

Addis Ababa University College of Business and Economics

Department of Management.

MSc in International Business

Title: E-Leadership and Strategic Innovation in Ethiopian BPO Firms: The Mediating Roles of Dynamic Capability and Inter-Team Coordination, and the Moderating Role of Knowledge Integration Capability

By:

SAMRAWIT MINILIK

Supervisor:

ZELALEM G/TSADIK *(*PhD)

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE MASTER OF SCIENCE DEGREE IN INTERNATIONAL BUSINESS (STRATEGIC INVESTMENT MANAGEMENT)

20 June 2026.

Addis Ababa, Ethiopia.

Table of content

Table of content ii
List of Tables v
List of Figures v
List of Abbreviations vi
Declaration viii
Certification ix
ACKNOWLEDGMENT xi
Abstract xii
1. Introduction 1
1.1 Background of the Study 1
1.2 Statement of the problem 5
1.3 Research questions 6
1.4 Objective of the study 7
1.5 Significance of the study 8
1.6 Scope of the study 8
1.7 Limitation of the study 9
1.8 Organization of the study 10
2. Literature Review 11
2.1 E-leadership 11
2.2 Strategic Innovation 12
2.2.1 Strategic versus incremental innovation 12
2.2.2 Strategic innovation in an outsourcing setting 14
2.3 Dynamic capability 14
2.4 Inter-team coordination 16
2.5 Knowledge integration capability 17
2.6 Ethiopian BPO sector 18

2.7 Empirical Literature Review and Hypothesis Development 19
2.7.1 E-leadership and Strategic Innovation 19
2.7.2 E-leadership and Inter-team Coordination 21
2.7.3 Inter-team Coordination and Strategic Innovation 22
2.7.4 E-leadership and Dynamic Capability 24
2.7.5 Dynamic Capability and Strategic Innovation 25
2.7.6 Inter-team coordination mediates the relationship between e-leadership and strategic innovation 25
2.7.7 Dynamic capability mediates the relationship between e-leadership and strategic innovation 27
2.7.8 Knowledge integration capability (KIC) moderates the impact of e-leadership on inter-team coordination 29
2.7.9 Conceptual Framework 30
3. Research Methodology 31
3.1 Target population and sampling technique 31
3.2 Research approach and design 33
3.3 Data Collection and Instrument 35
3.4 Data Measurement 36
3.5 Method of Data Analysis 37
3.6 Pilot Study 38
3.6.1 Demographics Characteristics of Samples 38
3.6.2 Identification Measurement Model 39
3.6.3 Analysis and Discussion 39
4. Results and Discussion 42
4.1 Respondents Demographic Characteristics 42
4.2 Descriptive Statistics 43
4.3 The PLS-SEM Algorithm and Bootstrapping 44
4.4 Measurement Model Analysis 46
4.4.1 Internal Consistency Reliability 47
4.4.2 Convergent Validity 48

4.4.3 Discriminant Validity 49
4.4.3.1 The Fornell Larcker Criterion 50
4.4.3.2 Heterotrait-monotrait (HTMT) Ratio 51
4.4.3.3 Cross Loading 51
4.5 Structural Model Analysis 52
4.5.1 Multicollinearity Analysis (VIF) 53
4.5.2 Hypothesized Direct Relationship 54
4.5.3 Assessment of Explanatory Power (R^2) 56
4.5.4 Assessment of Explanatory Power (f^2) 56
4.5.5 Predictive Relevance (Q^2) 57
4.5.6 Mediation Analysis Results 57
4.5.6.1 Mediation Analysis through Indirect Effect 58
4.5.7 Moderation Analysis Results 59
4.5.7.1 Simple Slope Plot Analysis 61
4.6 Discussion 62
5. Conclusion, Recommendation and Future Research 67
5.1 Conclusion 67
5.2 Recommendation 70
5.3 Future Research 70
Appendix 73
Data collection instrument 73
References 76

List of Tables

Table 1 Population Size by Company 32
Table 2 Sample Size Calculation 34
Table 3 Sample Size Allocated by Company 35
Table 4 Demographics 38
Table 5 Model Identification 39
Table 6 Outer Loading Results 40
Table 7 Internal Consistency and Convergent Validity 41
Table 8 Discriminant validity (HTMT) result 42
Table 9 Demographic Characteristics 42
Table 10 Descriptive Statistics 43
Table 11 Construct Reliability and Convergent Validity 49
Table 12 Fornell Larcker Criterion 50
Table 13 HTMT Matrix 51
Table 14 Cross Loading 51
Table 15 Multicollinearity (VIF) Results 53
Table 16 Hypothesized Direct Relationship 55
Table 17 R^2 Values 56
Table 18 f^2 Values 57
Table 19 Q^2 Results - Constructs 57
Table 20 Mediation Analysis through Indirect Effect 58
Table 21 Moderation Analysis 59

List of Figures

Figure 1 Conceptual Framework: 31
Figure 2 PLS SEM Result 45
Figure 3 Bootstrapping Result 46
Figure 4 Structural Research Model Assessment 55
Figure 5 Simple Slope Plot Analysis 61

List of Abbreviations

Abbreviation	Full Form
AIT	Advanced Information Technology
AI	Artificial Intelligence
AVE	Average Variance Extracted
BPO	Business Process Outsourcing
CB-SEM	Covariance-Based Structural Equation Modeling
CR	Composite Reliability
CRBA	Company Readiness Benchmark Assessment
DASAT	Digital Awareness, Strategy, Adoption, and Transformation
DC	Dynamic Capability
DFI	Development Finance Institution
EL	E-leadership
ESG	Environmental, Social, and Governance
H1-H8	Hypothesis 1 - Hypothesis 8
HTMT	Heterotrait-Monotrait Ratio
IC	Inter-team Coordination
ICT	Information and Communication Technology
IT	Information Technology
KI	Knowledge Integration
KIC	Knowledge Integration Capability
PLS-SEM	Partial Least Squares Structural Equation Modeling
R2	Coefficient of Determination
RPA	Robotic Process Automation
SEM	Structural Equation Modeling

SI	Strategic Innovation
TMPs	Talent Market Places
VUCA	Volatility, Uncertainty, Complexity and Ambiguity

Declaration

This thesis titled “E-Leadership and Strategic Innovation in Ethiopian BPO Firms: The Mediating Roles of Dynamic Capability and Inter-Team Coordination, and the Moderating Role of Knowledge Integration Capability” has been carried out under the guidance and supervision of my advisor, Zelalem Gebretsadik (Ph.D.).

The thesis is original and has not been submitted for any degree or diploma award to any university or institution.

Researcher’s name: Samrawit Minilik Solomon

Signature: 

Date: 20 June 2026

Certification

This is to certify that Samrawit Minilik has carried out this research work on the topic "*E-Leadership and Strategic Innovation in Ethiopian BPO Firms: The Mediating Roles of Dynamic Capability and Inter-Team Coordination, and the Moderating Role of Knowledge Integration Capability*" under my supervision. This research is her original work and has not been presented for a degree in any university, and all sources of material used for the study have been duly acknowledged. Thus, it is sufficient for submission to partially fulfill the requirements for the award of a Master of Science in Management.

Advisor: Zelalem Gebretsadik (Ph.D.)

Signature: 

Date: 20 June 2026

APPROVAL PAGE

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

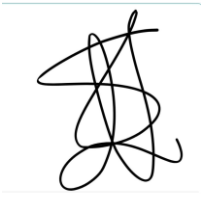
DEPARTMENT OF MANAGEMENT

E-Leadership and Strategic Innovation in Ethiopian BPO Firms: The Mediating Roles of Dynamic Capability and Inter-Team Coordination, and the Moderating Role of Knowledge Integration Capability

By: Samrawit Minilik (GSE/3397/16)

Advisor: Zelalem Gebretsadik (Ph.D.)

Members of the Board of Examiners

Zelalem Gebretsadik (Ph.D.)		20 June 2026
Advisor	Signature	Date
Tesfaye Eba (PhD)		11 July 2026
External examiner	Signature	Date
Jemal Mohammed (PhD)		11 July 2024
Internal Examiner	Signature	Date

ACKNOWLEDGMENT

Above all, I want to express my gratitude to God Almighty for providing me with the courage and capacity to start and finish this research.

Next, I would like to forward my sincere gratitude to my advisor Zelalem Gebretsadik (Ph.D.) for his continuous support, invaluable guidance and encouragement throughout every step of my work.

I also want to express my sincere gratitude to each and every survey participant for their priceless time and dedication, which greatly helped in the accomplishment of this study.

Lastly, I want to express my sincere gratitude to my family and friends for their continuous support during this journey. This accomplishment would not have been possible without their encouragement and support.

Abstract

The rapid digitalization of business practices has fundamentally reshaped leadership and organizational innovation processes globally, with particular consequences for the outsourcing sector in emerging economies. This study investigates the relationship between e-leadership and strategic innovation in Ethiopian Business Process Outsourcing (BPO) firms, with dynamic capability and inter-team coordination proposed as parallel mediators and knowledge integration capability proposed as a moderator. A quantitative, cross-sectional research design was employed. Data were collected from 248 employees across selected BPO firms in Addis Ababa using structured questionnaires adapted from validated scales, yielding a response rate of 91.8%. PLS-SEM was used to assess measurement and structural models, including mediation and moderation effects via 5,000-resample bootstrapping.

The results yield four statistically significant direct relationships. E-leadership positively and significantly predicts strategic innovation, dynamic capability, and inter-team coordination. Dynamic capability significantly predicts strategic innovation. The direct path from inter-team coordination to strategic innovation was not statistically supported. Regarding the mediation hypotheses, dynamic capability significantly and partially mediates the e-leadership–strategic innovation relationship, whereas inter-team coordination does not serve as a significant mediator. The moderation analysis reveals that knowledge integration capability does not significantly moderate the relationship between e-leadership and inter-team coordination, indicating a negligible interaction effect.

These findings lead to two central conclusions. First, e-leadership is an empirically supported predictor of strategic innovation in the Ethiopian BPO context; however, its primary pathway to innovation operates through dynamic capability specifically the organizational capacity to sense emerging market shifts, seize new service opportunities, and reconfigure delivery models accordingly. Second, inter-team coordination, while significantly shaped by e-leadership, functions primarily in service of operational efficiency within Ethiopian BPO firms rather than as an independent driver of strategic innovation. The non-significant moderating role of knowledge integration capability suggests that structured digital tools and boundary-spanning artifacts used by e-leaders in this context may already perform the synthesis function that knowledge integration would otherwise provide.

This study contributes to the dynamic capabilities and knowledge-based view literature by offering an empirically grounded, multi-mechanism framework tested in an underrepresented emerging economy. It provides actionable insights for BPO managers and policymakers on prioritizing digital leadership development and dynamic capability building as the central organizational levers for sustained strategic innovation in Ethiopia's outsourcing sector.

Keywords: *E-leadership, Strategic Innovation, Dynamic Capability*

1. Introduction

1.1 Background of the Study

Digitalization is a necessary step that organizations must take to remain relevant and competitive in the market (Hassan, et al., 2025). One of the clear reactions to this paradigm shift involves developing e-leaders and utilizing their knowledge in their specific fields. As a result, e-leadership can improve collaboration between persons and teams, which encourages the staff to achieve creative results in accordance with the company's strategy. Avolio BJ (2014) defined e-leadership as a social influence process mediated by advanced information technology (AIT) or information and communication technologies (ICTs) that operates in both proximal (close) and distal (distant) context to affect the change in attitudes. While this is the most accepted abstract definition, a more usable definition emphasizes the need for a blended approach. E-leadership is the effective use and blending of electronic and traditional methods of communication requiring an awareness of current ICTs, selective adoption of appropriate technologies for oneself and the organization and technical competence in using the selected ICTs (Wart, Roman, Wang, & Liu, 2016). This more concrete definition highlights that effective e-leadership is not just about using technology more often but about skillfully integrating digital communication with physical presence, choosing the best technology for the purpose and using it competently to achieve organizational goals.

The global BPO industry underscores the strategic importance of e-leadership. The global BPO market was valued at approximately USD 280.64 billion in 2023 and is projected to expand at a compound annual growth rate (CAGR) of 9.4% through 2030, driven by the adoption of cloud computing, robotic process automation (RPA), and artificial intelligence (AI) (Grand View Research, 2023). In Africa, BPO has emerged as a priority sector for economic diversification, with Ethiopia, Kenya, South Africa, and Rwanda identified as key emerging hubs (Larsen, 2023). Within Ethiopia specifically, the BPO sector was valued at approximately USD 34 million in 2021 and employed over 3,350 professionals, with major market players including MMCY Tech, IE Networks, Mereb Technologies, Africom, Excellerent, CCI, and iSoN Experiences (Shega, 2024; German Outsourcing Association, n.d.). The sector's competitiveness rests primarily on Ethiopia's large, young, and cost-effective labor pool, with typical call-center entry-level salaries

starting at approximately ETB 5,500 per month (Shega, 2024). However, the rapid rise of AI-driven automation and global talent marketplaces such as Upwork and LinkedIn are directly threatening the viability of low-complexity BPO services, which have traditionally constituted the industry's core revenue base (Awol, 2024). This disruption makes the transition toward higher-value, strategically innovative service offerings not merely desirable but operationally urgent.

E-leadership and creative performance in an organization including virtual teams is an important component of strategic innovation (Chamakiotis, Panteli, & Davison, 2021). The process of creating and implementing new concepts, goods, services or procedures that significantly increase stakeholder value and provide a competitive advantage is known as organizational level strategic innovation. Chamakiotis, Panteli, & Davison (2021) note that innovation is one of the reasons why virtual teams were assembled as they were designed to bring together dispersed global talent to generate innovative outcome for one country. In the absence of face-to-face interaction, the e-leaders technologically mediated influence is what supports the work environment for innovation to occur.

Inter-team coordination is a main function for e-leaders whose effectiveness is demonstrated by their ability to structure and facilitate interactions across different teams in different locations (Raineri & Valenzuela-Ibarra, 2021). Inter-team coordination links together different functions at a firm to conduct a collective set of tasks (Dietrich, Kujala, & Artto, 2013). This is an important requirement in organizations with multi team projects where the work of each team is dependent on one another. This also necessitates the exchange of information, shared knowledge and conflict resolution.

E-leaders need to adopt a holistic perspective of the coordination needs and interactions with other organizational units. This is one of the important leadership functions which involves taking action or empowering team members to discuss problems, coordinate work, and give and receive feedback (Raineri & Valenzuela-Ibarra, 2021). An e-leader’s effectiveness is tied to the successful management of coordination processes which falls under impersonal mode, individual mode or group mode. Impersonal mode relies on formal documentation, process documentation, IT tools and reporting systems. Individual mode involves direct contacts through in-person, email or phone and the leader’s participation in teams’ work. The third process which is called

group mode uses formal or informal meetings leveraging simultaneous technologies (Dietrich, Kujala, & Artto, 2013).

Successful inter-team coordination brings together teams with different skills to achieve complex and innovative outcomes. This supports strategic innovation which depends on the combination of diverse knowledge from different teams working various tasks (Dietrich, Kujala, & Artto, 2013).

Dynamic capability defined by Teece (2007) is when a company integrates, develops, restarts and reorganizes limited resources and skills either internally or externally to adjust to quickly evolving business conditions. In other words, it represents the organizational capacity to learn and change.

E-leadership (digital leadership) is important to digital transformation and has a significant relationship with dynamic capability. Dynamic capabilities can mostly be developed and deployed with strong leadership. The e-leader's competence in digital technology and focus on market orientation are what increases the development of dynamic capabilities. E-leaders are required to have the timely cognitive ability to sense, seize and transform, to search for and discover proper opportunities (Subramaniam, Salamzadeh, & Mujtaba, 2023). Globally, the transition to e-leadership has accelerated considerably. A survey by Gartner (2022) found that infrastructure and operations leaders anticipated that remote or hybrid work arrangements would persist beyond the short term, fundamentally embedding virtual leadership as an organizational norm rather than a temporary measure. McKinsey & Company (2023) further reports that organizations with digitally capable leadership are more likely to report above-average financial performance, highlighting the tangible competitive premium attached to effective e-leadership. In the BPO sector specifically, Talenteum (n.d.) notes that firms pivoting toward complex, AI-augmented services such as analytics, cloud management, and intelligent automation require leaders who can navigate distributed teams, make rapid technology adoption decisions, and restructure organizational capabilities in real time.

Dynamic capability has a significant relationship with innovation management. Since dynamic capability is the ability to adapt to a changing environment, it will be necessary to manage innovation effectively. In a fast-paced digital age, dynamic capability helps an organization to

sense market changes, seize opportunities and rearrange by mitigating potential risks which are essential for innovation (Subramaniam, Salamzadeh, & Mujtaba, 2023).

Ethiopia's BPO sector is changing quickly tied up by both locally owned firms and global BPOs with a presence in the country. A core competitive advantage for the industry is its massive, young and cost-effective talent (Awol, 2024). The industry's success relies on serving global clients through the deployment of virtual and globally distributed teams. This environment is highly tense due to pressure from talent market places and the rapid evolution of AI which are directly impacting the nature and demand for BPO services.

E-leadership is important for BPO managers in Ethiopia since they are leading teams operating across digital boundaries to deliver services to international clients. E-leaders need to increase the development of organizational capabilities to keep pace with the dynamic global market and manage the shift towards higher complexity projects such as advanced web development projects, automation, accounting services instead of focusing on lower complexity projects such as call center operation, inbound and outbound sales. BPO managers require the ability to sense, seize and transform opportunities as quickly as possible since the market is highly volatile and changes every day. This is critical for identifying new service lines that can differentiate their firms.

The movement of BPO firms toward mid to high complexity products (cloud computing, RPA, AI solutions) requires working with people that have different competencies. Those working in operations, tech and client facing roles must coordinate their work effectively. A major weakness in the Ethiopian BPO talent pool is the professional skills gap in essential soft skills such as teamwork and feedback culture. This directly weakens inter team coordination which requires mutual respect, shared goals and problem-solving and communication skills. The shortage of experienced team leads and project managers highlights a gap in the capacity to execute different coordination schemes.

Ethiopian BPOs must adapt to increasing competition from talent market places (TMPs) such as Upwork and LinkedIn and the influence of AI. Dynamic capability is needed to sense these threats and modify business models to focus on AI augmented tasks rather than AI displaceable tasks.

This study investigates whether the organizational capacity to sense, seize, and reconfigure resources (dynamic capability) and the ability to align team efforts across functions (inter-team coordination) serve as the mechanisms through which e-leadership produces innovation outcomes, and whether knowledge integration capability conditions this process. Hence the study seeks to provide empirically grounded insights that can inform leadership development, organizational strategy, and national BPO policy in Ethiopia.

1.2 Statement of the problem

The Ethiopian BPO sector is at an important stage. It is valued at approximately USD 34 million in 2021 and employing over 3,350 professionals (Shega, 2024). The sector has historically competed on the basis of low-cost, low-complexity services including call center operations and inbound sales. However, the rapid growth of artificial intelligence global talent marketplaces such as Upwork and LinkedIn are eroding the commercial viability of these services (Awol, 2024; Talenteum, n.d.). In this environment, transitioning toward higher-value, strategically innovative service offerings such as intelligent automation, analytics, and advanced web development is no longer optional but a prerequisite for survival (Larsen, 2023).

Leadership is a central determinant of this strategic transition. E-leadership, defined as the effective integration of electronic and traditional communication to influence geographically dispersed teams through digital technology (Wart, Roman, Wang, & Liu, 2016), is increasingly recognized as essential for managing the complexity of global service delivery (Avolio BJ, 2014). Empirical research has established a positive link between e-leadership and organizational innovation (Hassan et al., 2025; Li W. et al., 2016; Chamakiotis, Panteli, & Davison, 2021). However, the specific mechanisms through which e-leadership translates into strategic innovation particularly in developing economy BPO contexts remain underexplored (Hassan et al., 2025).

Two organizational mechanisms have been theoretically proposed as potential mediators of this relationship. First, inter-team coordination which is the alignment of efforts and sharing of resources across different organizational units has been identified as enabling the knowledge flows required for innovation in virtual work settings (Hassan et al., 2025; Dietrich, Kujala, & Artto, 2013). Yet existing studies testing this mediation pathway have largely been conducted in

Western or high-income settings (Xie, Ling, Liu, & Wei, 2022), leaving its applicability to emerging economy BPO environments untested. Second, dynamic capability which is the organizational capacity to sense environmental shifts, seize emerging opportunities, and reconfigure internal competencies accordingly (Teece, 2007) has been identified as a prerequisite for innovation in digitally intensive environments (Subramaniam, Salamzadeh, & Mujtaba, 2023; Schoemaker, Heaton, & Teece, 2018). Despite its theoretical relevance, dynamic capability has not been tested as a parallel mediator alongside inter-team coordination in the e-leadership and strategic innovation relationship, representing a clear gap in the literature.

