Misalignment between Business and IT Strategic Objectives in Saudi Arabia Public Sector Organisations

Abulaziz AlGhazi[1], Mengxiang Li[2], Tingru Cui[1], Fosso Wamba Samuel[3] and Jun Shen[1]

[1]*University of Wollongong, Australia-NSW, Northfields Ave, Wollongong, Australia*
[2]*Hong Kong Baptist University, Baptist University Rd, Kowloon Tong, Hong Kong*
[3]*Toulouse Business School, 20 Boulevard Lascrosses, 31068 Toulouse, France*

Abstract: Business-IT strategy misalignment is increasingly an important area of concern and interest in organisations around the world including Saudi Arabia (SA). Indeed, the SA government has launched the National Digital Transformation Strategy for 2030 to support all public-sector organisations to improve efficiency and performance. This research aimed to identify and analyse the factors that contribute to business/IT strategy misalignment in Saudi public-sector organisations. This research focused emerged from the need to better understand the business and IT models incorporated in the organisations Saudi Arabia to achieve high performance, quality of service (QoS) and return of investment (ROI). Using a qualitative study design that included semi-structured interviews with eight executive and managerial staff from five public-sector organisations in Saudi Arabia, this study found human, operational and IT system factors all have the potential to contribute to business-IT strategy misalignment. It also found the approaches to misalignment avoidance in Saudi public-sector organisations sometimes lack structure and consistency.

1 INTRODUCTION

Over recent years, the alignment between informaion technology (IT) strategy and business strategy has emerged as a factor of critical importance and continuous challenge within the information systems (IS) discipline (Luftman and Derksen 2012; Luftman and Kempaiah 2007). This has led to the development of different models and theoretical explanations for how IT alignment creates value (Reynolds and Yetton 2015). However, governments remain concerned about the continuous failure of IT projects in public organisations (Byrd et al. 2005; Pardo et al. 2006). Furthermore, there is increasing concern that optimal return of investment (ROI) in IT projects is not being achieved (Gerow et al. 2014; Henderson, Venkatraman and Bharadwaj 1999; Rai et al. 2015; Wu, Straub and Liang 2015).

The government of Saudi Arabia (SA) has adopted a National e-Government strategy to improve technology-based operations and service delivery in public-sector organisations (Shehry et al. 2011; Rai et al. 2015; Yesser 2016). The implement-

tation of the e-government project however is facing many technological, cultural, organisational, and social challenges and issues, which must be considered carefully by the Saudi government given the limited research evidence and insights on this issue to guide the successful to adoption of e-government services in SA (Shehry et al. 2011). Although, SA is classified as a high-income country, there is little research and insight to guide the successful to adoption of e-government services in SA (Shehry et al. 2011). As such, there is no practical model available to test strategic alignment at the strategic plan level in Saudi Arabia (Alshehri and Drew 2010).

As business-IT strategic alignment becomes more complex with the rapid advances in the technology and digitalisation revolution (Wu, Straub and Liang 2015), governments implementing e-service platforms are increasingly under pressure to be more flexible in response to these transformations and increasing industry clock speed (Tallon and Pinsonneault 2011; Tanriverdi et al. 2010). Based on these concerns, this study aimed to answer the

following research question:

Why is there continued misalignment between business and IT strategic objectives in public sector organisations in Saudi Arabia?

2 MISALIGNMENT: AN OVERVIEW

A business' IT strategy is typically defined as the identification and adoption of relevant technologies necessary to meet a set of objectives and goals by an entity (Alsudiri et al. 2013). Given the ever-increasing prevalence of IT infrastructures to support business operations, businesses across the world have had no choice but to incorporate IT into their daily operations (Martinez et al. 2015; Seman and Salim 2013). Business-IT misalignment is characterised as the breakdown or lack of coordination between business and IT to deliver the coherent management of information to meet business needs (Enagi and Ochoche 2013). Based on this definition, the misalignment is likely to negatively impact business performance given that business-IT strategy alignment is required to increase business value (e.g., Dulipovici and Robey 2013; Handley 2017; Rai et al. 2015). To explain this relationship, Fichman and Melville (2014) asserted that business performance is "conditioned" by the business IT system.

