

Alignment of information technology strategy with business strategy in an uncertain environment

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Abstract

This research examines how to integrate information technology (IT) with business by aligning IT strategy with business strategy. The existing literature postulates a variety of antecedents that can be used to achieve business-IT alignment. Yet, the question of how to accomplish alignment in an uncertain environment remains largely unanswered. In fact much of the research conducted in this regard has employed an approach, which examines the impact of antecedents on alignment. They fail to examine how environmental uncertainty affects the alignment and the capabilities of antecedents to achieve alignment in an uncertain environment. Hence, this research proposes a conceptual model to assess the way antecedents can lead to align IT strategy with business strategy in an uncertain environment. The conceptual model will be validated through a survey of Sri Lankan organizations. Findings tied to this initiative will provide important contributions to both research and practice.

Keywords

Strategic alignment, antecedents, environmental uncertainty

INTRODUCTION

In many organisations, information technology (IT) has become crucial in the support, sustainability, and growth of business (Ravishankar, Pan, & Leidner, 2011). This pervasive use of technology has created a dependency on the proper integration of IT with business. A recent study also found that proper integration of IT with business by aligning the business strategies is an issue facing CIOs (Luftman et al., 2012). Failure to integrate IT with the business is believed to be the cause of the failure of many IT initiatives (Ravishankar et al., 2011). Particularly in the case of enterprise-wide information system (IS) initiatives, alignment with the strategic objectives of the organization is the challenge for modern organizations (Ravishankar et al., 2011).

Business-IT alignment, also referred as strategic alignment facilitates to the application of IT in an appropriate and timely way and in harmony with business strategies, goals, and needs (Luftman & Brier, 1999). It is a collaborative process between business and IT managers which enables them to search for opportunities for embedding IT in business (Choe, 2003). Strategic alignment is generally rooted in Contingency theory assuming that the effectiveness of organizations is a result of the fit between organizational characteristics and contingencies that surround the organization (Henderson & Venkatraman, 1993). This fit is crucial, in order to support strategies within an organization (Chan, Huff, Barclay, & Copeland, 1997). It can aid organizations in acquisition and development of IT resources and capabilities, necessary for competitive positioning (Ravishankar et al., 2011).

One of the approaches used to align IT with business strategies is to discover how certain antecedents interact to create conditions that enable or inhibit strategic alignment (Reich & Benbasat, 2000). By examining each antecedent in an organizational context, executives are better able to design appropriate strategies to achieve strategic alignment (Hu & Huang, 2006; Reich & Benbasat, 2000; Yayla & Hu, 2009). Whereas existing alignment research suggests various antecedents to achieve strategic alignment (Reich & Benbasat, 2000), attaining alignment between IT and business remains a challenge (Luftman et al., 2012). Environmental uncertainty has been found to be one of the key challenges to achieving strategic alignment. The question of how to accomplish strategic alignment in a complex and dynamic environment remains largely unanswered (Hu & Huang, 2006).

Environmental uncertainty refers to the unpredictability of environmental variables that have an impact on an organization's performance (Miller, 1993). Some of the information required to make comprehensive decisions may not be available in an uncertain environment (Fredrickson & Mitchell, 1984). This lack of information can cause serious mistakes in decision making (Xu & Koronios, 2005), and can adversely affect strategic planning

(Johnson & Lederer, 2005). This may inhibit coordination amongst IT and business units and lead to conflicting unit goals (Sabherwal & Kirs, 1994). An uncertain environment may therefore act as an inhibitor to strategic alignment (Sabherwal & Kirs, 1994). Therefore, it is important for managers to develop an understanding of which antecedents can be of most assistance when attempting to achieve strategic alignment efficiently in the context of a highly uncertain environment.

The literature has postulated the antecedents of strategic alignment; however, there is almost no systematic research that considers the abilities of antecedents to ameliorate the effects of environmental uncertainty on strategic alignment. In fact, much of the existing literature in this regard has employed a reductionist approach in which a linear relationship has been found to exist between antecedents and determinants of strategic alignment such as communication and planning connection between business and IT planning. However, a more comprehensive approach has greater power to explain the complex interrelationship between constructs. This study therefore examines the influence of environmental uncertainty on strategic alignment and how to best achieve strategic alignment in an uncertain environment. The proposed conceptual model enables to capture the influence of environmental uncertainty and, to investigate the ability of antecedents to achieve strategic alignment in an uncertain environment.