A third gap concerns the boundary conditions of these relationships. Knowledge integration capability (KIC), an organization's ability to synthesize specialized knowledge from diverse sources to create value has been proposed as a moderator that shapes how effectively leadership influences coordination (Hassan et al., 2025; Xie et al., 2022). However, this moderating role has received limited empirical attention in the BPO context, particularly in Africa (Larsen, 2023). Without understanding these boundary conditions, prescriptive guidance for managers on how to maximize the innovation payoff from e-leadership investment remains incomplete.

In summary, three interconnected gaps motivate this study: (1) the absence of empirical research on the e-leadership–strategic innovation relationship in the Ethiopian and broader African BPO context; (2) the lack of a parallel mediation framework that tests both dynamic capability and inter-team coordination as simultaneous mediators; and (3) insufficient empirical evidence on whether knowledge integration capability meaningfully conditions the e-leadership–coordination link in this setting.

1.3 Research questions

The study answers the following key research questions:

1. What is the direct effect of e-leadership on strategic innovation within Ethiopian BPO firms?
2. What is the direct effect of e-leadership on dynamic capability in Ethiopian BPO firms?
3. What is the direct effect of e-leadership on inter-team coordination in Ethiopian BPO firms?

4. What is the direct effect of dynamic capability on strategic innovation in Ethiopian BPO firms?
5. What is the direct effect of inter-team coordination on strategic innovation in Ethiopian BPO firms?
6. How do inter-team coordination and dynamic capability mediate the relationship between e-leadership and strategic innovation in Ethiopian BPO firms?
7. How does knowledge integration capability moderate the relationship between e-leadership and inter-team coordination in Ethiopian BPO firms?

1.4 Objective of the study

The main objective of this study is to examine the impact of e-leadership on strategic innovation within the Ethiopian BPO sector. The specific objectives are:

1. To determine the direct relationship between e-leadership and strategic innovation among employees in Ethiopian BPO firms
2. To determine the direct relationship between e-leadership and inter-team coordination among employees in Ethiopian BPO firms
3. To determine the direct relationship between e-leadership and dynamic capability among employees in Ethiopian BPO firms
4. To determine the direct relationship between dynamic capability and strategic innovation among employees in Ethiopian BPO firms
5. To determine the direct relationship between inter-team coordination and strategic innovation among employees in Ethiopian BPO firms
6. To analyze the mediating role of inter team coordination in the link between e-leadership and strategic innovation
7. To investigate the mediating role of dynamic capability in the relationship between e-leadership and strategic innovation
8. To assess the moderating effect of knowledge integration capability on relationship between e-leadership and inter-team coordination.

1.5 Significance of the study

There is a recognized relationship between e-leadership and innovation however the specific mechanisms of how this occurs remains underexplored especially in developing economies like Ethiopia. This study contributes to the knowledge-based view and dynamic capability theory by testing a model that includes inter-team coordination and dynamic capability as mediators. This combination isn't widely researched. The research provides new insights into how knowledge integration capability acts as moderator that magnifies the impact of a leader's vision on team coordination.

In terms of the BPO sector focus, it is seen as AI and global talent marketplaces like Upwork threatening low complexity services. This study provides a roadmap for BPO managers to transition towards higher value strategically innovative solutions. The study highlights the role of inter-team coordination which assists companies in overcoming the professional skills gap in soft skills like team work and feedback culture that currently makes the sector weak.

1.6 Scope of the study

The study is limited to examine the direct relationship between e-leadership and strategic innovation as well as the direct relationships of inter-team coordination and dynamic capability on strategic innovation. It also looks at the direct relationship between e-leadership and the two mediators, inter-team coordination and dynamic capability. It focuses on mediating roles of inter-team coordination and dynamic capability (sensing, seizing and transforming). It also evaluated the moderating role of knowledge integration capability between e-leadership and inter-team coordination.

The research is limited to the Ethiopian BPO sector and targets major market players and established firms within Ethiopia specifically those with operations in Addis Ababa. The study focuses on manager and non-manager staff within these BPO firms who operate in virtual or hybrid environments.

1.7 Limitation of the study

The research used LinkedIn keyword searches rather than from an official or verified business registry to derive the target population of 1469. LinkedIn offers broad access to professional and organizational data however it functions as a self-curated commercial networking platforms and listings may contain inaccuracies, outdated entries or omissions. This may result a difference in the actual number of employees working in the BPO firms meeting the study's inclusion criteria from what the platform reflects. In addition to that, the approach used to select respondents is convenience sampling. The researcher used LinkedIn and personal professional networks rather than true random selection. This might limit representativeness of the sample and the extent to which findings can be generalized to the wider Ethiopian BPO industry.

The Ethiopian BPO sector is comparatively small and still developing relative to the global industry. This makes it challenging to obtain large, fully representative samples and it means that the study's findings are most directly applicable to the current developmental stage of the sector. When the industry matures and expands, the dynamics between e-leadership, coordination and innovation may evolve in ways that the present study can't anticipate.

The researcher used a single self-administered survey instrument completed by the same respondents at the same point in time to measure all five constructs. This creates a systematic measurement bias that arises when both predictor and outcome variables are captured from a single source using a single method which can artificially inflate or distort the observed relationships between constructs (Podsakoff, 2003). This risk was minimized using several procedural solutions. For example respondents were assured of anonymity, the survey clearly communicated that there are no right or wrong answers and the ordering of constructs was designed to reduce the psychological connection between predictor and outcome items.

Data for this study were collected at a single point in time which means the findings reflect a static snapshot of the relationships between constructs rather than capturing how these relationships develop and evolve over time. Strategic innovation and dynamic capability are inherently longitudinal. Their development develops across extended organizational processes that a cross-sectional design cannot adequately trace. Future longitudinal studies tracking the same organizations across multiple time points would provide stronger causal evidence and a

more complete understanding of how e-leadership investments translate into innovation outcomes over time.

The study relies on respondents' perceptions of leadership effectiveness and organizational innovation. Hence, participants may provide desirable answers or overstate their firm's innovative capabilities. This is a common limitation of perception-based survey research and should be considered when interpreting the magnitude of the reported effect sizes.

Finally the findings of this study are specific to the Ethiopian BPO context. Responses may have been influenced by the sector's characteristics including its reliance on virtual and distributed teams, its dependence on international clients and the broader cultural properties around team works and feedback. This may limit the direct transferability of findings to other sectors or national contexts where such conditions do not apply.

1.8 Organization of the study

The study is structured into five chapters. The first chapter contains the following: an introduction, a problem statement, basic research questions, the study's purpose, significance and scope, and limitations. The second chapter explores the literature and presents a critical analysis of the works of scholars about the study. Chapter three contains the methodology, which defines the research's nature and design as well as the study's participants, data sources, instruments, measurement, and methods for data analysis. The presentation of data, analysis, interpretation, and discussion of the findings will be the main topics of Chapter 4. Chapter Five concludes with recommendations, a summary of the study, and a conclusion.

2. Literature Review

2.1 E-leadership

Older research studies by Avolio B. J. (2000) define e-leadership as a social influence process mediated by advanced information technology to produce a change in attitude, feelings, thinking, behavior and performance with individuals, groups and organizations. This occurs at any hierarchical level in a company that involves either one to one or one to many interactions over an electronic media.

The way e-leadership is conducted and achieved represents a fundamental shift in how leaders influence their team and how goals are achieved within organizational settings. The core objective of leadership which are setting vision, motivating followers and achieving organizational goals remains unchanged. What is changed is the medium through which these are achieved which is through advanced information technology (DasGupta, 2011) (López-Figueroa, Ochoa-Jiménez, Palafox-Soto, & Munoz, 2025). Advanced Information Technology (AIT) brings together telecommunication, computer and software and let individuals process and transfer data at greater speed and volume (Australian Government, Department of Industry Science and Resources, n.d.).

Historically leadership consisted of face-to-face interaction where nonverbal signs and physical presence facilitated trust and social connection (Sacavém, Machado, Santos, & Palma-Moreira, 2025). In contrast to historical leadership, e-leadership mostly occurs in virtual environments where teams are dispersed over space and time. E-leadership is a new socio-technical phenomenon where leadership and technology are mutually essential (DasGupta, 2011) (López-Figueroa, Ochoa-Jiménez, Palafox-Soto, & Munoz, 2025).

An effective leader needs to master two competencies. These are technological and human centered. Technical competence includes more than basic digital literacy (Adewumi, Ewim, Sam-Bulya, & Ajani, 2024). It requires the ability to sense the potential of emerging technologies like AI, blockchain and cloud computing to create value. Human centered competencies are however seen as the most impactful factors in digital leadership effectiveness (Sacavém, Machado, Santos, & Palma-Moreira, 2025) (López-Figueroa, Ochoa-Jiménez, Palafox-Soto, &

Munoz, 2025). These include the ability to bring enthusiasm, inspire followers and speak truths through digital media in a physically dispersed team, establishing trust with individuals who may never physically meet the leader, requiring transparency, consistency and the use of digital signs to signal reliability (Ying, Hassan, Shahrulnizam, & Kelana, 2025) (Sacavém, Machado, Santos, & Palma-Moreira, 2025). E-leaders need to be responsive and attentive in leading remote teams to prevent the breakdown of team morale and workflow dynamics and operate in volatile, uncertain, complex and ambiguous (VUCA) environments. This necessitates agile decision making and the ability to manage intergenerational workforces (Cyfert, Dyduch, Szumowski, & Prause, 2025).

The transition to e-leadership has increased during the COVID-19 pandemic which was essential for the wide scale adoption of remote work and virtual operations. This period highlighted the importance of e-leadership in maintaining business continuity and promoting wellbeing during global crisis (Uru, Gozukara, & Tezcan, 2022).

2.2 Strategic Innovation

Strategic innovation involves the process of companies changing/adjusting their value proposition and service delivery mechanisms. This is done in response to technological and market changes. The emergence of new technologies such as Internet of Things (IoT), blockchain, and AI are some of the main drivers behind strategic innovation in a digital leadership context. These technologies are changing industries and forcing businesses to reconsider their business strategies. These technologies challenge conventional ways of thinking about how businesses should function in addition to providing new areas for value creation and delivery (Adewumi, Ewim, Sam-Bulya, & Ajani, 2024).

In the BPO sector, strategic innovation means the withdrawal of simple cost cutting noncomplex services in favor of complex BPO services. This change enables companies act as strategic partners for their clients capitalizing real time data and AI driven insights (Talenteum, n.d.).

2.2.1 Strategic versus incremental innovation

Incremental innovation focuses on improving current product offerings and processes through serious evaluation and market-based information. Strategic innovation occurs at the early stage

of ideation and involves high uncertainty and requires different management structures (Jensma, 2006).

Table 1 Author's own elaboration based on (Jensma, 2006)

Aspect	**Incremental innovation**	**Strategic innovation**
Goal	Sustain current product life cycle	Create new strategic scene and business models
Process	Rigid, static evaluation criteria	Flexible gates, exploratory mindset
Leadership	Operational	Visionary
Risk	Low (focuses on earnings and direct results)	High uncertainty (requires long term commitment)

Strategic innovation is also being viewed through the eyes of sustainability and ESG criteria. In the case of modern BPO companies, being innovative means not only adopting new tech but also confirming that innovation processes are inclusive, environmentally responsible and socially impactful (Talenteum, n.d.).

Successful strategic innovation requires digital strategy and roadmaps as outlined in frameworks like DASAT (Digital Awareness, Strategy, Adoption and Transformation). Digital awareness includes understanding the available technologies such as cloud computing, AI, automation and digital payments. It includes recognizing their potential impact on business operations. After developing digital awareness, companies must convert this knowledge into actionable strategies. This means effectively applying it to their systems and business processes. Third is implementing and adopting digital technologies. This is necessary for businesses because it allows operational flexibility and strategic adjustments during the last step which is digital transformation. Digital transformation requires a willingness to change, the digitization of business processes if necessary and simplifying existing processes while developing new processes essential for business restructuring (Kahveci, 2025).

Companies that align their digital strategies with business objectives can see significant performance gains including a 20% reduction in operational costs and a 15% increase in

customer satisfaction (Olebogeng B. Molete, 2025). However, this requires e-leaders who can encourage an open innovation mindset and entrepreneurial culture through virtual work (Worke, 2025).

2.2.2 Strategic innovation in an outsourcing setting

There is frequent research and learning happening on how strategic innovation can be achieved in an outsourcing industry. Weeks & Feeny (2008) look at innovation from the outsourcing context. The research observes between three levels of innovation based on their scope and business impact. This classing is important because it recognizes that not all innovation in an outsourcing setting carries strategic value. These 3 levels of innovation are IT operational innovation that involves technology adjustments introduced by the company that do not impact firm-specific business processes. Business process innovation which occurs when the service provider affects how the client's business operates in some important administrative or operational way. Strategic innovation which significantly increases product or service offerings for existing customers or facilitates entering new markets.

2.3 Dynamic capability

Dynamic capability is a company's ability to compare, build, renew, and update resources internally or externally to adopt to changing business environment (Teece, 2007). It is an organization's capability to have an attitude to learn and change. Dynamic capability highlights a company's resource capabilities that can be developed, expanded, and modified to fit the evolving environment and establish a new standard for transformation (Haseeb, Hussain, ´Slusarczyk, & Jermsittiparsert, 2019).

The dynamic capability also shows that an organization's success in a dynamic environment depends on its ability to sense opportunities, seize those opportunities and adjust its competencies to match and compete with others (Subramaniam, Salamzadeh, & Mujtaba, 2023).

Sensing opportunities requires a company to be flexible in the scanning process of the business environment. Companies should regularly assess how environmental changes affect client needs and evaluate their product and service offerings to make sure they meet customer demand (Pavlou & El Sawy, 2011).

Seizing opportunities is necessary to guarantee that the company can make the necessary investment to change current processes. Companies should therefore have structured teams to oversee the introduction of new products and services as well as internal processes while making innovative choices. It is possible for a business to spot an opportunity but not make the necessary investments to take advantage of it (Teece, 2007). Seizing involves making the strategic choice to invest in these innovations that requires the trust and influence developed by the e-leader (Subramaniam, Salamzadeh, & Mujtaba, 2023).

Adjusting competencies require efficiency in the implementation of changes that drive new product development. This helps in integrating all current processes with new ones while preserving organizational efficiency. Redesigning business models and realigning assets are examples of adjustments and redeployments. This phase involves transforming internal processes, such as migrating from traditional server based systems to cloud based collaboration platforms to realize the innovation (Kahveci, 2025).

In the relationship between e-leadership and strategic innovation, dynamic capability serves as an important mediator (Subramaniam, Salamzadeh, & Mujtaba, 2023).

E-leadership provides the vision and the technical inspecting capability needed for identifying shifts in digital technologies and customer preferences (Kahveci, 2025).

Dynamic capability isn't an inherent company quality. It can be developed and deployed through strong leadership that embraces the challenges of the innovation process. Empirical evidence from emerging economies indicates that digital leadership when combined with dynamic capability has significant effect on innovation performance (Subramaniam, Salamzadeh, & Mujtaba, 2023).

Dynamic capability is closely linked to a company's capacity to change quickly in response to market volatility (the VUCA environment) (Sacavém, Machado, Santos, & Palma-Moreira, 2025).

In the BPO sector, agility is applied through flexible working practices such as remote and hybrid models which were tested during COVID (Cyfert, Dyduch, Szumowski, & Prause, 2025).

Research suggests that e-leadership qualities have an indirect positive influence on innovation management through the mediation of dynamic capabilities. These capabilities allow companies to respond to market changes. Most visionary e-leaders may fail to translate ideas into economically viable services without dynamic capability (Subramaniam, Salamzadeh, & Mujtaba, 2023).

2.4 Inter-team coordination

Inter-team coordination is defined as the association of efforts and sharing of resources across different teams within a company to achieve a shared goal (Hassan, et al., 2025). In virtual organizations where physical distance can weaken team unity, inter-team coordination is an important mediator in translating e-leadership into strategic innovation. (Ministry of ICT and National Guidance , 2025).

Teams don't operate alone but depend on inputs from other team and external entities to achieve an objective. Teams gain access to external information, expertise and resources essential for organizational innovation through coordination. Similarly, inter-team coordination is fundamental activity for teams working within interdependent environment (Xie, Ling, Liu, & Wei, 2022).

The transition to remote work makes collaboration networks more independent and happen in imperfect coordination. (Ohri & Dutta, 2025). To resolve this, e-leaders must implement coordination practices such as:

- Use platforms such as MS teams, Slack, WhatsApp, Google Meet to create virtual workspaces that enable decentralized but coordinated efforts (Talenteum, n.d.).
- Establish purposeful culture and intentional practices to maintain engagement and wellbeing across team boundaries (Ohri & Dutta, 2025).
- Use digital tools to provide personalized support and two way feedback which are essential for building motivated teams (Ying, Hassan, Shahrulnizam, & Kelana, 2025).

Inter-team coordination acts as a bridge between the influence of the e-leader and the accomplishment of strategic innovation (Hassan, et al., 2025).

Studies in healthcare and agile software development show that coordination is a determinant of teamwork, quality and operational efficiency (University of Bath, 2024). Transformational and situational leadership styles are particularly effective in encouraging the trust and shared purpose required for high quality inter-team coordination (Aldawood, Alanazi, & Aljanabi, 2025).

In the context of the BPO sector, coordination moves far beyond internal teams and includes interorganizational coordination with external parties (Egim, Wardi, & Rino, 2025). Looking at the Ugandan BPO landscape, which is a continental competitor to Ethiopian BPO firms, this type of networking is the missing link that transforms isolated innovation efforts into sustainable competitive advantages (Ministry of ICT and National Guidance , 2025).

2.5 Knowledge integration capability

Knowledge integration capability is a company's ability to analyze and apply diverse, specialized knowledge to create new value (Hassan, et al., 2025). Based on the knowledge-based view theory, this capability is seen as the primary sources of sustainable competitive advantage for companies in a knowledge-based economy (Pasaribu, 2025).

The starting point on knowledge integration is intellectual capital which consists human capital (employee skills/creativity), structural capital (databases/tech) and relational capital (partner networks) (Giampaoli, Sgrò, Ciambotti, & Bontis, 2021). Knowledge management practices in companies provide the ability to strengthen these components especially through knowledge sharing which increases the overall level of employee expertise (Barile, Ciasullo, Testa, & Sala, 2023). Knowledge based leadership is a crucial style that encourages an environment that pushes subordinates to learn, share and apply new knowledge. This leadership style acts as a moderator influencing how environmental factors like procedural justice and workplace diversity are experienced and appreciated by employees as a result enhancing their job performance and innovation potential (Lin, 2024).

In the relationship between e-leadership and strategic innovation, knowledge integration capability acts as a moderator that magnifies the impact of the leader's vision (Hassan, et al., 2025). While e-leadership can initiate innovation, the organization's ability to effectively integrate knowledge across teams and departments determines the success of those innovations (Lin, 2024). High knowledge integration capability means that digital technologies are not just

adopted but are included into the organizational culture and processes to push continuous improvement (Sacavém, Machado, Santos, & Palma-Moreira, 2025).

2.6 Ethiopian BPO sector

According to CFI, Business process outsourcing (BPO) is a kind of outsourcing where a third-party service provider is hired to handle one or more business functions in a company. The third party is responsible for performing all operations related to the business function. BPO providers can support on marketing, sales, customer relations, payment processing, software engineering, accounting and finance which includes the back office and the front office business function of one company (Corporate Finance Institute, n.d.). BPO service providers can be based in different locations and are classified as onshore, nearshore and offshore outsourcing based on their locations relative to the client companies. Onshoring is when a client company hires a service provider that is located in the same country. Nearshoring is when the client hires a service provider in a neighboring country and offshoring is when a client hires a service provider in different country often in different continent (Corporate Finance Institute, n.d.).

