The three items evaluated—limiting access to authorized persons, establishing responsibility and accountability, and verifying operations for validity and legality—received mean scores that indicate a neutral to high perception of their effectiveness. The item with the highest mean score, CA1 (3.4108), suggests that respondents feel relatively confident that control activities effectively restrict access to authorized individuals, although the standard deviation of 1.36546 indicates some variability in responses.

The second-ranked item, CA2 (3.1987), reflects a slightly lower mean score, indicating that while there is a recognition of established responsibility and accountability for executing policies and procedures, there may be room for improvement in this area. The lowest-ranked item, CA3 (3.1549), suggests that respondents are less confident about the controls ensuring that operations are verified for validity and legality before recording. This item also has a high standard deviation of 1.36173, indicating a lack of consensus among respondents regarding the effectiveness of these controls.

Overall, the mean score of 3.2548 indicates a neutral to high perception of control activities, suggesting that while respondents generally view the control activities positively, there are areas that may require further attention. The Cronbach's alpha value of 0.729 indicates acceptable reliability of the items, suggesting that the assessment consistently measures the underlying construct of control activities. The variability in responses, particularly for CA2 and CA3, highlights potential areas for improvement to enhance the effectiveness of control activities within the organization.

4.4.1.4. Analysis of Mean Score for Information and Communication (InC)

This table presents descriptive statistics for items related to Information and Communication (InC) within a corporation. The overall mean of 3.4332 (SD = 1.04485) falls within the "High" range (3.41-4.20), suggesting a generally positive perception of the corporation's information and communication practices. This indicates respondents generally believe the organization communicates effectively.

Among the specific InC items, "Clear communication of tasks and requests" (InC3) had the highest mean (3.5185), indicating strong agreement that internal communication regarding work

assignments is effective. "Providing honest, relevant, and timely information to external audiences" (InC1) followed with a mean of 3.4983, also within the "High" range, suggesting positive perceptions of external communication. "Information system security and confidentiality" (InC2) had the lowest mean (3.2828), falling within the "Neutral" range (2.61-3.40). This suggests that while internal and external communication is perceived as strong, there may be concerns or less confidence in the security and confidentiality of information systems.

4.4.1.5. Analysis of Mean Score for Monitoring (Mo)

The results from the Monitoring (Mo) assessment indicate a strong perception of the monitoring processes within the organization. The mean scores for the three items evaluated—establishment of monitoring processes, use of knowledgeable personnel for evaluation, and performance of periodic monitoring activities—are all above 3.70, suggesting a high level of confidence in these areas. Notably, both Mo1 and Mo2 share the highest mean score of 3.7407, indicating that respondents feel positively about the integration of monitoring processes into business activities and the expertise of personnel involved in evaluating the internal control system.

The third item, Mo3, received a slightly lower mean score of 3.7071, which still reflects a high perception of the effectiveness of periodic monitoring activities. The standard deviations for these items are relatively low, particularly for Mo3 (0.83730), suggesting a consensus among respondents regarding the effectiveness of monitoring activities. This consistency in responses indicates that stakeholders generally agree on the robustness of the monitoring processes in place.

4.4.2. Balanced Scorecard

Code	Customer Perspective (CP)	Mean	SD	Rank
CP1	My work group looks for better ways to serve our customers	4.0135	0.74423	1
CP2	My work group consistently delivers a high level of customer service	3.596	0.86898	2
	Overall Mean	3.8047	0.73905	
Code	**Internal Process Perspective (IPP)**	**Mean**	**SD**	**Rank**
IPP1	I am aware of process improvement initiatives taking place in my department	3.9461	0.86824	3
IPP2	I have the materials/tools/equipment I need to do my job well	3.9899	0.92446	1

IPP3	My department is serios about change	3.9461	0.84056	2
	Overall Mean	3.9607	0.75954	
Code	**Learning Growth Perspective (LGP)**	**Mean**	**SD**	**Rank**
LGP1	I am paid fairly for the work I do	4.0303	0.84775	1
LGP2	I think my job performance is evaluated fairly	3.9158	0.87166	3
LGP3	My career coals can be met at BGI Ethiopia	3.9158	0.9845	4
LGP4	I receive the training I need to do a quality job	3.9226	0.91389	2
	Overall Mean	3.9461	0.62605	
Code	**Strategy Alignment (SA)**	**Mean**	**SD**	**Rank**
SA1	I have a clear understanding of my department's strategic objectives	3.9428	0.96217	2
SA2	I have a clear idea of my job responsibilities	3.9293	0.8882	3
SA3	I get the information I need to be productive in my job	3.9461	0.84856	1
	Overall Mean	3.9394	0.72705	

Table 4.7: Mean, SD, and Reliability for BSC Balanced scorecard Perspectives

Note:

- Mean Scale Used: 1.00-1.80: Very Low; 1.81-2.60: Low; 2.61-3.40: Neutral; 3.41-4.20: High; 4.21- 5.00: Very High

Cronbach's alpha (reliability)=0.754, n=297

4.4.2.1. Analysis of Mean Score for Customer Perspective (CP)

The results from the Customer Perspective assessment indicate a strong commitment to customer service within the organization. The highest-ranked item, CP1 (Mean = 4.0135), reflects that work groups actively seek better ways to serve customers, suggesting a proactive approach to enhancing customer satisfaction. This high mean score, coupled with a relatively low standard deviation of 0.74423, indicates a consensus among respondents regarding the importance of innovation in customer service.

The second item, CP2 (Mean = 3.5960), shows that while work groups consistently deliver a high level of customer service, there is a slightly lower perception compared to the first item. The standard deviation of 0.86898 for this item suggests some variability in responses, indicating that while many feel confident in the service levels provided, there may be areas for improvement or differing experiences among team members.

4.4.2.2. Analysis of Mean Score for Internal Process Perspective (IPP)

The results from the Internal Process Perspective assessment indicate a strong awareness and support for process improvement initiatives within the organization. The highest-ranked item, IPP2 (Mean = 3.9899), suggests that employees feel well-equipped with the necessary materials, tools, and equipment to perform their jobs effectively. This high mean score, along with a standard deviation of 0.92446, indicates a general consensus among respondents regarding their preparedness to execute their tasks.

The second-ranked item, IPP3 (Mean = 3.9461), reflects a positive perception of the department's seriousness about change, indicating that employees recognize a commitment to continuous improvement. This item shares the same mean score as IPP1, which focuses on awareness of process improvement initiatives (also 3.9461). The standard deviations for these items are relatively low, suggesting that respondents generally agree on the level of commitment to change and awareness of initiatives within their departments.

4.4.2.3. Analysis of Mean Score for Learning Growth Perspective (LGP)

The results from the Learning Growth Perspective assessment highlight a positive perception of various aspects related to employee satisfaction and development within the organization. The highest-ranked item, LGP1 (Mean = 4.0303), indicates that employees feel they are compensated fairly for their work, which is crucial for motivation and retention. This high mean score, along with a standard deviation of 0.84775, suggests a strong consensus among respondents regarding their satisfaction with pay.

The second item, LGP4 (Mean = 3.9226), reflects that employees believe they receive the necessary training to perform their jobs effectively, which is essential for maintaining quality standards. The scores for LGP2 (Mean = 3.9158) and LGP3 (Mean = 3.9158) indicate that employees feel their job performance is evaluated fairly and that their career goals can be met within the organization, although these items rank slightly lower. The standard deviations for these items are relatively high, particularly for LGP3 (0.98450), suggesting some variability in responses and indicating that not all employees may feel equally supported in their career aspirations.

