

Strategic Alignment between IT and Business Strategy for Driving Organizational Change

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Received: 18 March 2025; Revised: 11 April 2025; Accepted: 27 May 2025; Published: 30 June 2025

Abstract

It is well established that the alignment of IT strategy and business strategy is a major factor contributing to organizational change and performance. But very little empirical research addresses the "how"-how does the linkage from IT capabilities to change outcome work? In this paper, we explore the impact of IT capabilities on organizational change, both directly and through alignment, considering leadership commitment and organizational culture as moderators. A quantitative, survey approach was used, collecting responses from 210 IT managers, business executives, and senior leaders across several industries. Multi-item Likert scales were used to measure the constructs. Reliability was measured using Cronbach's alpha and construct validity using factor analysis. We used structural equation modeling to test our hypothesized relationships. As expected, IT capabilities are found to influence strategic alignment positively ($\beta = 0.71$, $p < 0.001$), which positively impacts change ($\beta = 0.64$, $p < 0.001$). The direct impact of IT capabilities on organizational change is also positive ($\beta = 0.28$, $p < 0.01$). Therefore, we find partial mediation of alignment. Both leadership commitment ($\beta = 0.21$, $p < 0.05$) and organizational culture ($\beta = 0.18$, $p < 0.05$) enhance the alignment-change relationship positively. The model as a whole explains 62% of the variance in organizational change. The findings provide empirical evidence for the alignment frameworks to work within today's digital environment, while also offering practical insights for managers on how to achieve successful change by integrating IT and business strategies. More research would need to extend this study toward longitudinal designs, compare cross-sectors, and examine IT-business alignment for specific digital projects.

Keywords: Strategic Alignment; IT Capabilities; Organizational Change; Leadership Commitment; Organizational Culture; Digital Transformation.

I. INTRODUCTION

Alignment between business and IT strategy has become an essential determinant for organizational success in this evolving digital world, as firms continuously count on technology for enhanced efficiency, effective innovation, and competitive advantage (Coltman et al., 2015; Tallon & Pinsonneault, 2011). However, the discrepancy in business and IT strategies can be detrimental and lead to wasted resources and failed initiatives; thus, the coherence of the strategies is emphasized (Hanelt et al., 2021; Bharadwaj et al., 2013).

In the current business world and rapid digital transformation, alignment has become increasingly prominent in facilitating organizational agility, innovation diffusion, and improved organizational performance outcomes (Wessel et al., 2021; Fredson et al., 2021). Aligning IT capabilities with business strategy enables firms to address dynamic market environments, implement new business processes, and implement meaningful change in the organization (Wahyudin et al., 2020; Li et al., 2016). However, to date, empirical evidence demonstrating the direct link between IT-business strategy alignment and organizational change outcomes has remained minimal, and thus, there is a need to identify these outcomes as well as the processes through which alignment impacts organizational change (Panda, 2022; Gerow et al., 2015). Understanding this relationship is crucial for providing meaningful guidance to practitioners and policymakers facing daunting digital transformation challenges.

The purpose of this research study is to explore the processes and outcomes of IT-business strategy alignment through (i) the assessment of the association between IT capabilities and IT-business strategy alignment, (ii) the impact of IT-business strategy alignment on organizational change outcomes, and (iii) analysis of the moderating role of some other critical factors, such as leadership commitment and organizational culture. This study makes both theoretical contributions by extending alignment theory into the domain of organizational change, and practical contributions by informing managers about designing and implementing IT-driven business changes.

The remaining part of this paper is organized as follows. Section 2 describes relevant literature and identifies the research gap. Section 3 states the conceptual framework and hypothesis. Section 4 explains the method, including data collection, measurement, and data analysis. Section 5 presents the results. Section 6 discusses the findings and practical implications. Section 7 concludes the study with a summary of contributions, limitations, and suggestions for future research.

II. LITERATURE REVIEW

The Strategic Alignment Theory focuses on ways that IT initiatives are integrated with business strategy in order to support organizational performance (Sadeghi, 2011). Traditional models of strategic alignment focus on two main levels of fit between IT capabilities and the business strategy (Lozano, 2013). The traditional IT/business strategic fit suggests that IT be aligned with business strategy so that IT is supportive of, not an impediment to, the business strategy (Bock et al., 2012). Later, the adaptation of IT/business strategic fit theories has allowed the inclusion of digital organizations by including dynamism to account for environments where IT changes rapidly, and innovation happens at a faster rate.

