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STRATEGIC ALIGNMENT OF IT AND BUSINESS GOALS: A CRITICAL ANALYSIS OF FRAMEWORKS, INFORMATION RESOURCE UTILIZATION, AND COLLABORATIVE GOVERNANCE

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ABSTRACT
The ongoing challenge of aligning information technology (IT) with business goals has been a key factor in determining how successful an organization can be in the digital economy. It can be argued that the reason for this persistence is that alignment is not achieved solely through structural governance, as two other key elements determine whether alignment will occur: first, the use of information resources to link strategic intent to actual operations; second, the degree of social alignment or "fit" that exists between IT management and business management. A systematic literature review of 47 peer-reviewed articles from 2019 to 2025, supported by foundational theoretical work using backward citation tracing, assesses the current state of the art of the research on established alignment models (Henderson & Venkatraman's Strategic Alignment Model and Luftman's Strategic Alignment Maturity Model) and provides insight into the mechanisms through which misalignment hinders an organization's overall performance. Findings indicate that organizations with mature alignment experience significantly better financial performance and can deliver their products to market more quickly than those organizations without mature alignment; however, the effect size of the relationship between mature alignment and both financial performance and speed to market varies widely based upon the specific industry, organizational size, and methodology used to measure the performance gap. This study presents an integrated model of governance that includes three layers: strategic, information, and operational, and introduces three testable hypotheses concerning layer-level reinforcement, the information layer as mediator, and the moderating role of social alignment among IT and business managers. Finally, the model is evaluated for its application to small and medium-sized enterprises, developing countries, and the rapidly evolving dynamics associated with the emergence of generative artificial intelligence.

Keywords:
IT-Business Alignment, Strategic Alignment Model, Information Resources, Business Intelligence, IT Governance, Competitive Advantage, Digital Transformation, Collaborative Leadership

1. INTRODUCTION

The link between information technology strategies and business strategies has been a topic of interest in management research for more than 30 years; however, achieving successful alignment between the two remains a major challenge for many organizations today (Coltman et al., 2015). In 2024 alone, global spending on information technology totaled approximately $5.06 trillion, underscoring the importance of a company's digital capabilities to its overall corporate strategy (Gartner, 2024). However, despite the large amount of money being invested in technology by companies, there is a large body of research that demonstrates a considerable percentage of organizations do not realize the maximum potential strategic value from their IT spending because their technological efforts were not aligned with their broader business goals (Mendes-da-Silva & Albertin, 2024).

Alignment between IT and Business Strategy refers to how well an organization's business strategy aligns with its IT strategy and infrastructure, relative to its business infrastructure (Henderson & Venkatraman, 1993). If an

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organization achieves alignment, its technology investment will directly support its competitive advantage, value-creating processes, and operational efficiencies (Ori & Szabo, 2024) by aligning its IT and Business Strategies. Misaligned technology investments lead to wasted resources, poor use of company time and resources, and a lessened ability for an organization to respond quickly to changes or new opportunities in the marketplace (Ori & Szabo, 2024).

Just as important as aligning IT and Business Strategy is the strategic use of Information Resources. Strategic use of information resources includes leveraging data assets, analytical capabilities, knowledge management systems, and human expertise to convert raw data into usable, actionable intelligence (Adama et al., 2024). Organizations that strategically leverage their information resources will be able to make decisions faster and more accurately, identify future opportunities in emerging markets, and create sustainable competitive advantages through data-driven innovation.

In this paper, we propose a major assertion that information resources are intermediary in the connection between strategic alignment intentions and operational alignment results; also, that the social aspect of alignment (shared domain knowledge, communication quality, and mutual trust between IT and business leaders) moderates the degree to which governance structures function effectively at each level. In order to support this assertion, we address the following three focused research questions: (1) By means of which mechanisms does IT-business misalignment hurt organizational performance? (2) How do information resources serve as intermediaries connecting strategic governance to operational implementation within alignment frameworks? (3) Which governance structures and collaborative practices allow organizations to achieve and sustain alignment between strategic, informational, and operational levels? Our paper contributes to the literature by developing an integrated governance framework with three empirically testable assertions that describe the causal mechanisms underlying the generation of organizational value through alignment.

2. OBJECTIVES

The primary objective of this research is to evaluate how IT-business alignment impacts an organization's performance by examining prior studies and distinguishing cause-and-effect relationships from mere association. In addition to identifying the benefits of each model (e.g., the Strategic Alignment Model and the Strategic Alignment Maturity Model), this research will identify limitations or "gaps" within those models, specifically regarding the role of Information Resources as both mediating mechanisms and Social Alignment as a moderating factor.