4.4.2.4. Analysis of Mean Score for Strategy Alignment (SA)

The results from the Strategy Alignment assessment indicate a strong understanding among employees regarding their roles and the strategic objectives of their departments. The highest-ranked item, SA3 (Mean = 3.9461), suggests that employees feel they receive the necessary information to be productive in their jobs. This high mean score, along with a standard deviation of 0.84856, indicates a general consensus that access to information is effective and supports productivity.

The second-ranked item, SA1 (Mean = 3.9428), reflects that employees have a clear understanding of their department's strategic objectives. This is crucial for ensuring that individual efforts align with broader organizational goals. The standard deviation of 0.96217 indicates some variability in responses, suggesting that while many employees feel informed, there may be areas where communication could be improved.

The third item, SA2 (Mean = 3.9293), indicates that employees have a clear idea of their job responsibilities. The standard deviation of 0.88820 suggests a moderate level of agreement among respondents, but it also highlights potential discrepancies in how responsibilities are perceived across different roles.

4.4.3. Financial Performance

Code	Financial Planning and Budgeting (FPB)	Mean	SD	Rank
FPB1	The company has a well-defined financial planning process.	3.6599	1.09768	2
FPB2	Financial forecasts are accurate and reliable.	3.8148	1.13127	1
FBP3	Budgets are realistic and achievable.	3.3502	1.13837	3
	Overall Mean	3.6083	0.81624	
Code	**Financial Control and Risk Management (FCRM)**	**Mean**	**SD**	**Rank**
FCRM1	Strong internal controls are in place to safeguard assets.	3.431	1.1102	3
FCRM2	Financial risks are identified and assessed regularly.	3.7239	0.93967	2

FCRM3	Effective risk mitigation strategies are implemented.	4	0.69749	1
	Overall Mean	3.7183	0.51072	
Code	**Financial Decision-Making (FDM)**	**Mean**	**SD**	**Rank**
FDM1	Investment decisions are based on sound financial analysis.	3.9697	0.83974	2
FDM2	The company has a clear capital budgeting process.	4.1077	0.68416	1
FDM3	Financing decisions are made prudently.	3.9226	0.7561	3
	Overall Mean	4	0.59275	

Table 4.6: Mean, SD, and Reliability for financial performance

Note:

- Mean Scale Used: 1.00-1.80: Very Low; 1.81-2.60: Low; 2.61-3.40: Neutral; 3.41-4.20: High; 4.21- 5.00: Very High

Cronbach's alpha (reliability)=0.754, n=297

4.4.3.1. Analysis of Mean Score for Financial Planning and Budgeting (FPB)

The highest-ranked item, FPB2 (Mean = 3.8148), indicates that employees perceive the financial forecasts as accurate and reliable. This is a positive sign, as accurate forecasting is crucial for effective financial planning and decision-making. The standard deviation of 1.13127 suggests some variability in responses, indicating that while many employees trust the forecasts, there may be differing opinions on their reliability.

The second-ranked item, FPB1 (Mean = 3.6599), reflects that employees believe the company has a well-defined financial planning process. This score indicates a generally favorable view, but the standard deviation of 1.09768 suggests that there is a notable range of opinions on how well-defined this process is perceived to be.

The lowest-ranked item, FBP3 (Mean = 3.3502), indicates that employees feel budgets are realistic and achievable, but this score is still within the "Neutral" range. The standard deviation of 1.13837 indicates significant variability in responses, suggesting that some employees may find the budgets unrealistic or challenging to meet.

4.4.3.2. Analysis of Mean Score for Financial Control and Risk Management (FCRM)

The highest-ranked item, FPB2 (Mean = 3.8148), indicates that employees perceive the financial forecasts as accurate and reliable. This is a positive sign, as accurate forecasting is crucial for effective financial planning and decision-making. The standard deviation of 1.13127 suggests some variability in responses, indicating that while many employees trust the forecasts, there may be differing opinions on their reliability.

The second-ranked item, FPB1 (Mean = 3.6599), reflects that employees believe the company has a well-defined financial planning process. This score indicates a generally favorable view, but the standard deviation of 1.09768 suggests that there is a notable range of opinions on how well-defined this process is perceived to be.

The lowest-ranked item, FBP3 (Mean = 3.3502), indicates that employees feel budgets are realistic and achievable, but this score is still within the "Neutral" range. The standard deviation of 1.13837 indicates significant variability in responses, suggesting that some employees may find the budgets unrealistic or challenging to meet.

4.4.3.3. Analysis of Mean Score for Financial Decision-Making (FDM)

The highest-ranked item, FCRM3 (Mean = 4.0000), indicates that employees feel effective risk mitigation strategies are implemented. This score falls within the "High" range, suggesting a strong belief in the organization's ability to manage risks effectively. The standard deviation of 0.69749 indicates a relatively low variability in responses, reflecting a consensus among employees regarding the effectiveness of these strategies.

The second-ranked item, FCRM2 (Mean = 3.7239), shows that employees believe financial risks are identified and assessed regularly. This score also falls within the "High" range, indicating that employees feel confident in the organization's proactive approach to risk management. The standard deviation of 0.93967 suggests some variability in perceptions, but overall, the sentiment is positive.

The lowest-ranked item, FCRM1 (Mean = 3.4310), indicates that employees perceive strong internal controls are in place to safeguard assets, but this score is on the lower end of the "High" range. The standard deviation of 1.11020 suggests a wider range of opinions, indicating that

while many employees feel secure about internal controls, there may be concerns or uncertainties among others.

4.5. Relationship between IC, BSC, and FP

Bivariate Pearson correlation is used to test the relationship between research variables. Table 4.18 shows that the relationships between IC variables are moderate to high, where r ranges from 0.1856 to 0.553. Each IC variable has a strong relationship with total IC, where r ranges from 0.309 to 0.720, which means that all the five variables are related to each other and strongly related to the total of IC. Furthermore, total IC is strongly related to BSC and FP, where r equals 0.581 and 0.831, followed by BSC is strongly related to FP, where r equals 0.571. All the correlation is significant at the 0.01 level (2-tailed).

Table 4.9: Bivariate Pearson correlations matrix for research variables

n=297

Variables	Internal Control					IC	BSC	FP
	CE	RA	CA	InC	MO			
CE	1							
RA	.553**	1						
	.000							
CA	.208**	.186**	1					
	.000	.001						
InC	.064	.005	.017	1				
	.272	.936	.774					
MO	.053	.112	-.048	-.100	1			
	.362	.054	.413	.086				
IC	.720**	.712**	.537**	.377**	.309**	1		
	.000	.000	.000	.000	.000			
BSC	.005	.003	.044	.071	.114	.581	1	
	.930	.964	.446	.225	.050	.013		
FP	.557**	.565**	.457**	.322**	.320**	.831**	.571**	1
	.000	.000	.000	.000	.000	.000	.000	

Note:

- **. Correlation is significant at the 0.01 level (2-tailed)
- r scale: r<0.1-Very small, 0.1≤r<0.3-Small, 0.3≤r<0.5-Moderate, r≥0.5-Large (Cohen, 1988)

4.6. Regression Analysis and Hypothesis Testing

R-square indicates the goodness and fitness of the model. The higher R-square value, the better explanation of the variation of independent variable on the dependent variable. The F and t-values indicate the significance of the relationships and effects.

Before conducting regressions analysis, the following assumptions have been confirmed.

4.6.1. Regressions Analysis Assumptions

(i) Linearity Test: To test the linearity, we depend on plotting of studentized residual against the predicted value. As shown in Figure 4.1, there is no relation between the predicted and residual values; therefore, linearity is assumed.