All organizations experience some degree of environmental uncertainty at some point (Calantone, Garcia, & Droge, 2003). However, organizations in developing countries generally experience higher environmental uncertainty than organizations in developed countries (Iakovleva, Kolvereid, & Stephan, 2011). The environment in developing countries is considered as less stable and is often marked by strong turbulence (Iakovleva et al., 2011). Government regulations and political factors play a significant role in the economy and significantly influence the flow of the economic activities (Badri, Davis, & Davis, 2000). Therefore, Sri Lanka as a developing country provides an appealing setting in which to examine the capabilities of antecedents to ameliorate the impact of environmental uncertainty on the managerial practices of strategic alignment.

LITERATURE REVIEW

This section reports on a review of related research on strategic alignment and its antecedents. Given that alignment is a broad area of research with overlapping definitions, this section provides an overview of core concepts related to strategic alignment within the context of this study.

Strategic alignment

The concept of alignment has arisen from the notion that organizations should attempt to ‘align’, or ‘fit’ their organizational resources to the competitive context in which the organization is situated (Baker, Jones, Qing, & Jaeki, 2011). Alignment refers to the “degree to which the needs, demands, goals, objectives, and/or structure of one component are consistent with the needs, demands, goals, objectives, and/or structure of another component” (Ravishankar et al., 2011, p. 40). Alignment between various organizational components is seen as a key to improved organizational performance (Henderson & Venkatraman, 1993). As IT increasingly assumes strategic roles in organizations, strategic alignment is seen as the alignment of an organization’s IT strategy with the business strategy of the organization (Sabherwal & Chan, 2001).

There are multiple descriptions of strategic alignment. Henderson and Venkatraman (1993) stated that alignment is the degree of fit and integration among business strategy, IT strategy, business infrastructure, and IT infrastructure. Strategic alignment has been defined as “the extent to which the IT mission, objectives, and plans support and are supported by the business mission, objectives, and plans” (Reich & Benbasat, 2000, p. 82). King (1998) described alignment as the fit of IT strategies and plans with business strategies and goals, whereas Palmer and Markus (2000, p. 242) stated that alignment is “using IT in a way consistent with the firm’s overall strategy”. However, no agreed-on definition has emerged in the literature.

Two approaches can be seen in the research literature, the intellectual dimension and the social dimension (Reich & Benbasat, 2000). The intellectual dimension concentrates on examining the strategies, structure, and planning methodologies in organizations (Chan et al., 1997). The social dimension investigates the actors in organizations, examining their values, communications with each other, and ultimately their understanding of each other’s domains (Reich & Benbasat, 2000). The intellectual dimension of alignment has been defined as the state in which a high-quality set of interrelated IT and business plans exists” (Reich & Benbasat, 2000). Research into the intellectual dimension concentrates more on the content of plans and on planning methodologies (Campbell, Kay, & Avison, 2005) and consists of formal mechanisms and processes of achieving alignment such as strategic planning, business enterprise modelling, use of tools and administrative governance arrangements and processes (Martin, Gregor et al., 2005).

The social dimension of alignment has been defined as “the state in which business and IT executives within an organizational unit understand and are committed to the business and IT mission, objectives, and plans” (Reich & Benbasat, 2000, p.82). This dimension concentrates on the cognitive processes of human actors in the alignment mechanism (Sha, Cheng, Pan, & Teoh, 2011). It focuses on the people involved in the creation of alignment (Chan & Reich, 2007; Reich & Benbasat, 2000).

Both the intellectual and social dimensions should be considered to achieve a comprehensive understanding of the alignment mechanism in organizations and obtain meaningful management implications from both perspectives (Reich & Benbasat, 1996). On their own, neither the social nor intellectual dimension of alignment is sufficient to explain the full spectrum of the alignment mechanism in organizations (Lee, Kim, Paulson, & Park, 2008). However, this research focuses on the social dimension of strategic alignment, since this study aims to investigate behavioural aspects by surveying executives about their understanding of strategic alignment. This research will explore how well business and IT executives understand and are committed to the business and IT mission, objectives, and plans.

Further, Reich and Benbasat (2000) contended that strategic alignment may be approached from a process or a state perspective. A process view is concerned with planned activities which are performed dynamically through the iterative process of achieving alignment (Gutierrez, Orozco, Papazafeiropoulou, & Serrano, 2008). An outcome perspective involves alignment as a fixed output and variance or factor models have been developed to explain how alignment can be achieved by manipulating a number of antecedents. The outcomes can then be observed and quantified (Reich & Benbasat, 2000).