A secondary objective of this research is to analyze (in terms of empirical findings) the organizational effects of misalignment, especially in terms of how it affects the organization's financial performance, its ability to innovate, and how it resists operational disruptions. Additionally, a goal of this research is to provide practical recommendations that IT leaders can use as a foundation to proactively align their organizations through strategic alignment practices and create collaborative governance arrangements with business executives.

The final objective is to create an integrated model for connecting alignment theory with Information Resource Management (IRM) through three empirically testable propositions; namely, describing the processes by which layers are reinforced (inter-layer reinforcement), layers mediate (information layer mediation), and layers moderate social alignment (social alignment moderation). The model will address the gap in the IRM literature by going beyond descriptive "best practices" and developing testable causal relationships among alignment constructs and measures of organizational performance.

3. METHODOLOGY

The systematic literature review approach used in this research is based on PRISMA as a method for achieving transparency and replicability in the literature search process, and for quality in the selection and synthesis of articles (Moher et al., 2009). A systematic literature review approach was selected due to its ability to provide an objective and critical examination of all available literature on IT-business alignment and information resource management; it also allows the researcher to minimize biases in article selection and to analyze literature from high-quality empirical and theoretical sources.

The research is based on an extensive literature review of primary sources, which include four leading academic databases. The four databases used are IEEE Xplore, Web of Science, Scopus, and Google Scholar. Each database was searched using Boolean combinations of keywords related to IT-business alignment, strategic alignment, information resources, business intelligence, competitive advantage, organizational performance, IT governance, and digital transformation. All searches were limited to peer-reviewed articles published between 2019 and 2025. Seminal theoretical works published prior to 2019 that provided a foundation for the

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contemporary literature on alignment were also included; specifically, Henderson & Venkatraman (1993), Reich & Benbasat (2000), and Coltman et al. (2015). These foundational works were not the result of a systematic search but rather were added via backward citation analysis to provide the appropriate theoretical context for the current alignment dialogue. Thus, the 47-article sample ultimately selected for inclusion in this dissertation represents the results of the systematic search, while the foundational references are listed separately to provide additional historical context for the current alignment dialogue.

3.1 Inclusion and Exclusion Criteria

All articles selected for this study had to meet the following criteria for inclusion in the analysis: (A) the article was published in a peer reviewed journal, conference proceedings or business/industry publication during the time frame of 2019-2025; (B) the article included an academic discussion of IT-business strategic alignment, information resources management or the impact on organizational performance of alignment and did not reference these topics incidentally; (C) the article included a clear description of the research methods employed (quantitative, qualitative, mixed-methods or design science); (D) the article was written in English and the full text of the article was available via the provided databases.

All articles that were excluded from the analysis were eliminated based on one of the following four criteria: (A) the article was exclusively concerned with implementing an IT system (i.e., software installation/configuration, network architecture) and did not discuss the strategic implications of the implemented system; (B) the article did not include a specific definition of research methodology (i.e., editorials/opinion pieces, trade publications/practitioner commentary that did not have a basis in empirical evidence or theory); (C) duplicate studies were removed from the analysis since they included substantial overlap in their data; (D) the article was published in a predatory journal/non-indexed journal, as per Beall's List and the Directory of Open Access Journals (DOAJ).

3.2 PRISMA Article Selection Process

The article evaluation process used the four stages of the PRISMA flow diagram shown in Figure 1 and described below.

Identification: An initial search of the four databases, Scopus (n = 98), Web of Science (n = 87), IEEE Xplore (n = 64), and Google Scholar (n = 63), generated a total of 312 potential references.

Screening: Elimination of 78 duplicates resulted in 234 remaining titles/abstracts for further screening. Two independent evaluators reviewed each of the 234 titles/abstracts against the inclusion/exclusion criteria. Agreement between the two evaluators regarding the inclusion/exclusion criteria was determined by Cohen's Kappa statistic (K = 0.82). Thus, there was substantial agreement between the two evaluators. Any discrepancies were resolved through discussion among the evaluators to reach a consensus. Of the 234 evaluated titles/abstracts, 145 were eliminated for lack of relevance to IT-business alignment, information resource management, and/or organizational performance measurement. This left 89 articles eligible for a full-text review.

Eligibility: Eligible articles underwent a full-text review, resulting in the elimination of 42 articles based on the following criteria: lack of defined methodology (n = 14), lack of strategic context for technical implementation (n = 12), inadequate consideration of alignment constructs (n = 9), and lack of availability of full text (n = 7).

Inclusion: The final sample of articles that met the eligibility criteria was 47. These 47 articles served as the basis for the thematic synthesis. Six foundational studies published prior to 2019 were identified via backward citation searching and added to the review to provide a theoretical context for the study. These foundational studies are listed separately in the References and did not undergo the systematic search protocol.