(ii) Normality: To test the normality, we depend on the histogram of residuals. Figure 4.2 shows that the errors are normally distributed around X, and the shape follows the normal distribution, so the model does not violate this assumption.

(iii) Equal Variance (Homoscedasticity): To test the equal variance, we depend on the plot of studentized residual against the predicted value. Figure 4.3 shows that the errors are constant for all the value of independent variables. Therefore, there is no relation between the predicted and residual values, so this assumption is not violated.

(iv) Independence of Errors: Tables 4.19, 4.20, and 4.21 shows that Durbin-Watson value is equal to 1.942, 1.848, and 1.636, which is within the range of 1.50-2.50, indicates that the errors are independent from one another; hence, this assumption is not violated.

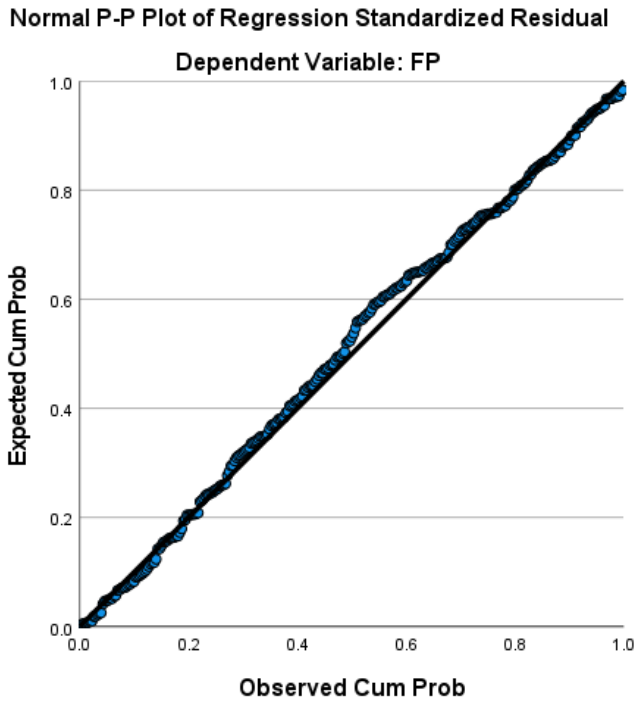

Figure 4.1: Linearity test

Source: Computation (SPSS-26) based on data gathered from author's field work, 2024

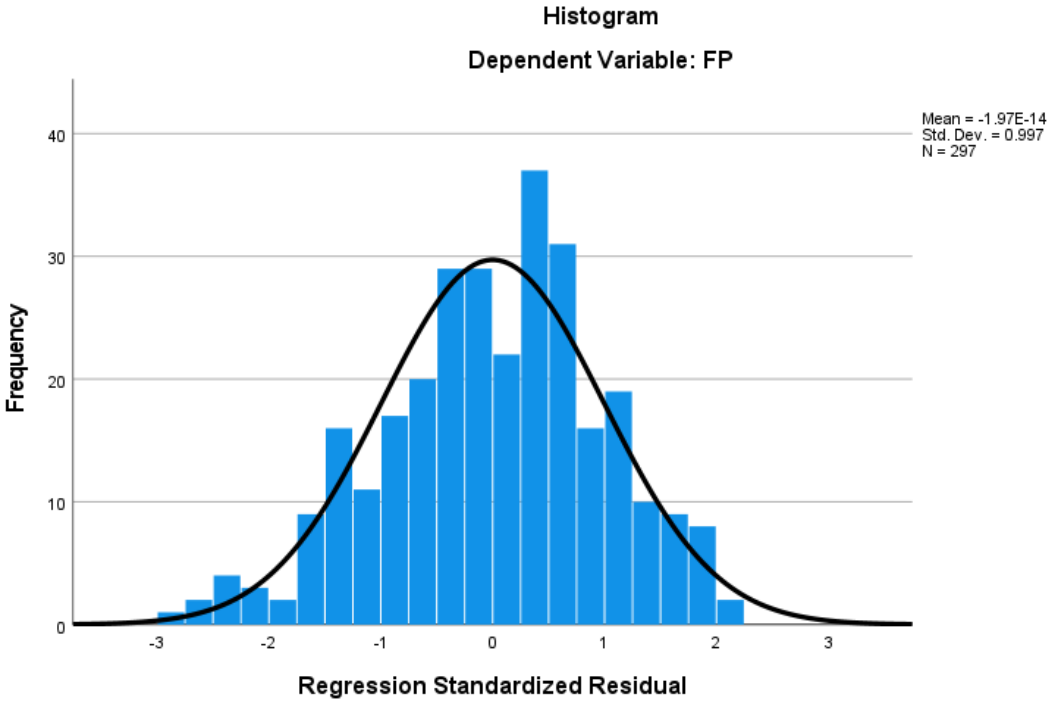

Figure 4.2: Histogram of residuals

Source: Computation (SPSS-26) based on data gathered from author's field work, 2024

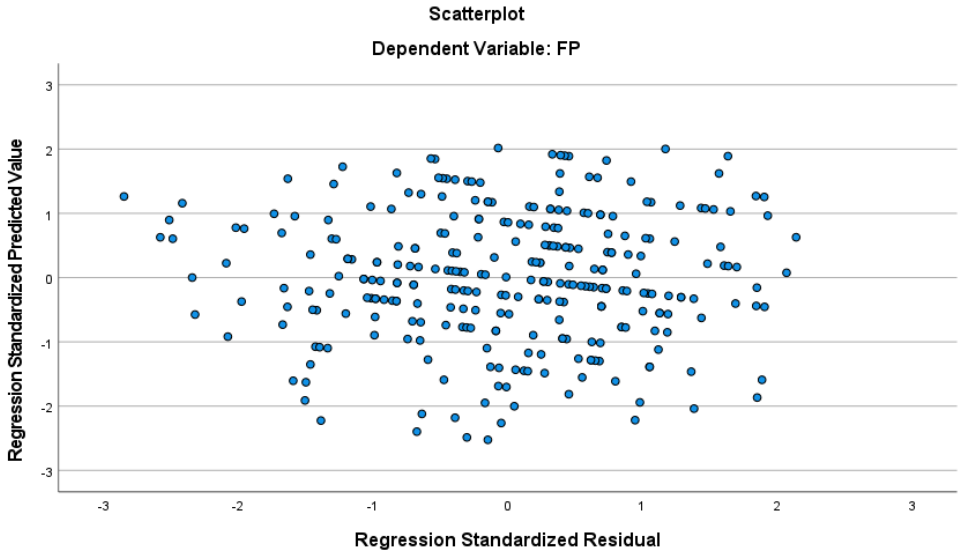

Figure 4.3: Histogram of residuals

Source: Computation (SPSS-26) based on data gathered from author's field work, 2024

(v) Multicollinearity: Tables 4.19, 4.20, and 4.21 shows that the variance inflation factor (VIF) value is less than 10 and tolerance value is more than 0.2 for each sub-variable, so collinearity assumption is not violated.

From these analyses, it can be concluded that regression model of this study meets all the assumptions required to ensure validity of its significance test.

4.6.2. Regression Analysis of IC on FP

Linear regression was conducted to analyze the effect of IC on FP. Analysis of variance (ANOVA) test was used to determine the influence that IC have on FP in a regression study. The ANOVA test allows a comparison of IC and FP measurements at the same time to determine whether a relationship exist between them.