The way in which business-IT strategy misalignment is conceptualised will strongly influence the process undertaken to identify the misalignment indicators and to implement solutions (Tallon 2007). However, the conceptualisation and measurement of strategic (mis)alignment is made complicated by the fact that alignment is largely "unobservable" and that measuring IT and business strategy is highly complex (Tallon 2007). Schniederjans and Cao (2009) for instance conceptualise misalignment as a mismatch between functional-level strategic planning and sup-port for business-level strategies. Misalignment has also been conceptualised as a coordination issue, whereby poor coordination exists between business and IT to deliver the coherent management of information to meet business needs (Enagi and Ochoche 2013).

2.1 Business-IT Strategy Misalignment Factors

Misalignment between an organisation's IT and strategic goals invariably emerge from the dynamics and complexities of general business practices (El-Telbany and Elragal 2014). The three broad source categories for business-IT strategy misalignment identified in the literature are: human factors (e.g., perceptions, expectations, skill levels etc.), business operation factors (e.g., knowledge assets, operational model, IT execution model etc.), and IT design factors (e.g., infrastructure components, assumptions made by IT developers). See Figure 1 to shows the relation between business and IT strategy and other misalignment factors.
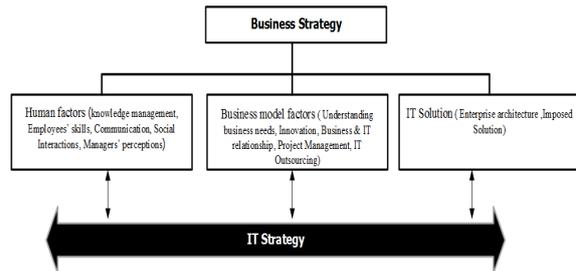

Figure 1: Relation between business and IT strategy and other misalignment factors.

2.1.1 Human Factors as a Source of Business-IT Strategy Misalignment

With regard to human factors, misalignment can occur when employees conceptualise the IT tools such as knowledge management systems (KMS) and their strategic function differently (Dulipovici and Robey 2013). This points to the need for businesses to ensure there are the appropriate mechanisms of verification to detect possible misalignments (Corsaro and Snehota 2011).Furthermore, misalignment may emerge due to differences between the social and material interactions surrounding the IT practices, particularly the use of new technology. According to Leonardi (2009), the social interactions underpin the way in which new technology is 'interpreted'; that is what the technology is "meant to do". Employee skills to manage IT effectively is also identified as a human factor leading to business-IT strategy misalignment. For instance, the skills with which employees can operate IT in combination with the outsourcing knowledge management practices initiated by managers will impact outsourcing performance and the relationship to organisational governance (Handley 2017).

2.1.2 Business Model as a Source of Business-IT Strategy Misalignment

Enterprise architecture refers to a suite of domains

such as business processes, information manage-ment, application systems and IT systems (Enagi and Ochoche 2013). Misalignment occurs when the business fails to adopt the necessary enterprise architecture to align the business and IT strategies. In turn, the extent of the misalignment / alignment between business and IT strategies can be analysed through a symptoms approach (Őri 2017). Towards this end, he proposed a model to conduct an enterprise architecture-based systematic analysis of disharmony (misalignment) between business and IT dimensions. The (IT) innovation posture of the business can also contribute to business-IT strategy misalignment when the strategic posture profile of (IT) innovation in the organisation does not match, or is not supported by, the resource profile of the organisation (Fichman and Melville 2014).

2.1.3 IT Solution as a Source of Business-IT Strategy Misalignment

At the IT source level, the primary focus is on the disconnect between what is assumed about business strategy objectives by IT developers and the actual business strategy objectives on the ground. For instance, when the a priori views of business managers and IT developer differ, misalignment between the IT system and business strategy is likely because of the disconnection that emerges between the potential affordances of the IT system and the operationalisation of the capabilities (Heath et al. 2013). Wei, Wang and Ju (2005) explained that misalignment between the functionality of a ERP system for instance and the strategic objectives of the business can emerge from the 'disruptive' change dynamics necessitated through the introduction of the new system. Lastly, Soh and Sia (2004) explained business-IT misalignment from a structural perspective suggesting it emerges due to opposing forces in the structures embedded in the IT system and the business operations. Misalignment is more likely to occur when some of the IT structures are imposed onto the organisational structures rather than voluntarily accepted which reduces the organisation's level of control over its structures leading to misalignment (Soh and Sia 2004).

