

IT: Business Strategic Alignment for Sustainable Performance in Saudi Government Institutions Systematic Literature Review

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Abstract: Aligning information technology (IT) with organisational strategy is crucial for achieving a competitive advantage and enhancing performance. However, evidence on how IT-business strategic alignment operates within Saudi government institutions remains limited. **Methods:** This study conducted a systematic literature review of research published in English between 2013 and 2023. Searches in Scopus, Web of Science, and EBSCO identified 555 scholarly articles. Network-based keyword analysis was used to map the literature and track the evolution of key themes over time. **Results:** Findings reveal a layered conceptual structure. Central themes such as IT strategy, strategic alignment, organisational performance, IT governance, and digital transformation form the core of the field. Additional influential areas include communication, IT infrastructure flexibility, sustainability, and cybersecurity. Keywords like innovation, change management, and knowledge management connect otherwise distinct topic clusters, reflecting the interdisciplinary nature of the field. Persistent challenges include communication gaps, weak IT governance, and rigid IT architecture, whereas successful alignment enhances efficiency, trust in IT, and organisational performance. **Contribution:** The study proposes a framework specific to IT-business strategic alignment in Saudi public institutions, integrating insights from literature and network analysis to model sustainable organisational performance. The framework supports Saudi Arabia's Vision 2030 digital transformation goals and offers practical guidance for policymakers and IT leaders.

Keywords: IT-Business alignment, Strategic IT alignment, Saudi public sector, Sustainable organisational performance, Digital transformation

1. Introduction

For more than 30 years, the alignment of information technology (IT) and business strategies has been recognised as a central concern for organisations (Gerow et al., 2014; Guillemette & Paré, 2012; Sternad Zabukovšek et al., 2023; Njanka et al., 2021). Researchers have examined how the integration of IT and business functions creates value and improves organisational performance (Al Jaafreh & Allouzi, 2023; Chan & Reich, 2007; Chtourou Ben Amar & Ben Romdhane, 2020). Successful alignment is linked to competitive advantage and profitability (Aversano et al., 2012; Baker et al., 2011; Jonathan et al., 2023; Mu et al., 2022), while misalignment often results in failed IT initiatives, wasted resources, and negative organisational consequences (Chen, 2010; Ravishankar, 2013).

Despite extensive research, most studies have been conducted in the private sector or Western contexts. There is limited empirical evidence on how IT-business alignment affects public sector organisations in Saudi Arabia, despite this sector undergoing rapid digital transformation under Vision 2030. This gap highlights the need to explore alignment not only as a management challenge but also as a driver of sustainability and long-term institutional performance in the Saudi context.

This study seeks to answer three key research questions:

- What factors influence IT-business strategic alignment?
- How does alignment affect organisational and sustainability performance in Saudi Arabia?
- How can IT-business alignment be systematically evaluated in relation to sustainability outcomes?

To address these questions, a systematic literature review (SLR) was conducted. Several scholars have proposed models to enhance the effectiveness of information systems (IS) in improving organisational performance. The Strategic Alignment Model (SAM) established by (Venkatraman et al., 1993) is widely recognised as the most prominent and extensively utilised among these models (Aversano et al., 2012, Gerow et al., 2014, Goepf and Avila, 2015, Luftman et al., 2012, Alghazi et al., 2017). The SAM model effectively facilitates strategic IT management by harmoniously coordinating four closely intertwined domains: business strategy, IT strategy, organisational infrastructure, and IT infrastructure, enabling seamless integration and operation (Colberg, 2022). Currently, SAM model holds an elevated level of respect in the field of management information systems (MIS) and is associated with ongoing research topics. Nevertheless, the SAM model has been subject to criticism due to its purely theoretical character, which hinders its ability to adequately analyse and evaluate degrees of alignment, as pointed out by (Gerow et al., 2015) and (Luftman et al., 2017). Although the SAM model has

several drawbacks, it has served as a benchmark for numerous researchers on this subject (Goepf and Avila, 2015, Ullah and Lai, 2013) . A review of studies shows that most scholars rely on the Strategic Alignment Model (SAM) as a foundation, often extending it with additional constructs.