From Table 4.19, the Correlation Coefficient value of 0.831 indicates a strong positive correlation between internal control and financial performance. This suggests that as internal control improves, financial performance tends to increase as well. The R^2 value of 0.690 means that approximately 69% of the variance in financial performance can be explained by internal control. This is a relatively high value, indicating a good fit of the model.

The adjusted R^2 of 0.689 is slightly lower than the R^2, which accounts for the number of predictors in the model. This suggests that the model remains robust even when considering the number of variables. The F-value of 657747 is significantly high, indicating that the model is statistically significant and that the independent variable (IC) reliably predicts the dependent variable (FP). The SE of 0.2235 provides an estimate of the average distance that the observed values fall from the regression line.

The significance level (Sig.) of 0.000 indicates that the results are statistically significant at the $p < 0.001$ level. This means there is a very low probability that the observed relationship is due to chance. The constant term is 1.638, which represents the expected value of financial performance when internal control is zero. The coefficient for IC is 0.597, indicating that for each unit increase in internal control, financial performance is expected to increase by 0.597 units. The standardized coefficient for IC is 0.831, which shows that internal control has a strong effect on financial performance when considering the scale of the variables. The t-value for IC is 25.647, which is well above the critical value of 1.96 for significance at the $p < 0.01$ level, confirming the strength of the relationship.

The study provides the Cohen's rules for effect size to judge the magnitude of effects. Based on Table 4.19, it can be monitored the coefficient of determination (R-square) is 0.398 showing 39.8 per cent of FP can be explained by IC. The effect size to judge the magnitude of IC effect is large on FP.

Hypothesis 1 (H1): IC has a positive and significant relationship with FP in BGI Ethiopia-***Accepted***

Table 4.10: Results of regression analysis: regressing IC against FP

Model-1 IC→FP	**R**	**R-Square**	**Adj. R-Sq.**	**F-value**	**SE**	**Sig.**	**D-W**	**Result**
	0.831	0.690	0.689	657747	0.2235	0.000	1.942	
IV	**Unstd. Coeff.**		**Std. Coeff.**	**t-value**	**Sig.**	**Collinearity Statistics**		H1: Accepted
	B	*SE*	*β*			*Tol.*	*VIF*	
(Constant)	1.638	0.084		19.423	0.000			
IC	0.597	0.023	0.831	25.647	0.000	1.000	1.000	

Note: Dependent Variable (DV): Financial Performance (FP); Independent Variable (IV): Internal Control (IC); Unstd. Coeff.=Unstandardized Coefficients; Std.

Coeff.=Standardized Coefficients; SE=Standard Error; Sig.=Significance; D-W=Durbin-Watson (Range: 1.50-2.50), Significant at: $p<0.01$ ($t\geq1.96$), $p<0.05$ ($t\geq2.58$), and $p<0.001$ ($t\geq3.29$) levels; H=Hypothesis; Adj. R-Sq.=Adjusted R-Square

Source: Computation (SPSS-26) based on data gathered from author's field work, 2024

4.6.3. Regression Analysis of IC on BSC

Linear regression was conducted to analyze the effect of IC on BSC. Analysis of variance (ANOVA) test was used to determine the influence that IC have on BSC in a regression study. The ANOVA test allows a comparison of IC and BSC measurements at the same time to determine whether a relationship exist between them.

From Table 4.20, the correlation coefficient value of 0.581 indicates a moderate positive correlation between internal control and the balanced scorecard. This suggests that improvements in internal control are associated with better performance as measured by the balanced scorecard. The R^2 value of 0.507 means that approximately 51% of the variance in the balanced scorecard can be explained by internal control. This indicates a reasonable fit of the model, although it is lower than the previous model examining financial performance.

The adjusted R^2 of 0.503 is slightly lower than the R^2, which accounts for the number of predictors in the model. This suggests that the model remains robust despite the number of variables considered. The F-value of 195.157 is significantly high, indicating that the model is statistically significant and that the independent variable (IC) reliably predicts the dependent variable (BSC). The SE of 0.4835 provides an estimate of the average distance that the observed values fall from the regression line. The significance level (Sig.) of 0.000 indicates that the results are statistically significant at the $p < 0.001$ level. This means there is a very low probability that the observed relationship is due to chance.

The constant term is 1.672, which represents the expected value of the balanced scorecard when internal control is zero. The coefficient for IC is 0.700, indicating that for each unit increase in internal control, the balanced scorecard is expected to increase by 0.700 units. The standardized coefficient for IC is 0.810, which shows that internal control has a strong effect on the balanced scorecard when considering the scale of the variables. The t-value for IC is 14.000, which is well above the critical value of 1.96 for significance at the $p < 0.01$ level, confirming the strength of the relationship. The tolerance value of 1.000 and VIF (Variance Inflation Factor)

of 1.000 indicate that there is no multicollinearity issue, meaning that internal control is not highly correlated with other independent variables in the model.

The study provides the Cohen's rules for effect size to judge the magnitude of effects. Based on Table 4.20, it can be monitored the coefficient of determination (R-square) is 0.369 showing 36.9 per cent of BSC can be explained by IC. The effect size to judge the magnitude of IC effect is large on BSC.

Hypothesis 2 (H2): IC has a positive and significant relationship with BSC in BGI Ethiopia-***Accepted***

Table 4.11: Results of regression analysis: regressing IC against BSC

Model-2 IC→BSC	**R**	**R-Square**	**Adj. R-Sq.**	**F-value**	**SE**	**Sig.**	**D-W**	**Result**
	0.581	0.369	0.503	195.157	0.4835	0.000	1.848	
IV	**Unstd. Coeff.**		**Std. Coeff.**	**t-value**	**Sig.**	**Collinearity Statistics**		H2: Accepted
	B	*SE*	*β*			*Tol.*	*VIF*	
(Constant)	1.672	0.162		20.176	0.000			
IC	0.700	0.050	0.810	14.000	0.000	1.000	1.000	

Note: Dependent Variable (DV): Balanced Scorecard (BSC); Independent Variable (IV): Internal Control (IC); Unstd. Coeff.=Unstandardized Coefficients; Std. Coeff.=Standardized Coefficients; SE=Standard Error; Sig.=Significance; D-W=Durbin-Watson (Range: 1.50-2.50), Significant at: $p<0.01$ ($t\geq1.96$), $p<0.05$ ($t\geq2.58$), and $p<0.001$ ($t\geq3.29$) levels; H=Hypothesis; Adj. R-Sq.=Adjusted R-Square

Source: Computation (SPSS-26) based on data gathered from author's field work, 2024

4.6.4. Regression Analysis of BSC on FP

Linear regression was conducted to analyze the effect of BSC on FP. Analysis of variance (ANOVA) test was used to determine the influence that BSC have on FP in a regression study. The ANOVA test allows a comparison of BSC and FP measurements at the same time to determine whether a relationship exist between them.

From Table 4.21, the value of 0.571 indicates a moderate positive correlation between the balanced scorecard and financial performance. This suggests that as the balanced scorecard

improves, financial performance tends to increase as well. The R^2 value of 0.326 means that approximately 32.6% of the variance in financial performance can be explained by the balanced scorecard. While this is a lower explanatory power compared to previous models, it still indicates a meaningful relationship.

The adjusted R^2 of 0.323 is slightly lower than the R^2, which accounts for the number of predictors in the model. This suggests that the model remains robust despite the number of variables considered. The F-value of 142.440 is significantly high, indicating that the model is statistically significant and that the independent variable (BSC) reliably predicts the dependent variable (FP). The SE of 0.3299 provides an estimate of the average distance that the observed values fall from the regression line. The significance level (Sig.) of 0.000 indicates that the results are statistically significant at the $p < 0.001$ level. This means there is a very low probability that the observed relationship is due to chance.

