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# **Organisational Agility and IT Alignment in Public Organisations**

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## **Abstract**

Prior studies confirming the favourable outcome of IT alignment in enabling organisations to achieve organisational agility which, in turn, is reflected in improved organisational performance, has been debated among IS researchers. The phenomenon ‘alignment-agility paradox’, referring to the unintended outcome of IT alignment resulting in organisational rigidity, has surfaced in the literature following the contradictory findings of empirical studies. However, researchers argue that the relationship between IT alignment and organisational agility is the function of contextual organisational factors—both internal organisational factors as well as external environment. Since most IT alignment studies are conducted in developed countries focusing on commercial and private organisations, this study is poised to investigate the relationship between the two constructs within the context of public organisations in two developing countries.

## **Keywords**

IT alignment, organisational agility, organisational performance, organisational culture, organisational structure, stakeholder relationship, public organisations, developing country.

## **Introduction**

Despite the dearth of literature, the issue of IT alignment in public organisations has not attracted sufficient attention (Rusu and Jonathan 2017; Winkler 2013). A closer look at prior studies also indicates that the majority of IT alignment studies have been conducted in developed countries (Jonathan et al. 2019). While the findings of these studies have resulted in the identification of various factors that could influence IT alignment, there is little doubt that IT alignment improves organisational performance. However, the issue of organisational agility, which refers to organisations ability to detect and react to changes, has surfaced in the IS literature. Talon and Pinsonneault (2011) argue that the relationship between IT alignment and organisational agility need to be explored further given their significant association with organisational performance. By looking into public organisations in developing countries, the study might reveal the contextual issues that might explain the strength of relationships between IT alignment and organisational agility. According to Jonathan et al. (2019), the structural as well as cultural variations between developed and developing countries have implication on the value derived from the use of IT as well as on IT alignment. Thus, this paper presents a research-in-progress investigating the relationship between the two constructs within the context of public organisations in two developing countries.

## **Theoretical Foundation**

### ***IT Alignment and Organisational Agility***

The critical role of IT alignment also referred to as “business-IT alignment” has been recognised since the proliferation of IT in the 1970s. Described as “the extent of fit between information technology and business strategy” (Talon and Pinsonneault 2011, p. 464), IT alignment was found to contribute to the realisation of

organisational goals. Findings of empirical studies have consistently shown that organisations that have reached IT aligned positions have considerably improved their profit, reputation as well as hike in their sales. In the context of public organisations, IT alignment 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 supporting these goals” (Winkler 2013, p. 834). Even though researchers still debate how to account for the value of IT in the public organisations, reviews of previous studies suggest that IT alignment improves the quality as well as the accessibility of services provided by public organisations (Andersen et al. 2016; Rusu and Jonathan 2017). Thus, we propose:

H1: IT alignment is positively associated with organisational performance.

Recent literature reviews (e.g., Jonathan et al. 2020) show that the view on IT alignment as a construct has shifted from being an outcome at a certain point in time to a dynamic position that requires organisations to make continuous assessment and adjustments. Talon and Pinsonneault (2011) attribute this shift to increased environmental uncertainty in today’s market. Faced with the volatile demand and uncertainty, organisations find themselves in need of the ability to detect and respond to change, i.e. being agile. Researchers argue that organisational agility is a necessary capability that could help organisations achieve their goals (Nijssen and Paauwe 2012; Seo and La Paz 2008). Even though the issue of organisational agility is yet to be integrated into the IT alignment research domain, our literature review seems to suggest a two-way relationship between IT alignment and organisational agility which seems to influence organisational performance. The phenomenon, alignment-agility paradox, which refers to the unfortunate outcome of IT alignment creating rigid IT processes and resource commitments has surfaced in the literature (Jonathan et al. 2020). Taken together, we propose the following:

H2a: IT alignment positively associated with organisational agility.

H2b: IT alignment is negatively associated with organisational agility

H3: Organisational agility has positive influence on IT alignment.

H4: Organisational agility is positively associated with organisational performance.

