

# Strategic Alignment for Digital Transformation: Insights from the Public sector

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**Abstract.** Digital transformation, a form of Information Technology (IT) enabled organisational transformation, is recognised as a phenomenon that has resulted in a business model innovation fundamentally changing how organisations operate. In the public sector, the proliferation of emerging digital technologies has brought about myriads of opportunities. The findings of empirical studies indicate that digital transformation has improved not only the efficiency of business processes but also the variety and quality of public services delivered to citizens. However, success in digital transformation is dependent on various factors. Strategic alignment—the alignment between IT and overall organisational strategy—is considered one of the essential prerequisites for digital transformation. This paper presents an ongoing study exploring the role of strategic alignment on digital transformation. Preliminary results identified various organisational and managerial factors related to strategic alignment, which are critical for digital transformation. Expected contributions and future research directions are proposed.

**Keywords:** Business-IT Alignment, Digital Transformation, IT Enabled Organisational Transformation, Strategic Alignment, Public Organisations.

## 1 Introduction

Digital transformation, defined as “*technology-induced change on many levels in the organisation that includes both the exploitation of digital technologies to improve processes, and the exploration of digital innovation, which can transform the business model*” [1, p. 2], is a topic currently debated among Information Systems (IS) researchers and practitioners. Despite the emergence of new technologies and improved business models as the result of these technologies in the business processes of today’s organisations, digital transformation is still a concept not fully understood yet [2]. The extant literature also suggests a lack of attention on studies exploring digital transformation in the public sector. Nevertheless, there are exponentially growing digital transformation initiatives both in the private and public organisations [3].

On the other hand, researchers argue that previous digital transformation studies focused on the technical aspects of emerging technologies while the formulation of new strategies is overlooked [3, 4]. Strategic alignment, for instance, is among the IS topics

that are not studied within the context of digital transformation. Defined as “*the application of information technology in an appropriate and timely way, in harmony with business strategies, goals and needs*” [5, p. 3], strategic alignment is considered to be one of the important prerequisites for digital transformation [6, 7]. According to [3], strategic alignment in the public sector is critical to facilitate a common understanding and shared vision among the various stakeholders resulting in the realisation of the benefits derived from digital transformation. To contribute to the emerging literature on digital transformation and strategic alignment, this study is set out to explore the role of strategic alignment for digital transformation. Public organisations are targeted in response to the calls for further studies on the relationship between strategic alignment and digital transformation within the sector (e.g., [8, 9]). Thus, the following research question is formulated to meet the objective of the study: *What is the role of strategic alignment for public organisations undertaking digital transformation?*

The remainder of this paper is structured as follows. First, a summary of related studies on digital transformation and strategic alignment is presented. Next, the research methodology discusses the strategy adopted as well as the data collection and data analysis methods. The subsequent section presents the contribution of the study for research and practice.

## **2 Related Studies**

### **2.1 Digital Transformation in the Public Sector**

Digital transformation has become a way of improving organisational performance in many organisations, regardless of sector and industry [10]. In addition to academia, private and commercial organisations, the topic has also engaged policy-makers and elected officials in the public sector [11]. Despite its popularity, digital transformation is a phenomenon that is not well defined in the literature. However, a closer look into the IS literature suggests that the various definitions of digital transformation seem to have two themes in common. To start with, digital transformation is characterised by the various benefits it brings to organisations. Since organisations attempt to increase their investment in acquisitions of new digital technologies, researchers view digital transformation as the introduction and use of emerging IT solutions to create added value [12]. In the public sector, digital transformation enables automation of work processes, and improves efficiency which in turn increases transparency, creates new forms of stakeholder relationships and improves service delivery, innovation, and citizen satisfaction [4, 9, 13].

On the other hand, IS researchers recognise digital transformation as an organisation-wide transformation altering not only the existing business processes but also human resource allocations, organisational structure as well as IT and business strategies [13, 14]. Wessel [11] argues that digital transformation entails changes in the configuration of organisations utilising the internal and external resources to meet organisational objectives. Such characterisations cover all aspects of an organisation (both IT and non-IT organisational changes). However, digital transformation is viewed

as a mere technology phenomenon [1]. This lack of comprehensive oversight of organisational factors affecting digital transformation has resulted in unrealised benefits.

Within the context of public organisations, various internal and external factors determine the success of digital transformation. For instance, organisational culture [15], organisational structure [16], stakeholder participation [17], and regulatory frameworks [13] are recognised as factors affecting the success of digital transformation. In recent studies, digital transformation is recognised as a set of planned and executed activities with the premise that the introduction of new technologies is followed by appropriate adjustments to organisational resources as well as strategies. Thus, according to [1] and [18], organisations that do not succeed to align their business and IT strategies will have difficulty to realise the benefits from their digital transformation initiatives.

## **2.2 Strategic Alignment in the Public Sector**

Strategic alignment, commonly referred to as “*business-IT alignment*” remains to be among the extensively researched areas in the IS and cognate disciplines. Given its association with the overall organisational performance, the attention it has garnered so far is justified. However, despite the rich volume of literature and extensive research in the last four decades, strategic alignment in the public sector has not attracted sufficient attention among IS researchers [8].

Even though the rationale for strategic alignment, regardless of sector and industry, is the fit between IT and business strategies which enables the realisation of organisational goals, different contextual differences have been recognised to have influence on the approaches taken to reach and maintain strategic alignment. For instance, [8] and [17] argue that the pronounced differences between organisations in the private and public sectors call for a closer look into strategic alignment in different organisational settings. In comparison with organisations in the private sector, strategic alignment is more challenging in the public organisations. Scholars attribute these differences to the large number of stakeholders in the public sector with competing or at times opposing interests, the wide variety of services delivered, and the complex organisational structure whereby both political and administrative management powers are exercised [19]. Besides, assessing whether strategic alignment has created an added public value is difficult given the intangibility of services delivered [10]. Thus, strategic alignment in the public sector is defined as “*the degree to which the IT goals support the strategic goals of a public agency, and to which administration and IT stakeholders are committed to support these goals*” [17, p. 834].

