Multi-level IT Project Alignment in Government Services: Contracted Employment Services

Research-in-Progress

John Campbell
School of Information Systems and Accounting
Faculty of Business, Government and Law
University of Canberra
john.campbell@canberra.edu.au

Byron Keating
School of Management
Faculty of Business, Government and Law
University of Canberra
byron.keating@canberra.edu.au

Carla Wilkin
Department of Accounting and Finance
Faculty of Economics and Business
Monash University
carla.wilkin@monash.edu

Stephen Moore
School of Information Systems and Accounting
Faculty of Business, Government and Law
University of Canberra
stephen.moore@canberra.edu.au

ABSTRACT

This project examines the impact of IT project alignment mechanisms on the development of computer systems for the delivery of contracted government services in a complex public/private sector inter-organizational environment. Improved theoretical understanding of IT and business alignment in multi-firm environments is essential for the effective delivery of a range of government services. We propose a conceptual model and research plan to test the alignment elements necessary to obtain business value from systems in a complex public sector environment. This research will improve the performance of the Australian Government in delivery of important program objectives in relation to employment and disability services, and by providing cost-effective services to the Australian public.

Keywords (Required)

Multi-level alignment, information systems strategy, public sector

INTRODUCTION

An on-going challenge for many governments around the world concerns the effective delivery of employment services to relevant citizens in an accessible, timely, equitable and financially viable manner. In Australia, this challenge is managed by the Department of Education, Employment and Workplace Relations (DEEWR), in partnership with contracted service providers engaged to deliver a range of targeted programs. The largest of these programs is Job Services Australia (JSA), which provides social welfare recipients with access to a national network of employment support services. DEEWR also oversees the contracted delivery of Disability Employment Services (DES) for jobseekers assessed as having a significant physical or intellectual disability. The goal of both programs is to assist unemployed, or underemployed, Australians to engage in economic participation and social inclusion.

From a government perspective, the objective of the program is to reduce demand for social welfare payments by providing access to effective employment services and assisting able recipients to find suitable employment. A key related consideration is the balance between the funding of services that contribute to the employability of jobseekers and the impost of a regulatory framework that serves to motivate jobseekers to actively pursue employment. From the contracted service provider's perspective, they are concerned with delivering those services for which they are contractually obligated and remunerated. Specifically, this relates to reimbursement of the costs associated with the provision of permissible training and case management services, as well as earning payments for obtaining employment outcomes for jobseekers within their caseload.

Information technology (IT) provides a key enabling infrastructure for the realization of these objectives by ensuring that information is captured and shared in a timely way between DEEWR, the providers, and other various stakeholders who have an interest in the delivery of employment services (e.g., other government departments and agencies, jobseekers, employers, training and education providers, welfare agencies, charities, and the general public). Growing financial pressure on public

institutions, rising expectations for more efficient and effective service delivery, and uncertain demand for such services adds to the complexity associated with the development and deployment of government IT systems. This challenge is further complicated when the primary users of such systems are non-government contracted service providers. In such cases, there is a fundamental need for alignment between strategic priorities and operational capabilities of providers to ensure that IT systems are leveraged to realize business outcomes. However, creating value from investment in IT is challenging (Simnet, 2009), with recent statistics revealing "that 20 to 70 percent of large-scale investments in IT-enabled projects [are] wasted, challenged or fail to bring a return" (ITGI, 2009:7). Further concern arises when IT investment involve multiple firms (Kohli and Gover, 2008), and/or the provision of critical public sector services (Campbell et al., 2009; Irani and Love, 2008).

The impact of poor IT alignment on the delivery of services can be seen from a number of high-profile examples. For instance, Belgacom, the leading telecommunications provider in Belgium, attributed the failure of a major IT project to a failure to align the capabilities provided by the technology with strategic priorities of the firm (Viaene et al., 2007). The UK's National Audit Office provides another example, highlighting how failure to align an IT system developed for the UK's Child Support Agency with basic business processes and the capabilities of front-line staff, resulted in serious service disruptions. This ultimately resulted in the agency having to write off £1 billion in claims, and caused a backlog of £750 million in uncollected child support payments (McCue, 2004). Similar examples can be found in Australia. For instance, Queensland Health experienced problems when they changed over their payroll systems prematurely. The replacement system was poorly aligned with existing business processes and systems. This led to significant payment errors and a bill for an additional $422 million to rectify the problem (Fynes-Clinton, 2012).