In this study, strategic alignment refers to “the extent to which the IT mission, objectives, and plans support and are supported by the business mission, objectives, and plans” (Reich & Benbasat, 2000, p. 82). This description detail and articulate what exactly comprises good alignment and how it might be measured. In this context, strategic alignment is a state that is enabled by manipulating a number of antecedents.

Antecedents

The alignment literature discloses numerous factors that contribute to strategic alignment. These factors have variously been called enablers (Luftman & Brier, 1999), facilitators (Sledgianowski, Luftman, & Reilly, 2006), success factors (Teo & Ang, 1999) and antecedents (Campbell et al., 2005). The early research on alignment emphasized the identification of factors that are vital for achieving and sustaining alignment (Chan, Sabherwal, & Thatcher, 2006; Luftman & Brier, 1999). The factors include style of senior management decision making (Pyburn, 1983), IT management sophistication (Sabherwal & Kirs, 1994), support of senior executives for IS strategies (Luftman & Brier, 1999), shared domain knowledge between IT and business executives (Hu & Huang, 2006; Reich & Benbasat, 2000), and organization size (Chan et al., 2006).

A number of these factors have been viewed as antecedents which create the necessary structures or conditions for alignment to occur (Reich & Benbasat, 2000). For instance, Reich and Benbasat (2000) attempted to discover how certain critical factors interact to create conditions that enable alignment. They found that shared domain knowledge and successful IT history were potential antecedents that influenced the social dimension of strategic alignment. Other researchers have also identified, shared domain knowledge, relationship management and prior IS success as key antecedents. (Chan & Reich, 2007; Chan et al., 2006; Hu & Huang, 2006; Reich & Benbasat, 2000). Identification of these antecedents led to a better understanding of IT and business objectives by both IT and business executives (Reich & Benbasat, 2000).

Shared domain knowledge comprises the IT knowledge of business executives and the business knowledge of IT executives (Reich & Benbasat, 2000). It can be defined as the “ability of IT and business executives, at a deep level, to understand and be able to participate in the other’s unique key processes and to respect each other’s unique contribution and challenges” (Reich & Benbasat, 2000, p. 89). Shared domain knowledge is positively associated with rational decision making and it is considered as one of the critical factors of strategic decision making (Ranganathan & Sethi, 2002).

Relationship management is the “extent to which parties (business and IT executives) have the orientation or behavioural tendency to actively cultivate and maintain close working relationships” (Smith, 1998, p. 79). Ongoing relationships facilitate executives’ engagement in knowledge creation and knowledge exchange (Hatzakis, Lycett, Macredie, & Martin, 2005) leading to a better understanding of business and technological requirements (Jones, et al., 1995).

Prior IS success refers to the perceptions of business executives with regard to the success of the IT unit in the organization. Successful IS history gives credibility to the IT unit and creates a favourable perception of IT among top management (Chan et al., 2006; Hu & Huang, 2006; Reich & Benbasat, 2000; Yayla & Hu, 2009).

Failures negatively influence top management's ongoing perceptions of IT as well as impacting on how managers view new or future strategic IS opportunities (Chan et al., 2006).

Empirical evidence has demonstrated that these antecedents facilitate two managerial practices with regard to strategic alignment – communication between business and IT executives, and the connection between business and IT planning processes – and consequently facilitate strategic alignment (Hu & Huang, 2006; Reich & Benbasat, 2000).

Managerial practices

Communication involves sharing and exchanging information between parties for the purpose of coordination and mutual understanding. Communication can be defined as a process through which individuals share and create information in order to reach a mutual understanding (Johnson & Lederer, 2005). Johnson and Lederer (2005) postulated that frequent communication between business and IT executives has several benefits including increasing common understanding of an organization's business and IT functions, motivating top management to use IT for competitive advantage, and achieving strategic alignment. Increasing communication frequency, improves convergence among managers regarding IT innovations and their impact on the organization (Massey et al., 2001). This convergence leads to mutual understanding of the strategic role of IT in the organization (Johnson & Lederer, 2005) and collective action to find out how IT can help the organization to achieve its goals (Pearlman & Baker, 2005).