3.3 Quality Assessment

The methodological quality of each of the 47 studies eventually included was assessed using an adaptation of the Quality Assessment Criteria developed by Kitchenham and Charters (2007). The articles were rated using a 3-point scale (0 = no; 0.5 = partial; 1 = yes), for six areas: (A) Clarity of Research Objectives; (B) Appropriateness of Research Design; (C) Rigor of Data Collection Procedures; (D) Adequacy of Data Analysis; (E) Validity/Reliability of Findings; and (F) Relevance to the Review's Research Questions. Articles that had scores less than 3.0 out of 6.0 were considered for potential exclusion; however, ALL 47 studies in the final sample had scores of 3.5 or greater, with an average quality score of 4.6 (SD = .72). Quantitative Methods were used in 19 studies; Qualitative Methods were used in 14 studies; Mixed-Methods Designs were used in 8 studies; and Design Science or Conceptual/Theoretical Frameworks were used in 6 studies. A summary of the quality assessments for the 47 studies is presented in Table 1.

3.4 Data Extraction and Synthesis

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The data collection method for this systematic review used an evidence-based approach in which all study theoretical frameworks, methods, participant demographics, study results, limitations, and how each study related to one or more of the three research questions were extracted from the articles. In addition, a thematic synthesis was conducted to identify common patterns and differences in the findings across the studies included in this review. Both authors independently reviewed the lines of text coded by the first author using the three-stage thematic synthesis process developed by Thomas and Harden (2008): line-by-line coding, identification of descriptive themes, and development of analytical themes.

Table 1. ***Systematic Literature Review Protocol Summary***

Element	Description
Databases	Scopus, Web of Science, IEEE Xplore, Google Scholar
Time Period	2019–2025 (systematic search); pre-2019 foundational works via backward citation tracing
Search Terms	"IT-business alignment" OR "strategic alignment" AND "information technology"; "Information Resources" AND "Business Intelligence" OR "Competitive Advantage"; "IT Governance" AND "Organizational Performance"; "Digital Transformation" AND "Strategic Alignment"
Inclusion Criteria	Peer-reviewed; substantive focus on IT-business alignment, IRM, or alignment–performance link; defined research methodology; English full text available
Exclusion Criteria	Solely technical IT implementation; no defined methodology; duplicates; predatory or non-indexed journals
Initial Records	312
After Deduplication	234
After Title/Abstract Screening	89
Final Sample	47 peer-reviewed articles + 6 foundational works
Quality Assessment	Adapted Kitchenham & Charters (2007) criteria; 6 dimensions, 3-point scale; mean score 4.6/6.0 (SD = 0.72)
Synthesis Method	Three-stage thematic synthesis (Thomas & Harden, 2008)

4. LITERATURE REVIEW

4.1 Defining IT-Business Strategic Alignment

The concept of IT-business strategic alignment was first developed by Henderson and Venkatraman (1993). They defined it as the extent of coherence among four essential domains: Business Strategy, IT Strategy, Organizational Infrastructure and Processes, and IT Infrastructure and Processes. Henderson and Venkatraman's SAM (Strategic Alignment Model) emphasizes that there are two conditions required for effective alignment: Strategic Fit – aligning the organization's external positioning with the organization's internal capabilities; and Functional Integration – connecting the business and IT domains at both strategic and operational levels. The four primary alignment perspectives identified in the SAM are: Strategy Execution, Technology Transformation, Competitive Potential, and Service Level.

Following the original work of Henderson and Venkatraman, other researchers have expanded on this core body of knowledge in meaningful ways. Luftman (2000) created the Strategic Alignment Maturity (SAM) Model as an evaluation framework for assessing an organization's alignment maturity across six areas of focus: Communication, Competency & Value Measurement, Governance, Partnership, Technology Scope, and Skills. The SAM Model enables organizations to evaluate their current alignment position and establish targeted areas for improvement, thus providing a far more detailed understanding of an organization's alignment than previously possible (i.e., aligned or misaligned).

In a relatively recent development, Benkhayat et al. (2024) proposed using Multi-Agent Systems to assess strategic alignment. Benkhayat et al. (2024) argue that previous research has failed to adequately capture the

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fluid and adaptive nature of strategic alignment within today's increasingly complex organizational environment. Benkhayat et al.'s (2024) framework utilizes computational agents representing strategic decision-makers to enable simulation-based assessments of various alignment scenarios. While the application of Benkhayat et al.'s (2024) framework represents a significant advancement in methodology, further validation of its utility across a variety of organizational settings will require empirical research.

4.2 The Impact of IT – Business Strategy Misalignment

There is considerable evidence that a disconnect between an organization's IT and business strategies negatively affects overall performance. Ori and Szabo (2024) conducted a systematic review of 62 studies on business-IT strategy misalignment. They found common negative effects stemming from this disconnection, including inefficient operations, redundant technology investments, delays in executing a strategy, and loss of stakeholder trust. These researchers also discovered that the lack of alignment is not static; rather, it is a dynamic process in which the degree of misalignment varies with changes in both the organization's strategies and the environment in which it operates.

