Antecedents and Performance Effects of IT-Business Strategic Alignment

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Aligning information technology (IT) strategy with business strategy has been one of the top concerns of IT managers and business executives (McGee, 2006; Luftman et al., 2006). The fast paced technology environment and ever-changing business needs have been the driver of this continuous challenge towards achieving alignment. This dynamism between business and IT has been an enduring subject for information systems (IS) scholars (Henderson and Venkatraman, 1993; Reich and Benbasat, 1996; Sabherwal et al., 2001; Chan et al., 2006; Hu and Huang, 2006). In fact, IT-business-alignment is one of the early research streams in the IS literature (King, 1978; McLean and Soden, 1977), yet it is gathering even more attention in the recent literature as organizations rely more on information technology (Chan et al., 2006; Hu and Huang, 2006; Luftman et al., 2006).

The most common approach to study IT-business alignment has been the contingency perspective (Bergeron et al., 2004). According to this view, structural alignment is defined as the fit between IT structure and business structure, and strategic alignment is defined as the fit between IT strategy and business strategy in an organization (Chan et al., 1997; Henderson and Venkatraman, 1993). Reich and Benbasat (1996) argue that this IT-business linkage has two dimensions; intellectual and social. The intellectual dimension refers to the externally valid interrelated business and IT plans. The social dimension, on the other hand, takes the degree of communication and involvement of the business and IT managers into consideration, and refers to their mutual understanding of and commitment to business and IT objectives (Reich and Benbasat, 1996). Although there is a growing body of literature on the social dimension (Reich and Benbasat, 2000; Tan and Gallupe, 2006), studies that examine the intellectual dimension have dominated the IT alignment literature.

The research on IT-business alignment can be classified into two main streams. One stream of research has focused on the performance effects of alignment. This body of literature has argued conceptually (Henderson and Venkatraman, 1993; Papp, 1999) and found limited empirical support (Bergeron et al. 2004; Chan et al., 1997; Palmer and Marcus, 2000; Teo and King, 1999) for the enhancing effect of the alignment on organizational performance. The other stream of research has investigated the antecedents of IT-business alignment to fully understand the alignment process and provide prescriptive guidance on how to achieve alignment (Chan et al., 2006; Hu and Huang, 2006; Reich and Benbasat, 2000; Sabherwal and
Kirs, 1994). This body of literature has in general found that the most important antecedents of the alignment are shared domain knowledge of business and IT managers, previous success of IT unit, connections of business and IT planning, and environmental uncertainty.

Reich and Benbasat’s (2000) work is one of the recent studies that investigated the antecedents of alignment. The authors have proposed a framework to study the social dimension of alignment and found partial and qualitative support for their framework. Later, Hu and Huang (2006) confirmed and expanded their model, still with a qualitative study. An empirical confirmation of findings from this line of research is yet to be seen. In a more recent study, Chan et al. (2006) studied the antecedents and performance effects of alignment. They reported positive effects of alignment on organizational performance, and identified three immediate drivers of alignment; organizational size, prior IS success, and shared domain knowledge. However, their study is not as comprehensive in a sense that for small organizations without significant prior IT success, the only driver of alignment left is the shared domain knowledge. Moreover, the empirical support came from the extended use of their previously collected data (Sabherwal and Chan, 2001; Sabherwal and Kirs, 1994) which may limit the generalizability of their findings.

There is a clear need in the IS literature for a comprehensive empirical study based on the recent advances in alignment theory and statistical techniques with considerations for both antecedents and consequences of alignment in the same model. This dissertation attempts to fulfill this need. Thus, the objective of this dissertation is to integrate and expand the current literature on the social dimension of strategic alignment by investigating its antecedents and performance effects. More specifically, this dissertation will address the following research questions; 1) what are the antecedents of IT-business strategic alignment, 2) how does such strategic alignment affect the organizational performance, and 3) how do the antecedents and performance effects of strategic alignment vary across different business strategies. Figure 1 presents the proposed research framework of the dissertation. The thesis is that the current IT and business management practices are the immediate drivers of strategic alignment and they mediate the effect of antecedents of alignment. In addition, shared goals and interests of business-IT managers and environmental uncertainty moderate the relation between the current practices and strategic alignment.
The current management practices consist of the connection of business and IT planning and communication between business and IT executive (Reich and Benbasat, 2000). A simultaneous development of business and IT plans makes it more likely to integrate IT into the business strategy (Chan and Huff, 1993). Sabherwal and Kirs (1994) also suggested that an integration through mechanisms as task forces and liaison personnel would enable IT managers to become aware of organizational goals and promote top managers’ participation in the utilization of IT capabilities. Increased communication frequency, on the other hand, enhances the mutual understanding between IT and business managers on the current and future role of IT (Johnson and Lederer, 2005). Earl and Feeny (1996) also postulated that increased communication between CIO and executives will help improve the success of strategic alignment. Reich and Benbasat (2000) and Hu and Huang (2006) found support for the positive effect of connections and communication on the strategic alignment in their respective case studies.