Planning refers to the discipline and vision to foresee problems and opportunities within a turbulent and complex environment (Raghunathan & Raghunathan, 1991). Planning aims to coordinate the efforts of organizational members, and establish dialogue and lines of communication among various organizational subgroups, such as, business and IT (Segars & Grover, 1999). The IT planning process transforms business strategy into IT strategy in order to define the role of IT in the organization. The connection between business and IT planning can be defined as the degree of integration between the business and IT planning processes (Hu & Huang, 2006; Reich & Benbasat, 2000). Integrated planning refers to IT and business plans being developed and ratified simultaneously (Reich & Benbasat, 2000); interactively (Teo & King, 1996); business and IT executives both being present during the planning; and IT being considered significant for changing the basis of competition (Reich & Benbasat, 2000). A comprehensive integrated planning process coordinates planning efforts (Segars & Grover, 1999) and brings business and IT executives together repeatedly in an attempt to improve management of technology (Chan et al., 2006).

Though, the literature suggests antecedents and managerial practices to achieve strategic alignment, as an external factor, environmental uncertainty has been considered as a key challenge to achieving alignment.

Environmental uncertainty

Environmental uncertainty refers to the perceived unpredictability of environmental variables that have an impact on an organization's activities (Miller, 1993). Despite the general scholarly agreement that the external environment should be taken into consideration the number of studies explicitly investigating the effect of environmental uncertainty on the managerial practices of strategic alignment is small. The findings indicate mixed results in regards to the impact of environmental uncertainty on strategic alignment. Environmental uncertainty has been considered as an inhibitor (Sabherwal & Kirs, 1994), enabler (Chan et al., 2006) as well as a moderator (Yayla & Hu, 2012). Insufficient understanding of the impact of environmental uncertainty can affect the efficiency of the organization's internal practices, and make it difficult for managers to adopt effective strategies to cope with uncertainty (Engau & Hoffmann, 2009). It is important for managers to increase their understanding of the role antecedents' play in ameliorating the influence of environmental uncertainty on the managerial practices. Therefore, there is value in studying how environmental uncertainty affects the managerial practices of strategic alignment and the abilities of antecedents to ameliorate the effects of environmental uncertainty on those managerial practices.

The previous literature demonstrates three types of environmental uncertainty - market uncertainty, technological uncertainty and regulatory uncertainty. Market uncertainty refers to the unpredictability of markets, changes in market structure and the degree of competition with respect to industry (Bstieler, 2005). Technological uncertainty refers to the unpredictability of rapid and significant changes in technology and the complexity of that technology (Bstieler, 2005). Regulatory uncertainty refers to the unpredictability of the actions of regulatory agencies which create and enforce regulations (Engau & Hoffmann, 2009). One of the objectives of this study is to investigate the influence of each type of the three types of environmental uncertainty on managerial practices.

CONCEPTUAL MODEL

This section reports the research model and hypotheses for the research. Figure 1 illustrates the proposed research model. This research proposes two managerial practices that influence strategic alignment. These managerial practices are the communication between business and IT executives and the connection between business and IT planning. A review of the literature has disclosed key three antecedents that are considered to influence those managerial practices. The three antecedents are shared domain knowledge, relationship management and prior IS success. Further, environmental uncertainty proposes as an external factor that can potentially influence the managerial practices. Each of the constructs and their hypothesized relationships are more fully described in the following discussion.