The fact that IT alignment is influenced by various organisational, as well as environmental factors, has been cited as the reasons for its evasiveness (Chan et al. 2006; Luftman et al. 2017). Particularly in public organisations, findings of previous studies indicate that organisational structure, organisational culture as well as the active involvement of stakeholders was found to determine whether IT alignment may be reached (Gil-García et al. 2005; Jonathan et al. 2020; Rusu and Jonathan 2017). In relation to organisational structure, the degree of centralisation and formalisation is linked with the dimensions of IT alignment (communication, IT Governance and Dynamic IT scope) according to SAMM (Luftman et al. 2017). The formality of coordination hierarchy is also found to influence organisational agility (Nijssen and Paauwe 2012). On the other hand, organisational cultures that encourage employees to embrace change, accept failures and adopt exploratory character are likely to improve their IT alignment maturity (Luftman et al. 2017). The significance of organisational culture on organisational agility is also established in the literature. According to Seo and La Paz (2008), organisational culture that are anchored only on effective and efficient routines focusing on daily activities is likely to hinder organisational agility while cultures encouraging creativity and innovation are bound to result in optimal organisational agility. Thus, we propose the following:

H5: Organisational structure has influence on IT alignment.

H6: Organisational culture has influence on IT alignment.

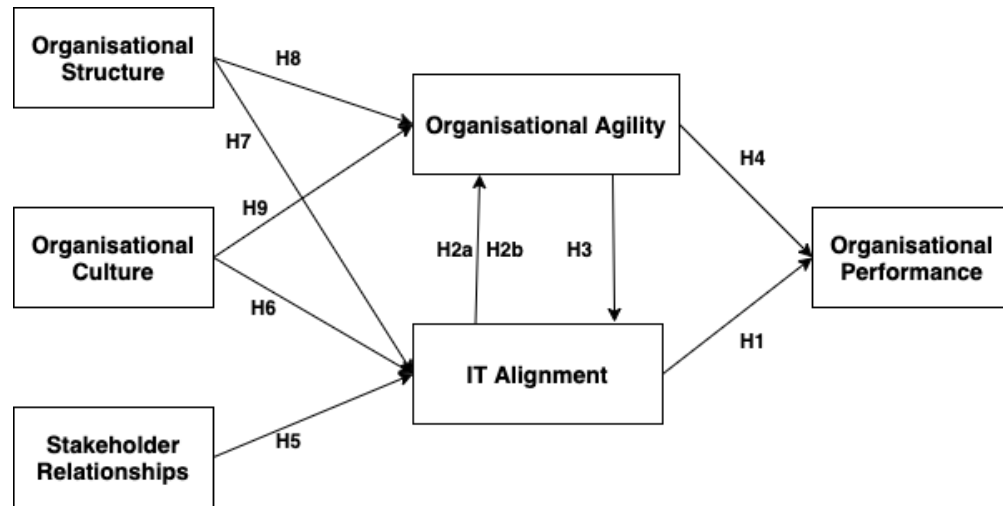
H7: Stakeholder relationships has influence on IT alignment.

H8: Organisational structure has influence on organisational agility.

H9: Organisational culture has influence on Organisational agility.

## **Research Model**

The current study uses the research model shown in Figure 1 as an initial point in the literature to investigate further the link among IT alignment, organisational agility and firm performance. However, the model also relied on the analysis of our qualitative data to establish the role of organisational structure, organisational culture and stakeholder relationships on organisational agility and IT alignment within the context of public organisations.



**Figure 1. Research Model**

## Research Methodology

This research adopts a mixed-method approach which combines both qualitative and quantitative methods within the same study. The choice of mixed-method approach is justified given the rich insights it might provide for topics that are not well explored and could not be fully understood applying one of the methods separately (Venkatesh et al. 2013). It is our conviction that by adopting both qualitative and quantitative data, the study would address the shortcomings of prior IT alignment studies with limited generalisability (Rusu and Jonathan 2017).

### Data Collection Method

Data collection for this study will be carried out in three steps. First, the literature survey was conducted to search for relevant articles that were used to formulate our theoretical foundation and research model. Following the systematic literature review process, according to Webster and Watson (2002), we searched for relevant articles on the topic of IT alignment and organisational agility. Using combinations of key words, databases indexing reputable IS journals and conference proceedings were searched, which resulted in the identification of 13 relevant articles published between 2014 and 2019. The findings of the literature review were the basis for our research model and hypotheses posited.