The SAM model has limitations in Saudi Arabia's public sector. The way IT managers communicate and follow cultural norms in these organisations is unique compared to Western cultures. These differences directly affect how IT strategies are implemented, proving that a specific, tailored approach is needed. See Figure 1

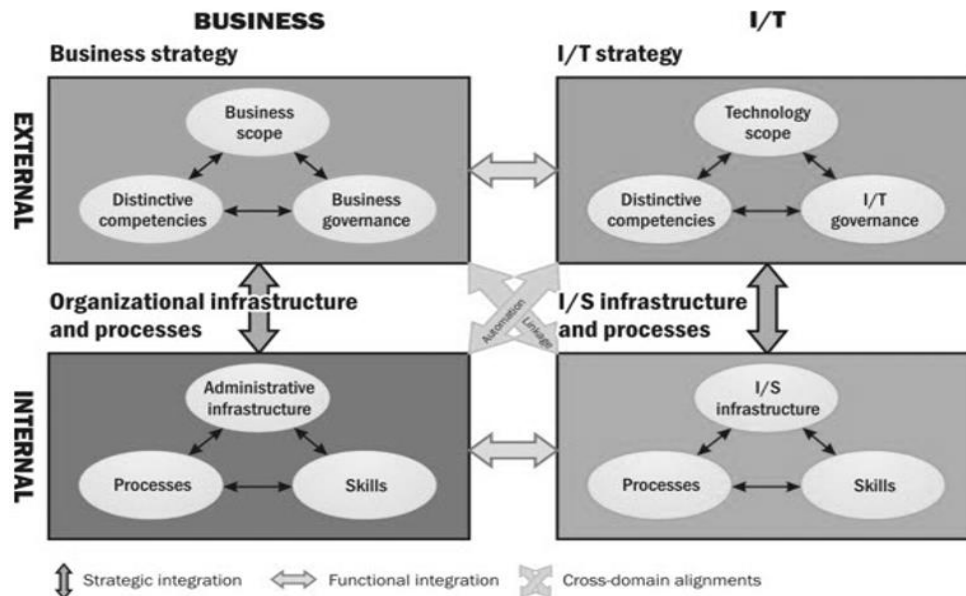


Figure 1: The Henderson and Venkatraman Strategic Alignment Model (SAM) ,1993

Moreover, this research builds on SAM but moves beyond it by identifying and integrating other critical elements highlighted in the literature. These include strategic flexibility, IT credibility and trust, IT governance, and IT infrastructure flexibility (Johnson & Lederer, 2010; Butler, 2022; Rivas-Asanza et al., 2018; Khuntia et al., 2024; Greulich et al., 2024). Such factors are particularly important in the public sector, where bureaucratic processes, evolving policies, and digital reforms shape how IT is adopted and aligned with institutional goals.

In summary, this study clarifies the roles of executive support, coordination, and knowledge sharing in alignment, focusing specifically on Saudi Arabia’s public sector. By doing so, it contributes a more context-specific and sustainable perspective to the alignment debate.

2. Methodology

This study followed the Systematic Literature Review (SLR) approach, guided by the PRISMA 2020 framework (Liberati et al., 2009; Moher et al., 2009; Page et al., 2021). The process was informed by the scoping principles of Arksey and O’Malley (2005) and Levac et al. (2010), but it was executed as a full SLR to ensure methodological transparency and reproducibility.

The review was conducted in five main phases. First, the research questions were clearly defined to guide the study. Second, relevant studies were identified through systematic searches. Third, eligible studies were selected based on predefined inclusion and exclusion criteria. Fourth, data from the selected studies were extracted and thoroughly analysed. Finally, the results were synthesised and reported to provide a comprehensive overview of the findings.