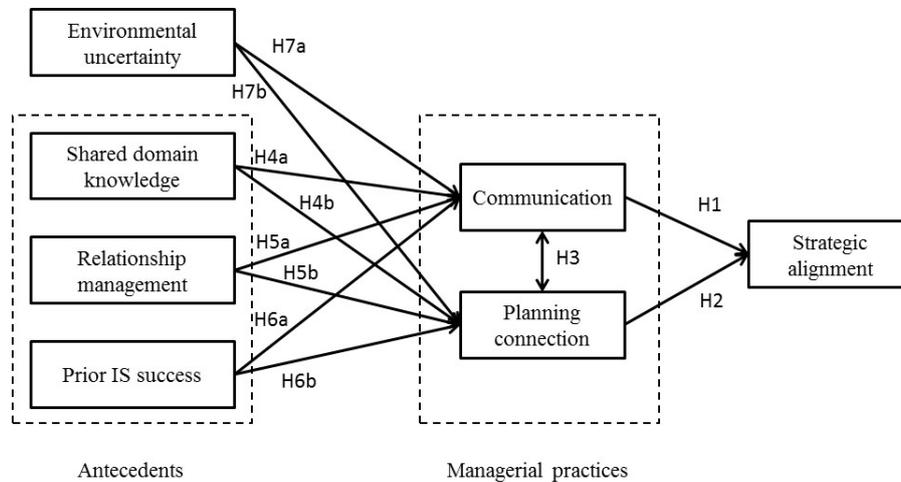


Figure 01. Conceptual Model

Impact of managerial practices on strategic alignment

In the alignment literature, communication has been considered as an important enabler of strategic alignment (Johnson & Lederer, 2005; Luftman & Brier, 1999). The literature shows that increasing communication between business and IT executives help improve strategic alignment (Earl & Feeny, 1994; Johnson & Lederer, 2005). Researchers such as Reich and Benbasat (2000) and Hu and Huang (2006) proposed that communication between business and IT executives would affect the level of strategic alignment. Therefore, this research proposes that:

H1: Communication between business and IT executives will positively influence the level of strategic alignment

IT planning needs to refer to the business objectives (Teo & King, 1996). When IT units do not refer to business objectives, their contribution to the organization may be limited (Pearlman & Baker, 2005). Higher levels of planning connection provide an effective way for IT executives to identify top management's objectives (Lederer & Mendelow, 1989) and lead to better understanding of the role of the IT function and contribution of IT to the organization (Teo & King, 1996). Planning connection between the business and IT planning processes facilitates the aligning IT strategy with business strategy (Hu & Huang, 2006; Reich & Benbasat, 2000; Yayla & Hu, 2009). Thus,

H2: Planning connection between business and IT planning processes will positively influence the level of strategic alignment

Relationship between communication and planning connection

Two kinds of participation – business executives' participation in strategic IT planning, and IT executives' participation in business planning – can be seen in the strategic planning process (Kearns & Sabherwal, 2007; Premkumar & King, 1994). In integrated planning, business and IT executives are both present and develop business and IT plans simultaneously and interactively (Teo & King, 1996). Therefore, this process creates cross-functional interfaces enabling socialization, and joint activities (Kearns & Sabherwal, 2007) leading to the establishment of dialogue and lines of communication between the two groups (Segars & Grover, 1999). This research thus proposes that planning connection facilitates communication between business and IT executives.

Simultaneously, IT planning involves activities such as defining the purpose of the IT, analysing the internal and external environments, and identifying IT strategies to assist the organization to execute its business strategies (Lederer & Sethi, 1998). Thus, IT strategic planning requires increased interaction between different executives

and the interpretation of various views from organizational interest groups (Ruohonen, 1991). Communication enables information sharing and mutual understanding (Johnson & Lederer, 2005), and thereby facilitates the integration of different views and cooperation among IT and business groups (Bai & Lee, 2003). Therefore, this research proposes that communication between business and IT executives will enhance planning connection and vice versa.

H3: There is a positive association between the extent of the planning connection and the communication between business and IT

Impact of antecedents on managerial practices

When business and IT executives are knowledgeable about each other's areas of domains, they are more likely to develop a shared understanding and vision (Chan et al., 2006), and achieve improved linkages between objectives and actions (Reich & Benbasat, 2000). Cohen and Levinthal (1990) reported that shared understanding (knowledge) improves communication. Conversely, a lack of shared understanding increases information asymmetry, and results in inaccurate interpretation of messages across groups (business and IT), ultimately leading to intergroup conflicts (Nelson & Coopridge, 1996). Thus, lack of knowledge of each other's domains has been reported as one of the top inhibitors of communication (Feeny, Edwards, & Simpson, 1992). Similarly, in the research literature, shared domain knowledge has been considered as an antecedent to strategic alignment (Reich & Benbasat, 2000) and has been reported as having a positive influence on communication (Chan et al., 2006; Hu & Huang, 2006; Reich & Benbasat, 2000). Therefore, it is expected that:

H4a: Shared business and IT domain knowledge will positively influence communication between business and IT executives