The constant term is 1.921, which represents the expected value of financial performance when the balanced scorecard is zero. The coefficient for BSC is 0.473, indicating that for each unit increase in the balanced scorecard, financial performance is expected to increase by 0.473 units. The standardized coefficient for BSC is 0.571, which shows that the balanced scorecard has a moderate effect on financial performance when considering the scale of the variables. The t-value for BSC is 11.935, which is well above the critical value of 1.96 for significance at the $p < 0.01$ level, confirming the strength of the relationship

The study provides the Cohen's rules for effect size to judge the magnitude of effects. Based on Table 4.21, it can be monitored the coefficient of determination (R-square) is 0.592 showing 59.2 per cent of FP can be explained by BSC. The effect size to judge the magnitude of BSC effect is large on FP.

Hypothesis 3 (H3): BSC has a positive and significant relationship with FP in BGI Ethiopia- ***Accepted***

Table 4.12 Results of regression analysis: regressing BSC against FP

Model-3 BSC→FP	**R**	**R-Square**	**Adj. R-Sq.**	**F-value**	**SE**	**Sig.**	**D-W**	**Result**
	0.571	0.326	0.323	142.440	0.3299	0.000	1.636	H3: Accepted
IV	**Unstd. Coeff.**		**Std.**	**t-value**	**Sig.**	**Collinearity**		

	Coeff.					Statistics	
	B	*SE*	*β*			*Tol.*	*VIF*
(Constant)	1.921	0.157		12.269	0.000		
BSC	0.473	0.040	0.571	11.935	0.000	1.000	1.000

Note: Dependent Variable (DV): Financial Performance (FP); Independent Variable (IV): Balanced Scorecard (BSC); Unstd. Coeff.=Unstandardized Coefficients; Std. Coeff.=Standardized Coefficients; SE=Standard Error; Sig.=Significance; D-W=Durbin-Watson (Range: 1.50-2.50), Significant at: $p<0.01$ ($t\geq1.96$), $p<0.05$ ($t\geq2.58$), and $p<0.001$ ($t\geq3.29$) levels; H=Hypothesis; Adj. R-Sq.=Adjusted R-Square

Source: Computation (SPSS-26) based on data gathered from author's field work, 2024

4.6.5. Analysis of Balanced Scorecard as a Mediator

The study assessed the mediating role of BSC on the relationship between IC and FP. The results revealed a significant indirect effect of IC on FP (B=0.3818, t=7.2173), supporting H4. Furthermore, the direct effect of IC on FP in presence of the mediator was also found significant (B=0.2660, $p<0.001$). Hence, BSC partially mediated the relationship between IC and FP. Mediation analysis summary is presented in Table 4.22.

The strength or size of mediation is determined by the use of variance accounted for (VAF) is recommended "because the distributional assumptions of Sobel test do not hold for indirect effect, and it lacks statistical power" (Haider et al., 2018). To estimate the total effect suggested by Sarstedt et al. (2014) as per Eq. (4.1).

Table 4.13: BSC Mediation Analysis

Effects	B	SE	T	p	LLCI	ULCI
Direct	0.2660	0.0456	5.8281	0.000	0.1762	0.3558
Indirect	0.3818	0.0529	7.2173	0.000	0.2772	0.4820
Total	0.6478	0.0464	13.9597	0.000	0.5565	0.7392

Note:

- LL=Lower level, UL=Upper level; CI =Confidence interval
- Level of confidence for all confidence intervals (CI) in ouFPut: 95.0000
- Number of bootstrap samples for percentile bootstrap confidence intervals: 5000

Source: Computation (SPSS-26, Hayes' Process Macro) based on data gathered from author's field work, 2024

Total effect=Direct effect + Indirect effect *(4.1)*

Total effect=0.2660+0.3818=0.6478

To establish this, the approach presented by Sarstedt et al. (2014) was followed by first excluding BSC from the model and run the bootstrapping. The direct effect between IC and FP value was 0.2660 and significant at 99% CI. In estimating the full model, the corresponding results of bootstrapping generate 0.6478 which is also significant at 99% CIs. As per Table 4.22, the variance accounted for (VAF) was calculated using the following Eq. (4.2).

VAF = Indirect effect ÷ Total effect *(4.2)*

VAF =0.3818÷ 0.6478=0.5893=58.93%

The result produced a VAF value of 0.5893, based on the rule of thumb given by Hair et al. (2014), which stated that if VAF>80%, it is full mediation-20%≤VAF≤80%; partial mediation and there is no mediation, if VAF<20%. Hence, it suffices to say that BSC partially mediates in the relationship between IC and FP. Partial mediation suggests BSC translates IC into FP, but other unmeasured factors (e.g., leadership) also contribute."

Leadership plays a crucial mediating role in translating intellectual capital (IC) into improved financial performance (FP) within organizations, especially in knowledge-intensive sectors like banking. Intellectual capital—comprising human capital, structural capital, and relational capital—represents intangible assets that require strategic direction to be effectively utilized. Without effective leadership, the potential of IC often remains untapped. **Bontis et al. (2000)** argue that while IC provides the foundational capabilities for innovation and competitive advantage, it is leadership that aligns these capabilities with organizational goals. Leadership mediates this relationship by shaping organizational culture, motivating employees, and ensuring that knowledge resources are applied in ways that
enhance efficiency and innovation—key drivers of financial outcomes.
Several empirical studies confirm this mediating effect. For instance, **Carmeli (2004)** found that transformational leadership significantly strengthens the impact of human and structural capital on organizational performance, suggesting that leadership behaviors influence how well intellectual assets are converted into financial results. In the context of banking and financial institutions, effective leadership not only facilitates knowledge sharing and innovation but also creates accountability systems that link IC deployment to performance metrics. Thus, leadership serves as a catalyst that bridges the gap between intangible knowledge resources and measurable financial success, reinforcing the need for leadership development as part of any IC-
focused strategic plan.

Hypothesis 4 (H4): BSC mediates significantly between IC and FP in BGI Ethiopia-***Accepted***

CHAPTER 5

5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter provides a concise summary of the research findings, draws conclusions based on these findings, offers practical recommendations, and suggests areas for future research, encapsulating the study's contributions and implications within the field of inquiry.

5.2. Summary of Findings

The demographic profile of the respondents reveals a predominantly young and male workforce. Out of 297 respondents, 85.5% are male and 87.2% fall within the age range of 21-30 years. This indicates a significant gender disparity and a youthful demographic, which may reflect trends in educational enrollment or workforce entry. Additionally, the majority of respondents hold at least a first degree, with 60.6% having a first degree and 38.7% holding a diploma. Only 0.7% have a second degree. A notable portion of the workforce has less than five years of work experience, aligning with the younger age distribution, while 36% have 5-10 years of experience, and only 2.7% have more than 10 years of experience.

The document's reliability analysis focuses on three main components: Internal Control (IC), Balanced Scorecard (BSC), and Financial Performance (FP). For IC, the reliability was assessed using Cronbach's Alpha and Corrected Item-Total Correlation (CITC). The Control Environment (Cronbach's Alpha = 0.754), Risk Assessment (Cronbach's Alpha = 0.796), Control Activity (Cronbach's Alpha = 0.729), Information and Communication (Cronbach's Alpha = 0.813), and Monitoring (Cronbach's Alpha = 0.825) all showed varying levels of internal consistency. These values indicate acceptable to good reliability, suggesting that the items within each category are consistent in measuring the underlying constructs.