There is a need to examine IT capabilities in relation to strategic alignment in order to allow the organization to achieve greater support for business processes (Al-Haddad & Kotnour, 2015). Sound IT infrastructure, fluid and scalable systems, and the use of decision support tools will enable organizations to remain adaptive in light of evolving business requirements (Sharma et al., 2022). Business strategies, especially in terms of implementing digital initiatives like ERP systems, the utilization of the cloud, and data analytics, bring together IT and business strategy more so. The use of these capabilities enables organizations to become more responsive, increase

the efficiency of business processes, and make more informed decisions based on accurate, up-to-date information (Whelan-Berry & Somerville, 2010).

In relation to strategic IT/business alignment, there are other organizational change factors that have an impact on it. Leadership commitment, an organizational culture that embraces change, and the rate of innovation will impact the level of change (Torres & López, 2024). If a leader is involved and is supportive of strategic IT/business alignment and fosters an environment that supports change, the organizational change process will go more smoothly (Cinquini & Tenucci, 2010). Similarly, employee preparedness in terms of being ready to implement changes, specifically regarding digital processes, will have an impact on the organizational change processes (Stephan et al., 2016).

While the theory behind strategic IT/business alignment is widely documented, there is a lack of studies that connect strategic IT/business alignment to organizational change outcomes. Most research conducted has focused on conceptual models or isolated IT capabilities, with few studies that empirically relate the fit to the actual change outcomes and performance. Therefore, this research seeks to fill in this gap by investigating how strategic IT/business alignment impacts the outcome of organizational change.

III. CONCEPTUAL FRAMEWORK

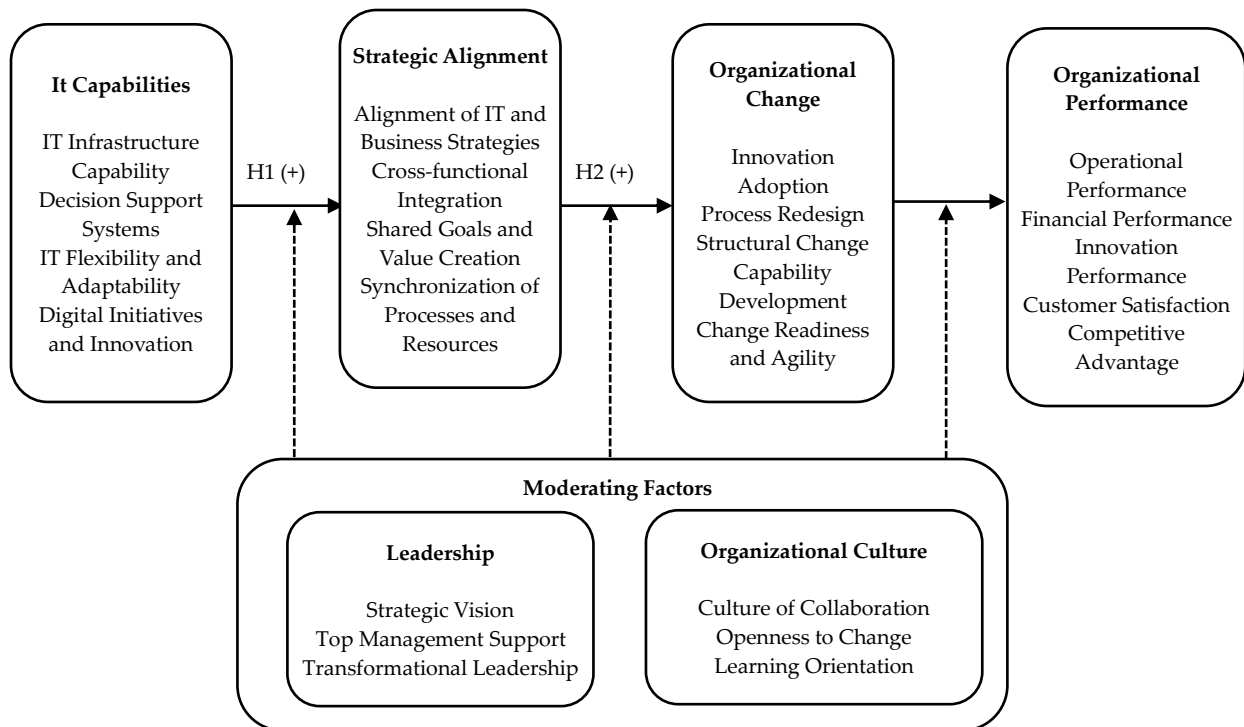


Figure 1: Conceptual Framework of IT-Business Strategic Alignment Driving Organizational Change