2.1 Search Strategy

A comprehensive search was conducted across three major academic databases : Scopus, Web of Science (WOS), and EBSCOhost. Indeed, for studies published between 2013 and 2023. Only peer-reviewed journal articles written in English were included.

The final search syntax applied was:

(TITLE-ABS-KEY("information technology" OR "IT" OR "information systems"))

AND

(TITLE-ABS-KEY("business alignment" OR "IT-business alignment" OR "strategic alignment" OR "IT strategy"))

AND

(TITLE-ABS-KEY("sustainable" OR "sustainability" OR "organisational performance" OR "organizational performance"))

AND

(TITLE-ABS-KEY("public sector" OR "government" OR "Saudi Arabia"))

This search identified 3,259 records (1,265 from WOS, 1,361 from Scopus, and 633 from EBSCO). After removing 473 duplicates, 2,786 unique records remained for screening.

2.2 Screening and Selection

Full-text screening based on inclusion and exclusion criteria (Table 1).

Table 1: Inclusion and Exclusion Criteria

| Criterion | Inclusion | Exclusion |
|------------------|---|---|
| Language | English | Non-English |
| Publication Type | Peer-reviewed journal articles | Conference papers, book chapters, reports |
| Period | 2013-2023 | Before 2013 |
| Focus | IT–business alignment, organisational performance, sustainability, public/government sector | Non-organisational or technical IT studies |
| Country Context | Global and Saudi Arabia | Studies unrelated to organisational context |

After screening, 555 papers met the inclusion criteria and were included in the final synthesis.

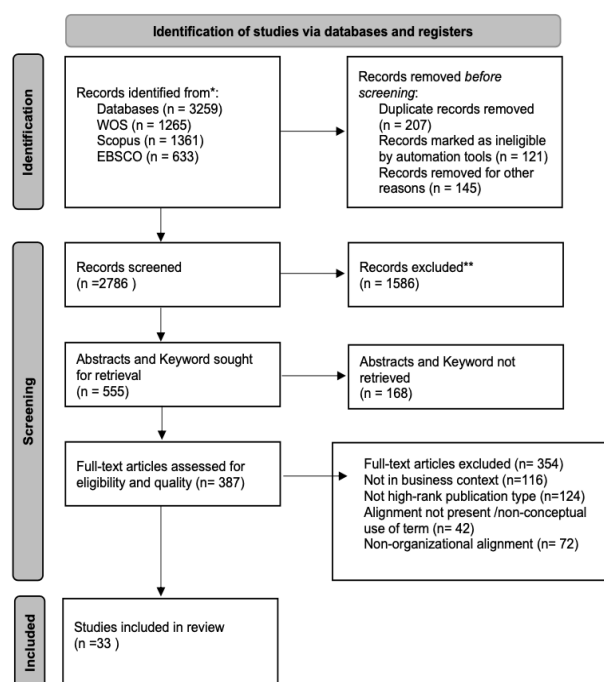
2.3 Quality Appraisal

Although the review was guided by scoping principles for the initial mapping, a light-weight quality appraisal was applied to maintain rigor. Each study was evaluated based on methodological clarity, relevance to IT–business alignment, and its theoretical or empirical contribution.

2.4 Data Extraction and Analysis

Figure 2 presents the PRISMA 2020 flow diagram, showing the number of records identified, screened, excluded (with reasons), and included in the final review

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases and registers only



*Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers).

**If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools.

Figure 2: PRISMA 2020 flow diagram

In summary, researchers have shown considerable interest in examining the impact of information technology (IT) alignment across various sectors due to its significance and the advantages it offers in enhancing organizational sustainability (Johnson & Lederer, 2010). Conducting a Systematic Literature Review (SLR) covering the period 2013–2023 provides a contemporary perspective on research advancements and trends, ensuring that the findings are relevant and applicable to current research questions and methodologies while capturing the latest developments in the field (El Archi et al., 2023).