These examples illustrate that the value realized from IT investments is significantly hindered by poor alignment between higher-order strategic priorities, and tactical-level capabilities, processes and infrastructure. The remainder of this paper outlines an ongoing program of research that aims to improve theoretical understanding of multi-level IT project alignment in a multi-firm environment for the effective delivery of government services.

CONCEPTUAL FRAMEWORK

IT alignment has been defined in the literature in a variety of ways: as the degree that higher-level business strategy is supported by IT strategy, and IT and business structures (Henderson and Venkatraman, 1993); as the consistent alignment of business strategy and IT strategy (Chan et al., 2007); and as a complex configuration of alignment dimensions comprising strategy, structure, process, IT, and human elements: individual, social and intellectual (Rahrovani et al., 2011; Schlosser et al., 2012). As this succinct timeline demonstrates, research has begun to move away from high-level, difficult to measure abstractions of "strategy" towards an examination of the specific capabilities required to support IT alignment with business processes and outcomes (e.g., El Arbi et al., 2012; Rahrovani et al., 2011). This shift reflects the view that organizations implement IT strategy with the aim of establishing business value through the alignment of IT with business strategy and operational capabilities. In this context IT alignment is defined as the degree to which the deliverables of an IT system are consistent with the organization's objectives, which are shaped by a complex range of internal and external factors (Jenkin and Chan, 2010). Therefore, examining how different alignment configurations impact IT project outcomes is important to understanding the emergent nature of IT alignment and its impact on business value.

In response, we propose a three-stage, multi-level IT Alignment Model (see Figure 1), which draws on institutional theory and agency theory to respectively explain strategically focused external alignment and tactically focused internal alignment. In doing so, our model aims to deliver better understanding of how value is derived from IT investments at multiple levels, and within multi-stakeholder environments. This is a significant contribution as the IT alignment literature has largely focused separately at either the strategic or tactical level, assuming a dyadic rather than a network view. Our model thus attempts to capture how value is co-created among stakeholders (Grover and Kohli, 2012) to inform the realization of business goals at different levels and at different stages as an IT project moves from initiation through to system development, deployment and evaluation (Wilkin and Chenhall, 2010).

Based upon pilot research undertaken with DEEWR's more general JSA program, our proposed research will seek to operationalize this model through a mixed methodological examination of the Employment Support System (ESS) deployed by DEEWR in support of the JSA and DES employment programs. In particular, we plan to investigate the conceptualization of external and internal alignment within this context, and the extent to which multi-level alignment impacts the assimilation of the ESS IT system and broader business process outcomes. A recently published independent review of the Australian Government's employment services (APESAA, 2012) highlighted a number of deficiencies in the delivery of DEEWR's employment programs, including concerns regarding the efficacy of the existing IT system. The report highlighted that poor alignment (between the IT systems and the business models of providers) had exacerbated the administrative burden of service delivery through the use of 'shadow systems' that replicated much of the intended functionality of the DEEWR

system. A better understanding of multi-level alignment will help the partner organization to understand the issues that need to be addressed as DEEWR moves to reform the delivery of employment services and redevelop the ESS IT system.

Although extensive research has been undertaken into IT alignment, there is a recognized need for research that integrates strategic and tactical views of alignment (Wolf et al., 2010). A consideration of alignment, however, first demands that firms have well-conceived strategies and rigorous supporting processes. A key competence for achieving this goal is good people (Willcocks and Lacity, 2008). On the contract manager side, successful IT alignment requires that senior management understand the business context and have the vision and skills to create IT solutions that are aligned with needs of stakeholders. On the provider side, people should be both capable and honest about what can realistically be achieved.

Likewise, effective external alignment between stakeholders requires the support of sound contracts and good relationship management. In this regard, Lacity et al. (2008) assert that in situations where the demand for innovation is high and outcome certainty is low (i.e., complex service settings), there is a need for more emphasis on behavior-based strategies (i.e., relationship management) than on outcome-based contracts. Finally, it is important to note that any proposed IT project must make good strategic sense to all parties. As such, the IT system must be internally aligned with the supplier‘s strategies and capabilities (Henderson and Venkatraman, 1993), ensuring that it avoids what Kern et al. (2002) call ‘the winner‘s curse,’ which they describe as occurring when providers are forced to adopt an undesirable and/or unprofitable practice. Other factors that may jeopardize the success of an IT project include the politics of information sharing, intellectual property concerns, and the challenge of building effective long-term relationships over time (Cullen et al., 2005).