Ethiopia's BPO market is relatively small and still developing making exact data difficult to track. However as of 2021 the sector was valued at USD 34 million and provided employment for over 3350 individuals. Ethiopia is becoming a popular destination for call center services and lower skill tech jobs, with several international companies turning to Ethiopia for their outsourcing needs. Ethiopia's low labor costs provide a high value compared to the Philippines and India generating major savings for cost sensitive businesses. Current local numbers place a typical call center starting salary at approximately ETB 5500 (Shega, 2024). Some of the very successful BPO service providers such as MMCY Tech, IE networks, Mereb Technologies, Africom, Excellerent, CCI, iSoN Experiences are the major market players (German Outsourcing Association).

E-leadership and the adoption of advanced technologies drive the BPO sector to evolve from just being a cost saving measure to a strategic facilitator of growth and innovation. E-leadership is critical in the BPO industry because it involves remote and global workforces. E-leaders must be talented in selecting and utilizing the right digital tools and platforms for a streamlined operation and service delivery. They must establish clear and consistent communication channel to make

sure effective inter-team coordination. Effective BPO leaders are those that focus on employee wellbeing, motivation and professional development since high turnover rates are common challenge in the industry (First Source, n.d.).

Strategic innovation involves creating new service offerings, implementing advanced technologies and developing business models to gain a competitive edge all of which applies to BPOs (Piton Global, 2025).

2.7 Empirical Literature Review and Hypothesis Development

2.7.1 E-leadership and Strategic Innovation

E-leadership is defined as a social influence process mediated by digital technology that produced change in attitudes, thinking and performance with in a company. E-leadership connects business strategy and technological transformation through several empirically identified qualities (Avolio B. K., 2001). Among some of the frequently identified feature of effective e-leadership is agility. This quality includes a flexible culture and being strategy focused with a shared mindset, clear vision and proactive collaboration. E-leaders that have this feature use quick prototyping and prepare IT infrastructure to respond rapidly to shifting market demands. Their proactiveness involves instant innovation and maintaining readiness for future strategic moves through proactive IT and human investments. Such agility allows companies to execute business strategies that are tightly linked with digital tech in fast changing environments (Li W. , Liu, Belitski, Ghobadian, & O'Regan, 2016).

Another vital component is the development of hybrid skills. Successful e-leaders have cross disciplinary expertise including ICT, business and sales and marketing. This expertise supports effective role transitioning within teams and allowing leaders to bridge technical possibilities with strategic business needs. These hybrid skills are necessary for strategy execution as they confirm tech choices directly support organizational design and business goals (Li W. , Liu, Belitski, Ghobadian, & O'Regan, 2016).

E-leaders need their technology and people on the same page. An architectural view provides the logic to make that happen by changing isolated systems in to a collaborative network. This big picture approach helps leaders invest in people and partnerships making sure the company's

business vision and tech expansion goes hand in hand. This makes sure that the internal team and external parties work together effectively to achieve strategic objectives (Li W. , Liu, Belitski, Ghobadian, & O'Regan, 2016).

A quantitative study drawing on a sample of 241 professionals in the US directly tested the relationship between e-leadership and strategic innovation. The research established a positive and significant link finding that e-leadership positively influences the development and implementation of innovative strategies within organizations (Hassan, et al., 2025). This finding is further supported in the work by Avolio BJ (2014) and Van Wart (2019) who argue that e-leaders possess a deeper understanding of digitalization enabling them to carefully evaluate organizational needs and employees' capabilities and select appropriate technological resources. These are capacities that translate directly into strategic innovation outputs. Li W. L. (2016) developed an empirically derived e-leadership model from in-depth fieldwork in European SMEs. The study demonstrated that effective e-leadership drives the successful alignment between business strategy and digital technology. This encourages longevity and organizational growth which are processes that are fundamentally inseparable from strategic innovation.

E-leadership involves acting as both a value creator and protector. As value creators, e-leaders focus on prioritization and data-oriented value to build platforms that transition into broader ecosystems. As value protectors, they make sure service level alignment is achieved through flexibility and resilience. This includes digitalizing core business processes to increase operational efficiency and reliability for both the firm and its clients. E-leaders work to align information system with business processes to optimize operations and enhance the firm's competitive position (Li W. , Liu, Belitski, Ghobadian, & O'Regan, 2016).

The link between e-leadership and innovation has also been validated at the team and behavioral levels reinforcing the firm level argument. Chamakiotis (2021) established that virtual teams were originally assembled precisely to utilize innovation potential bringing together global talent across boundaries as a way of increasing the possibilities of generating innovative outcomes. They found that appropriate e-leadership practices are what determine whether that innovation potential is actually realized. Empirical research conducted in Chinese organizations confirmed that e-leadership exerts a significant positive impact on employee innovation behavior with

psychological capital and affective commitment to leadership serving as mediating mechanism (Li M. &., 2023). Hence, we hypothesize:

H1: E-leadership is positively related to strategic innovation

2.7.2 E-leadership and Inter-team Coordination

E-leadership involves more than the simple adoption of digital tools. It requires a shift in management behavior to encourage collaboration across space and time distributed teams. Contreras (2020) highlights that effective e-leadership requires managers to move away from traditional, rigid hierarchies toward flexible structures that prioritize trust and rapid communication. Their research indicates that e-leaders must develop specific competencies in e-communication and e-team building to consolidate virtual teams and make sure they remain aligned with organizational goals particularly during times of crisis or remote work transitions.

Primary process through which e-leadership increases inter-team coordination is the facilitation of technology-based knowledge sharing. Transformational leadership in virtual settings is vital for encouraging employees to engage with digital knowledge platforms. Employees are more likely to consider tech-based knowledge sharing as beneficial to both their personal success and the success of the firm when leaders encourage a culture of support and trust (Nguyen M. R.-T., 2023). This flow of information is a requirement for coordination as it makes sure that different teams have access to the same updated data and insights.

Management of team emotions and social dynamics is also an important component of e-leadership that impacts coordination. E-leaders that encourage positive emotions can increase knowledge sharing whereas failing to address negative emotions can lead to knowledge hiding. E-leaders reduce information sharing gaps and encourage mutual exchanges between different groups by monitoring and influencing the emotional environment (Luqma n, 2023).

Ethical leadership practices further boost the collaborative framework of an organization. Goswami (2023) observes that ethical leadership promotes knowledge sharing and creation by building intellectual assets among team members. Leaders use shared goals to turn different teams with different ideas into coordinated unit. They act as role models for open communication

and fair exchange to create a space where teams feel secure in sharing resources across the organization.

Study by Elyousfi (2021) represents leadership as a combination of leader trust, communication and coordination. They find that this leader led activities are essential for maintaining team engagement and accountability in companies. Their findings suggest that the structured communication and coordination provided by the leader helps connect interdependent tasks when team members don't share a physical space.

Relational and task oriented leadership styles are effective in virtual work settings. As teams are becoming more and more remote, a leader's role in providing support and maintaining coordination becomes even more significant. Hence e-leaders must adapt their styles to ensure that information isn't only transmitted but also understood and acted upon (Höddinghaus, 2023). Hence we hypothesize:

H2: E-leadership is positively related to inter team coordination

2.7.3 Inter-team Coordination and Strategic Innovation

The relationship between inter-team coordination and strategic innovation is strong especially in the context where firms must work around complex, dynamic and digitally mediated operating environments. Strategic innovation in this context involves new service models, business processes and market positioning which is fundamentally a collective activity. Gemünden (2018) provide an important theoretical ground by conceptualizing project-based companies as an entrepreneurial, future oriented and stakeholder driven entity. These entities use cross functional, multi team structures to develop and implement strategic initiatives. Their model shows the capacity to innovate is deeply connected with the quality of coordination between teams. This is because the interaction across project-based business units generates the knowledge combinations useful for novel strategic outcomes. Another article by Zahoor N. &.-T. (2020) provides evidence from review of 113 studies looking at the relationship between inter organizational collaboration and innovation in SMEs. The literature analyses that collaboration whether it is with internal or external teams creates the conditions for knowledge recombination, shared learning and the development of novel solutions. These are not possible to be achieved individually. The review also identifies communication quality and coordination capability as

mediators of the collaboration and innovation relationship. Even if the review focuses on SMEs, the insights can be directly applied to the BPO context where firms of different sizes need to coordinate across operational and client facing units to create innovations that meet evolving client expectations.

The role of coordination in influencing strategic innovation is further strengthened when examining knowledge intensive service firms. Magni (2023) explores service in international knowledge intensive business service companies through a micro foundation perspective. This in simple words mean the sharing of tacit knowledge across organizational units. This process is dependent on effective inter team coordination which is a key driver of service innovation. The article's findings show that knowledge transfer and translation practices across teams significantly amplify the relationship between knowledge transformation and sharing. This will as a result help firms to identify and track more innovative service offerings. Del Giudice (2021) complement the above article through their finding of organizational agility and ambidexterity (physical coordination) which are antecedents of digital innovation emerges from the firm's capacity to coordinate internal processes and rapidly reconfigure team activities in response to environmental signals. Their study shows that companies that are capable of coordinating the actions of different internal units are better positioned towards digital innovation.

Larsen (2023) examine the evolution of the BPO industry in Kenya which is one of Ethiopia's closest regional counterparts in the emerging African outsourcing landscape. The study demonstrates that coordination between internal service delivery units, multinational client firms and institutional actors is the foundational mechanism through which African BPO firms generate knowledge spillovers, build innovative capabilities and achieve strategic upgrading. Their study reveals that African BPO suppliers which successfully reduce inter-team and inter-unit coordination costs are significantly better positioned to transition from low value, generic service delivery to higher-value, innovation-intensive service offerings. The study also argues that the capacity for innovation in African BPO environments is not primarily a function of individual firm resources or quality technology. It is the quality of coordination structures that enable knowledge transfer across team and organizational boundaries. The evidence from Kenya suggests that Ethiopian BPO firms that invest in strengthening inter-team coordination

mechanisms are most likely to develop the collective intelligence and adaptive capacity from which strategic innovation emerges. Hence we hypothesize:

H3: Inter-team coordination is positively related to strategic innovation

2.7.4 E-leadership and Dynamic Capability

According to Teece, Pisano, & Shuen (1997) dynamic capability of a company refers to the ability to sense opportunities, capitalize them and reconfigure internal and external competencies to respond to rapid environmental shifts. This capability allows firms to learn and change by creating, extending and adapting their resources. Schoemaker et al. (2018) argue that dynamic capability can only be developed and successfully implemented when strong leadership is present to handle the challenges of the innovation process. Leadership provides the strategic direction needed for recognizing external change and identifying market shifts.

E-leadership serves as a critical driver for the three main components of dynamic capabilities which are sensing, seizing and transforming. Leaders must show specific qualities to encourage their team's potential. For example, Li et al. (2016) identified six essential e-leadership qualities which are agile leadership, hybrid skill development, architectural view, digital entrepreneurship, value creation and value protection. Agile leadership helps a leader to respond quickly to threats and opportunities in uncertain situations. Digital entrepreneurship involves the ability to interpret trends in the IT environment to stimulate business innovation. These qualities directly improve the firm's ability to sense and seize new opportunities in a timely manner.

Additionally, E-leadership acts as a supporter for employees' dynamic capability. Guangyan LUO (2022) describe employees' dynamic capability as a micro level application of dynamic capabilities. This represents the ability of individuals to integrate and reconfigure their own competencies. The research shows that e-leadership supports the positive outcome of these individual capabilities on job performance especially during times of crisis such as COVID. Effective e-leaders help team members across different time and location coordinate tasks helping them navigate dynamic environments and improving their adaptability and problem-solving skills. The collective evidence suggests that e-leadership qualities provide the necessary framework for companies to build and sustain the dynamic capabilities required for growth in digitalized world. Hence, we hypothesize:

H4: E-leadership is positively related to dynamic capabilities

2.7.5 Dynamic Capability and Strategic Innovation

Teece et al. (1997) defined dynamic capability as a firm's ability to sense opportunities, seize and reconfigure (restructure) internal resources and competencies in response to environmental changes. The most direct validation for this relationship comes from (Subramaniam, Salamzadeh, & Mujtaba, 2023). They have analyzed 145 respondents from Malaysia's medical device industry and demonstrate that dynamic capabilities hold a strong and significant relationship with innovation management. Their research positions dynamic capability not only as a mediator but also as an independent driver of innovation outcomes. Schoemaker et al. (2018) build a theoretical case for why dynamic capability is tied with innovation. Their argument is that firms operating in VUCA (volatile, uncertain, complex and ambiguous) environments can only achieve strategic innovation when i) they develop the organizational routines and leadership processes associated with sensing external shifts; ii) seize emerging opportunities and iii) reconfiguring capabilities accordingly. Zahoor et al. (2022) provide additional evidence from the context of high tech B2B SMEs. Their conclusion shows that firms that effectively acted on their sensing and seizing capabilities were significantly more successful at achieving strategic innovation. Their research shows that dynamic capabilities function as the company's heart through which firms convert environmental uncertainty into innovative strategic opportunity rather than being overwhelmed. Firms that can dynamically sense and seize such disruptions are shown to innovate more effectively than those that cannot. Hence we hypothesize:

H5: Dynamic capability is positively related to strategic innovation

2.7.6 Inter-team coordination mediates the relationship between e-leadership and strategic innovation

The pathway from e-leadership to strategic innovation through inter-team coordination is theorized within the Complexity Leadership Theory framework, which shows that enabling leadership practices are essential for facilitating coordination of information flows and

relationships across organizational boundaries, thereby creating the adaptive conditions from which innovation emerges (Uhl-Bien, 2011).

Inter-team coordination serves as a mediator in order to translate leadership behaviors into innovative outcomes. Donate (2023) provide evidence by demonstrating that knowledge-oriented leadership improves strategic innovation capabilities by encouraging transactive memory systems which means “knowing who knows what” and enhancing task coordination. The research indicates that effective leadership reduces task management conflict and aligns efforts across different units, creating a collaborative context that is required for integration of specialized knowledge into innovative products and services. This suggests that e-leadership qualities achieve strategic innovation because they enable teams to work in a coordinated manner.

Importance of relational and cultural foundations of coordination is highlighted by the work of (Zhang, 2024) and (Akhtar, 2023). Inclusive leadership impacts innovative behavior by encouraging organizational harmony. Leaders create a supportive and participatory environment when they demonstrate inclusivity. This in turn encourages inter-team cooperation and reduces the friction that delays the coordination of creative ideas (Zhang, 2024). Similarly, Akhtar (2023) suggests that responsible leadership influences innovation through the development of an organizational ethical culture and a progressive strategic posture. This ethical framework acts as a signal that aligns team goals and values making sure the coordination efforts are directed toward long term strategic objectives.

Knowledge management and sharing also acts as vital component of the coordination process. Alzghoul (2024) discusses that knowledge-oriented leadership supports innovative behavior by encouraging a knowledge centered culture. This happens by rewarding cooperation, teamwork and information sharing. This culture makes sure that intellectual resources aren’t gate kept but are actively coordinated across the organization to fill knowledge gaps and stimulate collective problem solving. Nguyen M. (2023) highlights the role of transformational leadership in promoting knowledge sharing. In e-leadership context, the ability of a leader to inspire employees to use digital platforms for knowledge sharing is a requirement for inter-team coordination. Employees are more likely to participate in the mutual exchange of information

when they see themselves reflected in the leader's vision. This in turn results providing the data and insights necessary for strategic innovation to occur.

These studies suggest that e-leadership impacts innovation by building the social and structural capacity for teams to interact, share and align their work. E-leaders establish a high level inter team coordination by encouraging inclusivity, ethical alignment and tech based knowledge exchange. This in turn allows the organization to redesign its resources and implement strategies effectively.

E-leadership does not produce strategic innovation directly but rather works through the structural and relational coordination it generates among teams. Specifically, e-leaders who create adaptive organizational spaces, encourage transactive memory and task alignment, encourage inclusive and ethically grounded coordination cultures and leverage digital platforms for knowledge sharing are systematically building the inter-team coordination capacity. This capacity serves as the intervening mechanism through which strategic innovation is realized. To put it in other words, it is the sequential process by which e-leadership behaviors first elevate the quality and depth of inter-team coordination and that coordination in turn creates the collective knowledge integration and goal alignment from which strategic innovation emerges. Hence we hypothesize:

H6: Inter-team coordination mediates the relationship between e-leadership and strategic innovation

2.7.7 Dynamic capability mediates the relationship between e-leadership and strategic innovation

The move from traditional leadership to e-leadership is important if companies are looking to navigate the complexity of digital transformation. During this time, developing dynamic capabilities acts as a bridge between the leader's strategic vision and the understanding of innovative outcome. Schoemaker et al. (2018) argue that innovation is not a random occurrence but a result of a company's capacity to sense, seize and reconfigure its resources. They propose that strong leadership is the primary driver of these dynamic capabilities. A company remains stagnant without a leader who can identify market shifts and commit resources to new

opportunities. Therefore e-leadership provides the necessary strategic direction and digital mindset to initiate the sensing and seizing processes required for change in a company.

Study by Sasmoko et al. (2019) provides evidence that digital leadership impacts innovation through dynamic capabilities. The research suggests that leaders with a digital attitude are better suited to build an ecosystem where market and technological trends are continuously monitored. This sensing capability allows the company to adapt its innovation strategies in real time. The study indicates that the influence of leadership on innovation is noticed when organizations' internal ability remains flexible and responsive to the environment. Central to this, e-leadership acts as the catalyst that allows the organization to develop the agility needed for strategic innovation.

The mediating role of dynamic capability is further supported by Elidjen et al. (2019). The findings show that actual execution of innovation management depends on the company's dynamic capability in addition to digital leadership which is essential for setting innovation agenda. They observe that leadership supported by collaboration creates a ground for resource restructuring. This is what allows a firm to transform its old systems into new innovative business models. The study suggests that dynamic capability serves as a mediating variable. This means e-leadership improves strategic innovation because it first improves the company's ability to change its operational and strategic base.

Research by Mihardjo & Rukmana (2019) in the telecom sector shows that companies facing disruptive environments rely on digital leadership to build innovation capability. Their analysis shows that e-leaders create a culture of continuous learning and adaptation which are core components of dynamic capabilities. E-leaders confirm that the company can sense disruptive threats and seize them as opportunities for innovation by using digital tools and promoting a shared vision. This path shows that E-leadership drives innovation by increasing organizational flexibility and resource consolidation.

Encouraging a digital mindset and agile process helps e-leaders build dynamic capabilities necessary to navigate uncertain environments. These capabilities provide the structural and operational method to achieve strategic innovation. Hence we hypothesize:

H7: Dynamic capability mediates the relationship between e-leadership and strategic innovation

2.7.8 Knowledge integration capability (KIC) moderates the impact of e-leadership on inter-team coordination

E-leadership doesn't always drive inter-team coordination in a uniform manner across all companies. It is often dependent upon the company's internal capacity to process and analyze complex information. Knowledge integration capability represents an organization's ability at combining specialized knowledge from various sources into analyzable information to solve problems and execute strategies. E-leaders provide the digital vision and the tools for communication. The extent to which these efforts result in ideal coordination depends on how well the company can integrate the information being exchanged.

Direct evidence for the moderating role of knowledge integration capability is found in the research by Xie X et al. (2022). The study explores the relationship between inter-team coordination and performance highlighting that KIC acts as a critical boundary condition. It is discussed that when teams possess high KIC, they are better at information elaboration. Information elaboration means the process of carefully examining and discussing task relevant information. In an e-leadership context, this indicates that the digital directions and communication channels established by the leader are more effective when the organization has a high KIC. This means teams can better interpret and act upon the information provided. On the contrary, without sufficient KIC, the efforts of e-leaders may lead to information overload or fragmented coordination.

Guo (2021) analyzed that IT capability which is one element of e-leadership interacts with KIC to influence business model design. This suggests that the impact of digital leadership on how teams organize their work is maximized when there is a strong capacity to integrate knowledge. KIC allows for a more complicated use of IT resources indicating that the digital connectivity facilitated by the leader results in the alignment of diverse team functions.

Research by Acharya (2022) indicates the importance of KIC in managing information for innovation. The research focuses on the role of boundary spanning objects. Boundary spanning objects are concepts that are flexible enough to be useful across different groups but powerful

enough to maintain a common identity. They are important for knowledge sharing, communication and collaborations. In digital environment these are platforms and data visualizations managed by e-leaders. It is noted that KIC is necessary to manage the inflow of information across these boundaries. If an organization lacks the capability to integrate this information, the boundary spanning efforts of the leader fail to produce coordinated innovation. Hence KIC serves as the tool that converts the raw communication facilitated by e-leadership into actual team coordination.