Theoretical Framework

Notably, since the 1990s, a range of models have been developed to explain and inform alignment strategies as well as to identify and/or remedy business-IT strategy misalignment. For example, The list includes, but is not limited to, the strategic alignment model (SAM) developed by Henderson and Venkatraman (1993). The SAM is an IT/business management system that enables the successful implementation of information systems/technology and businesses and their resulting infrastructural components (Renaud et al. 2016). The SAM can be based on, integrated and defined by its four core building blocks and fundamental strategic choice domains, including IT strategies, business strategies, organisational process and infrastructure and the informational systems and technologies processes and infrastructure (Luftman 2004). Each domain and feature behind the building blocks of the SAM has significance and features that mainly consist of three components, i.e., strategic fit, cross-dimension alignment and functional integration. According to Luftman (2004), the components and features that form the components and basis of business and IT strategic alignment are the twelve components of alignment.

3 METHODOLOGY

3.1 Study Design

This study employed a qualitative exploratory design to understand and analyse the factors contributing to business/IT strategy misalignments and its impact on business performance in public-sector organisations in SA.

3.2 Study Sample

The sample included eight senior and executive managers in IT and business at multiple public-sector organisation at Saudi Arabia. The different job descriptions of the participants included business strategy officers, project managers, IT department managers and strategy-management offices with the governance unit. Participant recruitment was limited to senior managers or above because of their background and experience in formulating business and IT strategic goals and objectives.

3.3 Data Collection

Semi structured interviews were conducted with eight managers from the multiple organisations with minimum ten years of experiences as shows in table 1.

The interview included 13 open-ended questions intended to elicit views and opinions from the participants related to business-IT strategy and the potential factors contributing to strategy

misalignment. The interviews were conducted via telephone interviews and email. With the participants' consent, the phone interviews were recorded to facilitate the data analysis process.

Table 1: Interview participants.

Job titles	Abbr.	Department	Experience
Business Development Manager	BDM	IT	15 Year
Business Development Manager	BDM	IT	13 Year
Applications Department Director	ADD	IT	23 years
Strategy Analyst	SA	Business	10 years
Business Architecture	BA	Business	25 years
Communications Directorate	CD	IT	21 years
Director IT Infrastructure	DII	IT	25 years
Business Strategy Consultant	BSC	Business	20 years

3.4 Data Analysis

The data was analysed using NVivo. The program supported an inductive content analysis to identify the prominent themes in the qualitative data set (Creswell 2013). A theme was defined as a recurring topic or suggested meaning in the interviewees' comments related to the main components of the research question (Clarke and Braun 2013).

3.5 Ethics Considerations

Participant anonymity and data were achieved by assigning codes rather than names during the duration of the study to ensure the privacy of any given information.

4 RESULTS

Most participants acknowledged the importance of aligning business strategies with IT strategies to improve business performance. However, participants' responses also revealed they perceived there to be eight factors that contribute to business-IT strategy misalignment:

1. Lack of coordinated communication (SA)

2. Lack of awareness between business decision makers (BDM)

3. Lack of IT agility (BA)

4. Unclear requirements and responsibilities (SA)

5. Unrealistic requirements and expectations from the business (BA, SA)

6. Legacy systems not aligned to any of the IT standards or best practices (DII)

7. Lack of clear business objectives (BDMs & ADD)

8. When IT adopts the rule of planning and accountability instead of business (BSC)

When considered collectively, the factors contributing to business-IT misalignment identified by the participants cover a wide range of operational aspects including the clarity of the business and IT objectives; communication pathways; employee knowledge and skills; the agility of internal control mechanisms (e.g., policies, procedures); and the nature of the expectations placed upon the IT systems.