2.5 Analysis: Academic Disciplines, Journals, and Country Distribution

This study searched three major electronic databases *Scopus*, *Web of Science*, and *EBSCO* which collectively cover a wide range of disciplines, including business, management, social sciences, and humanities. Scopus provides broader coverage of natural sciences compared to the others (Mongeon & Paul-Hus, 2016). From this search, 555 articles published between 2013 and 2023 were analysed.

2.5.1 Academic disciplines

Table 2 shows the distribution of articles across disciplines. Management dominates with 102 articles (35.92%), reflecting the centrality of strategy and management in alignment research. Disciplines such as Green Sustainable Science and Technology (28.87%), Environmental Studies (28.17%), and Environmental Sciences (27.11%) also appear strongly, showing the increasing connection between IT alignment, sustainability, and environmental performance. By contrast, fields like Computer Science (2.82%), Economics (2.47%), and Industrial Engineering (2.11%) are less represented, but their contributions highlight technical and interdisciplinary dimensions often overlooked in mainstream alignment studies.

Table 2: Academic disciplines represented in alignment research (2013–2023)

| No | Academic Discipline | Articles | % of Total |
|----|--|----------|------------|
| 1 | Management | 102 | 35.92% |
| 2 | Green Sustainable Science & Technology | 82 | 28.87% |

| No | Academic Discipline | Articles | % of Total |
|----|--|----------|------------|
| 3 | Environmental Studies | 80 | 28.17% |
| 4 | Environmental Sciences | 77 | 27.11% |
| 5 | Business | 61 | 21.48% |
| 6 | Information Science & Library Science | 56 | 19.72% |
| 7 | Computer Science: Information Systems | 53 | 18.66% |
| 8 | Computer Science: Interdisciplinary Apps | 8 | 2.82% |
| 9 | Economics | 7 | 2.47% |
| 10 | Engineering: Industrial | 6 | 2.11% |

Note: Management dominates alignment research, but sustainability-related fields are increasingly prominent.

2.5.2 Journals

A wide range of journals contributed to the dataset (Table 3). The journal Sustainability published 69 articles (12.43%), making it the leading outlet. Information systems-focused journals, such as *Information Systems Research* (3.42%) and *Information Systems Frontiers* (2.70%), also play a key role, demonstrating the relevance of alignment research to IS theory and practice. Business-oriented journals like *Business Systems Research Journal* and *Information Management* further reflect the multidisciplinary nature of the topic.

Table 3: Leading journals publishing alignment research (2013–2023)

| No | Journal Name | Articles | % of Total |
|----|-----------------------------------|----------|------------|
| 1 | Sustainability | 69 | 12.43% |
| 2 | Information Systems Research | 19 | 3.42% |
| 3 | Information Systems Frontiers | 15 | 2.70% |
| 4 | Business Systems Research Journal | 14 | 2.52% |
| 5 | Information Management | 12 | 2.16% |
| 6 | Other journals (combined) | 426 | 76.77% |

Note: Sustainability dominates, but IS journals provide key conceptual contributions.

2.5.3 Countries

Research output is globally distributed across 41 countries (Table 4). The United States leads with 52 articles (9.37%), followed by China (7.39%) and England (5.95%). Australia, Spain, Brazil, and South Korea also make strong contributions. This diversity highlights the global relevance of IT-business alignment, though the dominance of the US and China suggests stronger research infrastructures and funding in those contexts.

Table 4: Country distribution of alignment research (2013–2023)

| No | Country | Articles | % of Total |
|----|--------------|----------|------------|
| 1 | USA | 52 | 9.37% |
| 2 | China | 41 | 7.39% |
| 3 | England | 33 | 5.95% |
| 4 | Australia | 18 | 3.24% |
| 5 | Spain | 18 | 3.24% |
| 6 | Brazil | 17 | 3.06% |
| 7 | South Africa | 14 | 2.52% |
| 8 | South Korea | 13 | 2.34% |
| 9 | Taiwan | 13 | 2.34% |
| 10 | India | 11 | 1.98% |

Note: Contributions are concentrated in the US, China, and England, reflecting established research hubs.