KIC is especially important during periods of crisis such as COVID. E-leaders benefit from global digital platforms to maintain operations. The success of these platforms in coordinating teams found in separate places depends on the company's ability to integrate local and global knowledge (Guo Y. C., 2023). Salunke (2019) argues that KIC is important to competitive strategy because it allows companies to combine specialized professional knowledge into unique service offerings. This process indicates that the strategic coordination goals set by leadership are attainable through the combined efforts of various specialized teams.

Fait (2023) mentions that knowledge sharing intentions are implanted in the company's intellectual capital. E-leaders can encourage sharing and KIC determines if that shared knowledge is successfully used for coordination. Gong (2022) discussed a "too much of a good thing" effect for digitalization where excessive technology without matching KIC can slowdown innovation. This highlights that e-leadership must be matched with integration capability to achieve a productive team coordination rather than becoming a source of confusion. Hence we hypothesize:

H8: Knowledge Integration Capability moderates the impact of e-leadership on inter-team coordination

2.7.9 Conceptual Framework

According to the hypotheses above the conceptual framework proposed in this study is shown in the figure below. This conceptual framework is adopted from the original research topic "Examining the impact of e-leadership on strategic innovation at work: a moderated mediation model" with a new additional variable introduced as a mediating factor based on insights from research article "The Mediating Role of Dynamic Capability on the Relationship between E-

Leadership Qualities and Innovation Management: Insights from Malaysia's Medical Device Industry". This new variable is added to justify that e-leadership alone doesn't fully translate into innovation outcomes unless the organization possesses the ability to sense, seize and reconfigure resources within fast changing environments. The research demonstrates that e-leadership qualities influence innovation primarily through dynamic capability. Dynamic capability therefore functions as the internal mechanism that transforms digital vision, communication and strategic guidance into real and organization wide innovative action.

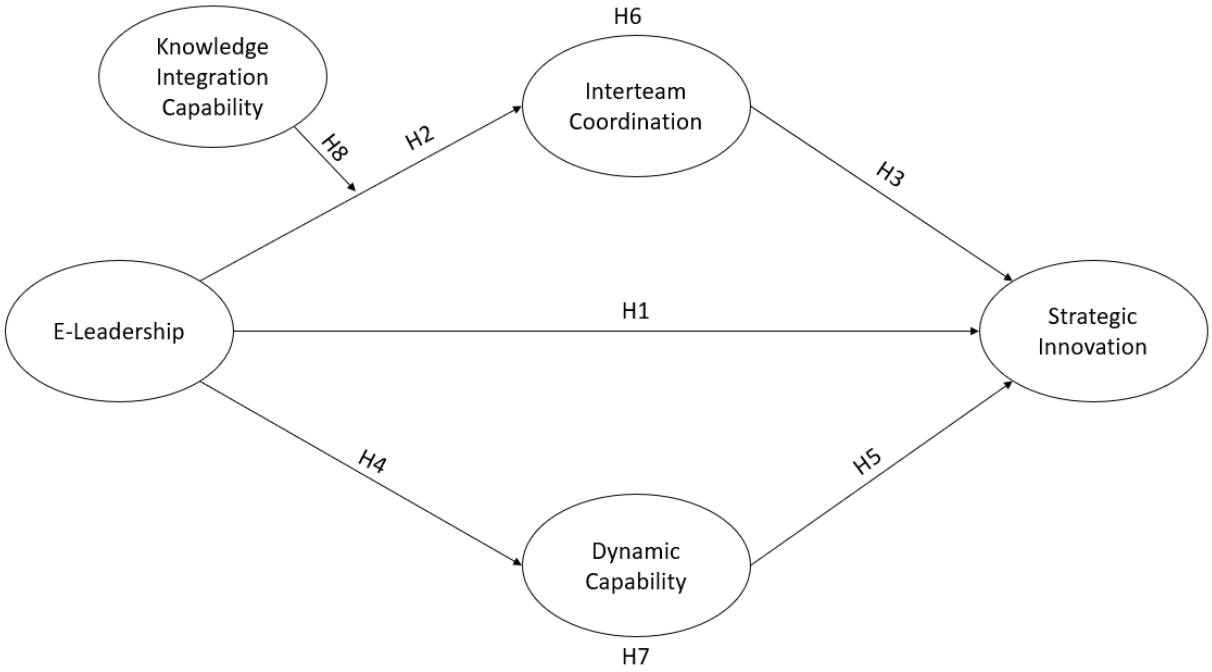


Figure 1 Conceptual Framework:

Source: (Hassan, et al., 2025)

3. Research Methodology

3.1 Target population and sampling technique

LinkedIn industry and location-based keyword search shows that there are 121 tech/IT and 1348 non-tech outsourcing service providers in Ethiopia, including firms in accounting/auditing,

advertising/marketing and human resource. These companies provide outsourced services to both international and local clients.

Purposive sampling technique is used to select samples based on specific characteristics that makes them theoretically appropriate for answering the research questions. Specifically, ten outsourcing firms in Ethiopia were purposively sampled. These firms were selected based on the following justifications.

- Active engagement on digital platforms and social media can be used as a proof for a firm's reliance on digital communication infrastructure. It is theoretically important that sample firms actively utilize virtual environments for stakeholder engagement and sales processes. This reflects an established organizational culture of digital interaction.
- Firms operating across local and international markets require hybrid or fully virtual workflows to bridge geographical boundaries. This operational model creates the exact complex, distributed team environment where e-leadership is tested.
- Selecting firms with operations to Addis Ababa provides a controlled context where firms operate under identical macroeconomic, technological and cultural conditions. This controls for external environmental variance. It confirms observed leadership dynamics are a function of organizational and digital strategy rather than regional imbalance.

The selected outsourcing firms are SICS IT outsourcing, Excellerent Tech Solutions, Dengene tech solutions, Mereb Technologies, MMCY tech, CRDLE, AIT, Tewos technologies, Certa and Yaltopia. These firms served as primary representatives to drive and project the study's sample size. Data collection was not exclusively restricted to these companies. The questionnaire was distributed to full time employees of the ten and other companies engaged in providing outsourcing services. Based on LinkedIn employee counts, the total number of employees across these firms was 905.

Table 2 Population Size by Company

Company	**Number of employees**
SICS IT outsourcing	23
Excellerent Tech Solutions	115

Dengene tech solutions	21
Mereb Technologies	47
MMCY Tech	579
CRDLE	60
AIT Technology	15
Tewos Technologies	28
Certa	10
Yaltopia	7

The LinkedIn employee count indicates that MMCY Tech holds a dominant share of the population workforce however this distribution doesn't reflect the actual composition of the gathered sample. Data collection was intentionally managed to make sure that response rates were not disproportionately dominated by a single firm.

3.2 Research approach and design

This study used a quantitative research approach that employed cross-sectional data collection. It is used to study the relationships between the different constructs using quantitative data. Quantitative data focused on numerical measurements and statistical analyses to analyze the results (Hair J. F., 2020). Yadegaridehkordi (2023) explains it as a better way to measure and evaluate the relationships between the constructs. This enables the user to perform statistical analysis, test hypotheses and infer from numerical evidence (Hair J. F., 2020).

This research used a cross-sectional design that collects data at one point in time. It looks at relationships between variables without considering the timing of the variables (prediction over time). It then followed a deductive approach where the study tests specific hypothesis through primary data collected using adjusted questionnaires from other studies. The targeted sample includes 270 participants including manager and non-manager staff from selected outsourcing services provider companies.

The formula used for generating the sample size is created by S.A. Regma Bukhari for MBA/MSC students adopted from (Daniel WW, 1999). The Bukhari model was specifically selected for its contextual relevance to postgraduate management and business research. It provides structured operational guidance for researchers navigating finite target populations, standardizes acceptable margins of error (e=0.05) and accounts for anticipated non response rates typical in survey-based business research.

Formula for known population:

$$\text{Sample size} = \frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

Table 3 Sample Size Calculation

Confidence Level	95%
Sample Proportion (p)	0.5
Margin of Error (e)	0.05
Population Size (N)	**905**
Alpha divide by 2	0.025
Z-Score (z)	1.96
Sample Size	**270**

Since the number of employees in each of the 10 companies is different, we allocate the 270 samples through proportionate stratified random sampling (Zahari, 2017). This method confirms that each company is represented in exact proportion to its size in the total population. The allocation formula used is:

$$n_i = \left(\frac{N_i}{N}\right) \times n$$

where Ni is the number of employees in one company, N is the total population of all 10 companies and n is total target sample size (270).

Table 4 Sample Size Allocated by Company

Company	**Number of employees**	**Allocated Sample**
SICS IT outsourcing	23	7
Excellerent Tech Solutions	115	34
Dengene tech solutions	21	6
Mereb Technologies	47	14
MMCY Tech	579	173
CRDLE	60	18
AIT Technology	15	4
Tewos Technologies	28	8
Certa	10	3
Yaltopia	7	2

Of the 270 questionnaires expected to be filled in, 248 were successfully filled and returned (response rate of 91.8%). According to Mangione (1995) a response rate of more than 85% is considered as excellent. This rate is substantially higher than the average response rate of 52.7% (Baruch, 2008) in organizational research. With such a high number of respondents the risk of non-response bias is negligible and the data is sufficiently representative to proceed to the analysis phase.

3.3 Data Collection and Instrument

The study utilized existing questionnaires used by previous researchers with adjustment. The first section of distributed questionnaire include demographic information and then measure e-leadership using a 4 item scale adapted from Doghri (2021), inter-team coordination using a 5 item scale adapted from Hoegl (2004), dynamic capability using a 6 item scale adapted from

(Lopez-Cabrales et al. (2017), knowledge integration capability using a 6 item scale adapted from Yu (2022), and strategic innovation using a 5 item scale adapted from Miller (1983).

Control variables used include age, tech experience, gender and educational background consistent with previous study i.e. Rizzuto (2011). The researcher approached employees through LinkedIn and personal networks from selected and similar companies at random to collect questionnaire responses and used Google Forms to administer the questionnaire. Participation in the survey was voluntary and respondents did not receive any financial compensation.

Since this study is quantitative, the validity and reliability of the questionnaire's items were evaluated using factor loading, composite reliability, Cronbach's alpha, and average variance extracted (AVE). The measurement and structural models were validated using convergent and discriminant validities, the Fornell-Larcker Criterion, the HTMT matrix, regression analysis (R squared values), f-squared values, and projected indirect and direct linkages.

However, the discriminant validity is verified using the Fornell-Larcker Criterion, the HTMT matrix, the average variance recovered, and the cross-loading. Consequently, the adjusted items and structures are validated simultaneously using our modified outer model (measurement model).

An internal model with independent, dependent, and indirect variables is called a structural model. To validate the structural or inner model, the study employed regression analysis (R-squared values), f-squared values, predictive relevance (Q^2), and suggested indirect and direct relationships. The study's model is validated using measurement and structural models in Smart-PLS 4.4. Additionally, we measured the mediation model using the bootstrapping method with 5000 bootstraps.

3.4 Data Measurement

The dependent, independent and mediating variables are assessed using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) based on participants responses. This scale is easy to understand making it convenient for respondents to use (Don A. Dillman, 2014). The simple nature of the scale minimizes ambiguity and allows participants to communicate their responses accurately and efficiently. The scale also provides a well-balanced set of response

options typically including two positive and negative and one neutral choice. It was originally emphasized by Likert that this structure helps respondents to indicate either strong agreement or disagreement as well as a neutral or moderate attitude Willits et al. (2014). In a practical sense, the five point Likert scale is suitable for longer questionnaires as it requires shorter time to complete than scales with more response categories increasing the likelihood of higher response rates (Luis M. Lozano, 2008).

3.5 Method of Data Analysis

In this study, partial least square equation modelling (PLS-SEM) data analysis is conducted using Smart PLS 4.4. The moderation and mediation analysis, as well as the characteristics of the data and sample, were taken into consideration when choosing this method. Similarly, this approach has grown in popularity in marketing, human resource management, and related sectors (Iqbal, 2021). A component-based method for forecasting complex cause-and-effect relationships in route models with latent variables is called PLS-SEM. It is suggested in a different study by Karnadi (2023). It is a second-generation multivariate data analysis methodology in the structural equation modelling family, as opposed to covariance-based techniques (CB-SEM).

Two criteria can be used to evaluate the model elements and indicators of PLS-SEM. These are the reliability and validity of measurement models. Validity is the extent to which the indicators and constructs measure what they are supposed to evaluate, while reliability is the degree to which they are consistent and dependable in their measurement (Karnadi, 2023).

The research by Hair J. F. (2017) shows that PLS-SEM provides the following advantages over other approaches. PLS-SEM is a distribution free method that can handle complex models with numerous constructs, indicators, and relationships. It can also work with non-normal or skewed data. The effectiveness of PLS-SEM depends on factors such as model complexity and effect size. This makes it applicable for studies with both relatively small and large samples. This method can be applied to both primary and secondary data even if strict assumptions of measurement theory are not fully met. For example, Karnadi (2023) shows the use of PLS-SEM for predicting relationships amidst dependent variables. This approach is effective for estimating multiple interrelated equations simultaneously. It also helps examine the structural relationships

within a proposed research framework. All of this indicates that PLS-SEM acts as an analytical tool for conducting empirical analysis in this study.

Additionally, Karnadi (2023) mentions SmartPLS as a software program designed to implement PLS-SEM modeling. The software features a natural graphical interface and includes advanced analytical capability such as PLS predict oriented segmentation, importance performance map analysis and complex bootstrapping procedures. It supports a range of applications such as data exploration, theory validation, prediction and evaluation of measurement models. Based on this foundation, this study uses the lates version of SmartPLS to conduct the data analysis.

3.6 Pilot Study

A pilot study is an initial, small-scale study carried out before the main research to identify potential weaknesses in the research design and data collection tools. It plays an important role in improving the questionnaire and helps ensure that the data gathered in the main study is both reliable and valid (Saunders et al., 2019). The author conducted a pilot with 20 participants to evaluate the reliability and validity of the survey items.

3.6.1 Demographics Characteristics of Samples

Table 5 Demographics

Characteristic	Category	Frequency	Percentage
Gender	Male	12	60%
	Female	8	40%
Age	18-25 years	7	35%
	26-35 years	13	65%
	36-45 years	0	0
	46-55 years	0	0
	55+ years	0	0
Education	TVET/Level4 Diploma	0	0%
	Bachelor's Degree	16	80%
	Master's Degree	4	20%
	PhD	0	0%

Experience	Less than 1 year	0	0%
	1-3 years	10	50%
	4-6 years	7	35%
	7-10 years	3	15%
	10+ years	0	0%

3.6.2 Identification Measurement Model

The researcher identified the nature of the measurement models for all latent constructs based on criteria established by Hair et al. (2022).

Table 6 Model Identification

Constructs	Typical Model	Reference
EL	Reflective	Avolio et al. (2014), Huang et al. (2010)
IC	Reflective	Faraj and Sproull (2000)
DC	Reflective	Pavlou and El Sawy (2011)
KI	Reflective	Huang and Newell (2003), Grant (1996)
SI	Reflective	Gebauer et al. (2012)

In line with the recommendation of Jarvis et al. (2003), all latent variables in this thesis were modeled using a reflective measurement model as the indicators are manifestations of the construct, they are interconnected and interchangeable and removing one indicator doesn't change the essential meaning of the construct

3.6.3 Analysis and Discussion

A pilot study was conducted with N= 20 participants to assess the feasibility and psychometric properties of the survey instrument. Data were analyzed using SmartPLS 4.1.1.8. Since the primary goal of the pilot was to validate the measurement model, structural path analysis was not performed. The author evaluated the reflective measurement model by using the following criteria:

Indicator Reliability/Outer Loading

Indicator reliability was assessed using outer loadings. It should exceed 0.708 to ensure that the construct explains more than 50% of the indicator variance (Hair et al., 2022).

With most of the indicators in this analysis showing high loadings (ranging from 0.74 to 0.94), the reliability was high. There are 3 indicators, DC6 (0.652), IC3 (0.678) and KI5 (0.631) that dropped just below the 0.708 threshold. However, their values are very close to the acceptable 0.70 (Hair et al., 2022).

The table below shows that 3 indicators—DC5, IC2, and EL2—were missing. These indicators were excluded because their outer loading values were below 0.6. After their removal, the Cronbach's alpha and Average Variance Extracted (AVE) improved to 0.792 and 0.613, respectively.. However, these items were retained in the main study because the large sample size resulted in internal consistency and convergent validity measures that exceeded the established thresholds.

Table 7 Outer Loading Results

	DC	EL	IC	KI	SI	
DC1	0.805					
DC2	0.765					
DC3	0.832					
DC4	0.901					
DC6	0.652					
EL1		0.813				
EL2		0.884				
EL4		0.925				
IC1			0.740			
IC3			0.678			
IC4			0.816			
IC5			0.881			
KI1				0.836		
KI2				0.836		
KI3				0.885		
KI4				0.942		
KI5				0.631		
KI6				0.867		

SI1					0.890	
SI2					0.846	
SI3					0.840	
SI4					0.910	
SI5					0.810	
KI X EL						1.000

Internal Consistency and Convergent Validity

The Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE) results are presented in Table 8. The author assessed internal consistency reliability using the same data, which indicated that all constructs had high internal consistency. Cronbach's Alpha values range from 0.792 to 0.917, which is above the usually accepted limit of 0.70 (Hair et al., 2022). Similarly, Composite Reliability (CR) was generally strong, ranging from 0.821 to 1.018. The value of 1.018 for KI is common in small sample PLS-SEM application where high sampling variance can lead to reliability estimates exceeding the theoretical limit of 1.0 (Hair et al., 2021; Boomsma, 1982). According to the principle of 'Consistency at Large' (Dijkstra & Henseler, 2015), these estimates are expected to stabilize and remain within the 0-1 range as the sample size increases toward the final target 200-250.

Convergent validity was examined using AVE. All constructs exceeded the minimum value of 0.50, with values ranging from 0.613 to 0.766. On average, more than 60% of the variance in their respective indicators, providing strong evidence for convergent validity.

Table 8 Internal Consistency and Convergent Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
DC	0.853	0.872	0.895	0.633
EL	0.848	0.874	0.907	0.766
IC	0.792	0.821	0.862	0.613
KI	0.917	1.018	0.933	0.703
SI	0.911	0.911	0.934	0.740

Discriminative Validity

Discriminant validity was checked using the Heterotrait-Monotrait ratio of correlations (HTMT) in order for the constructs of the model to be empirically distinct. Table 9 shows that all HTMT

values were below the threshold of 0.9 according to Henseler, Ringle, and Sarstedt (2015). The highest observed value was 0.870 and 0.858 (between EL - DC and SI - DC). Gold et al. (2001) is cited for using the 0.90 threshold in organizational research. They argue that in complex business models, constructs like "Knowledge Management" and "Capabilities" will naturally have higher correlations. As a result, discriminant validity is ascertained for all the latent variables in the pilot study.

Table 9 Discriminant validity (HTMT) result

	DC	EL	IC	KI	SI
DC					
EL	0.870				
IC	0.376	0.428			
KI	0.515	0.418	0.364		
SI	0.858	0.826	0.426	0.280	
KI X EL	0.281	0.319	0.208	0.100	0.060

4. Results and Discussion

4.1 Respondents Demographic Characteristics

The table below shows 248 participants in the survey that work in a remote setting. There were 97 female respondents, or 39.11% of the total, and 151 male respondents, or 60.89% of the total. 36.3% (90) of the respondents have 4-6 years of experience and 31.8% (79) of them have 1-3 years of experience. 77% of the respondents are aged between 18 and 35 and 97.18% of them obtain higher education degree.

Table 10 Demographic Characteristics

Demographic Variable	Groups	Frequency	Percent
Gender	Male	151	60.89%
	Female	97	39.11%
Experience	Less than 1 year	12	4.84%
	1-3 years	79	31.8%
	4-6 years	90	36.3%
	7-10 years	46	18.54%

	10+ years	21	8.46%
Age	18-25 years	67	27.02%
	26-35 years	124	50%
	36-45 years	45	18.15%
	46-55 years	12	4.84%
Educational Background	TVET/Level 4 Diploma	2	0.81%
	Bachelor's Degree	167	67.34%
	Master's Degree	69	27.82%
	PhD	5	2.02%

4.2 Descriptive Statistics

Table 11 below displays the findings of the descriptive statistics. Based on the findings, the mean values for all constructs fall between 3.56 and 4.19. This shows respondents mostly agree with the statements presented.