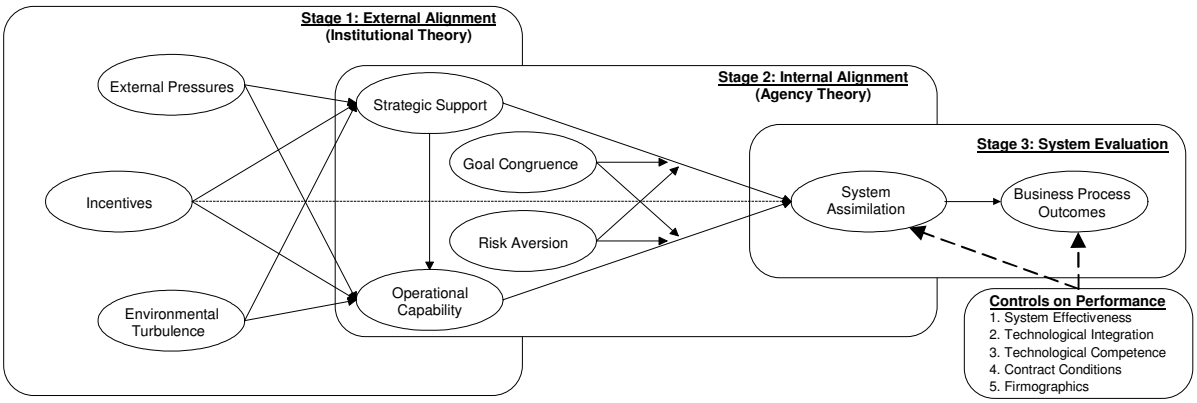

Figure 1. Multi-level IT Alignment Model (MAM). Adapted from Wolf et al. (2010)

With this background in mind, we identify three significant theoretical and methodological contributions that will guide our research.

Integrated, multi-level view of IT alignment

The importance of alignment to the realization of business value from IT is well established in the literature. For two decades, it has persistently ranked as one of the number one issues confronting IT executives (Luftman et al., 2012), and is viewed as a critical determinant of IT take up and organizational performance (Chan and Reich, 2007; Teo and Ang, 1999). Prior IT alignment research distinguishes between strategic and tactical levels of alignment, regarding both as equally important to the utilization-performance relationship (Chan et al. 1997; Cragg et al., 2002; Henderson and Venkatraman, 1993). Strategic IT alignment reflects the extent to which IT supports the realization of business goals (Luftman and Brier, 1999), whereas tactical IT alignment is defined as the fit between IT infrastructure and organization’s capacity to exploit the proposed technology (Henderson and Venkatraman, 1993).

Although the importance of integrating the strategic and tactical views of IT alignment has long been recognized (e.g. Henderson and Vekataraman, 1993; Tarafdar and Qrunfleh, 2009), very few studies have sought to examine the interplay between these two views (Wolf et al., 2010). Consequently, there are few well established, integrated frameworks that provide insight into how alignment is translated from higher-level strategic support into the operational-level requirements for value creation and successful system deployment is yet to emerge. This research addresses this important gap.

Application of alignment theory to complex government services

Unlike the private sector where business value is measured in terms of profitability and efficiency, public sector organizations have an additional mandate to deliver social and policy related outcomes (Campbell et al., 2009; Kraemer and Dedrick, 1996). Public sector organizations are also subject to greater levels of transparency, and must operate within complex regulatory environments that require, among other things, free and equitable access to core services (i.e., employment services). This broadened focus introduces additional complexity to the way that IT is developed and deployed in public sector organizations, and recasts both the interpretation and application of alignment theory.

Though alignment theory has been increasingly used to inform research into IT investments by government (e.g., Van Slyke, 2007), particularly in the context of electronic government initiatives (e.g., Gregor et al., 2007; Fedorowicz et al., 2009), the volume of this government-focused alignment research is still very small relative to non-government studies. This is surprising given the scale of government expenditure on IT. There remains a need for further research that considers (i) the impact of alignment on other forms of value (e.g., social impacts and policy implementation); (ii) the inter-dependent nature of relationships among stakeholders engaged in the delivery of public-good services; and (iii) the challenge of delivering such services within an increasingly corporatized government environment, where increased accountability and greater demands for efficiency continue to undermine service delivery. The proposed study is amongst the first comprehensive attempt to address these issues.