Simply, the research patterns show that developed economies like the US and China lead the way. Their strong research systems and funding allow them to publish more (Mongeon and Paul-Hus, 2016). The core of this research is still in management and IT, which makes sense given that alignment is a strategic issue (Chan and Reich, 2007). Interestingly, more studies are showing up in sustainability journals, pointing to a new focus on connecting IT alignment with environmental and social performance (Mio et al., 2020). Meanwhile, emerging economies like Saudi Arabia are not publishing as much, which means we really need more research tailored to their unique circumstances (Khalil and Belitski, 2020).

3. Proposed Framework: IT–Business Strategic Alignment for Sustainable Performance

The proposed framework extends the Strategic Alignment Model (SAM) and contextualises it within the Saudi public sector. It positions sustainability as a central organisational outcome. The framework integrates business and IT strategy, organisational infrastructure, and IT capabilities. This integration achieves strategic coherence and advances sustainable institutional performance in line with Vision 2030 objectives. Communication serves as a key mechanism. It minimises misalignment and facilitates knowledge exchange across organisational levels. Robust IT governance structures ensure accountability, effective risk management, and regulatory compliance. Trust in IT systems enhances user confidence. It also promotes the institutionalisation of digital transformation initiatives. Infrastructure flexibility enables agile technology deployment. It further supports the adoption of sustainable operational practices. Together, these factors reinforce strategic alignment and contribute to the long-term sustainability and digital maturity of Saudi public institutions. Table 5 presents the definitions of the key components of the proposed framework, aligned with the framework illustrated in Figure 3.

Table 5: Definitions of the proposed framework.

| Factors | Definition | References |
|--|--|--|
| IT-business strategic alignment (SAM perspective) | <i>The degree to which IT strategy and business strategy are mutually supportive, ensuring that technology investments and initiatives enable the organisation's goals, improve performance, and create sustainable competitive advantage</i> | <i>(Henderson & Venkatraman, 1993).</i> |
| Communications | <i>the effective on-going exchange of knowledge and clear understanding between business and IT units within Organisations allowing them to comprehend the strategies, plans, risks, environments (both Business and IT) and priorities of the Organisation and the way to achieve them</i> | <i>(Luftman, 2004, Luftman, 2003, Luftman et al., 2017)</i> |
| IT infrastructure flexibility | <i>The definition of IT infrastructure flexibility emphasizes IT infrastructure's ability to easily and readily support a wide variety of hardware, software, and communication technologies, to distribute information to anywhere inside an Organisation and beyond, and to support the design, development, and implementation of a heterogeneity of business applications.</i> | <i>(Chen and Siau, 2012, Byrd and Turner, 2001)</i> |
| IT Governance | <i>The allocation of authority for IT decisions and the processes IT and business manager's use at strategic, tactical, and operational levels for setting IT priorities, allocating resources, and controlling activities.</i> | <i>(Van Grembergen et al., 2004, Simonsson et al., 2010, Luftman et al., 2017)</i> |
| Trust in IT | <i>The subjective probability by which Organisations believe that the underlying technology infrastructure can facilitate transactions according to their confident expectations.</i> | <i>(Thatcher et al., 2010, Ratnasingam and Pavlou, 2003)</i> |
| sustainability performance | <i>sustainability performance is the aggregate negative or positive bottom line of economic, environmental and social impacts of an entity against a defined baseline.</i> | <i>(Wijethilake, 2017, Labuschagne et al., 2005, Development et al., 1992, Büyüközkan and Karabulut, 2018)</i> |