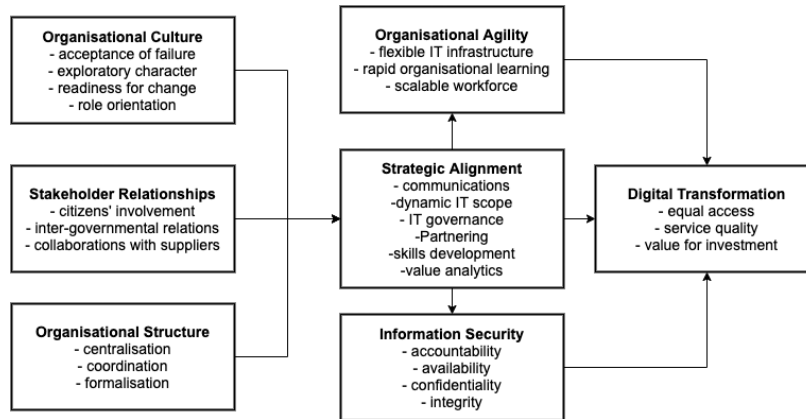


Fig. 1. Research Model.

The research model in Fig. 1 shows the conceptualisation of the study depicting the relationship between strategic alignment and digital transformation as well as the seven constructs. The extant literature on strategic alignment IT alignment, organisational studies, and digital transformation (for instance, [17, 20]) are the foundation for the development of the research model as well as the measurement items for each construct.

### 3 Research Methodology

This study follows both exploratory and confirmatory research approaches. The choice of mixed research methodology (systematic literature reviews, and case studies) is to improve the rigour of the study as recognised among researchers [21].

#### 3.1 Data Collection Method

This study is conducted in three stages. First, two literature reviews were conducted to establish a theoretical base and provide the state-of-the-art. The first literature review identified 94 articles exploring strategic alignment. The aim of this review was to gain an overview of strategic alignment studies during the digitalisation era. The second literature review of 13 articles focused on three factors related to strategic alignment and organisational agility in the public sector—organisational structure, organisational culture, and stakeholder relationships. The last literature review of 29 relevant articles explored information security management and strategic alignment. Databases indexing premier journals and conference proceedings were searched using combinations of keywords [22].

Interviews were used to collect data in the second stage of the data collection at multiple organisations. The first ten interviews, lasting between 60 and 85 minutes, were conducted in one municipality. The focus here was on the relationship between organisational structure and IT alignment. The next 17 interviews were with leaders in four public organisations. The interviews, lasting between 85 and 110 minutes, were on

information security and organisational agility, focusing on organisational structure, organisational culture, and stakeholder relationships. Purposive sampling strategy was adopted to recruit informants from IT and administration divisions.

Quantitative data is required for the confirmatory part of the study in the third stage. The survey questionnaire will be formulated based on the operationalisation of the constructs and research model. Similar public organisations where the interviews were conducted will be targeted to distribute the questionnaire. Given the the number of contacts we establish during the course of the study, we expect to collect about 500 complete responses. The 26 measurement items will be used to test the seven constructs. Respondents will be asked to score according to a 7-point Likert Scales which will be adopted for the survey questions corresponding to each of the measurement items. The unit of analysis for the study is the public sector. Thus, the questionnaires are formulated to assess how the various organisational and managerial factors influence IT alignment and digital transformation in public organisations. Before the questionnaires are distributed, a sample of experts will test it for comprehension and clarity.

### **3.2 Data Analysis Method**

Since the aim of the study is to explore the organisational and managerial factors that are relevant for strategic alignment and digital transformation, thematic analysis is chosen for the qualitative data. The rationale for this choice is that thematic analysis is not associated with a particular epistemology or theory. Besides, thematic analysis has been popular among IS researchers [3]. For the literature reviews, a concept matrix was used to thematically analyse the data, as suggested by [23]. For the analysis of the interview data, the six-steps thematic analysis procedure by [22] was followed. The analysis of the quantitative data from the survey is the last step in the data analysis. Partial Least Structural Equation Modelling (PLS-SEM) will be used to test the proposed research model and hypotheses posited. PLS-SEM is one of the multivariate data analysis methods which has gained popularity among IS researchers [25]. Two steps are involved in the analysis—the measurement model will be tested by evaluating convergent and discriminant validity while the structural model is evaluated by assessing the coefficients of determination ( $R^2$ ) and path coefficient significance [25].

## **4 Expected Contribution**

Prior IS studies indicate that strategic alignment is critical for the success of digital transformation. Thus, it is in the best interest of researchers and practitioners to explore the various factors affecting strategic alignment. To this end, the findings of this study will be an addition to the scarce literature on IT management in the public sector. Given the extensive adoption of new digital technologies in the sector, identifying the various factors influencing strategic alignment will also provide insight to leaders with the responsibility of managing the digital transformation in public organisations. In addition to previous studies focusing on the technical elements of digital transformation, the findings of this study provide an overview of organisational and

managerial factors to support public organisations as they configure their resources to succeed in their digital transformation attempts.

The mixed-research method approach chosen will also improve the rigour of the study. Besides, by conducting a confirmatory analysis, the findings would be invaluable for practitioners. For instance, identifying the influence of various organisational and managerial factors on strategic alignment as well as the degree of influence will enable the formulation of an actionable plan. On the other hand, prioritisation of scarce resources might be possible based on the analysis of the degree of influence of the various factors on strategic alignment.

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