The participants' views that are many and diverse factors that contribute to business-IT strategy misalignment aligns with findings reported in other research studies. For instance, Dulipovici and Robey (2013) found human factors to be a significant contributor to misalignment, primarily due to different employee perceptions and expectations of the IT system. In addition, Nigeria, Enagi and Ochoche (2013) found organisational factors also contributed to business-IT misalignment through the failure by the business to implement the necessary enterprise architecture to align the business and IT strategies. Lastly, research also shows the IT system itself can be a contributing factor to business-IT misalignment.

In response to these factors, some managers indicated the importance of clearly stated business goals and objectives, having agile and flexible IT infrastructures, and regular auditing of processes:

"Developing clear and solid strategy and objectives, and developing mature KPIs to measure the alignment level" (BDM).

The relationship between audits of IT system KPIs and business-IT alignment/misalignment, the finding in this study is supported in other research studies. For instance, Ayoup, Omar and Rahman (2016) conducted a case study of a large Malaysian

Government-Link Company and found that audits and reviews of the IT system KPIs using the balanced scorecard (BSC) approach supported improvement in operational processes.

In addition, most managers believed there is not a sufficient approach or method in place in their organisation to measure the profit-driven traditional, ROI and the limit of optimum project profitability:

"Generally, our origination does not have a dependable and clear approach to measuring ROI in public organisations". (ADD)

The finding of an inconsistent approach by organisations to measuring the profit-driven traditional, ROI, and the limit of optimum project profitability suggests a lack of synchronisation between business processes and business objectives leading to business turbulence (Melnyk et al. 2014). Other research studies attest to the effectiveness of some of these models such as Khaiata and Zualkernan's (2009) claims of the effectiveness of the six dimensions of the Strategy Alignment Maturity Model (SAMM).

Most respondents also confirmed that there is not a suitable enterprise architecture framework dedicated for use in their company:

"Our origination does not use any kind of architecture frameworks". (ADD)

That Saudi organisations generally do not employ an Enterprise Architecture framework to achieve core business objectives is consistent with the finding reported by Alshathry (2016). Specifically, the author reported that there is a "sharp disjoint between IT and business strategy" in Saudi organisations due to a lack of maturity in their understanding of business process management and the utilisation of relevant measurement tools (Alshathry (2016, p. 507).

However, some participants added that they are using the customised TOGAF framework to manage enterprise architecture along with Software Development Life Cycle (SDLC) to ensure consistent delivery of IT application and projects:

"Our IT organisation is aligned to ITIL best practices, and complies with ISO 20K standards, and we have an enterprise BMC solution aligned to all ITIL V3 processes". (DII)

In terms of the organisation's IT strategy for performance appraisal, three participants indicated that the organisation's IT KPIs were reviewed every quarter, and one participant indicated that the organisation's IT projects included two KPIs: average issue resolution time, and system availability. Another participant commented that IT project KPIs were reviewed by the Board to agree on corrective actions or to implement new projects.

Regarding the organisation's use of technology solutions to share knowledge and information, most participants revealed that their organisation was using SharePoint software:

At the department level, we are using MS SharePoint and Document library. (BA)

The finding that technology-based solutions for knowledge management are used in the Saudi organisation reflects current commentary in the literature. For instance, Khaled, Renukappa, Suresh and Saeed (2017) claims that the Saudi government is actively pursuing initiatives to implement Knowledge Management (KM) tools, methods and philosophies in public sector organisations to improve operational outcomes.

The manager participants also varied in their views on the pattern of engagement with IT innovation in their organisation and how it aligned with the broader organisational strategy to improve profit and performance outcomes. Some participants pointed to an automated approach; whereas others indicated that their organisation did not have an overall innovation plan or a rule for IT-led innovation:

"Automating all manual processes where applicable and keeping up to date with the latest technology to eliminate legacy processes where possible". (DII)

"Our origination does not have innovation strategy. Questionnaires have been used to collect new ideas from the employees". (ADD).

In terms of IT and innovation strategy, the findings in this study correlate with those presented by Fichman and Melville (2014) that misalignment between an organisation's position on IT innovation and its IT innovation resource profile shapes the relationship between IT innovation and the performance of the organisation.

4.1 Internal Organisational Mechanisms and Their Impact on IT Outcomes

The results of the data analysis also pointed to the relationship between the mechanisms within the organisation and the realisation of desired IT strategic outcomes.