For the Balanced Scorecard (BSC), the reliability analysis revealed strong internal consistency for the Customer Perspective (Cronbach's Alpha = 0.802), Internal Process Perspective (Cronbach's Alpha = 0.831), Learning Growth Perspective (Cronbach's Alpha = 0.735), and

Strategy Alignment (Cronbach's Alpha = 0.732). The CITC values for these components ranged from 0.248 to 0.799.

The Financial Performance (FP) components also demonstrated good reliability, with Cronbach's Alpha values ranging from 0.763 to 0.872. The Financial Planning and Budgeting (Cronbach's Alpha = 0.854), Financial Control and Risk Management (Cronbach's Alpha = 0.763), and Financial Decision-Making (Cronbach's Alpha = 0.872) categories all showed strong internal consistency.

The Control Environment assessment indicates a generally positive perception of internal control mechanisms within the organization. The overall mean score of 3.6756 reflects a high perception of the control environment. The overall mean score of 3.7969 (SD = 1.09508) suggests that respondents believe the organization effectively identifies and manages risks.

The overall mean score of 3.2548 (SD = 1.09488) indicates that while respondents generally view the control activities positively, there are areas that may require further attention. The overall mean score of 3.4332 (SD = 1.04485) suggests that respondents generally believe the organization communicates effectively, although there may be concerns about information system security and confidentiality. The overall mean score of 3.7295 (SD = 0.84083) reflects a high level of confidence in the monitoring processes.

The Balanced Scorecard assessment reveals strong internal consistency for its perspectives. The Customer Perspective (Mean = 3.8047, SD = 0.73905) and Internal Process Perspective (Mean = 3.9607, SD = 0.75954) indicate a strong commitment to customer service and process improvement. The Learning Growth Perspective (Mean = 3.9461, SD = 0.62605) highlights positive perceptions of employee satisfaction and development. The Strategy Alignment (Mean = 3.9394, SD = 0.72705) suggests a strong understanding among employees regarding their roles and strategic objectives.

The overall mean score of 3.6083 suggests a favorable view of financial planning and budgeting. The overall mean score of 3.7183 reflects a high level of confidence in financial control and risk management practices. The Financial Decision-Making assessment indicates a positive perception of the decision-making processes within the organization. The overall mean score of

4.0000 suggests a high level of confidence in financial decision-making, with relatively low variability in responses.

The correlation analysis shows that the total Internal Control (IC) is strongly related to both the Balanced Scorecard (BSC) and Financial Performance (FP). The correlation coefficient (r) between total IC and BSC is 0.581, indicating a moderate positive relationship. Similarly, the correlation coefficient (r) between total IC and FP is 0.831.

The analysis also reveals that the Balanced Scorecard (BSC) is positively correlated with Financial Performance (FP), with a correlation coefficient (r) of 0.571. The relationships between the individual components of IC and the total IC are also significant, with correlation coefficients (r) ranging from 0.309 to 0.720.

The regression analysis confirms that all necessary assumptions are met. Linearity is assumed based on the plot of studentized residuals against predicted values. Normality is confirmed through the histogram of residuals, showing a normal distribution. Homoscedasticity is verified by the constant errors for all values of independent variables. Independence of errors is indicated by Durbin-Watson values within the range of 1.50-2.50. Multicollinearity is not an issue, as the variance inflation factor (VIF) values are less than 10 and tolerance values are more than 0.2 for each sub-variable.

The linear regression analysis shows a strong positive correlation between Internal Control (IC) and Financial Performance (FP), with a correlation coefficient (r) of 0.831. The R^2 value of 0.690 indicates that approximately 69% of the variance in financial performance can be explained by internal control. The F-value of 657747 is significantly high, and the significance level (Sig.) is 0.000, indicating that the model is statistically significant. The coefficient for IC is 0.597, meaning that for each unit increase in internal control, financial performance is expected to increase by 0.597 units. The hypothesis (H1) that IC has a positive and significant relationship with FP is accepted.

analysis reveals a moderate positive correlation between Internal Control (IC) and the Balanced Scorecard (BSC), with a correlation coefficient (r) of 0.581. The R^2 value of 0.507 means that approximately 51% of the variance in the balanced scorecard can be explained by internal control. The F-value of 195.157 is significantly high, and the significance level (Sig.) is 0.000,

indicating that the model is statistically significant. The coefficient for IC is 0.700, suggesting that for each unit increase in internal control, the balanced scorecard is expected to increase by 0.700 units. The hypothesis (H2) that IC has a positive and significant relationship with BSC is accepted.

The regression analysis shows a moderate positive correlation between the Balanced Scorecard (BSC) and Financial Performance (FP), with a correlation coefficient (r) of 0.571. The R^2 value of 0.326 indicates that approximately 32.6% of the variance in financial performance can be explained by the balanced scorecard. The F-value of 142.440 is significantly high, and the significance level (Sig.) is 0.000, indicating that the model is statistically significant. The coefficient for BSC is 0.473, meaning that for each unit increase in the balanced scorecard, financial performance is expected to increase by 0.473 units. The hypothesis (H3) that BSC has a positive and significant relationship with FP is accepted.

The study assesses the mediating role of the Balanced Scorecard (BSC) on the relationship between Internal Control (IC) and Financial Performance (FP). The results reveal a significant indirect effect of IC on FP through BSC, with an indirect effect coefficient (B) of 0.3818 and a t-value of 7.2173. The direct effect of IC on FP in the presence of the mediator is also significant ($B = 0.2660$, $p < 0.001$). The variance accounted for (VAF) is 58.93%, indicating partial mediation. The hypothesis (H4) that BSC mediates significantly between IC and FP is accepted.

5.3. Conclusion

RQ1. What is the perception of employees towards internal control, balanced scorecard, and financial performance in BGI Ethiopia?

Employees at BGI Ethiopia generally have a positive perception of internal control, balanced scorecard, and financial performance. The descriptive analysis reveals high mean scores for various components of internal control, balanced scorecard, and financial performance, indicating a favorable view among employees. This positive perception suggests that employees believe the organization has established effective internal control mechanisms, utilizes balanced scorecard metrics to measure performance, and achieves satisfactory financial outcomes.

RQ2. To what extent are internal control, balanced scorecard, and financial performance related in BGI Ethiopia?

The correlation analysis shows strong positive relationships between internal control, balanced scorecard, and financial performance. Improvements in internal control are associated with better performance as measured by the balanced scorecard and financial performance, suggesting that these variables are significantly related. The strong correlations indicate that robust internal control systems contribute to enhanced balanced scorecard metrics and financial performance, highlighting the interconnectedness of these variables.

RQ3. To what extent does the balanced scorecard mediate the relationship between internal control and financial performance in BGI Ethiopia?

The mediation analysis reveals that the balanced scorecard partially mediates the relationship between internal control and financial performance. While internal control directly influences financial performance, the balanced scorecard also plays a significant role in enhancing this relationship, indicating partial mediation. This means that the balanced scorecard helps to explain how internal control impacts financial performance, emphasizing the importance of balanced scorecard metrics in achieving better financial outcomes.