Second, 17 interviews lasting between 85 and 110 minutes were conducted in four different public organisations. Respondents from IT and administration divisions were purposely selected. The interviews were invaluable for various reasons. To start with, the insights from our respondents helped us to adapt our research model according to the organisational context. The analysis of the interview was helpful to formulate the measurement items that were used to our constructs. Besides, the contact with the respondents who are positioned at the strategic level within their respective organisations was found to be essential to identify prospective respondents who possess the knowledge to complete the survey questionnaires.

Third, the final data will be collected from a sample of experts who are informed of both IT and overall strategies at their respective public organisations. Besides the first four organisations where the interviews were conducted, additional contacts have been established with eight additional organisations across Ethiopia and Kenya. Organisational size, as well as number of employees, were taken into consideration to make sure similar organisations were selected. However, before administering the survey to our prospective respondents, the survey instrument was pre-tested with a sample of researchers and practitioners in each country. Due to the differences in national and official languages in the organisations targeted, the survey instrument was checked for word comprehension and the order of the questions (Creswell 2012).

## Measurement and Validation Steps

Since our research model is founded on constructs in the IS, public administration as well as organisational studies literature, we relied on measurement items already established in the literature. For instance, IT alignment and its maturity will be measured using the six dimensions according to the Strategic Alignment Maturity Model (Luftman et al. 2017). As shown in Table 1, in total, 22 measurement items will be used to measure the six constructs. We adopted 7-point Likert Scales for all items.

Constructs	Measurement items	Source
IT Alignment (ITA)	Communication	Luftman et al. (2017)
	Value analytics	Luftman et al. (2017)
	IT Governance	Luftman et al. (2017)
	Partnering	Luftman et al. (2017)
	Dynamic IT Scope	Luftman et al. (2017)
	Skills Development	Luftman et al. (2017)
Organisational Agility (OA)	Scalable workforce	Nijssen and Paauwe (2012)
	Flexible IT infrastructure	Tallon and Pinsonneault (2011)
	Innovation	Luftman et al. (2017)
	Rapid Organisational learning	Nijssen and Paauwe (2012), Seo and La Paz (2008)
Organisational Culture (OC)	Acceptance of failure	Gil-García and Pardo (2005)
	Exploratory character	Legner et al. (2017)
	Readiness for change	Legner et al. (2017), Liang et al. (2017)
Organisational Performance (OP)	Service quality	Andersen et al. (2016), Førsund (2017)
	Equal access	Førsund (2017)
	Cost effectiveness	Hackler and Saxton (2007).
Organisational Structure (OS)	Formalisation	Yayla and Hu (2009)
	Centralisation	Nijssen and Paauwe (2012), Yayla and Hu (2009)
	Coordination	Liang et al. (2017), Tallon and Pinsonneault (2011)
Stakeholder Relationships (SR)	Citizens involvement	Gil-García and Pardo (2005), Winkler (2013)
	Inter-government relations	Winkler (2013)
	Collaboration with suppliers	Seo and La Paz (2008)

**Table 1. Operationalisation of Constructs and the Research Model**

The measurement instruments will be validated using Partial Least Structural Equation Modelling (PLS-SEM). As one of the second-generation multivariate data analysis method (Fornell and Larcker, 1981), PLS-SEM has been frequently used by researchers in recent years (Hair et al., 2017). Prior IT alignment studies have also used the method (e.g., Abdolvand and Sepehri, 2016; Chan et al., 2006; Tu et al., 2018). SmartPLS software, version 3.2.8 (Ringle et al., 2015) will be used. The data analysis will be done in two steps: evaluation of the measurement followed by assessment of the structural model (Hair et al. 2017). Convergent and discriminant validities will be assessed to test the measurement model. Coefficients of determination ( $R^2$ ) and path coefficient significance will be evaluated to test the structural model.

## Expected Contributions

The findings of the study will contribute to research and practice. In regard to research, the expected results will add to the body of knowledge furthering our understanding of the less explored context of IT alignment, public organisations. As public organisations in the developing countries embark the journey of digital transformation, identifying the various factors that could influence alignment is a timely issue. For leaders in the sector, the findings of the study will provide insights on how different organisational factors related to organisational agility as well as IT alignment should be assessed and acted upon to improve organisational performance.

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