Similarly, shared domain knowledge has been considered as a critical success factor for the integration of business and IT plans (Teo & Ang, 1999). If top managers have knowledge of IT, it creates an opportunity for IT managers to participate in business planning and for business executives to participate in IT planning (Kearns & Sabherwal, 2006-7). Similarly, if IT executives have strong business knowledge, it enables them to convince business executives that they understand business goals and processes and they are generally trying to help them achieve those goals (Bassellier & Benbasat, 2004). An understanding of each other's subject domain is more likely to lead to establishment of an effective IT-business relationship (Feeny & Willcocks, 1998; Bassellier & Benbasat, 2007) and a tendency to share risks and responsibilities in common activities (Bassellier & Benbasat, 2007). Further, Reich and Benbasat (2000) and Hu and Huang (2006) reported the positive influence of shared domain knowledge on the connections between business and IT planning processes. Therefore, this research proposes that:

H4b: Shared business and IT domain knowledge will positively influence the connections between business and IT planning processes

Business executives have frequently emphasized the critical role of relationships in achieving strategic alignment. (Hu & Huang, 2006). A strong relationship between business and IT executives enhances the ability of IT to add value to the organization (Earl & Feeny, 1994) and ensures the successful integration of business and IT strategies (Feeny et al., 1992; Luftman & Brier, 1999). Scholars have suggested that a stronger relationship between business and IT executives improves communication between business and IT executives (Hu & Huang, 2006).

H5a: Relationship management will positively influence the communication between business and IT executives

Similarly, a good relationship between business and IT has also been considered an enabler of business/IT planning integration (Feeny et al., 1992). Scholars have suggested that a stronger relationship between business and IT executives improves the connection between business and IS planning (Hu & Huang, 2006; Yayla & Hu, 2009).

H5b: Relationship management will positively influence the connections between business and the IT planning processes

Prior IS success itself does not impact strategic alignment directly. However, the increased confidence of top management (Teo & Ang, 1999) and the higher credibility of the IT department (Yayla & Hu, 2009) enable IT executives to participate effectively in the strategic planning process and communicate effectively with business executives. The confidence of top management in the capabilities of the IT department has been found to be a critical success factor for aligning IT plans with business plans (Luftman & Brier, 1999). Teo and Ang (1999) postulated that the confidence of top management in IT increases their commitment to the strategic use of IT, resulting in them being more likely to allocate appropriate resources for planning and the development of IT applications. On the other hand, lack of IT management credibility discourages top managers from communicating their needs and problems (Pearlman & Baker, 2005) and, more importantly, from communicating

their goals, objectives and plans (Lederer & Mendelow, 1989) thereby inhibiting strategic alignment (Luftman & Brier, 1999). Therefore, prior IS success has a positive impact on both communication between business and IT executives and connections between business and IT planning processes (Reich & Benbasat, 2000; Yayla & Hu, 2009).

H6a: Prior IS success will positively influence the communication between business and IT executives

H6b: Prior IS success will positively influence the connections between business and IT planning processes

Impact of environment uncertainty on managerial practices

Environmental changes cause managers in challenging situations to adopt new strategies and tactics frequently (Bstieler, 2005; Calantone et al., 2003). Managers need more information in order to understand and assess the environment, as well as make effective strategic decisions. However, some of the information required to make comprehensive decisions may not be available in an uncertain environment (Fredrickson & Mitchell, 1984). Lack of information can result in ambiguity and serious mistakes in decision making (Xu & Koronios, 2005), which adversely affect strategic planning (Johnson & Lederer, 2005). This may inhibit harmony among organization IT and business unit and lead to conflicting unit goals (Sabherwal & Kirs, 1994). Therefore, business executives view the influence of uncertainty as one of the most difficult aspects of the IS strategic planning (Lederer & Mendelow, 1986). Sabherwal and Kirs (1994) revealed that environmental uncertainty works as an inhibitor of business-IT alignment. An uncertain environment may affect communication and planning connection. Based on these arguments this research proposes that, environmental uncertainty will influence both communication between business and IT executives and connections between business and IT planning processes.

H7a: Environmental uncertainty will influence communication between business and IT executives

H7b: Environmental uncertainty will influence connection between the business and IT planning processes

RESEARCH METHOD

This section reports the research method of this study. The findings of the study can carry scientific importance only if the research design is carefully conducted. First, the context selection for the study will be presented. Followed by data analysis process will be presented.