IT governance reflects the degree of centralization and formalization of the IT unit. Since in centralized governance modes IT activities are coordinated at the corporate level (Sambamurthy and Zmud, 1999), organizations with such structures may require less effort for alignment (Chan et al., 2006). In contrast, in decentralized modes, divisional managers assume authority (Sambamurthy and Zmud, 1999), and they are more likely to focus on their own objectives rather than the central objective. Formalization, on the other hand, promotes communication and connection, and in turn, enhances the IT management and decision making process (Ranganathan and Sethi, 2002). Similarly, the high degree of IT management sophistication (i.e., IT planning, control, organization and integration) enhances the participation of business managers in IT planning (Gupta et al., 1997; Sabherwal and Kirs, 1994). Thus, we posit that centralization and formalization have a positive effect on alignment through the mediating effects of connections and communication.

The shared domain knowledge between business and IT managers has been considered a major component and enabler of social dimension of alignment (Armstrong and Sambamurthy, 1999; Chan and Huff, 1993; Chan et al., 2006;
Luftman and Brier, 1999; Tan and Gallupe, 2006). High levels of shared knowledge facilitate the communication and connections and improve the relationship between business and IT executives (Feeny et al., 1992; Hu and Huang, 2006; Reich and Benbasat, 2000; Sabherwal and Kirs, 1994). Similarly, a successful IT history gives credibility to the IT unit and increases the top management’s perceptions of IT (Chan et al., 2006; Earl and Feeny, 1994; Hu and Huang, 2006; Reich and Benbasat; 2000; Rockart et al., 1996). Thus, we posit that in organizations with successful IT track record it is more likely that business managers communicate with IT managers and align IT with business plans.

Several scholars in the literature suggested that the increasing relationship between business and IT managers will improve their communication level (Coughlan et al., 2005; Hu and Huang, 2006; Rockart et al., 1996). This relationship, in turn, will enhance the ability of IT to add value (Earl and Feeny, 1994) and ensure the integration of business-IT strategic integration (Rockart et al., 1996). These informal relationship networks are not only an important component of alignment (Chan, 2002), but the lack of such relationship is considered one of the top inhibitors of alignment (Luftman and Brier, 1999). Thus, we posit that active relationship management by IT managers enhances the connections between IT and business planning and improves communications between IT and business managers.

The proposed research model also postulates the moderating role of shared goals and interests of business and IT managers and environmental complexity. Grounding their arguments in the team effectiveness theory, Edmondson et al. (2003) argued that when managers do not share the same goal, their divergent interests have adverse effect on their decision making effectiveness. One aspect of the team effectiveness theory is defined as the willingness of team members to implement team decisions. Lee and Pai (2003) also suggested that disparate goals can lead to inter-group conflicts, which may have adverse effects on the effectiveness of strategic IS planning. On the other hand, although studies have considered environmental uncertainty as an inhibitor of alignment, this argument lacks empirical support (Chan et al., 2006; Sabherwal and Kirs, 1994). Parallel to this, Newkirk and Lederer (2006a and 2006b) have presented statistical support for the moderating effect of environmental uncertainty (i.e., dynamism, heterogeneity and hostility). These findings suggest that it may be more appropriate to analyze the moderating effect rather than the direct effect of environmental uncertainty on strategic alignment.

Finally, the research model reaffirms the performance effects of strategic alignment. However, this dissertation will further investigate the influence of competitive business strategy on this relationship using Miles and Snow’s typology of defender, analyzer and prospector. The effect of business strategies on the relationship between alignment and organizational success is also suggested in the literature (Armstrong and Sambamurthy 1999; Chan and Huff, 1993; Chan et al., 2006).

Survey data will be collected from business and IT managers and analyzed with structural equation modeling (SEM) technique. There are several advantages of SEM over path analytic regression models. SEM, for instance, produces overall fit for the model and allows researchers to work with unobserved latent variables, conduct confirmatory analyses, and model
measurement error. However, these benefits are limited with the complexity of SEM, the danger of equivalent models and the possibility of capitalization on chance (Chin, 1998).

The expected results of this dissertation will provide empirical support for 1) the effects of antecedents and management practices on IT-business strategic alignment, 2) the effect of business strategy on the performance effects of the alignment, and 3) the moderating roles of shared goals and interests and environmental uncertainty. The dissertation will integrate and extend the current IS literature on IT-business alignment and provide a more comprehensive framework that will be empirically tested with survey data. Moreover, the findings will have managerial contribution in terms of providing prescriptive guide to executives for achieving successful IT-business alignment.

References


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