Staff qualifications and training were identified as important factors to impact business-IT strategic alignment:

Most of the key IT staff members have sufficient training and qualifications. (DII)

However, three managers also indicated that there was no clear plan in their organisation to improve the skills of IT staff to meet the organisation's needs:

There is no clear plan to improve the skills of employees to meet the needs of the organisation. (ADD)

Employee skills typically represent a critical success factor (CSF) in an organisation, particularly the skills of the CEO and IT managers (Coltman et al., 2015). As such, the findings indicate that the participants perceive the IT training provided to employees as weak; that is, it does not provide them with sufficient skills and qualifications to support effective business-IT strategy alignment.

Furthermore, three participants indicated that the IT projects in their organisations were not underpinned by clear processes, procedures and governance regulations during project lifecycle. In contrast, two participants indicated that each IT project in their organisation is governed by a steering committee comprising of various stakeholders, another participant also reported that acceptance criteria are established for IT projects in the company that identify and evaluate the achievement of key milestones to ensure continuous alignment with business needs.

Some participants (ADM and BSC) acknowledged that their organisation does not apply specific control procedures or standards at their organisations. One participant however indicated that implementing IT projects involves the application of global standard procedures, and rules and methodologies to accommodate those standards. In addition, two participants stated that their IT service management solution complies with ITIL V3 Standards and all its processes are based on ITIL best practices.

In terms of the organisation's use of specific frameworks to avoid and detect misalignment between the enterprise architecture, the primary business objectives, and the level of engagement between the business and IT domains, the participants varied in their responses. For instance, BSC spoke about the use of TOGAF and enterprise architect; whereas, BDM described how his organisation has a committee comprised of sectors head that is responsible for ensuring that all decisions are aligned also with the organisation's goals and objectives.

Also, organisations were found to use varied approaches to managing risks related to business-IT misalignment. This is aligned with other research studies. For instance, Hinkelmann et al. (2016, p. 78) assert the effectiveness of the TOGAF enterprise architecture framework in an organisation to "continuously monitor itself and be prepared to react quickly to threads and opportunities". As (Őri, 2017) explains, the identification, examination and correction of misalignment can be accomplished through the utilisation of the enterprise architecture model.

5 DISCUSSION

Of primary interest to this study is why there is continued misalignment between business and IT strategic objectives in public sector organisations in Saudi Arabia? The main finding to emerge from the analysis of data is that misalignment between the business and IT strategy objectives in Saudi public-sector organisations can emerge as a result human, operational, and/or IT systems issues, and that the avoidance or remedy of misalignment issues requires a well-structured and model-based misalignment detection processes. Furthermore, when seeking to properly align business and IT objectives it is crucial for Saudi organisations to ensure employees have a good understanding of the capabilities of the IT systems and how such capabilities can be optimised to achieve the core business goals and objectives.

This finding suggests the importance of a coordinated and sophisticated approach by Saudi public-sector organisations to manage business-IT misalignment issues and outcomes. Organisations clearly need to consider human resource management issues and how they manage social interactions to facilitate optimal IT system use outcomes. Employees knowledge of the system and their expectations of how the IT system contributes

to the achievement of core business goals and objectives is of particular importance (Dulipovici and Robey 2013). In turn, one of the implications for practice is the need in Saudi organisations to incorporate more informal workplace training activities into operational practices to better deliver the anticipated benefits of the IT systems (Esteves 2014).

In addition, there is the clear need for IT systems and infrastructures in an organisation to adapt and or undergo modification as business goals and objectives change. As Enagi and Ochoche (2013) point out, as business goals objective are adjusted or modified, so too must the technological architectures be modified. Furthermore, a related implication for practice is the increase need for organisations to ensure the regular audit and/or review of the IT systems for their alignment with business objectives. Audits / reviews in this context are crucial to managerial decision making as they provide managers with a basis for decision making by helping them to clarify their strategic objectives, measures, and targets (Aversano et al. 2012; Ayoup et al. 2015).