Mendes-da-Silva and Albertin (2024) investigated how strategic alignment influenced non-digital organizations during their digital transformation. They concluded that the main factors creating a lack of alignment are an organization's siloed structure and its failure to have a consistent digital strategy in place. In addition, they analyzed two case studies using PwC's (2022) supporting survey data, which indicated that only 20 percent of IT leaders shared the same strategic expectations for IT use as their business partners. This IT-business gap is a serious weakness that can severely impede any attempts at digital transformation.

According to Gerow et al. (2014), using statistical analysis, organizations with a high level of alignment between IT and business strategy will experience return on assets of 15–25 percent, and time-to-market for new products will be 20–30 percent faster than those organizations that have a lower level of alignment between IT and business strategy. It is important to examine these statistics critically on at least three bases. First, the range of percentages reported was based on data collected using a cross-sectional survey design involving only a limited number of large organizations in North America, thereby limiting the generalizability of these findings to smaller organizations, organizations in different industries, and organizations in different locations. Second, cross-sectional designs do not allow for establishing cause-and-effect relationships; organizations that report higher ROA may have the resources to implement additional alignment initiatives, creating a reverse-causality problem that none of the studies reviewed here addressed using instrumental variables or quasi-experiments. Third, the wide ranges reported (e.g., 15–25%) indicate that the effect of alignment on financial outcomes likely varies depending upon a variety of factors, including industry dynamics, the maturity of the organization, and the quality of measurement, precisely the moderating factors specified in this paper's Proposition 3 as part of the social alignment dimension. While the directionally positive relationship between alignment and financial performance has been consistently shown across multiple studies employing different methodological approaches, the magnitude of this relationship is likely to be context-dependent. On the other hand, the studies reviewed above show that strategic misalignment was associated with a higher project failure rate, higher IT operating costs as a percentage of revenue, and lower employee engagement in technology-based initiatives.

4.3 Information Resources as Strategic Enablers

Information resources include all types of digitized data and information, all types of analytical tools, all types of knowledge management systems, and all types of people capable of using this information as evidence for strategic decisions and/or competitive advantage when appropriately used (Adama et al., 2024). For IT-business alignment, information resources serve two roles. First, they serve as a basis of fact for strategic decisions; second, they represent a potential source of competitive advantage where appropriately utilized.

Business Intelligence (BI) in leveraging Information Resources is significantly enhanced with advancements in Artificial Intelligence (AI) and Machine Learning (ML). Contemporary BI platforms support Real-Time Analytics, Predictive Modeling, and Natural Language Querying, all of which reduce the time from Data Generation to Strategic Action (Wu et al., 2015). Organizations that invest in Augmented Analytics Capabilities have reported increased Forecasting Accuracy and more responsive Supply Chain Management, both of which contribute to the Operational Dimension of IT-Business Alignment.

Data Governance has evolved into a key component for enabling the effective use of Information Resources. Without effective or nonexistent data governance frameworks that ensure Data Quality, Accessibility, Security, and Regulatory Compliance, even the most advanced analytical tools will produce unreliable results (Tallon et al., 2023). A combination of an organization's IT Strategy and Data Governance, as represented by the COBIT and ITIL frameworks, provides an organizational structure in which alignment initiatives can be implemented with assurance that the underlying Information Resources are reliable and usable.

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4.4 IT Governance Frameworks Supporting Alignment

IT governance frameworks provide the structure for alignment. COBIT 2019, an IT governance framework developed by ISACA, outlines the five core principles of IT governance as follows: meet stakeholders' expectations, cover the entire enterprise end-to-end, use one integrated framework, take a holistic view, and separate governance from management (Adama et al., 2024). These principles define organizational structures and authority and responsibility systems that link IT investment decisions to business value realization.

The ITIL framework supports COBIT's strategic level of IT governance by providing operational-level guidance for IT Service Management. It ensures that daily IT operations align with business-unit requirements for the services they need (Iden & Eikebrokk, 2013). Organizations can implement a strategic governance framework and an operational excellence framework when adopting both COBIT and ITIL, creating a complete alignment infrastructure. The IT Alignment Guide, a relatively new lean framework, can integrate concepts from Strategy Management Science with IT alignment research. This enables organizations of all sizes to utilize this framework.