EL1 recorded the highest average agreement with a mean of 4.198. This is a strong suggestion that respondents agree there is a strong presence of e-leadership behavior in their organizations.

Indicators for strategic innovation are positive but have slightly lower mean ranging from 3.56 to 3.77 compared to other indicators. This shows that innovation is happening but there is also more room for growth compared to leadership and coordination.

The standard deviation values for all indicators are between 0.8 and 1. According to Hair J. F. (2017), a standard deviation close to 1 on a 5-point scale is an indicator that there is sufficient variance in the responses. All indicators have negative skewness results. This is expected in organizational research similar to this one where respondents usually rate positive traits towards the higher end of the scale. According to Kline (2011), skewness values within the range of plus or minus 3 are considered acceptable.

The kurtosis values for the indicators range from -0.644 to 2.066. Finney (2006) argues that values within the plus or minus 7 range are considered acceptable for social science research.

Table 11 Descriptive Statistics

Indicators	Mean	Median	Min	Max	SD	Excess kurtosis	Skewness	P Value
EL1	4.198	4	1	5	0.878	1.447	-1.187	0
EL2	4.04	4	1	5	0.941	0.336	-0.869	0
EL3	3.972	4	1	5	0.922	-0.077	-0.658	0

EL4	4.117	4	1	5	1.007	0.253	-1.023	0
IC1	4.02	4	1	5	0.99	0.399	-0.97	0
IC2	3.899	4	1	5	0.876	0.293	-0.598	0
IC3	3.794	4	1	5	1.013	-0.644	-0.491	0
IC4	3.871	4	1	5	0.946	-0.102	-0.602	0
IC5	3.903	4	1	5	0.983	0.516	-0.906	0
DC1	4.117	4	1	5	0.879	1.065	-1.019	0
DC2	3.931	4	1	5	0.847	1.046	-0.871	0
DC3	4.052	4	1	5	0.925	0.354	-0.842	0
DC4	4.056	4	2	5	0.826	-0.353	-0.538	0
DC5	4.008	4	1	5	0.828	2.066	-1.045	0
DC6	4.089	4	1	5	0.933	0.234	-0.837	0
KI1	4.089	4	1	5	0.92	1.611	-1.177	0
KI2	3.992	4	1	5	0.916	-0.367	-0.586	0
KI3	3.968	4	1	5	0.933	0.606	-0.956	0
KI4	4.101	4	1	5	0.947	1.105	-1.12	0
KI5	4.069	4	1	5	0.933	1.675	-1.247	0
KI6	4.097	4	1	5	0.884	0.295	-0.861	0
SI1	3.637	4	1	5	0.94	-0.204	-0.416	0
SI2	3.774	4	1	5	0.919	-0.173	-0.54	0
SI3	3.645	4	1	5	0.965	-0.202	-0.431	0
SI4	3.669	4	1	5	1.079	-0.252	-0.608	0
SI5	3.56	4	1	5	1.049	-0.371	-0.435	0

4.3 The PLS-SEM Algorithm and Bootstrapping

The study's data analysis method was PLS-SEM. To evaluate the intricate relationship between the constructs, regression analysis can be successfully carried out using PLS-SEM. Because PLS-SEM is non-parametric, it does not require a large sample size or the assumption of normalcy (Hair et al., 2011). The structural model and measurement are assessed using this multivariate approach with the least amount of error variance. PLS-SEM is suitable since it simultaneously illustrates and validates the link between the constructs (Hair et al., 2020). A bootstrapping method using 5000 resampling was used to assess the structural model. A structural equation model with latent constructs consists of two components. The first component is the structural model, which shows how the latent constructs are connected. PLS-SEM only allows recursive interactions; causal loops are not allowed. This shows that the structural paths connecting the latent components can only go in one direction. The structural model has both external constructions that have no linkages pointing to them and endogenous components that are explained by other constructs through relationships. The second component of the structural equation model is the measurement model, also known as the outer model in PLS-SEM. These

models incorporate the anticipated relationships between each latent idea and its observable indicators. Each indicator variable is associated with a single latent construct because multiple relations are prohibited. It shows that PLS-SEM can handle both formative and reflective measurement models. Reflective indicators are thought to reflect the hidden construct, and changes in the construct lead to changes in the indicator variables. Reflective indicators are represented as arrows pointing from the latent construct to the indicator variables, and the coefficients of these correlations are called outer loadings. On the other hand, formative markers are assumed to be responsible for the latent variables. While the coefficients for these interactions are known as outer weights, formative indicators are displayed as arrows pointing from the indicator variables toward the latent construct.

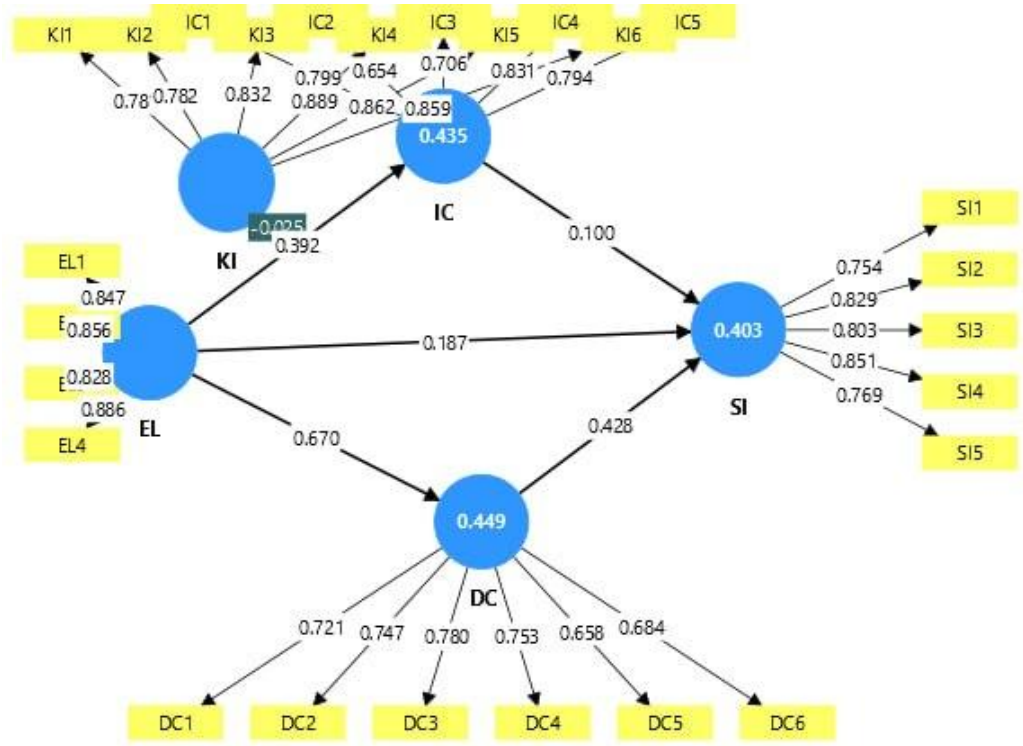


Figure 2 PLS SEM Result

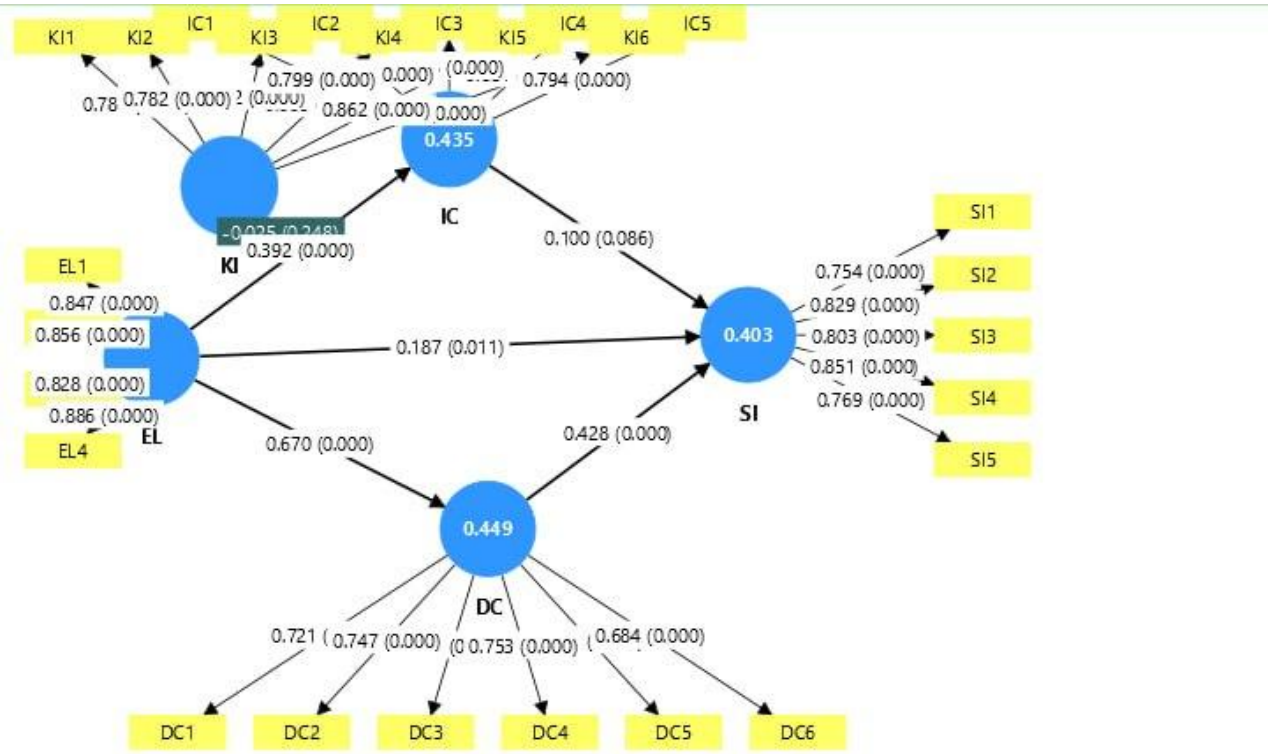


Figure 3 Bootstrapping Result

4.4 Measurement Model Analysis

To verify the accuracy and consistency of our measurement instruments, measurement model analysis is carried out. Content validity, reliability, discriminant validity, consistency reliability, and convergent validity are some of the elements that comprise the measurement model (Hair et al., 2020). The individual constructs' reliability is assessed by looking at their outer loadings (Hair et al., 2020). Measurement model is further assessed by distinguishing it as reflective and formative models (Karnadi, 2023b).

Validity and reliability are assessed using a reflective measurement methodology. When evaluating a concept's internal consistency in terms of construct reliability, composite reliability is commonly employed. Since composite reliability takes into account the varying reliability of numerous indicators, it is more appropriate than Cronbach's alpha for PLS-SEM, where indicators are ranked according to their reliability during model estimation. For exploratory research, composite reliability scores between 0.60 and 0.70 are sufficient. In later stages of the

research, values between 0.70 and 0.90 are advised (Hair et al., 2019b). If the result is less than 0.60, there indicates a lack of reliability.

Each indication's reliability should also be taken into account. Standardised loadings are used to evaluate this. Strong dependability is indicated if they are higher than 0.70. Indicator values with loadings between 0.40 and 0.70 may be eliminated if doing so raises composite reliability above the suggested cutoff. However, the potential impact of eliminating indications on their validity should be taken into account. Weaker indicators may be retained if they demonstrate content validity. Indicators with loadings of 0.40 or lower should often be eliminated from reflective scales.

When assessing the validity of reflective measurement models, convergent and discriminant validity are crucial factors to take into account. Convergent validity can be confirmed using the average variance extracted (AVE). An AVE value of 0.50 or higher indicates sufficient convergent validity. This means that more than half of the variance in its indicators is present in the dependent variable. Discriminant validity can be confirmed using cross-loadings and the Fornell-Larcker criterion. The Fornell-Larcker criterion states that a latent concept should show more variance with its assigned indicators than any other unobserved variables in the structural model. The AVE values of any latent variable should be greater than the squared correlation between it and any other construct, according to statistics. The second criteria for discriminant validity are the indicator's factor loading with its corresponding latent concept must be greater than its loadings with all other constructs (i.e., the cross-loadings).

4.4.1 Internal Consistency Reliability

Reflective measurement techniques assess validity and reliability. When evaluating a concept's internal consistency in terms of construct reliability, composite reliability is commonly employed. In social science research, internal consistency dependability has historically been assessed using Cronbach's alpha. However, when combined with PLS-SEM, this measurement tends to be cautious. Previous studies have proposed "Composite Reliability" as an alternative statistic to address this issue (Hair et al., 2020). According to Karnadi (2023), a composite dependability scores greater than 0.7 is considered adequate. Composite reliability scores more than 0.7 indicate internal consistency across items, indicating that each construct assesses

different concepts. Similarly, Cronbach alpha values greater than 0.7 have an effect on the structures. All reflecting latent variables have composite dependability ratings better than 0.7, indicating a high level of internal consistency dependability, as Table 12 below demonstrates.

4.4.2 Convergent Validity

A validity category called convergent validity assesses how closely several measures of the same construct relate to one another. This shows that all indicators measuring the same notion have a strong association with one another and evaluate mutual variables in accordance with pertinent theory. Convergent validity is determined by evaluating the AVE for each latent variable. Fornell & Larcker (1981) specify that an appropriate value for AVE should be above 0.5. All of the AVE values in the table below are greater than the recommended outcome of above 0.50, demonstrating adequate convergent validity (Hair et al., 2020). Additionally, the composite reliability (CR) coefficients were higher than the suggested cutoff of 0.70. Construct dependability is indicated by this (Hair et al., 2011). Table 12's outer loading values are all between 0.654 and 0.889. This shows the internal consistency or reliability of the constructs. AVE and outer loading are used to assess convergent validity.

Cronbach's alpha evaluates the internal consistency of each construct, whereas composite reliability examines the internal consistency of each factor. It illustrates the relationships between several elements inside a single framework. According to Hair et al. (2020), it is encouraging if the composite dependability score is more than 0.7. It indicates that the test is accurately measuring what it is intended to. This score demonstrates that every component of the test truly measures something distinct and significant. In other words, both composite reliability and Cronbach alpha are methods of assessing a test's effectiveness, but they focus on distinct aspects. Additionally, a high result indicates that our test is dependable and operating as it should.

Table 12 Construct Reliability and Convergent Validity

Constructs	Indicators	Loadings	Cronbach's alpha	CR (rho_a)	CR (rho_c)	AVE
Dynamic Capability	DC1	0.721	0.819	0.824	0.869	0.526
	DC2	0.747				
	DC3	0.78				
	DC4	0.753				
	DC5	0.658				
	DC6	0.684				
E-leadership	EL1	0.847	0.877	0.883	0.915	0.73
	EL2	0.856				
	EL3	0.828				
	EL4	0.886				
Inter-team Coordination	IC1	0.799	0.815	0.824	0.871	0.577
	IC2	0.654				
	IC3	0.706				
	IC4	0.831				
	IC5	0.794				
Knowledge Integration Capability	KI1	0.781	0.913	0.917	0.932	0.697
	KI2	0.782				
	KI3	0.832				
	KI4	0.889				
	KI5	0.862				
	KI6	0.859				
Strategic Innovation	SI1	0.754	0.861	0.861		
	SI2	0.829			0.90	0.643
	SI3	0.803				
	SI4	0.851				
	SI5	0.769				

4.4.3 Discriminant Validity

Discriminant validity is a measure of how several conceptions differ from one another (Cable & DeRue, 2002). Cross-loading, the Heterotrait-Monotrait (HTMT) ratio, and the criteria put out by (Fornell & Larcker, 1981; Leguina, 2015) were used in this work to evaluate discriminant validity.

4.4.3.1 The Fornell Larcker Criterion

According to Fornell & Larcker (1981), to demonstrate discriminant validity, the Average Variance Extracted (AVE) square root of each latent variable must be found. The square root of the AVE (shown by the diagonal values) must be larger than any off-diagonal correlation in the same row or column in order to prove discriminant validity. This means that compared to other constructs in the model, a construct shares more variation with its own indicators. The difference between a construct's squared correlations with its indicators and other constructs is also calculated by the Fornell-Larcker criterion. If there is a substantial difference, the construct is distinct from other constructions.

Each variable's square root of the AVE must be higher than the correlation between that construct and any other construct, according to Fornell-Larcker criterion. The results in Table 13 (highlighted bold values), which compare a latent variable with the square root of AVE the variance of each variable, show the discriminant validity of each factor. Importantly, the square root of the AVE for each element is greater than the correlation between the components, indicating how distinct they are from other ideas. Discriminant validity has so been demonstrated (Hair et al., 2020).

Discriminant validity was assessed using the Fornell -Larcker criterion. For example, the square root of the AVE for Dynamic Capability is 0.725 which is greater than its correlation with E-leadership (0.67). This confirms that the construct shares more variance with its indicators that with other constructs in the model thereby establishing discriminant validity. Compared to its associations with Inter-team Coordination (0.559) and Strategic Innovation (0.53), E-leadership (0.854) is substantially greater. Knowledge Integration (0.835), Strategic Innovation (0.802), and Inter-team Coordination (0.76) all show similar trends. These findings offer preliminary proof that the constructs reflect distinct organizational phenomena.

Table 13 Fornell Larcker Criterion

Constructs	**DC**	**EL**	**IC**	**KI**	**SI**
Dynamic Capability	**0.725**				
E-leadership	0.67	**0.854**			
Inter-team Coordination	0.547	0.559	**0.76**		
Knowledge Integration Capability	0.467	0.415	0.549	**0.835**	

Strategic Innovation	0.608	0.53	0.439	0.383	**0.802**

4.4.3.2 Heterotrait-monotrait (HTMT) Ratio

The discriminant validity of a measurement model is evaluated using the HTMT ratio. The squared correlation between two constructs is divided by the product of their AVE values to determine the HTMT ratio. To show discriminant validity, the HTMT ratio values must be smaller than 0.90. Every HTMT is less than 0.90, as Table 14 demonstrates. This shows that the prerequisites for discriminant validity are satisfied. To achieve discriminant validity between two constructs, this is an additional prerequisite (Ahmed et al., 2023). Consequently, it is determined that the model's dependent variable validates the measurement model in question.

The following formula can be used to determine the HTMT ratio matrix.

$$\text{HTMT}_{ij} = \frac{1}{K_i K_j} \sum_{g=1}^{K_i} \sum_{h=1}^{K_j} r_{ig,jh} \div \left(\frac{2}{K_i \left(K_i - 1 \right)} \sum_{g=1}^{K_i - 1} \sum_{h=g+1}^{K_i} r_{ig,ih} \quad \frac{2}{K_j \left(K_j - 1 \right)} \sum_{g=1}^{K_j - 1} \sum_{h=g+1}^{K_j} r_{jg,jh} \right)^{\frac{1}{2}}$$

Table 14 HTMT Matrix

Constructs	**DC**	**EL**	**IC**	**KI**	**SI**
Dynamic Capability					
E-leadership	0.785				
Inter-team Coordination	0.677	0.651			
Knowledge Integration Capability	0.545	0.457	0.63		
Strategic Innovation	0.717	0.609	0.525	0.431	
KI x EL	0.163	0.345	0.312	0.326	0.204

4.4.3.3 Cross Loading

Table 15 below shows that each item loading (bolded) of the latent variables is greater than the cross loading (with other scale items).