This research framework provides an insight into how the IT capability affects organizational performance through strategic alignment and organizational change. As revealed in figure 1, IT capability provides a base for alignment with business strategy. Strategic alignment with business

strategy leads to organizational change, which provides the improvement of organizational performance.

IT Capabilities constitute the technical infrastructure, decision support mechanisms, and digitally-driven projects to help organizations achieve success when reacting to strategic needs. These capabilities are important because they offer the flexibility to adapt to the changing demands of business operations.

Strategic Alignment: The extent to which IT is integrated with the business strategy. This allows resources to be invested efficiently in areas that support business strategy and decisions regarding the business to be made effectively.

Organizational Change Measures new procedures, systems, and work practices that arise as a consequence of business and IT alignment efforts. Successful change depends upon leadership support, adoption of innovation, and a willingness to adapt.

Organizational Performance is the final performance outcome, which is measured by organizational efficiency improvement, innovation capability improvement, and competitive advantage improvement. The framework suggests that the level of IT capabilities positively influences the strategic alignment, which consequently enhances organizational change and performance.

IV. METHODOLOGY

4.1 Research Design

This survey-based quantitative research design is used to investigate the IT capability-strategic alignment-organizational change relationship. A survey design can gather a systematic body of data across several organizations to test hypotheses in a statistically rigorous manner. Survey designs are suitable for comparing levels of IT-business alignment and their effect on outcome measures of organizational change across multiple organizational settings.

4.2 Sample and Data Collection

The study's population includes IT managers, business unit managers, and top-level executives who made strategy and operations decisions. The members in the population, with experience in IT-business integration projects, are sampled using a purposive sampling technique. A structured electronic questionnaire is used for the data collection; optional follow-up interviews may be set up to clarify the ambiguous answers. The size of the sample is estimated through power analysis to ensure it is large enough for the SEM and regression analysis.

4.3 Variables and Measurement

- **The independent variables were as follows:** IT capabilities encompassing IT infrastructure, decision support systems, IT flexibility, and digital initiatives.
- **Mediator:** Strategic alignment (how well the IT initiatives are coordinated with the business goal).
- **Dependent Variables:** Organizational change results, namely adoption of innovation, redesign of process, organizational change, and change in capability.

- **Moderators:** Leader commitment and organizational culture (which will moderate the relationship between alignment and change).

All of these constructs are operationalized using multi-item Likert-type scales. Reliability was determined using Cronbach's alpha, and construct validity was ensured by using factor analysis (exploratory and confirmatory) so that it could be confirmed that the measurement scale taps into the construct it is meant to.

4.4 Data Analysis

Using structural equation modeling (SEM), analysis of the proposed relationships was conducted. Regression and correlation analysis were applied in a complementary manner for verification of the model, examination of the direct and indirect effects, and testing the moderating relationship. Goodness-of-fit indices (CFI, RMSEA, TLI, etc.) were reported, indicating strong support for the model's construct. Path coefficients and p-values suggest whether the relationship is significant in direction and magnitude of association between constructs, and indicate the IT-business alignment's effect on the organizational change outcomes.

V. RESULTS

5.1 Descriptive Statistics

The data were collected from 210 respondents: IT managers, business unit heads, and top executives. The means of the key constructs show a fairly high perception of IT capabilities ($M=4.21$, $SD=0.52$) and alignment with business strategy ($M=4.05$, $SD=0.58$). Organizational change outcomes also averaged above the midpoint ($M=3.88$, $SD=0.61$), indicating that respondents experienced noticeable organizational change efforts.