Governance structures and processes in an organisation can significantly impact the successful implementation of IT projects (Wu, Straub and Liang 2015). Regarding control procedures, Saudi organisations attempt to achieve strategic alignment through a range of internal control mechanisms. Similarly, Cram, Brohman, Chan and Gallupe (2016) found that organisations used a range of control mechanisms to address four core IT control dimensions: the IT system environment, the control mechanism itself, socio-emotional behaviours of employees, and the execution of control procedures. Notwithstanding the heavy investment in IT by the Saudi Arabian government in all public-sector organisations, many organisations are still not able to allocate sufficient management, operational and governance resources towards the implementation of IT projects.

More efficient and effective uses of misalignment detention and remedy models and frameworks will facilitate better business-IT strategic alignment in Saudi public-sector organisations. Therefore, stakeholder expectations for quality product and service delivery from these organisations, along with the organisation's priority to achieve key goals and objectives, should dictate that greater attention is paid by the Saudi government to implementing and properly utilising suitable IT systems and platforms.

6 CONCLUSION

It is well-established that IT and business strategic misalignment is a critical and fundamental issue of concern to both executives and IT professionals in contemporary organisations around the world. In Saudi Arabia specifically, executive staff and IT managers are under increasing pressure to support the service quality and sustainability of the organisation by avoiding and/or remedying business-IT misalignment issues. This study identified the human, operational, and IT system factors that contribute to misalignment between business and IT strategic objectives in Saudi public-sector organisations. As such well-structured and continuous efforts are required by managers and IT staff in Saudi organisations to eliminate misalignment and thus optimise organisational performance. Towards this outcome, employees at all levels must have a sound knowledge of the goals and objectives of the business operations and understand the role IT plays in supporting their achievement.

Research Contribution

This study contributes to our academic and practical understanding of business-IT strategy misalignment through its analysis of the main causal factors of IT and business misalignment and how misalignment impacts organisational performance. In addition, it contributes significant knowledge in the following areas: the factors influencing IT performance and misalignment between IT strategy and business strategy by examining Business-IT Alignment Maturity in public-sector organisations; the operational measures utilised in organisations to promote alignment / avoid misalignment; the perspectives and attributes of misalignment as revealed in a synthesis of the relevant research and academic literature on business-IT strategy misalignment and its implications for organisational performance.

Study Limitations

The sample for the present study comprised only ten senior managers and directors from different government organisations – six from the field of IT and only two from business. As study, the generalisability of the study findings is limited. Consequently, research studies with a much larger sample size are required to ensure appropriate generalization of this study's findings. In addition, the Saudi public-sector organisations for inclusion in

this study were selected based on the quality of services they provided. The selection of different organisations may lead to different results because of the nature of the public bureaucracy and culture. Another limitation of this study is that the executive participants were very busy. Lastly, because the participant interviews were conducted via email or telephone, there was no opportunity for this research to gauge the body language and facial expressions of participants to inform the line of questioning and potentially elicit more valuable data on a response.

REFERENCES

AlShathry, O., 2016. Business process management: A maturity assessment of Saudi Arabian organizations. *Business Process Management Journal*. 22:507-521.

Alshehri, M. and Drew, S., 2010. Challenges of e-government services adoption in Saudi Arabia from an e-ready citizen perspective. *World Academy of Science, Engineering and Technology*, 66(June).

Alsudiri, T., Al-Karaghouli, W., & Eldabi, T., 2013. Alignment of large project management process to business strategy: A review and conceptual framework. *Journal of Enterprise Information Management*. 26:596-615.

Approaches. Sage publications.

Aversano, L., Grasso, C., & Tortorella, M., 2012. A literature review of Business/IT Alignment Strategies. *Procedia Technology*. 5:462-474.

Ayoup, H., Omar, N., & Rahman, I., 2016. Balanced scorecard and strategic alignment: A Malaysian Case. *International Journal of Economics and Financial Issues*. 6:85-95.

Byrd, T. A., Lewis, B. R., and Bryan, R. W. 2006. "The Leveraging Influence of Strategic Alignment on It Investment: *An Empirical Examination," Information & management* (43:3), pp. 308-321.

Coltman, T, Tallon, P, Sharma, R & Queiroz, M 2015, 'Strategic IT alignment: twenty-five years on', *Journal of Information Technology*, vol. 30, no. 2, pp. 91-100.