Table 2. Comparison of Major IT-Business Alignment Frameworks

Framework	Core Focus	Key Strength	Limitation
SAM (Henderson & Venkatraman, 1993)	Strategic fit and functional integration	Comprehensive four-domain model	Static; does not address dynamism
SAM Maturity (Luftman, 2000)	Alignment maturity assessment	Six-dimensional maturity continuum	Lacks agility for rapid change
COBIT 2019 (ISACA)	IT governance and risk management	Stakeholder-driven, integrated	Complex implementation
Multi-Agent (Benkhayat et al., 2024)	Dynamic simulation of alignment	Adaptive, computational approach	Limited empirical validation

5. RESULTS AND DISCUSSION

5.1 Strategies for Proactive IT-Business Alignment

Five general strategies were found in the research that IT leaders can use to achieve proactive alignment with business goals. The first strategy is to create joint strategic planning processes in which IT leaders participate in formulating business strategy rather than being involved only in implementation. This is the most commonly cited alignment enabler in the literature reviewed (Coltman et al., 2015; Luftman, 2000). By participating early and consistently in strategic planning processes, IT leaders ensure that technology is viewed as an input to business strategy, rather than just a tool for executing a plan already decided by business leaders.

The second strategy is the use of common performance metrics that relate IT operational measurements to business outcome measurements. The ability to sustain alignment depends on continuous measurement and reporting of how well IT contributes to achieving business goals (Coltman et al., 2015). For example, measuring solely IT technical metrics (such as system uptime or incident resolution times) does not clearly show how IT contributes strategically to business success. Instead, translating IT performance into business outcomes (such as increased revenue, improved customer satisfaction, and/or cost reductions) will help build business leaders' trust in IT's strategic value.

The third strategy is the implementation of agile governance models that permit IT to respond quickly to changes in business needs. More recently, many organizations have recognized that traditional annual planning cycles do not adequately support businesses operating in fast-changing, dynamic markets (Benkhayat et al., 2024). Organizations that utilize quarterly alignment meetings and real-time performance dashboards may identify misalignment early enough to prevent it from resulting in material strategic differences.

The fourth strategy is to invest in developing cross-functionally trained personnel (i.e., employees who work in both IT and business areas) and in employee rotation programs to increase the sharing of domain-specific knowledge between IT and business staff. As described by Reich & Benbasat (2000), the greater the degree of shared knowledge between IT and business staff members regarding each other’s respective domains of expertise, the better the perception of alignment and the more likely the two groups are to make collaborative decisions.

The fifth strategy is the deployment of strategic information resources via enterprise-wide data platforms and self-serve analytics tools to provide equal access to business intelligence to all stakeholders within an organization. With these tools, alignment can develop organically throughout an organization at the operational level, rather than only at the executive level. By providing all stakeholders within an organization with access to

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the same business intelligence, the dependence of business stakeholders on IT to deliver necessary business information is reduced, thereby enhancing the potential for alignment at the organizational level.

Table 3. Proactive IT-Business Alignment Strategies and Expected Outcomes

Strategy	Implementation Mechanism	Expected Outcome
Joint strategic planning	IT leaders participate in business strategy sessions	Technology integrated into strategic vision
Shared performance metrics	Linked IT KPIs with business outcome measures	Executive confidence in IT value
Agile governance	Quarterly alignment reviews with real-time dashboards	Rapid detection of alignment drift
Cross-functional talent development	Rotation programs between IT and business units	Increased shared domain knowledge
Self-service analytics deployment	Enterprise data platforms with user-facing BI tools	Distributed alignment capability

5.2 The Role of Information Resources in Driving Business Value

Three distinct paths to creating business value emerge from an examination of how companies derive value from their information resources as they work to align their IT with business goals. The first path runs from structured and unstructured data to the creation of business intelligence and insights that then inform business strategy. As Wu et al. (2015) found, companies with mature business intelligence capabilities report higher forecasted demand accuracy, improved customer segmentation, and faster risk identification. These three factors combine to give a company the opportunity to make informed, timely strategic choices.

The second path involves generating a competitive advantage from a company's information resources. Companies use proprietary data assets and/or advanced analytical capabilities to create barriers to competitors' entry. Data-driven differentiation can be generated at several points throughout a company's value chain, such as optimizing its supply chain, using predictive maintenance, and engaging customers in a personal manner. Adama et al. (2024) demonstrated that companies can generate compounding advantages by successfully integrating their information resources across their value chains when applying Porter's value chain analysis. Once these advantages are created, it becomes increasingly difficult for companies to replicate them.

The third path provides operational efficiencies by automating data collection, processing, and reporting. The manual time and labor required to collect, process, and report data are reduced when companies use enterprise resource planning (ERP) systems, customer relationship management (CRM) software, and/or integrated data warehouses. ERP systems, CRM software, and/or integrated data warehouses also help eliminate information silos and provide cross-functional visibility, enabling strategic alignment and the coordination of daily operations. Tallon et al. (2023) indicated in their study that companies that were able to integrate their ERP systems, CRM systems, and/or integrated data warehouses with strong data governance achieved a reduction in operational redundancies of 15 – 20%. However, this estimated range of reduction in operational redundancies was based almost exclusively on case studies from the financial services and manufacturing industries, where processes are well defined. Companies operating in knowledge-intensive or creative industries will likely experience varying efficiency rates due to the lack of defined processes. In addition, researchers have used varying measures of "operational redundancy," including costs and the number of duplicate processes, to assess the same concept, which limits direct comparison of results. This inconsistency in measuring operational redundancy highlights the need for the type of integrated information-layer governance described in this paper's framework, which will allow standardized data quality metrics to be compared across companies to determine the level of alignment between a company's IT and business goals.