Instantiation within a real-world setting

Gregor and Jones (2007) argue that information systems is an inherently practical discipline, involving the study of technological artifacts that are embedded within real-world, organizational settings. They contend that most, if not all, information systems research that concerns the design and deployment of systems ought to be instantiated in a real-world setting in order to improve the practical and theoretical relevance of the findings. Accordingly, our proposed research examines multi-level IT alignment in government services through an examination of contracted employment services. In particular, this research will focus on the generalizability of our multi-level alignment model to the Australian government's JSA and DES employment programs. These programs were chosen because they were the subject of a recent review that recommended, among other things, a major overhaul of these programs, including an upgrade to the IT support system (ESS).

Another related advantage of instantiation is that it will allow us to addresses a well acknowledged criticism with public sector reform initiatives; namely, that they tend to focus too much on the mechanics of bringing about change to processes (and systems), with little, if any, attention on the net impact of these changes (ANAO, 2009). The proposed approach is unique in that it will not only measure the impact of external and internal alignment on system assimilation, but it will also examine whether the reforms have improved actual business process outcomes.

APPROACH AND METHOD

This research program consists of a three-stage mixed methodology (Cresswell and Plano Clark, 2011) to empirically test the conceptual model (Figure 1). Our approach draws on qualitative techniques to explore the conceptualization of external alignment with the strategic priorities of DEEWR (Stage 1), and internal alignment between the desire to use the ESS IT system and the capabilities required to assimilate and exploit this technology (Stage 2). Stage 3 will quantify the impact of external and internal alignment on the system evaluation.

Stage 0: Pilot Study (already completed)

The investigators have undertaken an initial pilot study to understand the drivers of IT project success in the deployment of a system to support the delivery of contracted government services. It has been argued that a valuable starting point for IT alignment research should be the analysis of well-specified IT projects (Wolf et al., 2010). Following Chan and Reich's (2007) definition of IT project alignment as the degree to which the outcome of an IT project matches with the organization's IT strategy and the overall project's objectives, we used DEEWR's successful employment services system as a starting point. Herein our focus was on the governance and socio-cultural structures that supported the service provider engagement with DEEWR following the most recent redevelopment of the JSA employment services support system (citation removed for review). This research revealed the importance of IT alignment, and helped to identify a number of factors that influenced internal and external alignment. In particular, and consistent with the work of Gutierrez and Serrano (2008), the lack of congruence between the priorities of senior managers responsible for strategic-level alignment with the capabilities of middle managers with the responsibility for tactical-level alignment was identified as an inhibitor to successful assimilation of the IT system.

The research program detailed in this paper will build on the insights from this pilot research, and the resulting multi-level alignment model that was derived, to examine the development, deployment and evaluation of a new ESS IT system planned for progressive rollout across the JSA and DES programs from 2013 to 2015 as part of the proposed reforms emanating from the APESAA (2012) review. It is also significant that the research proposed is amongst the first to consider IT alignment as a dynamic, emergent process. Recent research suggests that the ability to align internal and external capabilities in response to changes in internal and external environments is critical to successful IT assimilation, and subsequently, to realizing business value through superior business process outcomes (Wolf et al., 2010; Chan and Reich, 2007).

Stage 1: Conceptualization of external alignment

During recent years, institutional theory has emerged as a theoretical perspective to account for the influence of external forces on organizational decision making (Mizruchi and Fein, 1999). Institutional theory posits that structural and behavioral changes in firms are driven by an organization's need for legitimacy (DiMaggio and Powell, 1983). The continuous search for legitimacy facilitates, over time, the process of institutionalization and isomorphism, especially in dynamic and turbulent environments. In these environments, senior management fulfill a boundary spanning role (Mitchell, 2006), and are responsible for aligning external expectations with internal capabilities (Liang et al., 2007). However, operational capability is also required to address top management's priorities through the adaptation of technology, and/or the re-design of business processes (Floyd and Wooldridge, 1997). In line with Scott's (1987) conceptualization of inducements, incentives provided by influential stakeholders can also shape governance and behavior.