Table 15 Cross Loading

	DC	**EL**	**IC**	**KI**	**SI**
DC1	**0.721**	0.488	0.411	0.369	0.412
DC2	**0.747**	0.56	0.336	0.297	0.455
DC3	**0.78**	0.518	0.383	0.284	0.498
DC4	**0.753**	0.449	0.375	0.255	0.53
DC5	**0.658**	0.435	0.457	0.392	0.372
DC6	**0.684**	0.459	0.447	0.477	0.356

EL1	0.545	**0.847**	0.474	0.362	0.416
EL2	0.619	**0.856**	0.539	0.329	0.471
EL3	0.504	**0.828**	0.35	0.312	0.459
EL4	0.61	**0.886**	0.524	0.411	0.464
IC1	0.416	0.497	**0.799**	0.399	0.353
IC2	0.383	0.357	**0.654**	0.369	0.303
IC3	0.345	0.356	**0.706**	0.339	0.337
IC4	0.487	0.452	**0.831**	0.485	0.346
IC5	0.435	0.445	**0.794**	0.479	0.329
KI1	0.395	0.425	0.473	**0.781**	0.305
KI2	0.273	0.259	0.377	**0.782**	0.281
KI3	0.349	0.24	0.433	**0.832**	0.311
KI4	0.439	0.375	0.489	**0.889**	0.375
KI5	0.341	0.32	0.469	**0.862**	0.276
KI6	0.511	0.433	0.493	**0.859**	0.363
SI1	0.514	0.438	0.373	0.332	**0.754**
SI2	0.501	0.413	0.395	0.312	**0.829**
SI3	0.444	0.475	0.367	0.272	**0.803**
SI4	0.526	0.383	0.293	0.278	**0.851**
SI5	0.443	0.412	0.326	0.342	**0.769**

4.5 Structural Model Analysis

The main factors utilised to assess the structural model are the significance of the path coefficients and the R squared measures. Since the goal of prediction-oriented PLS-SEM is to explain the variance of the endogenous latent variables, a high R squared for the primary target constructs is essential. However, high R squared may vary depending on the subject of study. In consumer behaviour research, for example, R squared value of 0.20 is considered high, whereas in success driver studies, R squared value of 0.75 is considered strong. In marketing research studies, R squared values of 0.75, 0.50, or 0.25 for dependent latent variables in the structural model might be interpreted as substantial, moderate, or weak, respectively.

The path coefficients that were obtained from the path model analysis in the PLS structural model can be comprehended using the standardised beta coefficients of ordinary least squares regressions. Similar to the loadings and weights of the indicators, a bootstrapping process can determine the relevance of each path coefficient. Paths that are nonsignificant or show signs that diverge from the expected direction do not support a prior hypothesis. However, important

pathways that point in the direction of the hypothesis provide empirical support for the proposed causal link.

Paths that depart from (are not significant) the proposed direction do not support the initial premise. However, the proposed causal link is empirically supported by important routes that lead in the same direction. Another evaluation result is the predictive ability of the structural model. The Stone-Geisser's Q squared measure is commonly used to assess predictive relevance. Each endogenous latent component's indicators must be accurately predicted by the model. The Q squared value is calculated by blindfolding certain data points and utilising the guesses to estimate the missing amount. Choosing the appropriate omission distance typically between 5 and 10 is crucial.

4.5.1.1 Multicollinearity Analysis (VIF)

The structural model must now be examined for lateral collinearity as the measurement model analysis proved that the constructs are distinct. When two or more independent variables have a high degree of correlation, their individual contributions to the dependent variable are covered. According to Ahmed et al. (2023), this study focuses on the VIF of the inner model. Because it shows the theoretical relationships between the latent variables, the inner model is crucial to comprehending the result. To ascertain whether any factors should be combined or whether a higher order construct was necessary, each set of independent latent variables was analyzed. According to Hair J. F. (2017), to ensure that multicollinearity does not skew the path coefficients, VIF values should be below the threshold of 5, with values below 3 being preferable. All of the VIF values in this study fall between 1 and 2.009, as the table below illustrates, indicating that there are no multicollinearity problems with the structural model.

Table 16 Multicollinearity (VIF) Results

	DC	**IC**	**SI**
DC			1.971
EL	1	1.273	2.009
IC			1.578
KI		1.263	
KI x EL		1.169	

4.5.2 Hypothesized Direct Relationship

Figure 4 depicts the entire structural model as well as the interactions between the independent, dependent, mediating, and moderating components. To test the variable hypotheses, we examined the T-values and P-values. The cutoff points are T > ±1.96 and P < 0.05. If the variables' results meet these criteria, the relationship between the two variables was supported and significant.

Table 17 displays the results of the hypothesis based on the relationship between independent components. This study employed bootstrapping with 5000 resamples and the PLS algorithm to determine the path for the coefficient level and its significance for the suggested hypothesis. The path coefficient, p-value, and t-statistics values determined whether the hypotheses were accepted or rejected, as shown in Table 17 below. The strength of the relationship between the variables can be examined using the path coefficient values. Path coefficient values near +1 imply strong associations, and vice versa (Hair et al., 2020). P-values and t-statistics show whether the proposed hypotheses are accepted or rejected. Additionally, a low or zero standard deviation suggests that the respondent answers all or the majority of the survey's questions in the same way.

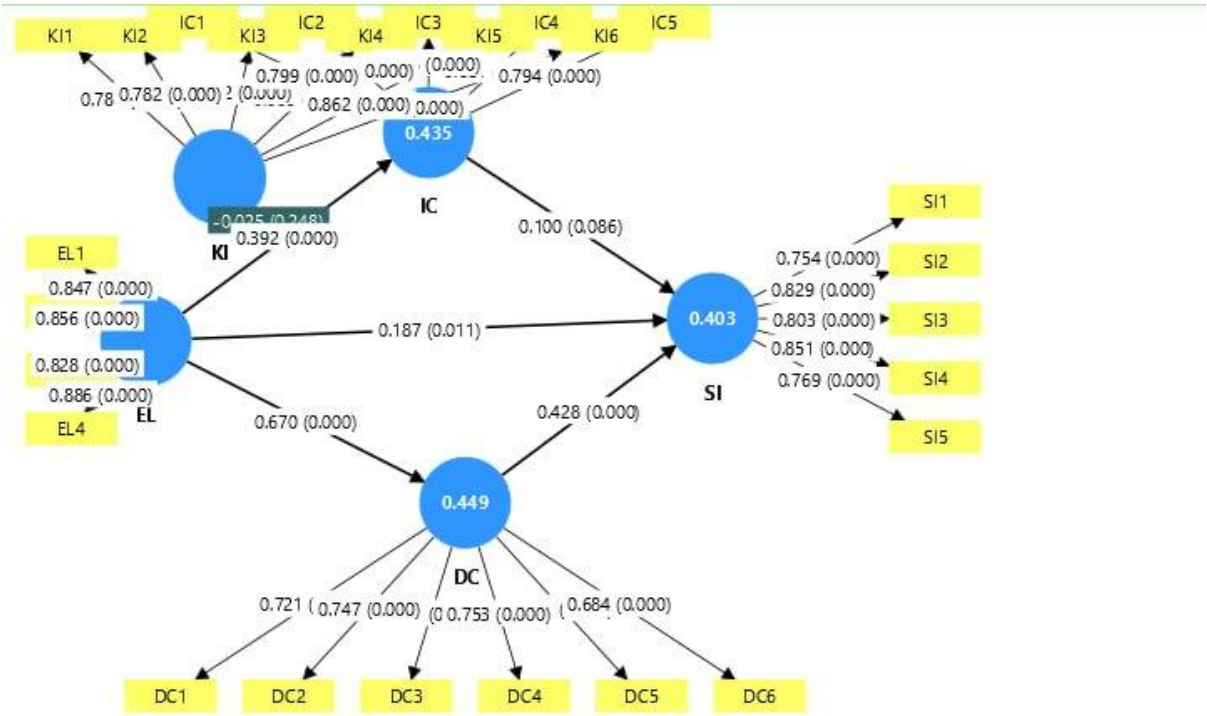


Figure 4 Structural Research Model Assessment

The results of this inquiry are summarised in Table 17 below. Four of the five proposed direct correlations are statistically significant, according to the findings.

1. Dynamic capability is positively related to strategic innovation (**β=0.428, T=6.239, P<0.05):** Dynamic capability significantly affects strategic innovation. This indicates that organizational routines for reconfiguring resources are important for innovation outcomes.
2. E-leadership is positively related to dynamic capabilities (**β=0.67, T=15.165, P<0.05):** This is the strongest relationship in the model. It suggests that E-leadership has a considerable and highly significant positive impact on dynamic capability.
3. E-leadership is positively related to inter team coordination (**β=0.392, T=6.701, P<0.05):** E-leadership also plays a critical role in promoting inter-team coordination.
4. E-leadership is positively related to strategic innovation (**β=0.187, T=2.285, P<0.05):** Looking at the path coefficient, the direct effect is smaller compared to others constructs, however e-leadership still maintains a significant direct influence on strategic innovation.
5. The path from inter team coordination to strategic innovation was not supported (**β=0.1, T=1.364, P>0.05)** at the 0.05 significance level with a P value of 0.086. This suggests that coordination alone while positive doesn't significantly drive strategic innovation without the influence of other factors.

Table 17 Hypothesized Direct Relationship

Hypothesis	Path Coefficient(β)	Mean (M)	Standard deviation (STDEV)	T values	P values	95% CI	Decision
DC -> SI	0.428	0.435	0.069	6.239	0	[0.324, 0.549]	Accept
EL -> DC	0.67	0.671	0.044	15.165	0	[0.594, 0.74]	Accept
EL -> IC	0.392	0.392	0.059	6.701	0	[0.296, 0.486]	Accept
EL -> SI	0.187	0.18	0.082	2.285	0.011	[0.042, 0.31]	Accept
IC -> SI	0.1	0.102	0.073	1.364	0.086	[-0.015, 0.225]	Reject

4.5.3 Assessment of Explanatory Power (R^2)

The R^2 value or the coefficient of determination measure the model's predictive accuracy. It represents the proportion of variance in the endogenous or dependent constructs which is explained by the predictor or independent constructs in the model. According to Hair J. F. (2017), R^2 values of 0.75, 0.5 and 0.25 are generally descried as substantial, moderate and weak respectively.

As shown in table 18, the model demonstrates a moderate level of explanatory power across all three endogenous constructs. E-leadership explains 44.9% of the variance in dynamic capability, E-leadership and knowledge integration capability together explain 43.5% of the variance in inter team coordination. The combined influence of E-leadership, dynamic capability and inter team coordination explains 40.3% of the variance in strategic innovation.

Table 18 R^2 Values

Factors	**R-square**	**R-square adjusted**
Dynamic Capability	0.449	0.447
Inter-team Coordination	0.435	0.428
Strategic Innovation	0.403	0.396

4.5.4 Assessment of Explanatory Power (f^2)

R^2 measures the collective impact of predictors and f^2 measures the effect size which evaluates the unique contribution of a specific independent construct to an endogenous construct's R^2.

Cohen (1988) explained that f^2 values of 0.02, 0.15 and 0.35 represent small, medium and large effects respectively. Values below 0.02 are considered to have no practical effect.

Table 19 shows f squared value of 0.816 between e-leadership and dynamic capability. This is categorized as a large effect and suggests that e-leadership is a primary and necessary driver of a firm's dynamic capabilities.

E-leadership's and knowledge integration's effects on inter team coordination are 0.214 and 0.198 respectively which shows medium effect size. Similarly dynamic capability's effect on strategic innovation shows a medium effect with a value of 0.156. E-leadership's effect on strategic innovation is small with a value of 0.029 suggesting that the path is significant but its

unique contribution to the R squared of innovation is limited. It can be seen from the table that inter team coordination's effect on strategic innovation is lower than 0.02 and the moderation term effect on inter team coordination is also lower than 0.02 which indicates a negligible effect on the R^2 of their respective target constructs.

Table 19 f^2 Values

	DC	IC	SI
DC			0.156
EL	0.816	0.214	0.029
IC			0.011
KI		0.198	
KI x EL		0.002	

4.5.5 Predictive Relevance (Q^2)

Evaluating the model's predictive power is the final stage in the structural model study. To ensure that the results are generalizable, this examination looks at whether the conclusions apply to additional data sets in addition to the data used for estimation (Hair J. F., 2017). Predictive relevance is indicated by a Q^2 value larger than zero, whereas the absence of predictive relevance is shown by a value equal to or less than zero. The model has predictive relevance for all endogenous constructs since all of the Q^2 values in Table 20 are above zero. Put differently, the structural model can precisely forecast strategic innovation, interteam collaboration, and dynamic capabilities.

Table 20 Q^2 Results - Constructs

Constructs	Q^2predict
DC	0.441
IC	0.414
SI	0.283

4.5.6 Mediation Analysis Results

Hayes (2009) defined mediation as the study of how a third variable affects or modifies the relationship between two other variables. This indicates that one variable, like as leadership, affects a result, such as strategic innovation, through one or more intervening variables, like dynamic capability. The total effect of e-leadership on strategic innovation may be influenced by

a range of direct and indirect factors. We concentrate more on the indirect forces in our study. Direct effects happen when two creations are linked by a single line, while indirect effects happen when two constructs pass via one or more additional structures. The direct effect of the constructs as determined by the p-values, T-statistics, SD, mean, and path coefficient (β) is displayed in the table below.

4.5.6.1 Mediation Analysis through Indirect Effect

Looking at a new methodology developed by Kock (2014), it provides a more effective method to evaluation mediations compared to conventional method of evaluating mediation offered by Baron (1986) which doesn't rely on standard errors. The mediating effect analysis in this study comprises constructing the indirect theoretical link between the dependent and independent factors, including the mediating variables, in order to determine the degree to which indirect impacts via the mediating variables change the hypothesis direct path.

The table below displays the specific indirect effects generated through 5000 bootstrap subsamples. The results show a clear difference between the two proposed mediators. First is the mediating role of dynamic capability. The indirect effect of e-leadership on strategic innovation through dynamic capability is positive and highly significant (**β=0.287, T=5.454, P<0.05)**. This can be interpreted as e-leadership significantly reconfigures organizational resources which in turn drives innovation. The mediation type is partial mediation where e-leadership improves dynamic capabilities. This in turn increases strategic innovation. However, e-leadership also contributes directly to innovation without relying entirely on dynamic capability. Hence hypothesis 7 (Dynamic capability mediates the relationship between e-leadership and strategic innovation) is supported.

In contrast to dynamic capability, the indirect effect through inter team coordination isn't statistically significant (**β=0.039, T= 1.26, P>0.05).** This can be explained as e-leadership might encourage coordination however the coordination doesn't significantly change the hypothesis direct path for innovation. Hence hypothesis 6 (Inter-team coordination mediates the relationship between e-leadership and strategic innovation) isn't supported.

Table 21 Mediation Analysis through Indirect Effect

Constructs	Original sample	Sample mean	STDE	T	P	Mediati	Type of

	(O)	(M)	V	Values	Values	on	mediation
EL -> IC -> SI	0.039	0.041	0.031	1.260	0.104	Not Supported	No Mediation
EL -> DC -> SI	0.287	0.292	0.053	5.454	0.000	Supported	Partial Mediation

4.5.7 Moderation Analysis Results

According to Dawson (2014), a moderator is a variable that influences the strength or direction of the relationship between an independent variable and a dependent variable. In the context of management research, moderation analysis reveals whether the impact of a predictor changes depending on the level of the moderating factor. In this study, knowledge integration capability was hypothesized to moderate the relationship between e-leadership and inter team coordination.

The objective was to verify the significance of the interaction term (KI x EL) and its impact on the target construct. The table below shows the bootstrapping results. The interaction effect recorded a coefficient of -0.025. This low and negative value suggests that KI doesn't significantly strengthen the relationship between e-leadership and inter team coordination.

In order to be statistically significant at a 95% confidence level, the T value must exceed 1.96 and the P value must be less than 0.05. The results show a T value of 0.679 and P value of 0.248 which fails to meet the required thresholds.

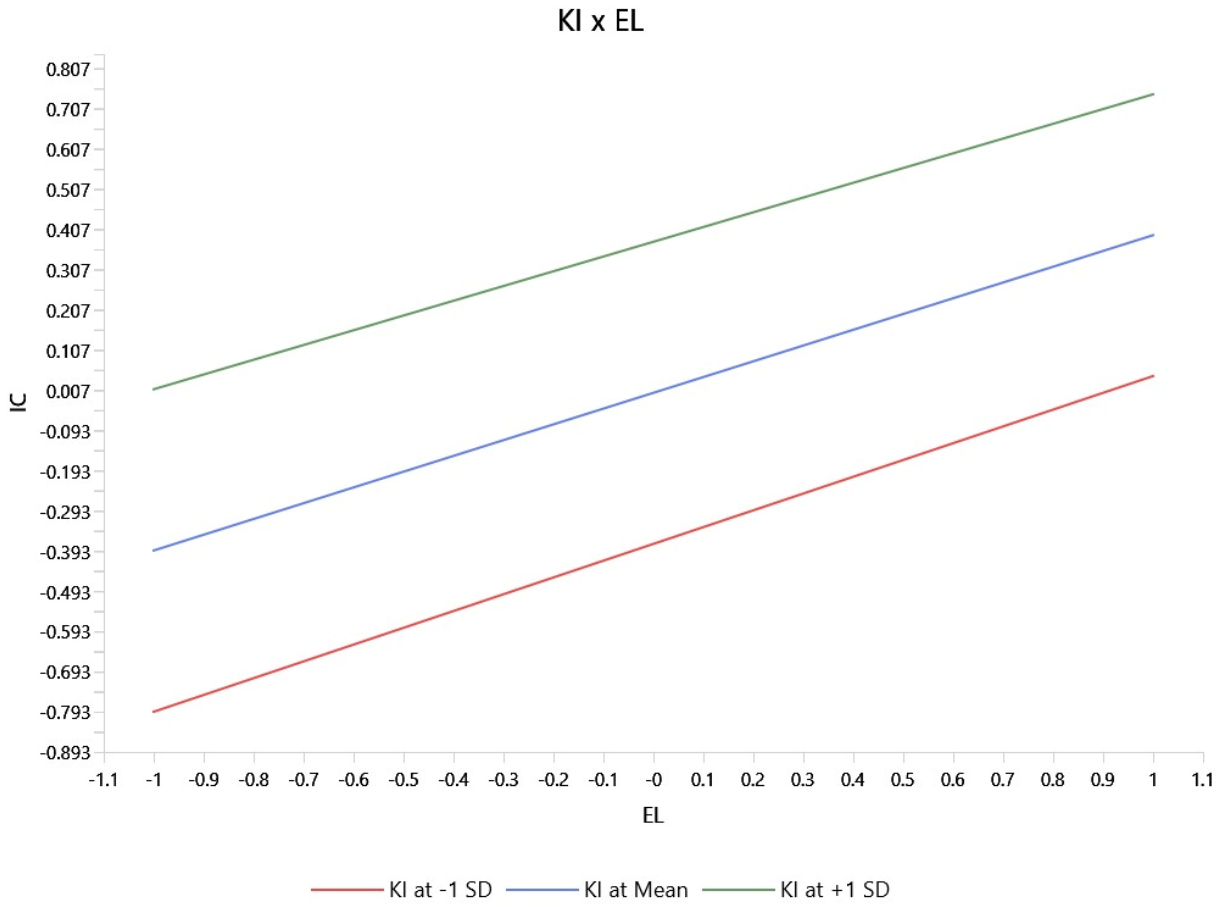
This lack of statistical significance (p=0.248) is further verified by the effect size of the interaction term. According to Cohen's (1988) guidelines for PLS-SEM, an f^2 value of 0.02, 0.25 and 0.35 represents small, medium and large effects respectively. In this study, the interaction term (KI X EL) yielded an f^2 value of 0.002. This provides compelling substantive evidence alongside the p-value confirming that the moderation effect is not just statistically non-significant. This indicates that KIC doesn't exert any meaningful operational influence on the relationship between e-leadership and inter-team coordination within this study.

Table 22 Moderation Analysis

Constructs	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T Values	P Values	Moderation
KI x EL -> IC	-0.025	-0.023	0.037	0.679	0.248	Not supported

4.5.7.1 Simple Slope Plot Analysis

Figure 5 Simple Slope Plot Analysis



The moderation effect is further explained using a simple slope analysis. The interaction effect was plotted at three levels of the moderator. One is below the mean (KI at -1 SD), another at the mean (KI at Mean) and the third one above the mean (KI at +1 SD).

Interpretation of the slope is as follows:

- Across all three levels as E-leadership increased from -1 to +1 on the X-axis, inter-team coordination also increases. This shows the direct positive relationship between EL and IC which is consistent with hypothesis 2 (E-leadership is positively related to inter-team coordination). When knowledge integration capability is low (red line), e-leadership still predicts inter team coordination but the absolute values of IC are considerably lower (0.793 at EL=-1) and (0.007 at EL=+1). During average levels of knowledge integration

capability (blue line), IC ranges from -0.363 at EL=-1 to +0.407 at EL=+1. This shows the positive relationship between EL and IC is present and shows the average firm's response to e-leadership. Now looking at when knowledge integration capability is high (green line), IC values are highest overall and range from +0.007 at EL=-1 and to +0.717 at EL=+1. This means firms with the strong knowledge integration start at a higher baseline of coordination and maintain this advantage across all levels of e-leadership.