5.3 Collaborative Governance Between IT and Business Leadership

In addition to being a governance and leadership issue, each study found that the most successful IT-business alignments result from far more than simply having a technically functioning process. To sustain IT-business alignment, an institutional structure, such as cross-functional governance committees, needs to be established. These committees are typically composed of the Chief Information Officer, the Chief Executive Officer, the Chief Financial Officer, and representatives from the various business units. These committees provide a forum for resolving competing investment priorities, evaluating opportunities enabled by technology, and assessing all IT investments based on their business impact.

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In their study, Reich and Benbasat (2000) showed that social factors (i.e., shared understanding, trust, and communication quality among IT and business executives) have an equally important effect on the level of alignment achieved, alongside intellectual factors (i.e., strategic content). Recently, Mendes-da-Silva and Albertin (2024) found that when an organization maintains a balance between social and intellectual alignment dimensions, this leads to more sustainable alignment outcomes, especially during strategic transitions.

One key finding from the literature is that the role of the Chief Information Officer is changing from a technology operations manager to a strategic business partner. CIO's that have direct access to the CEO and are included in board level strategic discussions are more likely to ensure that the IT strategy aligns with the overall business strategies (Luftman, 2000). This organizational position, along with the CIO's ability to articulate the value of IT in business terms, ultimately determine how IT is viewed within the organization as either a strategic asset or a cost center.

5.4 Proposed Integrative Governance Framework

The authors propose linking the theory of alignment with IRM across three interconnected layers, using a governance model with detailed specifications for the mechanisms of interaction among the layers. The key difference between this new model and prior models is that, while the SAM identifies areas of alignment and Luftman's Maturity Model provides a continuum for diagnostics, no one has identified how information resources facilitate the transition from strategic intent to operational implementation, or how social alignment affects governance effectiveness. **Strategic Layer:** The strategic layer includes processes for creating a joint IT and Business plan, developing a common vision, and evaluating the organization's alignment maturity. **Information Layer:** The Information Layer serves as the critical mediating mechanism between the strategic and operational layers. It addresses Data Governance, Analytical Capability Development, and the deployment of Self-Service Business Intelligence Platforms to give everyone in the organization equal access to strategic intelligence. The rationale for the mediating role of the information layer is as follows: For example, strategic intent (i.e. the decision to differentiate itself based on customer-centricity) cannot be translated into operational alignment (i.e. delivering services tailored to individual customers) without the information layer providing the data, analysis tools and governance structures that allow the strategic intent to become actionable at the operational level. Without the mediating role of the information layer, strategic and operational governance are disconnected, a fragmentation similar to that in organizations that achieve very high levels of strategic planning maturity but do not perform well in operational alignment (Ori & Szabo, 2024).

Operational Layer: The focus of the operational layer is on Agile Project Governance, Cross-Functional Teams, and Continuous Feedback Mechanisms that allow for real-time monitoring and correction of misalignment. The three layers of the framework are related to each other through Collaborative Governance Mechanisms such as Steering Committees composed of cross-functional teams, Shared Performance Scorecards, and Rotation Programs, but the effectiveness of those mechanisms depends on the Social Dimension of Alignment. Depending on the levels of Domain Knowledge, Quality of Communication, and Trust between IT and Business Executives (Reich & Benbasat, 2000; Mendes-da-Silva & Albertin, 2024), identical governance structures will yield significantly different alignment outcomes. This is why many researchers in the field of alignment have been puzzled by the fact that organizations with similar governance structures achieve vastly different levels of alignment. According to the authors, the explanation for this puzzle lies not in structural differences but in the Organization's Relational Capital, which determines how effectively governance mechanisms are used.