The qualitative fieldwork in this stage of the project will focus on understanding how external pressures (mimetic, coercive, normative), incentives (material, solidary, purposive), and environmental turbulence (market, technological) combine to influence strategic commitment by providers, and their willingness to engage with DEEWR around critical system (re)development. Given the lack of research on system development in the public setting, and questions regarding the applicability of the conceptual model to the focal employment programs, each of the constructs depicted in the conceptual model (see Figure 1) will need to be explored in detail during the interviews.

The fieldwork will involve semi-structured interviews with senior management from DEEWR, providers and other key industry groups. The contract manager interviews will involve senior managers from employment services generally, and the JSA and DES programs in particular, policy advisers, and of course, the systems architects responsible for the development and deployment of the ESS IT system. The provider interviews will involve C-level managers from a random stratified sample of providers. While saturation will dictate the actual number of interviews undertaken, our goal is to identify an initial random stratified sample of 60 providers nationally. The stratification will ensure that the sample is balanced in terms of employment program (JSA/DES), demographics, experience, and provider location. Prior research undertaken as part of the pilot study suggests that at least three interviews will be necessary with the equivalent of the Chief Executive Officer, Chief Operations Officer, and the Chief Technology Officer. We also envisage interviewing key industry stakeholders including the Chair, Federal Government Advisory Panel on Employment Services Administration and Accountability (APESAA).

Stage 2: Conceptualizing internal alignment

Following a commitment to strategically align with DEEWR, it is necessary for service providers to undertake a process of internal alignment in order to access the resources and build the capabilities needed to support the assimilation of the system. Agency theory (variously known as principal-agent theory, human-agency theory) provides a useful lens through which to examine internal alignment. According to Eisenhardt (1989), agency theory is concerned with resolving problems that arise when there is conflict between the desires or goals of the principal and agent, or when the principal and the agent have different attitudes towards risk and risk sharing. Though much of the focus of agency theory has concerned the use of formal contracts to manage undesirable behavior, within the context of the proposed study, we are also interested in how providers balance their formal obligations to the principal under their employment services contracts, against other considerations such as client and employer expectations.

Qualitative research will be undertaken during this stage to explore how strategic-level support is translated into tactical-level capabilities. The fieldwork will involve semi-structured interviews of middle and line managers responsible for implementation of corporate strategy. Within the employment services context, this will require interviews with regional managers and site managers. Regional managers typically report to the Chief Operations Officer (or equivalent), and have territorial management responsibilities. They are also the lowest level of management that has a direct reporting function to the Contract Manager. While there is variation from one provider to another, a regional manager will typically oversee a small handful of sites (up to a dozen) within a provider network. The actual management of service delivery is the domain of site managers. They are responsible for the day-to-day management of staff responsible for delivery of training and case

management services. Based on the initial sample of providers from Stage 1, we anticipate at least 60 interviews with a paired sample of regional manager-site manager respondents.

An important aspect of this fieldwork is the recognition that different respondents, operating at different levels within the provider firms, are likely to conceptualize the key constructs (depicted in Figure 1) differently. As such, and in line with the previous stage, this qualitative fieldwork will examine the conceptualization of these constructs, and hence aid in their operationalization during the modeling phase that will follow. Particular attention will be given to understanding how providers use incentives to shape goal alignment and to mitigate resistance to change.

Stage 3: Modeling and system evaluation

The final stage of the research will involve a quantitative assessment of the extent to which system assimilation and business process outcomes are enhanced by external and internal alignment. In order to validate the conceptual model presented in Figure 1, and the hypothesized relationships depicted by the paths shown in this model, we plan to conduct an online survey of regional managers from the population of JSA and DES providers who were awarded contracts in the latest tender rounds for both programs. Regional managers were chosen as the respondent group because they act as intermediaries between the site managers and the senior management team. As such, they have a good understanding of the operational capabilities and concerns of site managers, and are tasked with rolling out strategy and policy developed by senior management. They also have a direct reporting function to DEEWR, and have generally risen to their current position from entry level operational roles. The latest DEEWR data reveals that there are currently 297 providers operating across 116 employment service areas and 4100 sites nationally. With the support of the partner organizations, we will develop a contact list of regional managers and survey the entire population in this final stage. Data will be gathered using an online questionnaire developed and pre-tested at the end of the second stage.