Corsaro, D. & Snehota, I., 2011, 'Alignment and misalignment in business relationships', *Industrial Marketing Management*, vol. 40, no. 6, pp. 1042-1054.

Cram, W. A., Brohman, M. K., Chan, Y. E., & Gallupe, R. B., 2016, 'Information systems control alignment: complementary and conflicting systems development controls', *Information & Management*, vol. 53, no. 2, pp. 183-196.

Creswell, J. W., 2013. *Research design: Qualitative, quantitative, and mixed methods*

Clarke, V. and Braun, V., 2013. Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. The psychologist, 26(2), pp.120-123.

Dulipovici, A. & Robey, D., 2013. 'Strategic alignment and misalignment of knowledge management systems: a social representation perspective', *Journal of Management Information Systems*, vol. 29, no. 4, pp. 103-126.

El-Telbany, O. & Elragal, A., 2014, 'Business-information systems strategies: a focus on misalignment', *Procedia Technology*, vol. 16, no. 2, pp. 250-262.

Enagi, M. A. & Ochoche, A., 2013. 'The role of enterprise architecture in aligning business and information technology in organisations: Nigerian Government Investment on Information Technology', *International Journal of Engineering and Technology*, vol. 3, no. 1, pp. 59-65.

Esteves, J. M., 2014. 'An empirical identification and categorisation of training best practices for ERP implementation projects', *Enterprise Information Systems*, vol. 8, no. 6, pp. 665-683.

Fichman, R. G. & Melville, N. P., 2014. 'How posture-profile misalignment in IT innovation diminishes returns: Conceptual development and empirical demonstration', *Journal of Management Information Systems*, vol. 31, no. 1, pp. 203-240.

Gerow, J. E., Grover, V., Thatcher, J. B. & Roth, P. L., 2014, 'Looking toward the future of IT-business strategic alignment through the past: a meta-analysis. *Mis Quarterly*, vol. 38, no. 4, pp. 1059-1085.

Handley, S. M., 2017, 'How governance misalignment and outsourcing capability impact performance', *Production and Operations Management*, vol. 26, no. 1, pp. 134-155.

Heath, D., Singh, R. & Shephard, B., 2013, 'Approaching strategic misalignment from an organizational view of business processes', in System Sciences (HICSS), 2013 46th *Hawaii International Conference on* (pp. 4055-4064). IEEE.

Henderson, J.C. and Venkatraman, H., 1993. Strategic alignment: Leveraging information technology for transforming organizations. *IBM systems journal*, 32(1), pp.472-484.

Henderson, J. C. & Venkatraman, H., 1999, 'Strategic alignment: leveraging information technology for transforming organizations', *IBM Systems Journal*, vol. 32, no. 1, pp. 472-484.

Hinkelmann, K., Gerber, A., Karagiannis, D., Thoenssen, B., Van der Merwe, A. & Woitsch, R., 2016' 'A new paradigm for the continuous alignment of business and IT: combining enterprise architecture modelling and enterprise ontology', *Computers in Industry*, vol. 79, no, 2, pp. 77-86.

Khaiata, M. & Zualkernan, I. A., 2009, 'A simple instrument to measure IT-business alignment maturity', *Information Systems Management*, vol. 26, no. 2, pp. 138-152.

Khaled, A., Renukappa, S., Suresh, S. & Saeed, A., 2017, Knowledge management practices in Saudi Arabian public sector organisations: a case of the Ministry of Justice, in Leadership, Innovation and Entrepreneurship as Driving Forces of the Global Economy (pp. 445-459), *Springer International Publishing*.

Leonardi, P. M., 2009, 'Why do people reject new technologies and stymie organizational changes of

which they are in favor? Exploring misalignments between social interactions and materiality', *Human Communication Research*, vol. 35, no. 3, pp. 407-441.

Luftman, J., 2000, 'Assessing business-IT alignment maturity', *Communication of Association for Information Systems*, vol. 4, no. 14, pp. 9-15.

Luftman, J., 2004. "Assessing Business-It Alignment Maturity," *Strategies for information technology governance* (4), p. 99.

Luftman, J., and Derksen, B., 2012. Key issues for IT executives 2012: *Doing More with Less. MIS Quarterly Executive*, 11(4).