Table 4. Integrative Governance Framework for IT-Business Alignment

Layer	Core Components	Governance Mechanisms	Interaction with Other Layers
Strategic	Joint IT-business planning; shared vision; alignment maturity assessment	Executive steering committees; annual strategic reviews; balanced scorecards	Defines strategic intent that the information layer translates into actionable intelligence
Information	Data governance, analytical capability development, and self-service BI platforms	Data governance councils, analytics centers of excellence, and data quality standards	Mediates between strategic intent and operational execution (Proposition 2)

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Operational	Agile project governance; cross-functional teams; continuous feedback loops	Quarterly alignment reviews; real-time dashboards; sprint retrospectives	Executes strategic intent using intelligence provided by the information layer
Social Dimension (Moderator)	Shared domain knowledge; communication quality; mutual trust between IT and business leaders	Rotation programs; joint training; informal networking; mentorship programs	Moderates the effectiveness of governance mechanisms across all three layers (Proposition 3)

5.5 Critical Assessment and Original Contribution

The current body of literature provides a substantial theoretical foundation for understanding IT-business alignment; however, it is characterized by significant gaps in conceptual development that warrant serious scholarly consideration. The first gap concerns the fact that most existing alignment frameworks have been developed within the context of established large firms in North America and Western Europe. Consequently, these frameworks will likely fail to account for the qualitatively distinct challenges faced by small and medium-sized enterprises (SMEs) and by organizations operating in emerging markets (Benkhayat et al., 2024). For example, SMEs typically lack formalized IT governance structures, operate under budget constraints that limit their ability to implement formal alignment programs, and thus rely on informal coordination mechanisms that are currently unaccounted for in the proposed maturity models. As a result, in both SME and emerging-market contexts, the social dimensions of alignment (e.g., trust, informal communication, shared tacit knowledge) may serve as the primary means of achieving alignment. This would occur because, in many cases, the social dimension of alignment functions as a substitute for the formal governance structures assumed to exist in the proposed framework's strategic and operational layers. Additionally, SMEs in emerging markets face significant barriers to aligning their IT use, including, but not limited to, institutional instability, infrastructure gaps, digital literacy disparities, and regulatory uncertainty. These barriers are largely absent from the Western-centric frameworks used to guide the construction of the proposed framework. For instance, Luftman's six-dimensional maturity model assumes the presence of formal governance structures and partnership norms, which are often absent in organizations operating in informal institutional environments. Thus, future alignment research must produce context-sensitive versions of existing frameworks calibrated to reflect the realities of SMEs and organizations operating in emerging markets. Therefore, the proposed framework must also be tested for its boundary conditions in these contexts.

The use of Generative Artificial Intelligence (GenAI) as an emerging technology creates new dynamics of alignment that prior models have not explored. The emergence of GenAI creates changes in the way we define alignment in at least three areas: 1) GenAI enables a much quicker transition from generating strategic ideas to developing prototypes that can be tested technically, which reduces the sequential nature of strategy development and implementation, which is based on the assumption of a sequential process in the SAM framework. 2) GenAI enables non-technical business users to develop their own code, create content, and produce analytical output; this has significant implications regarding the boundaries of roles between business users and technical users, which is a primary assumption made by governance models such as COBIT. 3) GenAI introduces new categories of risk, including hallucinations, uncertainty of rights to IP, and ambiguity of regulation, which will require additional governance mechanisms to ensure compliance and safety with regard to the risks introduced by GenAI. The proposed Integrative Framework, to some degree, addresses the new dynamics created by GenAI through the emphasis of agile governance and distributed alignment capability; however, to fully address the needs of GenAI, a new alignment model would require mechanisms to rapidly assess capabilities, implement AI ethics governance, and continuously monitor and adjust the boundary between human and machine decision-making authority. This represents the most urgent area requiring expansion of the theories related to alignment currently available, and the mediation of the information layer provided by Proposition 2 provides a good starting point: GenAI tools represent information layer capabilities that are primarily dependent on the effectiveness of the data quality standards governing them and the manner in which they are integrated into the decision-making process of an organization.

The unique contribution of this paper is that it brings together alignment theory and information resource management into an integrated framework for understanding alignment at the causal level, rather than simply as "best practices." Most existing frameworks have treated strategic alignment or information management in isolation; some have addressed both, but have not specified their interaction. The new framework addresses this void by developing and testing three testable propositions. Proposition 1 (Inter-Layer Reinforcement):

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Organizations that improve their maturity across all three layers of the framework (strategic, information, and operational) will show better alignment results than organizations that emphasize improvement in one layer over others, because inter-layer reinforcement produces compound governance effects that no individual layer can create. Proposition 2 (Information Layer Mediation): The information layer mediates between a company's strategic intent and its execution. Therefore, companies with poor data governance and limited analytics capabilities will see their alignment decay regardless of whether their strategic and operational governance structures are in good order. Proposition 3 (Social Alignment Moderation): Social aspects of alignment (defined in terms of common domain knowledge, communication among IT and Business Executives, and trust between these two groups) moderate the impact of all three levels of the framework, such that governance structures that are otherwise equivalent will yield measurably different alignment outcomes based on the degree of relational capital among IT and Business Executives. Therefore, the three propositions outlined above provide a falsifiable research agenda to help determine whether the new framework is valid, needs refinement, or should be rejected.