CONCLUSION

This program of research aims to improve theoretical understanding of multi-level IT project alignment in a multi-firm environment in the context of government service delivery. Using the JSA and DES programs as a backdrop, our ongoing program of research examines how DEEWR engages with contracted service providers to develop and deploy IT in support of employment services for clients. This necessitates a multi-level perspective that synthesizes the need for commitment by the service provider to the strategic priorities of the contract manager on the one hand, and internal alignment between the provider's strategic support for the proposed system and their operational readiness to assimilate the technology.

A deeper theoretical and practical understanding of multi-level alignment can provide benefit to a range of government programs beyond employment services. Our investigation of the conceptualization and interaction between external and internal alignment is relevant to any program that relies on external service providers. Our work will also assist the Australian Federal Government to better understand competing stakeholder interests and priorities, as well as barriers to effective service delivery, particularly as supported by complex, public-sector IT initiatives.

REFERENCES

1. APESAA (2012) Advisory Panel on Employment Services Administration and Accountability, Final Report, Available at: http://www.deewr.gov.au/Employment/Documents/APESSAFinalReport.pdf [last accessed 10 October 2012].
2. ANAO (2009). Innovation in the Public Sector: Enabling Better Performance, Driving New Directions. Better Practice Guide 2009.
3. Available at http://www.anao.gov.au/bpg-innovation/pdf/BPG-Innovation.pdf [last accessed November 2012]
4. Campbell, J., McDonald, C. and Sethibe, T. (2009) Public and Private Sector IT Governance: Identifying Contextual Differences, *Australasian Journal of Information Systems*, 16 (2), 5-18.
5. Campbell, J., Wilkin, C. and Moore, S. (2011) Investigation of the Comprehensiveness of the ISO 38500 Standard in an Inter-organizational Public/Private-sector Context, *Twenty-Second Australasian Conference on Information Systems* (ACIS), Sydney, Australia.
6. Chan, Y. E., Huff, S. L., Barclay, D. W., & Copeland, D. G. (1997) Business Strategic Orientation, Information Systems Strategic Orientation, and Strategic Alignment, *Information Systems Research*, 8(2), 125-150.
7. Chan, Y.E. and Reich, B.H. (2007) IT Alignment: An Annotated Bibliography, *Journal of Information Technology*, 22(4), 2007, 316-396.
8. Cragg, P., M. King and H. Hussin. (2002). IT alignment and firm performance in small manufacturing firms, *Journal of Strategic Information Systems,* 11 (2): 109-132.