Luftman, J., and Kempaiah, R., 2007. An Update on Business-IT Alignment:" A Line" Has Been Drawn. *MIS Quarterly Executive*, 6(3).

Martinez-Simarro, D., Devece, C. and Llopis-Albert, C., 2015. How information systems strategy moderates the relationship between business strategy and performance. *Journal of Business Research*, 68(7), pp.1592-1594.

Melnyk, S. A., Bititci, U., Platts, K., Tobias, J. & Andersen, B., 2014' Is performance measurement and management fit for the future?' *Management Accounting Research*, vol. 25, no. 2, pp. 173-186.

Őri, D., 2017. On exposing strategic and structural mismatches between business and information systems: misalignment symptom detection based on enterprise architecture model analysis", *PhD thesis, Corvinus University of Budapest*, viewed 23 Aug 2014.

Pardo, T. A. and Dadayan, L., 2006. Service New Brunswick (Case Study). *Center for Technology in Government, Albany*, NY.

Rai, A., Arikan, I., Pye, J. and Tiwana, A., 2015. Fit and Misfit of Plural Sourcing Strategies and IT-Enabled Process Integration Capabilities: Consequences of Firm Performance in the US Electric Utility Industry. *MIS Quarterly*, 39(4).

Renaud, A, Walsh, I, & Kalika, M 2016, 'Is SAM still alive? A bibliometric and interpretive mapping of the strategic alignment research field' *The Journal of Strategic Information Systems*, vol. 25, no. 2, pp. 75-103.

Reynolds, P. & Yetton, P 2015, 'Aligning business and IT strategies in multi-business organizations', *Journal of Information Technology*, vol. 30, no. 2, pp. 101-118.

Schniederjans, M. & Cao, Q., 2009, 'Alignment of operations strategy, information strategic orientation, and performance: an empirical study', *International Journal of Production Research*, vol. 47, no. 10, pp. 2535-2563.

Seman, E. & Salim, J., 2013, 'A model for business-IT alignment in Malaysian public universities', Procedia Technology, *4th International Conference on Electrical Engineering and Informatics*, *ICEEI* 2013, pp. 1135-1141.

Shehry, A. A., Rogerson, S., Fairweather, N. B. & Prior, M., 2011, 'The key organisational issues affecting e-government adoption in Saudi Arabia, in V Weerakkody (ed.) Applied technology integration in

governmental organizations: new e-government research (pp. 257-269), *Information Science Reference,* New York, NY.

Soh, C & Sia, SK 2004, 'An institutional perspective on sources of ERP package–organisation misalignments', *The Journal of Strategic Information Systems*, vol. 13, no. 4, pp. 375-397.

Tallon, P. P., and Pinsonneault, A. 2011. "Competing Perspectives on the Link between Strategic Information Technology Alignment and Organizational Agility: Insights from a Mediation Model," *Mis Quarterly*), pp. 463-486.

Tallon, P. P., 2007, 'A process-oriented perspective on the alignment of information technology and business strategy', *Journal of Management Information Systems*, vol. 24, no. 3, pp. 227-268.

Tallon, P. P., 2007, 'A process-oriented perspective on the alignment of information technology and business strategy', *Journal of Management Information Systems*, vol. 24, no. 3, pp. 227-268.

Tanriverdi, H., Rai, A. and Venkatraman, N., 2010. Research commentary—reframing the dominant quests of information systems strategy research for complex adaptive business systems. *Information Systems Research*, 21(4), pp.822-834.

Wei, H. L., Wang, E. T. & Ju, P. H., 2005, 'Understanding misalignment and cascading change of ERP implementation: a stage view of process analysis', *European Journal of Information Systems*, vol. 14, no. 4, pp. 324-334.

Wu, S. P. J., Straub, D. W. & Liang, T. P., 2015, 'How information technology governance mechanisms and strategic alignment influence organizational performance: insights from a matched survey of business and IT managers. *Mis Quarterly*, vol. 39, vol. 2, pp. 497-518.

Yasser e-government program, 'The national strategy and the e-government action plan', viewed 15 October 2016, at http://www.yesser.gov./en/Mechanismsand Regulations/strategy /Pages/default.aspx