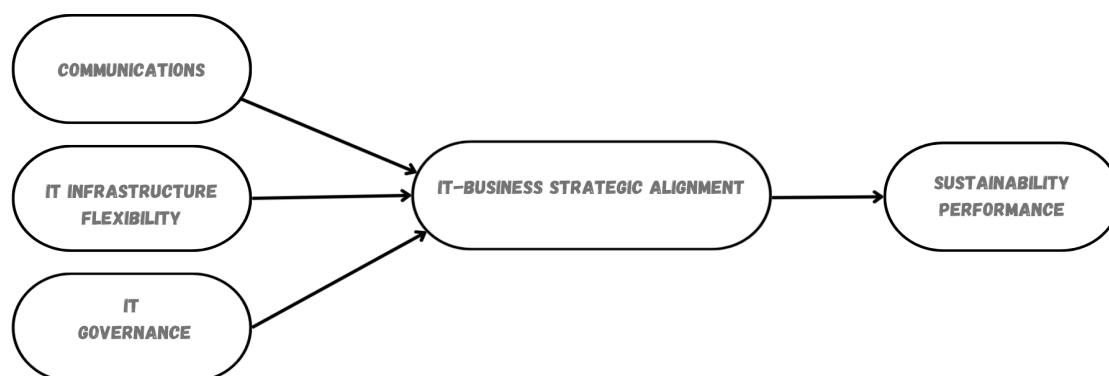


Figure 3: Proposed Framework: IT–Business Strategic Alignment for Sustainable Performance in Saudi Arabia

4. Discussion and Conclusion

This systematic literature review addresses a critical gap in understanding IT-business strategic alignment. It identifies core theoretical concepts and their interrelationships. The analysis confirms that IT strategy, strategic alignment, and IT governance are foundational elements. Factors such as communication, cybersecurity, innovation, and change management highlight the dynamic nature of the field. A key finding is the link between IT-business alignment and sustainability, as reflected in research published in environmental and sustainability journals. Most studies focus on developed countries. There is limited research from emerging economies in the Middle East, including Saudi Arabia. To address this, the study focuses on the Saudi public sector. This sector is undergoing rapid digital transformation under Vision 2030, highlighting the critical importance of alignment in driving sustainable outcomes.

The primary contribution of this study is a new conceptual framework for IT-business strategic alignment, tailored to Saudi public institutions yet applicable to similar Middle Eastern contexts. This framework synthesizes insights from the literature into a dynamic model supporting sustainable organisational performance, providing practical guidance for executives and IT leaders in implementing alignment initiatives and informing policy decisions. It also acknowledges persistent challenges, including communication gaps and rigid IT architectures, integrating these contextual factors to enhance theoretical understanding and deliver actionable insights for both practitioners and policymakers.

Building on the Strategic Alignment Model (SAM) (Henderson & Venkatraman, 1993), the framework is extended for the Saudi public sector by incorporating strategic flexibility, IT credibility and trust, governance mechanisms, and infrastructure flexibility, all critical for sustainable institutional performance. Strategic flexibility enables public institutions to adapt objectives to changing policy and regulatory demands, while IT credibility and trust strengthen stakeholder confidence in digital initiatives. Governance mechanisms ensure accountability and effective decision-making, and infrastructure flexibility allows IT systems to support evolving business needs. These extensions are expected to reinforce alignment between IT and business strategies, promoting sustainability outcomes consistent with Vision 2030. The framework is further supported by a concept map and testable propositions, providing a robust foundation for future empirical research. Practically, it guides CIOs and PMOs in enhancing strategic and IT capabilities, while policy implications emphasize governance requirements and performance metrics to reinforce sustainability objectives. Finally, the framework establishes a research agenda for measuring constructs such as IT credibility and governance maturity, and linking them to sustainable performance in public sector institutions.

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AI Declaration: This paper was developed without the use of AI tools in generating the main content. AI assistance was used only for formatting guidance, and grammar correction.

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