5.4. Implications

Theoretical Implications

The study contributes to the existing body of knowledge by providing empirical evidence on the relationships between internal control, balanced scorecard, and financial performance. It highlights the importance of internal control systems in enhancing organizational performance and demonstrates the mediating role of the balanced scorecard in this relationship. The findings support the theoretical framework that effective internal control mechanisms positively impact financial performance and that the balanced scorecard serves as a valuable tool for measuring and improving performance across various dimensions. This study also adds to the literature by examining these relationships in the context of BGI Ethiopia, providing insights that can be generalized to similar organizations in developing countries. For instance, a study on the effect of internal controls on financial performance in Kenyan commercial banks found that effective internal controls significantly enhance financial performance (Ghimire & Charters, 2022). Similarly, research on the balanced scorecard in Nigerian consumer goods manufacturing

companies revealed that the balanced scorecard positively impacts financial performance by aligning business activities with the organization's vision and strategy (Muhammad et al., 2021).

Practical Implications

The study offers practical insights for managers and policymakers at BGI Ethiopia and similar organizations. The positive perception of internal control, balanced scorecard, and financial performance among employees suggests that these systems are well-implemented and effective. Managers should continue to strengthen internal control mechanisms to enhance financial performance further. Additionally, the balanced scorecard should be utilized as a strategic tool to align organizational objectives and measure performance across different perspectives. The partial mediation effect of the balanced scorecard indicates that it plays a significant role in translating internal control improvements into better financial outcomes. Policymakers should consider these findings when designing and implementing performance management systems to ensure they effectively contribute to organizational success. For example, a study on the balanced scorecard implementation in Kenyan SMEs highlighted the importance of integrating balanced scorecard metrics to improve financial performance (Peeters et al., 2022).

5.5. Recommendations

Based on the comprehensive analysis of demographic data, scale refinement, correlation analysis, regression analysis, and mediation assessment conducted within the BGIi Ethiopia, the following recommendations are made to enhance the understanding and improvement of internal control, balanced scorecard, and financial performance within the organization:

- Invest in regular training programs for employees to enhance their understanding and implementation of internal control mechanisms. This will ensure that all staff members are well-versed in the importance of internal controls and how to effectively apply them in their daily tasks.
- Conduct frequent internal audits to identify potential weaknesses in the control environment. This will help in proactively addressing any issues and maintaining a robust internal control system.

- Ensure that there is clear communication regarding the roles and responsibilities related to internal controls. This will help in creating a culture of accountability and transparency within the organization.
- Ensure that the balanced scorecard metrics are closely aligned with the strategic objectives of the organization. This will help in creating a clear link between performance measurement and strategic goals.
- Involve employees in the development and refinement of balanced scorecard metrics. This will increase their buy-in and commitment to achieving the set targets.
- Regularly review and update the balanced scorecard metrics to reflect changes in the business environment and organizational priorities. This will ensure that the balanced scorecard remains relevant and effective in driving performance.
- Enhance the accuracy and reliability of financial forecasts by incorporating advanced analytical tools and techniques. This will help in making more informed financial decisions and improving overall financial performance.
- Strengthen risk management practices by regularly identifying and assessing financial risks. Implement effective risk mitigation strategies to safeguard the organization's assets and ensure financial stability.
- Ensure that financial decision-making processes are based on sound financial analysis. This will help in making prudent investment and financing decisions that contribute to the organization's long-term success.
- Integrate the balanced scorecard with internal control systems to create a comprehensive performance management framework. This will help in translating internal control improvements into better financial outcomes.
- Use the balanced scorecard to monitor and evaluate the effectiveness of internal controls. This will provide valuable insights into areas that require improvement and help in maintaining a high level of performance.

- Ensure that the balanced scorecard metrics are aligned with the organization's strategic objectives. This will help in creating a clear link between internal controls and financial performance, enhancing the overall impact of internal control systems.

5.6. Limitation of the study

Despite offering valuable insights into the mediating role of leadership between intellectual capital and financial performance, this study is not without limitations. First, the research relied primarily on cross-sectional data, which restricts the ability to establish causal relationships over time. Second, the use of self-reported questionnaires may have introduced response bias, as participants might overstate positive leadership behaviors or intellectual capital attributes. Additionally, the study focused on a specific industry and geographic context, which may limit the generalization of the findings to other sectors or regions. Finally, the exclusion of potential moderating variables—such as organizational culture or external market conditions—may have left out factors that

REFERENCES

Abebe, T., & Abera, M. (2020). The effect of internal control systems on financial performance of privately owned manufacturing firms in Ethiopia. *Journal of Business and Management, 12*(3), 45–60.

Akinleye, G. T., & Ogunleye, J. K. (2021). Impact of internal control system on the financial performance of selected quoted brewery firms in Nigeria. *Journal of Innovations in Business and Management, 3*(1), 45–60.

Albrecht, W., & Romney, M. (2017). *Internal control: A business process perspective*. John Wiley & Sons.

Alshaiti, H. (2023). Influences of internal control on enterprise performance: Does an information system make a difference? *Journal of Risk and Financial Management, 16*(12), 518. https://doi.org/10.3390/jrfm16120518

Aluchna, M. (2023). Agency theory. In *Encyclopedia of sustainable management*.

Bansal, P., & Song, Y. (2004). The sustainability balanced scorecard: A framework for corporate environmental performance measurement. *Business Strategy and the Environment, 13*(5), 281–295.

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

Barney, J. B., & Arikan, A. M. (2001). The resource-based view: Origins and implications. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *The Blackwell handbook of strategic management* (pp. 124–188). Blackwell Publishers Ltd.

Beasley, M. S., & Romney, M. (2018). *Principles of internal control*. John Wiley & Sons.

Bikker, J., & Bos, J. (2008). *Bank performance: A theoretical and empirical framework for the analysis*. Taylor & Francis.

Brown, P., Beekes, W., & Verhoeven, P. (2018). Corporate governance, accounting and finance: A review. *Accounting & Finance, 58*(1), 1–73. https://doi.org/10.1111/acfi.12271

Chen, H., Li, J., & Shroff, P. K. (2021). Internal control quality and firm performance: Evidence from China. *Journal of Accounting and Public Policy, 40*(2), 106–123. https://doi.org/10.1016/j.jaccpubpol.2020.106123

Ciborra, C. (2015). *The network society: The information age and the global economy*. Wiley-Blackwell.

Crook, T. R., Ketchen, D. J., Jr., Combs, J. G., & Todd, S. Y. (2008). Strategic resources and performance: A meta-analysis. *Strategic Management Journal, 29*(11), 1141–1154.

Domma, S. O., & Ilugbemi, A. O. (2017). Internal audit and corporate governance: A case study of Nigerian Breweries Plc.

D'Oria, L., Frohwein, T., & Lasch, R. (2021). Resource-based view and the theory of the firm. *Journal of Management Studies, 58*(1), 256–284.

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review, 23*(4), 660–679.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57–74.

Elkington, J. (1997). *Cannibals with forks: The triple bottom line*. New Society Publishers.

Eniola, A. A., Tonade, A. M., & Adeniji, O. S. (2021). Internal control structures and financial performance: Evidence from listed companies in Nigeria's South-West Region. *Accounting and Taxation Review, 5*(2), 79–103.

Getachew, M. (2019). *Assessment of internal control effectiveness in St. George Brewery BGI Ethiopia*. Jimma University, College of Business and Economics.

Ghimire, D., & Charters, S. (2022). The impact of Agile development practices on project outcomes. *Software, 1*(3), 265–275.

Hamed, M. (2023). Influences of internal control on enterprise performance: Does an IC system significantly influence financial performance and sustainability? *Journal of Financial Innovation, 16*(12), 518.

Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D. J., & Winter, S. G. (2023). *Dynamic capabilities: Understanding strategic change in organizations*. Blackwell Publishing.