Each proposition establishes an appropriate set of methodologies for empirical testing; therefore, each requires a different methodology for longitudinal panel data across multiple organizations with differing levels of investment across the three layers. Ideally, the methodologies should utilize difference-in-differences designs to control for unobserved time-invariant organizational characteristics. Proposition 2 is tested through mediation analyses (for example, Baron & Kenny or structural equation modeling), which examine the relationships among validated measures of strategic intent, information layer maturity, and operational alignment. Proposition 3 is tested using either moderated regression or multi-group SEM analyses that compare organizations with high versus low social alignment across identical governance structures. The specificity of the methodological implications of each proposition clearly sets this research apart from other alignment models that offer only best-practice recommendations, without sufficient theoretical specification to enable researchers to test, refine, or reject the claims.

6. LIMITATIONS

While this study represents many improvements to the IT-business alignment literature, the study also has some limitations. For example, as a systematic literature review, the study is constrained by the scope and quality of the primary studies used in the analysis. However, the authors followed the PRISMA guidelines and a high-quality assessment process; the findings of this study were therefore limited by the methodological decisions of the 47 included studies. Of course, there were no opportunities to establish causality regarding the association between alignment and performance in the reviewed studies, due to the predominance of cross-sectional designs.

Additionally, although the authors performed a comprehensive search using four databases (Scopus, Web of Science, IEEE Xplore, and Google Scholar), the search was limited to studies written in English. Therefore, the study may be subject to language bias and database coverage bias. That is, the study may have excluded studies written in other languages or indexed in databases not searched during the study (e.g., EBSCO, ProQuest). Furthermore, the study's exclusion of grey literature (e.g., unpublished dissertations), working papers, and studies without a journal article could introduce publication bias. Studies that show statistical significance are much more likely to be published than those that do not.

Moreover, the proposed integrated governance framework, based on the study's synthesized evidence, is entirely conceptual and has not been empirically tested. Therefore, the three testable propositions require longitudinal and multi-organization empirical research to validate them. Until these validations occur, the authors believe the framework should be viewed as a theoretical contribution that provides a foundation for future empirical investigations; however, it should not be considered a verified causal model.

Finally, the authors would like to note that, as mentioned in Section 5.5, most of the studies included in the analysis were completed in large organizations located in North America and Western Europe. Therefore, the authors are unsure whether the results and the proposed framework are applicable to SMEs, organizations in developing countries, and organizations across various industries (e.g., creative industries, public sector organizations). The authors have discussed the framework's boundary conditions, but they have not tested them.

7. CONCLUSION

In addition to providing evidence regarding IT-business alignment through the role of information resources as a mediator and the social dimension as a moderator, this paper argues that the social dimension is an essential factor that sustains IT-business alignment. A total of 47 peer reviewed papers were reviewed systematically in conjunction with some of the major theoretical works in order to provide a robust directional evidence base to demonstrate that alignment is positively correlated with organizational performance; however, the magnitude of

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the positive correlation was shown to vary substantially depending upon the specific contextual setting and the evidence base was unable to determine whether there exists a cause-and-effect relationship between alignment and performance due to the predominance of cross sectional research design.

The proposed integrative governance framework represents a significant contribution to the literature by transitioning from the provision of descriptive best practice examples to specifying causal mechanisms via the development of three testable propositions: 1) that alignment results from inter-layer reinforcement across strategic, information and operational governance layers; 2) that the information layer acts as a mediator between strategic intent and operational execution; and 3) that social alignment will moderate the effectiveness of all governance structures. Therefore, organizations that wish to achieve and sustain alignment should invest in three areas: establishing structural governance, developing information management capabilities, and building relational capital between IT and business leaders. In summary, the findings indicate that alignment is not an event-based phenomenon but a continuous, iterative process of adaptation, and that implementing governance structures is both necessary and insufficient without relational capital between IT and business leaders.

Future research efforts should focus on empirically validating the three propositions presented within this paper. Proposition 2 (the information-layer mediation proposition) presents the least difficult conceptual challenge to overcome, as it can be evaluated using structural equation modeling techniques with existing survey instrumentation to measure data governance maturity and alignment outcomes. As previously noted, longitudinal study designs are essential for addressing the reverse-causality issue that currently exists throughout the evidence base. Additionally, future research efforts should focus on evaluating how the emergence of Generative Artificial Intelligence (GenAI) alters the dynamics of IT-business alignment (i.e., strategy-execution compression, capability democratization, and new governance demands). The information-layer mediation proposition developed within this paper presents a logical theoretical basis for understanding how GenAI affects IT-business alignment. Finally, comparative studies should be conducted across Small-to-Medium Enterprises (SMEs), emerging economies, and other contexts in which the social dimension of IT-business alignment could serve as a proxy for formal governance structures or, at the very least, a moderator of the effectiveness of formal governance structures, potentially necessitating a fundamental re-evaluation of the assumptions underlying the proposed framework.

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