9. Creswell, J. W. and Plano Clark, V. L. (2011). Designing and conducting mixed methods research (2nd ed.). Thousand Oaks, CA: Sage.
10. DiMaggio, P.J. and Powell, W.W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields, *American Sociological Review*, 48 (2), 147-160.
11. El Arbi, F, Ahlemann, F. and Kaiser, M. (2012) The Effects of Intra-organizational Agency Problems on IS Project Alignment, *ECIS 2012 Proceedings*, http://aisel.aisnet.org/ecis2012/201 [last accessed 10 October 2012].
12. Eisenhardt, M.K (1989) Agency theory: An assessment and review, *Academy of Management Review*, 14(1), 57-74.
13. Fedorowicz, J., Gelinas, U.J. Jr., Gogan, J.L. and Williams, C.B. (2009) Strategic alignment of participant motivations in e-government collaborations: The internet payment platform pilot, *Government Information Quarterly*, 26 (1), 51-59.
14. Floyd, S.W., and Wooldridge, B. 1997. Middle Management Strategic Influence and Organizational Performance, *Journal of Management Studies* (34:3), 465-485.
15. Fynes-Clinton, M. (2012). It's a little Frankenstein with patches all over it. QWeekend, *The Courier Mail*, September 8-9.
16. Gregor, S., and Jones, D. (2007). The Anatomy of a Design Theory. *Journal of the Association of Information Systems*, (8:5), 312-335.
17. Gregor, S, Hart, D. and Martin, N. (2007) Enterprise architectures: Enables of business strategy and IS/IT alignment in government, *Information Technology and People*, 20 (2), 96-120.
18. Grover, V. and Kohli, R. (2012) Cocreating IT Value: New Capabilitities and Metrics for Multifirm Environments, *MIS Quarterly*, 36:1, 225-232.
19. Gutierrez, A., and Serrano, A. 2008. Assessing Strategic, Tactical and Operational Alignment Factors for SMEs: Alignment Across the Organization's Value Chain, *International Journal of Value Chain Management* (2:1), 33-56.
20. Henderson, J.C. and Venkatraman, N. (1993). Strategic Alignment: Leveraging information technology for transforming organizations, *IBM Systems Journal* 32(1): 4–16.
21. Irani, Z. and Love, P. (2008) Evaluating Information Systems: Public and Private Sector, Oxford, England: Butterworth-Heinemann.
22. ITGI (2009). Enterprise Value: Governance of IT Investments – The Val IT Framework 2.0, IT Governance Institute, Rolling Meadows, IL, USA.
23. Jenkin, T.A. and Chan, Y.E. (2010) IS project alignment – a process perspective, *Journal of Information Technology* 25, 35–55.
24. Kohli, R. and Grover, V. (2008) Business Value of IT: An Essay for Expanding Research Directions to Keep Up With the Times, *Journal of the Association for Information Systems*, 9 (1), 23-39.
25. Kraemer, K.L. and Dedrick, J. (1996) Computing and Public Organizations. Center for Research on Information Technology and Organizations, paper 227.
26. Liang, H., Nilesh, S., Hu, Q., and Xue, Y. 2007. Assimilation of Enterprise Systems: The Effect of Institutional Pressures and the Mediating Role of Top Management, *MIS Quarterly* (31:1), 59-87.
27. Luftman, J. and Brier, T. (1999). Achieving and sustaining business-IT alignment, *California Management Review*, 42(1), 109-122.
28. Luftman, J., Zadeh, H.S., Derksen, B., Santana, M., Rigoni, E.H. and Huang, Z. (2012) Key information technology and management issues 2011–2012: an international study, *Journal of Information Technology* 27, 198–212.
29. McCue, A. (2004). EDS under fire over 456m child support IT fiasco. Silicon.com. [accessed 29th January 2008].
30. Mitchell, V.L. (2006). Knowledge integration and information technology project performance, *MIS Quarterly* 30 (4): 919-939.
31. Mizruchi, M., and Fein, L. 1999. The Social Construction of Organizational Knowledge: A Study of the Uses of Coercive, Mimetic, and Normative Isomorphism, *Administrative Science Quarterly* (44:4), 653-683.
32. Rahrovani, Y., Kermanshah, A. and Pinsonneault, A. (2011) On the Conceptualization of IT Alignment: Measuring Alignment of IT Project Portfolio, *MCIS 2011 Proceedings*, http://aisel.aisnet.org/mcis2011/61 [last accessed 10 October 2012].
33. Schlosser, F., Wagner, H-T. and Coltman, T. (2012) Reconsidering the Dimensions of Business-IT Alignment, *45th Hawaii International Conference on System Sciences*, HICSS 2012 (5053-5061) IEEE.
34. Simnet, (2009). Society for information management: Delivering business value through IT leadership, http://www.simnet.org [last accessed 5 August 2012].
35. Scott, W.R. (1987). The adolescence of institutional theory, *Administrative Science Quarterly*, 32(4), 493-511.
36. Teo, T.S.H. and Ang, J.S.K. (1999). Critical Success Factors in the Alignment of IS Plans with Business Plans, *International Journal of Information Management* 19(1), 173–185.
37. Van Slyke, D.M. (2007) Agents or stewards: Using theory to understand the government-nonprofit social service contracting relationship, *Journal of Public Administration Research and Theory*, 17 (2), 157-187.

38. Viaene, S., Fagan, S., and Almeida, S. (2007). Belgacom: IT project selection 2005. *Communications of the Association for Information Systems* 19 (1): 47-60.
39. Removed for review
40. Wilkin, C.L. and Chenhall, R.H. (2010).A review of IT governance: A taxonomy to inform AIS, *Journal of Information Systems*, 24 (2), 107-146.
41. Wolf, M., Beck, R. and Vykoukal, J. (2010) An Integrated Perspective on IT Project Alignment in Highly Dynamic Environments – A Multi-Level Analysis, *ICIS 2010 Proceedings*. Paper 39. http://aisel.aisnet.org/icis2010_submissions/39 [last accessed 10 October 2012].
42. Yin, R. K. (2005). Introduction. In RK Yin (Ed.) Introducing the world of education: A case study reader, xii–xxii.