Table 1: Descriptive Statistics of Key Constructs

Construct	Mean	SD	Min	Max
IT Capabilities	4.21	0.52	2.8	5.0
Strategic Alignment	4.05	0.58	2.5	5.0
Organizational Change	3.88	0.61	2.0	5.0
Leadership Commitment	4.12	0.57	2.7	5.0
Organizational Culture	4.08	0.54	2.9	5.0

Table 1 provides the descriptive statistics, which indicate that respondents recorded the highest ratings for IT capabilities ($M = 4.21$), followed by organizational change ($M = 3.88$), with relatively strong ratings for strategic alignment, leadership commitment, and organizational culture, signifying the strong endorsement for IT-business integration and change management.

5.2 Correlation Analysis

Pearson correlations have shown a strong positive relationship between IT capabilities, strategic alignment, and organizational change. Strategic alignment acts as a mediator between IT capabilities and organizational change. Leadership commitment and organizational culture moderate the relationship between alignment and change.

Table 2: Construct Correlations

Construct	1	2	3	4	5
1. IT Capabilities	1				
2. Strategic Alignment	0.68**	1			
3. Organizational Change	0.54**	0.62**	1		
4. Leadership Commitment	0.45**	0.48**	0.50**	1	
5. Organizational Culture	0.42**	0.46**	0.49**	0.53**	1

*Note: $*p < 0.01$

Table 2 displays all high positive correlations between constructs. IT capabilities have a significant positive correlation with strategic alignment ($r = 0.68$). Both strategic alignment and IT capabilities show a moderate positive correlation with organizational change ($r = 0.54, 0.62$, respectively). Additionally, Leadership commitment and organizational culture positively correlated with IT capabilities, alignment, and change at moderate levels. Correlations of Leadership commitment with strategic alignment and organizational change are positively correlated with IT capabilities. All correlations are found to be significant ($p < 0.01$).

5.3 SEM / Regression Analysis

Table 3: SEM Path Analysis of IT-Business Alignment and Organizational Change

Path	β	p-value	Effect Type	Supported
IT Capabilities → Strategic Alignment	0.71	<0.001	Direct	Yes
Strategic Alignment → Organizational Change	0.64	<0.001	Direct	Yes
IT Capabilities → Organizational Change	0.28	<0.01	Direct (partial mediation)	Yes
Leadership Commitment × Alignment → Change	0.21	<0.05	Moderating	Yes
Organizational Culture × Alignment → Change	0.18	<0.05	Moderating	Yes

Table 3 shows the path analysis result from SEM. As can be observed, all the hypothesised links are supported. IT capabilities have a positive and significant impact on strategic alignment, and organizational change is significantly and positively affected by strategic alignment. Leadership commitment and culture positively moderate the alignment-change path and indicate the importance of managers and cultural influence in IT-business integration.