- The three lines aren't intersecting which indicates a non-significant interaction effect. When slopes are parallel, the moderator doesn't meaningfully change the strength or direction of the predictor-outcome relationship. This means the effect of e-leadership on inter-team coordination is the same whether the firm has low, average of high knowledge integration capability.

4.6 Discussion

This study looked at the relationship between e-leadership and strategic innovation and also researched the mediating effects of inter-team coordination and dynamic capability and the moderating effect of knowledge integration capability. The study tries to address a gap in reviewed literature which doesn't incorporate dynamic capability as a mediator and also the lack of empirical evidence regarding how digital e-leadership translates into innovation with in the emerging BPO sector of Ethiopia. PLS-SEM model is applied to provide a theoretical and practical roadmap for how Ethiopian BPO firms can navigate digital transformation.

Initially the findings showed that e-leadership has a significant and positive direct impact on strategic innovation. (Hypothesis1). With all other variables held equal, the coefficient (β) of 0.187 shows that for every unit increase in effective e-leadership, strategic innovation in BPO firms increased by 0.187 units. The t-value of 2.285 indicates a statistically significant correlation between e-leadership and strategic innovation. This is an indicator showing the hypothesis is supported empirically. Avolio B. K. (2001) defined e-leadership as a social influence process mediated by advanced information technology that can simultaneously produce changes in attitudes, feelings, thinking, behavior and performance. It also argues that digital technologies don't only serve as a passive communication channel for leaders but actively shape and transform the processes of influence and motivation themselves. Practically speaking this means that an e-leader who is skilled at employing digital collaboration platforms, data

dashboards and virtual system isn't just replicating traditional leadership. The leader is creating an environment where strategic direction is communicated instantly. In the Ethiopian BPO context, this is important. Frontline staff and their managers interact through digital interfaces such as messaging platforms, project management tools and video conferencing systems. The empirical finding confirms that e-leadership still maintains an independent contribution to strategic innovation. This is consistent with the argument by Hassan, et al. (2025) who found a direct effect of e-leadership on strategic innovation and with Li W et al. (2016) who showed that e-leadership through strategic alignment is a meaningful driver of firm level innovation.

Secondly, a significant finding of this study is that dynamic capability significantly mediates the relationship between e-leadership and strategic innovation. (Hypothesis 7). With all other variables held equal, the coefficient (β) of 0.287 shows that for every unit increase in effective dynamic capability, strategic innovation in BPO firms increased by 0.287 units. This suggests that e-leadership doesn't just create innovation out of nowhere but rather it does so by building the firm's ability to sense, seize and reconfigure resources. The t-value of 5.454 indicates a statistically significant correlation between dynamic capability and strategic innovation. This aligns with the dynamic capabilities' framework outlined by (Teece, Pisano, & Shuen, 1997). The article defined dynamic capabilities as the firm's ability to integrate, build and restructure internal and external competencies to address rapidly changing environments. They separated dynamic capabilities from ordinary or operational capabilities. The major argument here is: operational capabilities allow a firm to perform a given set of tasks at an acceptable level of efficiency however dynamic capabilities allow a firm to modify, extend and even create new operational capabilities in response to environmental changes. Subramaniam et al (2023) who looked at the context of Malaysia's medical device industry identified that e-leadership qualities as a cause for dynamic capability. Dynamic capability in turn mediated the relationship between e-leadership and innovation. It also aligns with Schoemaker et al (2018) who discussed leadership as the micro foundation through which dynamic capabilities are activated. It is the leader who decides what environmental signals deserve attention, which opportunities to pursue and how to relocate resources accordingly. How this association operates in the Ethiopian BPO context may be understood as follows. E-leaders who utilize digital tools, client satisfaction dashboards and competitor benchmarks are associated with stronger environmental sensing within the company. When those leaders coordinate digital teams around new service

development in response to sensed market signals, they reflect the seizing process. When firms subsequently restructure teams, reallocate budgets and revise service delivery, this reflects reconfiguration. Causal claims about sequencing, however, would require longitudinal data to confirm (Teece, 2007).

When we see the structural model results for the direct effect of dynamic capability on strategic innovation (Hypothesis 5), it is significant and positive ($\beta = 0.428$, $t = 6.239$, $p < 0.05$). This finding is theoretically supported in the framework of Teece et al. (1997) who argues that a firm's competitive advantage in fast paced environment comes from its capacity to continuously renew its resource base with shifting market demands. Teece (2007) further explained this argument by demonstrating that firms that develop strong sensing, seizing and restructuring capacity are better positioned to generate innovation. This is because they are not locked into existing ways of doing things. They have the ability to identify when existing service models are becoming obsolete and to rebuild replacements before competition becomes fierce. This finding connects directly to the work of Schoemaker et al. (2018) who discussed innovation as a product of dynamic capability investments. They showed that firms with strong dynamic capabilities are better at identifying early signs of market changes, gathering the right responses and respond with strategy. For Ethiopian BPOs, this means companies that have practices such as environmental assessments, agile teams, organized processes will have measurably higher rates of new service introduction, risk taking efforts and problem-solving abilities.

Regarding the relationship between e-leadership and inter team coordination (Hypothesis 2), the bootstrapping results show that a positive and highly significant relationship with coefficient (β) of 0.392. This indicates for every one unit increase in e-leadership effectiveness, inter-team coordination increases by 0.392 units. The t-value of 6.701 provide a strong empirical support for the hypothesis. This aligns with the literature that suggests e-leadership involves a shift in management behavior to encourage collaboration across distributed teams. This finding is in line with Raineri & Valenzuela-Ibarra (2021) who describe inter-team coordination as a function of relational coordination. This means the degree to which teams share goals, knowledge and mutual respect across departments and in an organization. They show that high performance work systems if supported by relational coordination, significantly improve team level performance outcomes. One way to enhance this kind of coordination is through the facilitation

of tech-based knowledge sharing. Nguyen M. (2023) found the primary process which can increases coordination in digital work environment is through structured deployment of platforms that make knowledge visible and accessible across team boundaries. Contreras (2020) mentions that effective e-leadership requires moving away from traditional and rigid hierarchies to flexible structures that prioritize trust.

The structural model results show that the relationship between e-leadership and dynamic capability (Hypothesis 4) having very strong positive correlation with a coefficient of 0.670. This means for every one-unit improvement in e-leadership, the firm's dynamic capability increased by 0.67 units. This result aligns with Teece et al. (1997) that defined dynamic capability as the ability to sense opportunities, capitalize on them and reconfigure competencies to respond to shifts. In an outsourcing environment, qualities such as agile leadership and digital entrepreneurship allow managers to interpret global IT trends. These qualities also help managers respond quickly to challenges in uncertain situations according to Li W. et al. (2016). The findings indicate that BPO firms in Ethiopia where leaders score higher on e-leadership measures are also associated with significantly higher levels of dynamic capability specifically the capacity to sense and seize new opportunities. E-leadership doesn't just affect the firm at a macro level; it acts as a supporter for employees own dynamic capability similar to what is discussed by Guangyan et al. (2022).

The theoretical review hypothesized that inter team coordination would act as a mediator between e-leadership and strategic innovation (Hypothesis 6). Similarly, it was hypothesized that inter-team coordination directly and positively affected strategic innovation. (Hypothesis 3). However, the PLS results did not support both hypotheses. The rejection is mainly due to non-significant relationship between inter team coordination and strategic innovation. The results of the mediator analysis show weak positive path coefficient of 0.039 and a t-value of 1.26. This presents an interesting contrast to the complexity leadership theory (Uhl-Bien, 2011). The theory explained that leadership in tech intensive environments should create an adaptive space where diverse teams interact to be flexible and respond to system shifts. We have seen that hypothesis 2 being supported which shows that e-leadership creates this coordination but the data shows that this coordination fails to result strategic innovation. One explanation can be found by looking at relational and cultural foundations discussed by (Zhang, 2024) and (Akhtar, 2023). It can be

understood that inclusive and responsive leadership may encourage organizational harmony and align team goals however the Ethiopian BPO sector's coordination may be focused more on operational rather than strategic efficiency. In Ethiopian BPO firms, coordination might be heavy on procedures through digital tools leaving little room for the entertainment of creative ideas that Zhang (2024) suggests necessary for innovation. This reasoning is supported by Dietrich et al. (2013) who found that in multi team project environments, inter-team coordination produces performance benefits when it is added with sufficient knowledge diversity and creative mandate. These conditions may be limited in Ethiopian BPO delivery contexts.

The final hypothesis of this study (Hypothesis 8) proposed that knowledge integration capability (KIC) would moderate the relationship between e-leadership and inter team coordination. The theoretical review showed that a positive and significant role of knowledge integration capability as a moderator. In the case of Ethiopian BPOs, the structural model analysis indicates that the interaction effect between e-leadership and knowledge integration capability isn't statistically significant with a coefficient of -0.025 with the negative sign showing a weakening effect. According to Xie et al. (2022), KIC should act as boundary condition that enhances information elaboration. In an ideal environment, high KIC should allow teams to better interpret the digital directions provided by e-leaders. Gong (2022) also argues that in digitally intensive organizations, excess use of complex knowledge integration process and IT tools might delay rather than facilitate coordination. This is termed as digitalization slowdown in the article. This aligns with our findings which suggests that in the Ethiopian BPO, the impact of e-leadership in inter team coordination is independent of the firm's knowledge integration levels. The non-significant finding in the Ethiopian BPO context can be explained through the lens of boundary spanning objects. This is a concept developed by Acharya (2022). Boundary spanning objects can be shared artifacts such as data visualizations, project templates, process documentation and reporting formats. These tools allow actors from different knowledge background to communicate and coordinate without requiring deep understanding of each other's knowledge. In the Ethiopian BPO context, this concept helps explain the non-significant moderation effect. E-leaders in BPO firms manage coordination through digital platforms such as project management dashboards, reporting templates that function as boundary spanning objects on their own. These objects might be sufficiently clear and structured that teams can coordinate effectively regardless

of their level of knowledge integration capability. This is because the tools themselves perform the translation and synthesis functions that KIC would provide.

5. Conclusion, Recommendation and Future Research

5.1 Conclusion

The outsourcing sector has emerged as a major basis for digital transformation and economic growth in this modern global economy. This is particular for developing nations like Ethiopia. This study has demonstrated the shift towards virtual and hybrid work environments and this has necessitated a fundamental re-evaluation of leadership. The digitization of work has provided Ethiopian outsourcing firms with a unique opportunity to compete on a global stage but this is dependent on effective utilization of e-leadership to drive strategic innovation. This research provides valuable insights into this complex relationship showing that while e-leadership is a major driver of organizational process, its success is connected with the development of dynamic capabilities, inter-team coordination and knowledge integration.

The first research question examined the association between e-leadership and strategic innovation (H1). The results reveal a statistically significant, positive direct association, supporting H1. For the second research question, the research evaluated the direct impact of e-leadership on dynamic capability (H4) discovering the strongest pathway in the entire study which supports H4 and positions e-leadership as a primary driver of environmental sensing and reconfiguration routines. The direct effect of e-leadership on inter-team coordination (H2) addressed the third research question. The relationship was found to be positive showing that digital behaviors actively enhance collaboration across teams and supporting H2.

The fourth research question assessed the direct link between dynamic capability and strategic innovation (H5). This path demonstrated a statistically significant positive impact showing strong support to H5 and highlighting adaptability as an essential prerequisite for innovation. In contrast, the analysis for the fifth research question regarding the direct effect of inter-team coordination on strategic innovation (H3) generated non-significant results leading to a rejection of H3 and indicating that team collaboration alone doesn’t automatically guarantee strategic innovation.

In order to answer the sixth research question, indirect path structures were utilized to determine how inter-team coordination (H6) and dynamic capability (H7) mediate the relationship between e-leadership and strategic innovation. The data indicates that dynamic capability acts as an essential mediator that effectively translates e-leadership into innovation outcomes supporting H7 however because the direct link between coordination and innovation was non significant. H6 was rejected as inter team coordination fails to serve as a viable standalone mediator. Lastly the seventh research question investigated whether knowledge integration capability moderates the impact of e-leadership on inter-team coordination (H8). The interaction term proved to be statistically negligible meaning internal knowledge processing attributes do not meaningfully affect this relationship which resulted in the rejection of H8.

The major conclusion of this study is that e-leadership is critical and empirically validated driver of strategic innovation in the Ethiopian BPO context. However, its primary pathway to innovation is dependent on the development and deployment of organizational dynamic capabilities.

This finding suggests that the way BPO managers deploy digital communication tools, establish shared strategic visions through virtual platforms and empower teams through technology-mediated influence is positively associated with the firm's strategic innovation efforts. This translates into measurable gains in the rate of new service introduction, competitive risk taking and problem solving. It demonstrates that e-leadership has a direct contribution to innovation independent of any mediating mechanism. This suggests that the quality of digital leadership is by itself a fundamental organizational asset in the BPO sector.

Regarding the relationship between e-leadership and dynamic capability, the findings show that e-leadership is a significant positive predictor of dynamic capability in Ethiopian BPO firms. This association is consistent with the theoretical proposition that digital leadership behaviors create the conditions for sensing, seizing and reconfiguration routines. This finding has practical significance. It demonstrates that the organizational capacity to sense emerging opportunities in the global BPO market, seize those opportunities through targeted resource mobilization and restructure service delivery models accordingly is determined by the quality of e-leadership. BPO firms with higher e-leadership scores are associated not only with stronger execution of existing service models but also with greater organizational capacity for service renewal and

innovation however longitudinal research would be needed to confirm whether leadership development investment directly produces these outcomes over time.

The mediating role of dynamic capability is an important and empirically significant path to strategic innovation in Ethiopian BPO firms. The findings are consistent with a model in which e-leadership is associated with innovation through two channels. One is directly through the inspiration and strategic clarity it provides and the other is by building the company's sensing, seizing and restructuring routines that make sustained innovation happen. In practical language, an Ethiopian BPO leader who uses digital tools to track global AI adoption trends brings together agile cross functional teams to develop new automation augmented service offerings. It restructures team compositions to acquire new technical competencies. This leader is exercising e-leadership in a way that simultaneously creates dynamic capability and using that capability drives strategic innovation.

Regarding the relation between e-leadership and inter-team coordination, the research concludes that e-leadership significantly improves the quality of inter team coordination in Ethiopian BPO firms. This finding validates that digital leaders who employ structured coordination mechanisms are successful in reducing coordination failures and aligning team efforts. However, the research also concludes that inter team coordination alone isn't sufficient to produce strategic innovation. The mediation of inter-team coordination was also not supported. This pattern of results leads to an important conclusion. In Ethiopian BPO context, inter-team coordination is primarily operationally oriented. This means it helps the firms execute existing service delivery models reliably and efficiently however it doesn't by itself generate the exploratory knowledge recombination and boundary spanning creativity that strategic innovation requires. This finding looks at how Ethiopian BPO firms currently use coordination mechanisms which is mainly in service of operational compliance rather than strategic exploration.

Looking at the moderating role of knowledge integration capability (KIC), the research concludes that KIC doesn't magnify the effect of e-leadership on inter-team coordination. It suggests that the coordination produced by e-leadership in this context is sufficiently structured through boundary spanning digital artifacts such as dashboards, templates and reporting tools. This means additional integrative function that KIC might provide isn't utilized among the teams.

5.2 Recommendation

The practical recommendation for BPO managers, senior executives and team leaders is that investment in e-leadership development isn't just administrative or operational. It is the primary strategy driver for building the organizational capabilities that determine long term competitiveness. Leadership development programs should move beyond basic digital literacy and focus on developing three higher order e-leadership competencies. The first is environmental sensing. This means training leaders to systematically monitor global technology trends, competitor positioning and evolving client needs using digital intelligence tools. They will then translate these environmental signals into strategic information for their companies. The second is opportunity seizing. This is to develop the capacity to rapidly assemble cross functional digital teams, and make resourced commitments to new service lines in response to sensed opportunities. The third is organizational restructuring (reconfiguration). This is building capability to restructure teams, reassign talent and redesign workflows in response to strategic changes. These three competencies align with the sensing, seizing and transforming foundations of dynamic capability.

Policy makers and educational institutions can use the finding for a coordinated national investment in digital leadership development within the BPO ecosystem. The current talent development pipeline which focuses on tech skills and language proficiency should be further expanded to include structured programs in virtual team leadership, digital strategy and inter team coordination management. Government can partner with industry leaders to support the creation of digital leadership certification programs that provide mid-level BPO managers with necessary competencies discussed earlier.

5.3 Future Research

This study has limitations even if it provides useful information. There was no exhaustive, pre-determined registry of all BPO employees and their specific leadership structures hence the study utilized a convenience sampling method. This approach allowed for a strong sample size of 248 participants but it may introduce certain biases as it may not be perfectly representative of the entire national BPO workforce. Additionally, because the study focused primarily on BPO firms located in Addis Ababa, the results may not be fully applicable to firms operating in other

regional hubs where infrastructure, local economic conditions, and legal frameworks might differ.

Additionally, this study adopted a cross-sectional design, capturing a snapshot of leadership and innovation at a single point in time. Strategic innovation is often a long-term evolution, and this study did not account for the longitudinal changes that occur as firms mature. Other external factors that could significantly impact the adoption of innovation such as the quality of national internet infrastructure, existing labor regulations, and client-side pressures from international markets were not explicitly modeled in this research. It is also probable that individual demographic factors, such as the age and prior international experience of the leaders, may influence how e-leadership is practiced and perceived within these firms.

Future research could concentrate on qualitative studies, such as in-depth interviews with BPO founders and CEOs, to expand understanding of the complex ways in which leaders' sense and seize opportunities. First, by including a broader range of service sectors within the BPO umbrella, future research can evaluate if the leadership dynamics hold true across different technical domains. Second, it would be interesting to include additional variables such as organizational culture or digital infrastructure quality to see how they interact with e-leadership and strategic innovation. Third, future studies could adopt a longitudinal approach to track how e-leadership interventions today result in strategic innovation outcomes several years down the line. Finally, the results of this field could be more broadly applicable if cross country comparative studies are employed, such as comparing the Ethiopian BPO context with other emerging hubs in East Africa like Kenya or Rwanda, to identify regional patterns in digital age leadership.

Appendix

Data collection instrument

https://forms.gle/b9AuhYhAxSHxqPE96

SURVEY QUESTIONNAIRE

Research Survey: *E-Leadership and Strategic Innovation in Ethiopian BPO Firms: The Mediating Roles of Dynamic Capability and Inter-Team Coordination, and the Moderating Role of Knowledge Integration Capability*

Dear Participant,

My name is Samrawit Minilik and I am a graduate student at Addis Ababa University, College of Business and Economics, Department of Management. I am currently conducting research for my Master's thesis in International Business.

The objective of this study is to examine how digital leadership (e-leadership) drives strategic innovation within the Ethiopian Business Process Outsourcing (BPO) sector. Specifically, the research explores how leaders use digital tools to enhance team coordination and organizational agility (dynamic capabilities) to stay competitive in a rapidly changing global market.

As a professional working within a BPO firm in Ethiopia, your insights are essential for the success of this study. The questionnaire consists of sections regarding your professional background and your perceptions of leadership and innovation practices within your organization.

The survey is designed to be straightforward and will take approximately **5 minutes** of your time to complete. Your participation is entirely voluntary. All responses are strictly anonymous and will be handled with the highest level of confidentiality. The data collected will be used exclusively for academic purposes. Most questions use a 5-point scale; please select the option that best reflects your level of agreement with each statement.