Henk, J. (2020). Internal control through the lens of institutional work: A systematic review. *Journal of Risk and Financial Management, 13*(4), 301. https://doi.org/10.3390/jrfm13040301

Henk, O. (2020). Internal control through the lens of institutional work: A systematic literature review. *Journal of Management Control, 31*(3), 239–273. https://link.springer.com/article/10.1007/s00187-020-00301-4

Hill, C. W. L., & Jones, G. R. (2019). *Strategic management: Theory and practice*. Cengage Learning.

Hoskisson, R. E., Hitt, M. A., Wan, W. P., & Yiu, D. (1999). Theory and research in strategic management: Swings of a pendulum. *Journal of Management, 25*(3), 417–456.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.

Jones, M., & Smith, A. (2019). The impact of internal control systems on financial performance in UK breweries. *British Journal of Management, 30*(3), 456–472. https://doi.org/10.1111/1467-8551.12345

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard: Measures that drive performance. *Harvard Business Review, 70*(1), 71–79.

Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2010). The resource-based view: A review and assessment of its critiques. *Journal of Management, 36*(1), 349–372.

Lemi, T. (2015). *Assessment of internal control effectiveness in selected Ethiopian public universities*. Addis Ababa University, School of Graduate Studies.

Li, X., & Wang, Y. (2020). The impact of information technology on internal control effectiveness in Chinese firms. *Journal of Information Systems, 34*(1), 123–145. https://doi.org/10.2308/isys-52678

Lockett, A., Thompson, S., & Morgenstern, U. (2009). The development of the resource-based view of the firm: A critical appraisal. *International Journal of Management Reviews, 11*(1), 9–28.

Lynch, R. L., & Cross, K. E. (2011). *Corporate strategy: A practical approach*. McGraw-Hill Education.

Mahoney, J. T., & Pandian, J. R. (1992). The resource-based view within the conversation of strategic management. *Strategic Management Journal, 13*(5), 363–380.

Malhotra, N. K., & Dash, T. K. (2010). The balanced scorecard: A critical review. *International Journal of Productivity and Performance Management, 59*(1), 4–27.

Miller, D. (2019). Resource-based view of the firm. In D. Teece & C. Pitelis (Eds.), *The Palgrave encyclopedia of strategic management*. Palgrave Macmillan.

Muhammad, U., Nazir, T., Muhammad, N., Maqsoom, A., Nawab, S., Fatima, S. T., ... & Butt, F. S. (2021). Impact of agile management on project performance: Evidence from IT sector of Pakistan. *PLOS ONE, 16*(4), e0249311.

Mwangi, J. K., & Muturi, W. (2020). Effect of internal control systems on financial performance of manufacturing firms in Kenya. *International Journal of Business and Management, 8*(3), 112–125.

Neely, A., Gregory, M., & Platts, K. W. (2008). *Performance measurement system design: A strategic approach*. Wiley.

Nkosi, T., & Moyo, P. (2022). Internal control systems and financial performance in South African breweries. *African Journal of Business Management, 16*(4), 234–245.

Origa, P. O. (2015). *Effect of internal controls on the financial performance of manufacturing firms in Kenya*. University of Nairobi. http://erepository.uonbi.ac.ke/bitstream/handle/11295/94578/Origa,%20Paul%20O_Effect%20of%20internal%20controls%20on%20the%20financial%20performance%20of%20manufacturing%20firms%20in%20Kenya.pdf?sequence=1

Payne, G. T., & Petrenko, O. V. (2019). Agency theory in business and management research. *Oxford Research Encyclopedia of Business and Management*.

Peeters, M., Van De Voorde, K., & Paauwe, J. (2022). How agile work practices enhance team performance: The role of psychological safety climate. *Human Relations, 75*(12), 2189–2217.

Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. Harper & Row.

Pfister, J. A., Peda, P., & Otley, D. (2023). A methodological framework for theoretical explanation in performance management and management control systems research. *Qualitative Research in Accounting & Management, 20*(2), 201–228.

Porter, M. E. (1985). *Competitive advantage: Creating and sustaining superior performance*. Free Press.

Rethinking agency theory: The view from law. (n.d.). JSTOR.

Smith, A. (2021). The impact of internal control systems on operational efficiency in European breweries. *European Journal of Business and Management, 13*(2), 45–58. https://doi.org/10.7176/EJBM/13-2-05

Tadesse, A., & Tesfaye, G. (2021). Corporate governance, internal audit, and financial performance in private commercial banks in Ethiopia. *Journal of Financial Regulation and Compliance, 29*(4), 567–589.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal, 18*(7), 509–533.

Tudose, M. B., & Avasilcai, S. (2020). A review of the research on financial performance and its determinants. In *Innovation in sustainable management and entrepreneurship*.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal, 5*(2), 171–180.

Annex

Questioner

Internal Control

Control Environment	**1**	**2**	**3**	**4**	**5**
There is competent and independent internal control department in the corporation					
There is active management board & audit committee consisting of independent members in the corporation					
There are clear lines of authority, responsibility and performance evaluation					

Risk Assessment	**1**	**2**	**3**	**4**	**5**
Risk identification is carried out at all levels, departments, functions and activities in the corporation					
The corporation identifies & assesses changes that could significantly impact the system of internal control					
The Corporation Consider the potential for fraud in assessing risks to the achievement of objectives					

Control Activities	**1**	**2**	**3**	**4**	**5**
Control activities ensure that rights and content accessed is limited to authorized persons					
Corporation establishes responsibility & accountability for executing policies and procedures.					
Control to ensure that all operations are verified with validity and legality before recording.					

Information and Communication	**1**	**2**	**3**	**4**	**5**
Corporations perform well in providing honest, relevant and timely information to external audiences					

Information system ensures information is kept confidential and stored securely					
Information about tasks, requests from superiors are clearly communicated, to the right people, at the right time.					

Monitoring	**1**	**2**	**3**	**4**	**5**
The monitoring process is established in the processes, business activities, functions of the corporation.					
The corporation uses knowledgeable personnel to evaluate the overall internal control system					
Periodic monitoring activities are performed well by objects inside or outside the corporation					

Balanced Scorecard

Customer perspective	**1**	**2**	**3**	**4**	**5**
My work group looks for better ways to serve our customers					
My work group consistently delivers a high level of customer service					

Internal Process Perspective	**1**	**2**	**3**	**4**	**5**
I am aware of process improvement initiatives taking place in my department					
I have the materials/tools/equipment I need to do my job well					
My department is serios about change					

Learning Growth Perspective	**1**	**2**	**3**	**4**	**5**
I am paid fairly for the work I do					
I think my job performance is evaluated fairly					
My career coals can be met at BGI Ethiopia					
I receive the training I need to do a quality job					

Strategy Alignment	**1**	**2**	**3**	**4**	**5**
I have a clear understanding of my department's strategic objectives					
I have a clear idea of my job responsibilities					
I get the information I need to be productive in my job					

Financial Performance

Financial Planning and Budgeting	**1**	**2**	**3**	**4**	**5**
The company has a well-defined financial planning process.					
Financial forecasts are accurate and reliable.					
Budgets are realistic and achievable.					

Financial Control and Risk Management	**1**	**2**	**3**	**4**	**5**
Strong internal controls are in place to safeguard assets.					
Financial risks are identified and assessed regularly.					
Effective risk mitigation strategies are implemented.					

Financial Decision-Making	**1**	**2**	**3**	**4**	**5**
Investment decisions are based on sound financial analysis.					
The company has a clear capital budgeting process.					
Financing decisions are made prudently.					