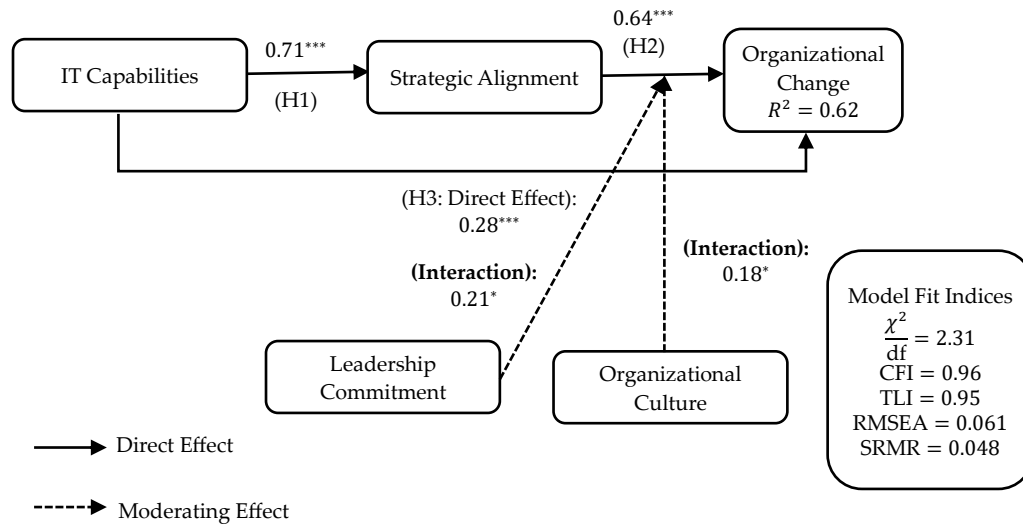


Figure 2: SEM Path Diagram of IT-Business Alignment and Organizational Change

Figure 2 shows the structural equation model of relationships among IT capability, strategic alignment, and organizational change. The relationships are indicated by solid arrows, where solid arrows demonstrate a direct effect. There were significant positive links between IT capabilities and strategic alignment ($=0.71$) as well as between strategic alignment and organizational change ($=0.64$). IT capability shows a partial mediation effect on organizational change via direct effect ($=0.28$). The moderating roles of leadership commitment ($=0.21$) and organizational culture ($=0.18$) are presented by dotted arrows, which means both factors moderate the link between strategic alignment and organizational change positively. All fit statistics are within the desired level for the proposed model ($df=2.31$, $CFI=0.96$, $TLI=0.95$, $RMSEA=0.061$, $SRMR=0.048$).

5.4 Key Findings

The findings show that IT capabilities contribute to organizational change success indirectly and enhance strategic alignment. Strategic alignment mediates the link between IT capabilities and change success. Leadership commitment and conducive culture further support this mediating mechanism positively and reveal the need for managers' and culture's role in the IT-business integration process.

VI. DISCUSSION

The results support that IT capabilities have a positive effect on strategic alignment and organizational change. The significance and large path coefficient from IT capabilities to strategic alignment ($= 0.71$) also confirmed previous theoretical arguments, suggesting that IT infrastructure, dynamic systems, and digital projects provide critical support to IT-business alignment. The mediation role of strategic alignment from IT capabilities to organizational change indicates that synchronized business IT strategies are vital to facilitate organizational process change, adoption of new technology, and changes in the organizational structure.

The results present a clear implication for the practitioners. Managers who intend to implement change within the organization need to build IT capabilities and ensure they fit with the strategy of the business. The strong influence of leadership and organizational culture on the relationships demonstrates that leaders need to develop and promote a cooperative, innovative, and flexible culture, while ensuring strong strategic alignment.

There will be challenges when implementing the IT capabilities and ensuring the fit between IT-business alignment and organizational change, such as resistance to change, resource scarcity, and cultural issues. Managers need to overcome these challenges by facilitating training, ensuring optimal use of resources, and cultivating a culture that embraces change. Continuous tracking and feedback are helpful to ensure that the fit among the three aspects of the organization is aligned with a desirable outcome.

This study has wider implications for policy making, digital transformation strategy formulation, and organizational agility management, indicating that a strong IT-business alignment helps organizations respond more appropriately to unexpected market shocks, adopt emerging technology faster, and achieve sustained competitive advantage. These findings emphasize the necessity of a well-connected business-IT alignment, which should not only focus on the technology itself, but also, at the very least, be a driving force of organizational transformation.

VII. CONCLUSION

In conclusion, this research finds empirical support for the IT capability and strategy alignment in impacting the change and performance in organizations. Through structural equation modeling, findings suggest IT capability has a significantly positive influence on strategy alignment ($\beta = 0.71$, $p < 0.001$), while strategy alignment impacts organizational change positively ($\beta = 0.64$, $p < 0.001$). Furthermore, there is a significant direct effect of IT capability on organizational change ($\beta = 0.28$, $p < 0.01$), showing partial mediation. Meanwhile, leadership commitment ($\beta = 0.21$, $p < 0.05$) and organizational culture ($\beta = 0.18$, $p < 0.05$) have a significant moderating effect on the impact of strategy alignment on organizational change. In summary, the developed model explains a great deal of variation in organizational change outcomes ($R = 0.62$). Theoretically, this research is a step towards testing alignment theories on modern digital environments and identifying the mediating and moderating mechanisms in promoting organizational change and performance. It demonstrates that technology-business integration is not only a technological support but also a source for successful change. Managerial and cultural influences on the alignment-change relationship are also underlined. This study has several limitations. First, this cross-sectional design restricts causal interpretations. The sample size limits the generalization power. Furthermore, a restricted sample size restricts the study to certain industry sectors, therefore limiting the applicability. Future research should employ a longitudinal design in order to assess the dynamic change process of IT-business alignment. Additionally, the current findings are based on a sample from a certain industry sector, so comparison across industries and/or across countries, further research on certain digital implementation, like adoption of artificial intelligence, enterprise resource planning systems, or cloud computing, etc., would be beneficial.

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