Thank you very much for your time, effort, and valuable contribution. **Feel free to reach out via WhatsApp or Telegram for any questions through this number +251923483224**

Demographic and professional information

1. Gender	**3. Age**
☐ Male	☐ 18-25 years
☐ Female	☐ 26-35 years
2. Level of education	

☐ TVET ☐ Bachelor ☐ Masters ☐ PhD ☐ Others	☐ 36-45 years ☐ 46-55 years ☐ 55+ years **4. Years of Experience** ☐ Less than 1 year ☐ 1-3 years ☐ 4-6 years ☐ 7-10 years ☐ 10+ years

Constructs	Statement	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)
E-leadership	My leader empowers me to use technology in innovative ways to enrich work.					
	My leader establishes systems that support the continuous improvement of technology use.					
	My leader develops a shared vision for comprehensive integration of ICT.					
	My leader encourages the regular development of digital and virtual collaboration skills.					
Inter team Coordination	Our team coordinates connected processes and activities with other teams.	**1 (SD)**	**2 (D)**	**3 (N)**	**4 (A)**	**5 (SA)**
	Our team avoids duplicated and overlapping activities.					
	Our team had no problems in coordinating with other teams.					
	Our team settles conflicts with other teams quickly.					
	Our team conducts constructive discussions with other teams.					
Dynamic Capability	We regularly review our service processes to ensure they meet evolving client demands.	**1 (SD)**	**2 (D)**	**3 (N)**	**4 (A)**	**5 (SA)**
	We frequently scan the environment to identify new business opportunities					
	We are effective in transforming existing information into new knowledge					
	We are effective in developing new knowledge that has the potential to influence product development.					
	We ensure that the output of our work is synchronized with the work of others.					
	We ensure appropriate allocation of resources within our group.					
		1 (SD)	**2 (D)**	**3 (N)**	**4 (A)**	**5 (SA)**
Knowledge Integration Capability	Communications within our team were timely.					
	Communications within our team were right amount.					
	Communications within our team were concise.					
	Communications within our team were objective.					
	Communications within our team were clear.					
	Communications within our team were fostering teamwork.					
		1 (SD)	**2 (D)**	**3 (N)**	**4 (A)**	**5 (SA)**
Strategic Innovation	The rate of new product/service introduction by our firm has increased relative to competitors.					
	The rate of change in our methods of providing services has increased.					
	Risk taking by key executives of our firm in seizing and exploring growing opportunities has increased.					
	Our firm aggressively pursues market share even in highly competitive environments					

	Senior executives seek unusual and novel solutions to problem via the use of brainstorming.					

References

Acharya, C. O. (2022). Managing information for innovation using knowledge integration capability: The role of boundary spanning objects. *International Journal of Information Management* .

Adewumi, A., Ewim, S. E., Sam-Bulya, N. J., & Ajani, O. B. (2024). Strategic innovation in business models: Leveraging emerging technologies to gain a competitive advantage. *International Journal of Management & Entrepreneurship Research*.

Adewumi, A., Ewim, S. E., Sam-Bulya, N. J., & Ajani, O. B. (2024). Strategic innovation in business models: Leveraging emerging technologies to gain a competitive advantage. *International Journal of Management & Entrepreneurship Research*.

Akhtar, M. W. (2023). Responsible leadership, organizational ethical culture, strategic posture, and green innovation. *The Service Industries Journal*.

Aldawood, A. N., Alanazi, A. F., & Aljanabi, M. A. (2025). The Impact Of Leadership Styles On Operational Efficiency In The Saudi Red Crescent Authority During The Period (2020–2025): A Systematic Review. *The Review of Diabetic Studies*.

Altassan, M. A. (2025). Enhancing leadership effectiveness through technology in educational institutions . *Cogent Business & Management* .

Alzghoul, A. K. (2024). Impact of knowledge-oriented leadership on innovative behavior, and employee satisfaction: The mediating role of knowledge-centered . *Business Strategy and Development* .

Australian Government, Department of Industry Science and Resources. (n.d.). Retrieved from https://www.industry.gov.au/publications/list-critical-technologies-national-interest/advanced-information-and-communication-technologies

Avolio BJ, J. J. (2014). E-leadership: Re-examining transformations in leadership source and transmission. *Leadership Quarterly* , 105-131.

Avolio, B. J. (2000). E-leadership: Implications for theory,research, and practice. *The Leadership Quarterly*.

Avolio, B. K. (2001). E-leadership: Implications for theory, research, and practice. *Leadership Quartely*.

Awol, E. (2024, May 28). Retrieved from https://shega.co/news/how-ethiopia-is-positioning-itself-as-a-competitive-bpo-destination: https://shega.co/news/how-ethiopia-is-positioning-itself-as-a-competitive-bpo-destination

Barile, S., Ciasullo, M. V., Testa, M., & Sala, A. L. (2023). An integrated learning framework of corporate training system: a grounded theory approach . *The TQM Journal*.

Baron, R. M. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *In Journal of Personality and Social Psychology* .

Baruch, Y. &. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, 1139-1160.

Chamakiotis, P. P. (2021). Reimagining e-leadership for reconfigured virtual teams due to Covid-19. *International Journal of Information Management*.

Chamakiotis, P., Panteli, N., & Davison, R. M. (2021). Reimagining e-leadership for reconfigured virtual teams due to Covid-19. *International Journal of Information Management* .

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences .* New York: LAWRENCE ERLBAUM ASSOCIATES, PUBLISHERS .

Contreras, F. B. (2020). E-leadership and teleworking in times of COVID-19 and beyond:What we know and where do we go. *Frontiers in Psychology*.

Corporate Finance Institute. (n.d.). Retrieved from https://corporatefinanceinstitute.com/resources/management/business-process-outsourcing-bpo/

Cyfert, S., Dyduch, W., Szumowski, W., & Prause, G. (2025). Are we ready for digital transformation? The role of organizational culture, leadership and competence in building digital advantage. *Central European Management Journal*.

Daniel WW. (1999). *Biostatistics: A foundation for Analysis in the Health Sciences.* New York: John Wiley.

Daniele Giampaoli, F. S., & Bontis, N. (n.d.).

DasGupta, P. (2011). Literature Review: e-Leadership. *Emerging Leadership Journeys*.

Dawson, J. F. (2014). Moderation in management research: What, why, when, and how. *Journal of Business and Psychology*, 1-19.

Del Giudice, M. S. (2021). A self-tun ing model for smartmanufacturing SMEs: Effects on digital innovation. *ournal of Product Innovation Management*, 68-89.

Dietrich, P., Kujala, J., & Artto, K. (2013). Inter-Team Coordination Patterns and Outcomes in Multi-Team Projects. *Project Management Journal*, 6-19.

Doghri, B. S. (2021). The E-leadership linking inter-organisational collaboration and ambidextrous innovation. *International Journal of Innovation Management*.

Don A. Dillman, J. D. (2014). *Internet, Phone, Mail and Mixed-Mode Surveys: The Tailored Design Method .* New Jersey: John Wiley and Sons.

Donate, M. J.-M. (2023). Solving task management conflict in hotel establishments through knowledge management tools: Effects on innovation capabilities. . *Journal of Knowledge Management* .

Egim, A. S., Wardi, Y., & Rino. (2025). INNOVATION CAPABILITY AND SUSTAINABILITY OF MICRO, SMALL, AND MEDIUM-SIZED ENTERPRISES (MSMEs): A SYSTEMATIC LITERATURE REVIEW. *Maker:Jurnal Manajemen*.

Elidjen, E., Mihardjo, L., & Rukmana, R. (2019). ntervening role of innovation management on relationship between digital leadership and dynamic capability accelerated by collaboration. . *International journal of innovation, creativity and change*.

Elyousfi, F. ,. (2021). Impact of e-leadership and team dynamics on virtual team per formance in a public organization. *International Journal of Public Sector Management*.

Fait, M. C. (2023). The roots of “volunteer” employees’ engagement: The silent role of intellectual capital in knowledge-sharing intentions. *Journal of Intellectual Capital*.

Finney, S. J. (2006). *Non-normal and categorical data in structural equation modeling.* Information Age Publishing .

First Source. (n.d.). Retrieved from https://www.firstsource.com/insights/blogs/strategic-alliances-partnerships-a-catalyst-for-success-and-innovation-in-bpo-organizations#:~:text=Strategic%20Alliances%20&%20Partnerships:%20A%20Catalyst,before%20they%20know%20it%20themselves.

Gemünden, H. G. (2018). The project-oriented organization andits contribution to innovation. *International Journal of Project Management*, 147-160.

German Outsourcing Association. (n.d.). *Outsourcing Destination Guide .* Deutscher Outsourcing Verband e.V. (German Outsourcing Association).

Giampaoli, D., Sgrò, F., Ciambotti, M., & Bontis, N. (2021). Integrating knowledge management with intellectual capital to drive strategy: a focus on Italian SMEs. *Journal of Information and Knowledge Management Systems* .

Gong, Y. Y. (2022). The too-much-of-a-good-thing effect of digitalization capability on radical innovation: the role of knowledge accumulation and knowledge integration capability. *ournal of Knowledge Management*.

Goswami, A. K. (2023). It's a knowledge centric world! Does ethical leadership promote knowledge sharing and knowledge creation? Psychological capital as mediator and shared goals as moderator. *Journal of Knowledge Management* .

Guangyan LUO, K. T. (2022). E-LEADERSHIP AS A BOOSTER OF EMPLOYEES' DYNAMIC CAPABILITIES INFLUENCE ON JOB PERFORMANCE. *SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY*.

Guo, J. e. (2021). How information technology capability and knowledge ntegration capability interact to affect business model design: A polynomial regression with response. *Technological Forecasting and Social Change*.

Guo, Y. C. (2023). Knowledge integration for resilience among multinational SMEs amid the COVID-19: From the view of global digital platforms. *Journal of Knowledge Management* .

Hair, J. F. (2017). A primer on partial least squares structural equation modeling (PLS-SEM). *Sage Publications*.

Hair, J. F. (2020). Assessing measurement model quality in PLS-SEM: Contextualizing former metrics with a new recommendation. *ournal of Business Research*.

Haseeb, M., Hussain, H., ´Slusarczyk, B., & Jermsittiparsert, K. (2019). ndustry 4.0: A solution towards technology challenges of sustainable business performance. *MDPI*.

Hassan, Y., Pandey, J., Majumdarr, S., Pereira, V., Behl, A., & Bazal-Shoham, O. (2025). Examining the impact of e-leadership on strategic innovation at work: a moderated-mediation model. *The Journal of Technology Transfer*.

Hassan, Y., Pandey, J., Majumdarr, S., Pereira, V., Behl, A., & Bazal-Shoham, O. (2025). Examining the impact of e-leadership on strategic innovation at work: a moderated-mediation model. *The Journal of Technology Transfer*, 469-487.

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 408-420.

Höddinghaus, M. N. (2023). Leadership in virtual work settings: what we know, what we donot know, and what we need to do. . *European Journal of Work and Organizational Psychology*.

Hoegl, M. W. (2004). Interteam Coordination, project commitment, and teamwork in multiteam R&D projects: A longitudinal study. *Organization Science*.

Iqbal, S. M. (2021). Linking entrepreneurial orientation with innovation performance in SMEs; the role of organizational commitment and transformational leadership using Smart PLS SEM. *Sustainability* , 1-18.

Jensma, S. (2006). *Enhancing innovation in a conservative heavy industry market start with the fuzzy front end.* Eindhoven University of Technology.

Kahveci, E. (2025). Digital Transformation in SMEs: Enablers, Interconnections, and a Framework for Sustainable Competitive Advantage. *MDPI*.

Kahveci, E. (2025). Digital Transformation in SMEs: Enablers, Interconnections, and a Framework for Sustainable Competitive Advantage. *MDPI*.

Karnadi, L. (2023). Analyzing simple PLS-SEM with SmartPLS.

Kline, R. B. (2011). *Principles and practice of structural equation modeling.* Guilford Press.

Kock, N. (2014). Advanced mediating effects tests, multi-group analyses, and measurement model assessments in PLS-based SEM. . *International Journal of E-Collaboration (Ijec),* , 10(1), 1–13.

Larsen, M. M. (2023). Outsourcing in Africa: How do the interactions between providers, multinationals, and the state lead to the evolution of the BPO industry? *Journal of International Business Policy*, 432-452.

Li, M. &. (2023). Research on the effect of e-leadership on employee innovation behavior in the context of “self” and “relationship”. . *Journal of Organizational and End User Computing* , 1-20.

Li, W. L. (2016). e-Leadership through strategic alignment: An empirical study of small-and medium-sized enterprises in the digital age. . *Journal of information technology*.

Li, W., Liu, K., Belitski, M., Ghobadian, A., & O’Regan, N. (2016). e-Leadership through strategic alignment: An empirical study of small-and medium-sized enterprises in the digital age. . *Journal of Information technology*.

Li, W., Liu, K., Belitski, M., Ghobadian, A., & O'Regan, N. (2016). e-Leadership through strategic alignment: an empirical study of small- and medium sized enterprises in the digital age. *Journal of Information Technology*.

Lin, K.-J. C.-P. (2024). Exploring the influence of workplace environment on job performance: a socio-cognitive perspective. *Total Quality Management and Business Excellence*.

Lopez-Cabrales, A., Bornay-Barrachina, M., & Diaz-Fernandez, M. (2017). Leadership and dynamic capabilities: The role of HR systems. *Personnel Review*.

López-Figueroa, J. C., Ochoa-Jiménez, S., Palafox-Soto, M. O., & Munoz, D. S. (2025). Digital Leadership: A Systematic Literature Review. *Multidisciplinary Digital Publishing Institute*.

Luis M. Lozano, E. G.-C. (2008). Effect of the Number of Response Categories on the Reliability and Validity of Rating Scales.

Luqma n, A. Z. (2023). Untangling the role of power in knowl edge sharing andjob performance: The mediating role of discrete emotions. *Journal of Knowledge Management*.

Magni, D. P. (2023). Internationalized knowledge-intensive business service (KIBS) forservitization: A microfoundation perspective. *International Marketing Review*, 798-826.

Mangione, T. W. (1995). *Mail surveys: Improving the quality.* Sage Publications.

Mihardjo, L., & Rukmana, R. (2019). Dynamic Capability, Market Orientation and Innovation Capability: The Role of Digital Leadership for Indonesia Telecommunication Firms in Facing Disruptive Era. *In Proceedings of the International Conference on Industrial Engineering and Operations Management.*

Miller, D. &. (1983). Strategy-making and environment: The third link. *Strategic Management Journal*.

Ministry of ICT and National Guidance . (2025). *National Business Process Outsourcing Policy-2025.* Uganda.

Nguyen, M. (2023). I see myself in my leader: Transformational leadership and its impact on employees' technology-mediated knowledge sharing in professional service firms. *Journal of Service Theory and Practice*.

Nguyen, M. R.-T. (2023). Impact of technology-based knowledge sharing on employee outcomes: Moderation effects of training, support and leadership. *Journal of Knowledge Management*.

Ohri, K., & Dutta, H. (2025). FROM WORKPLACE SPIRITUALITY TO EMPLOYEE ENGAGEMENT: GOVERNING WORK-LIFE BALANCE AND WORK-LIFE INTEGRATION. *Brazilian Operations Research Society*.

Olebogeng B. Molete, S. E. (2025). The Impact of IT Strategic Planning Process on SME Performance: A Systematic Review. *MDPI*.

Pasaribu, E. M. (2025). A Review of the Strategic Role of Supply Chain Management for Developing Competitive Advantage. *International Journal of Research*.

Pavlou, P., & El Sawy, O. (2011). Understanding the elusive black box of dynamic capabilities. *Journal of the Decision Sciences Institute*.

Piton Global. (2025, September 3). Retrieved from https://www.piton-global.com/blog/bpo-innovation-management-strategic-frameworks-for-cultivating-and-implementing-transformative-ideas-2/#:~:text=The%20evolution%20of%20Business%20Process,shift%20did%20not%20happen%20overnight.

Podsakoff, P. M. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 879.

Raineri, A., & Valenzuela-Ibarra, S. (2021). The role of inter-team relational coordination in the high-performance work systems–team performance linkage. *The International Journal of Human Resource Management*.

RAINS, S. A., & BONITO, J. A. (2017). Adaptive Structuration Theory. *The International Encyclopedia of Organizational Communication.* .

Rizzuto, T. E. (2011). Age and technology innovation in the workplace: Does work context matter? *Computers in Human Behavior*.

Sacavém, A., Machado, A. d., Santos, J. R., & Palma-Moreira, A. (2025). Leading in the Digital Age: The Role of Leadership in Organizational Digital Transformation. *Multidisciplinary Digital Publishing Institute*.

Salunke, S. W.-K. (2019). The central role of knowledge integration capability in service innovation-based competitive strategy. *Industrial Marketing Management*.

Sasmoko, S., Mihardjo, L., Alamsjah, F., & Elidjen, E. (2019). Dynamic capability: The effect of digital leadership on fostering innovation capability based on market orientation. *Decision Science Letters*.

Schoemaker, P., Heaton, S., & Teece, D. (2018). Innovation, dynamic capabilities, and leadership. *California Management Review*.

Schoemaker, P., Heaton, S., & Teece, D. (2018). Innovation, dynamic capabilities, and leadership. *California Mnagament Review*.

Shega. (2024, 05 28). Retrieved from https://shega.co/news/how-ethiopia-is-positioning-itself-as-a-competitive-bpo-destination

Subramaniam, S. A., Salamzadeh, Y., & Mujtaba, B. G. (2023). The Mediating Role of Dynamic Capability on the Relationship between E-Leadership Qualities and Innovation Management: Insights from Malaysia's Medical Device Industry. *MDPI*.

Subramaniam, S. A., Salamzadeh, Y., & Mujtaba, B. G. (2023). The Mediating Role of Dynamic Capability on the Relationship between E-Leadership Qualities and Innovation Management:Insights from Malaysia's Medical Device Industry. *MDPI*.

Talenteum. (n.d.). Retrieved from https://talenteum.com/2025-global-study-on-bpo-challenges-trends-and-opportunities/

Talenteum. (n.d.). Retrieved from https://talenteum.com/2025-global-study-on-bpo-challenges-trends-and-opportunities/

Teece, D. (2007). Explicating dynamic capabilities: The nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal*.

Teece, D. (2007). Explicating dynamic capabilities: The nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal*.

Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. . *Strategic Management Journal*.

Uhl-Bien, M. &. (2011). *Complexity leadership theory.* The SAGE handbook of leadership .

University of Bath. (2024). Fostering innovation to address grand challenges. *EURAM .* Bath.

Uru, F. O., Gozukara, E., & Tezcan, L. (2022). The Moderating Roles of Remote, Hybrid, and Onsite Working on the Relationship between Work Engagement and Organizational Identification during the COVID-19 Pandemic. *Sustainability*.

Van Wart, M. R. (2019). Operationalizing the definition of e-leadership: Identifying the elements of e-leadership. *International Review of Administrative Sciences*, 80-97.

Wart, M. V., Roman, A., Wang, X., & Liu, C. (2016). Operationalizing the definition of e-leadership: identifying the elements of e-leadership. *International Review of Administrative Sciences*.

Weeks, M., & Feeny, D. (2008). Outsourcing: from cost management to innovation and business value. *California Management Review*.

Willits, F. K., Theodori, G. L., & Luloff, A. E. (2014). Another Look at Likert Scales. *Journal of Rural Social Sciences*.

Worke, G. &. (2025). Influence of Transformational Leadership on Ethiopian Smart IT Factories' Performance Through Open Innovation.

Xie, X.-Y. L.-D. (2022). Inter-team coordination, information elaboration, and performance in teams: The moderating effect of knowledge integration capability. *Journal of Business Research*.

Xie, X.-Y., Ling, C.-D., Liu, W., & Wei, J. (2022). Inter-team coordination, information elaboration, and performance in teams: The moderating effect of knowledge integration capability. *Journal of Business Research*.

Yadegaridehkordi, E. F. (2023). Determinants of small and medium-sized enterprises' intention to adopt cloud computing: A hybrid approach using PLS-SEM and ANFIS. *Information Systems and e-Business Management*.

Ying, Z., Hassan, M. A., Shahrulnizam, N. A., & Kelana, B. W. (2025). The Future of Nursing Leadership: Adapting Leadership Styles for Remote Work Environments.

Yu, X. W. (2022). Impact of qualified gatekeepers on team absorptive capacity: The mediating role of knowledge combination capability. *Journal of Knowledge Management*.

Zahari, A. S. (2017). he Organizational Commitment towards Employee's Performance: A Case Study at Elektro Serve (M) Sdn Bhd. *Journal of Biological and Environmental Sciences*.

Zahoor, N. &.-T. (2020). Inter-organizational collaboration and SMEs' innovation: A systematic review and future research directions. . *Scandinavian Journal of Management*.

Zahoor, N., Golgeci, I., Haapanen, L., Ali, I., & Arslan, A. (2022). The role of dynamic capabilities and strategic agility of B2B high-tech small and medium-sized enterprises during COVID-19 pandemic: Exploratory case studies from Finland. *Industrial Marketing Management*, 502-514.

Zhang, G. &. (2024). The impact of inclusive leadership on employees' innovative behavior – An intermediary model with moderation. *Leadership & Organization Development Journal*.