Context Selection

The data will be collected through a survey at one point in time. The target will be organizations operating in Sri Lanka. In Sri Lanka, major economic indicators have fluctuated sharply over the period of 2006 to 2011 (The Central Bank of Sri Lanka, 2012). For instance, GDP growth, inflation, money supply and unemployment have changed markedly during the last six-year period. This is a clear indication of market turbulence which creates an unpredictable and uncertain environment for organizations. According to the global competitiveness report (2012), factors such as tax regulations, inefficient government bureaucracy, policy instability and government instability/coups are among the top most problematic factors for doing business in Sri Lanka. Further, organizations in Sri Lanka are hesitant to invest in technology, even though the government encourages and facilitates the use of ICT by establishing national level ICT plans such as the e-society and e-Sri Lanka (Information and Communication Technology Agency of Sri Lanka, 2014). However, organizations are wary of following these government ICT plans as they tend to change frequently (Kapurubandara & Lawson, 2006). In addition, factors such as a lack of simple procedures and guidelines, and lack of suitable software standards have been regarded as major barriers to advancement or expansion of ICT in Sri Lanka (Kapurubandara & Lawson, 2006). Therefore, the business environment of Sri Lanka indicates high uncertainty levels in all three aspects: market, technology and regulatory. Thus, Sri Lanka provide an appealing setting in which to examine the capabilities of antecedents to ameliorate the impact of environmental uncertainty on the managerial practices of strategic alignment.

The conceptual model will be tested through a survey of 250-300 Sri Lankan organizations. All organizations will be listed and grouped under the Central Bank of Sri Lanka Industrial Classification 2012 codes. Stratified sampling techniques will be used to select organizations. This will ensure that each of the categories, according to industry sector, will be represented proportionally within the sample. Organizations in each category will be selected using a systematic sampling technique.

In each organization, the Chief Executive Officer (CEO) will be asked to participate in the survey. It is assumed that the CEO of an organization will be more able to answer all the items since the CEO is involved in all managerial aspects of an organization, including strategic planning, and has a holistic view of the organization's activities. In addition, the CEO is less likely to be biased with regard to some of the measures in the research model such as prior IS success and strategic alignment. Similarly, it is important that the CEOs have been in an

organizational long enough to be aware of the strategic planning process in their organizations. Thus, targeted key informants will be CEOs who have a minimum of two years' experience as a CEO in the selected organization.

Operationalization of constructs

The respective literature for each construct was reviewed in order to generate the required items for the questionnaire. The aim of this review was to find reliable and valid measurement items. Suitable items were selected from the literature and were adapted as necessary. A five-point Likert scale was used for all measurement items. In addition to the measurement items, questions covering demographics of the respondents and participating firms were also included.

Data analysis

Structural equation modelling (SEM) will be used to test and validate the research model. SEM enables researchers to answer a set of interrelated research questions by modelling the relationships among multiple independent and dependent factors simultaneously (Gefen, Straub, & Boudreau, 2000). The SEM model contains two inter-related models - the measurement model and the structural model. The measurement model defines the latent variables that the model will use, and assigns observed variables to each. The structural model then defines the causal relationship among these latent variables (Gefen et al., 2000).

Research model consists of seven factors. Each factor will be measured using several questionnaire items. The data analysis process will include several phases. Firstly, factor analysis will be used to identify a meaningful, interpretable and manageable set of factors. Factor analysis is a technique for investigating whether a set of observed variables is linearly related to a smaller number of unobservable factors (Sekaran, 2006). Factor analysis also provides an indication of the construct validity. Validity refers to the degree to which a scale or set of measures accurately represents the factor (Saunders, Lewis, & Thornhill, 2009). Factor loading and average variance extracted (AVE) values will be used to test for the validity of factors.

Secondly, Cronbach's alpha will be used to estimate the reliability of the factors. Reliability refers to the degree that repeated measurement yield the same results (Sekaran, 2006). It is an indication of the stability and consistency with which the instrument measures the concept (Saunders et al., 2009). Generally agreed upon lower limit for Cronbach's alpha is 0.7 (Gefen et al., 2000). Therefore, criteria of greater than 0.7 for a better reliability, will be taken for the interpretation of the results.

Finally, the structural model will be used to estimate the linear relationships among the factors. The Squared Multiple Correlation (SMC) will be used to explain variance of each factor (Bollen, 1989). The overall model fit will be estimated by using the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI) and the Root Mean Residual (RMR) (Gefen et al., 2000). Thresholds for these indices in IS research are above .90, above .80 and above .05, respectively (Gefen et al., 2000).

THEORETICAL AND EMPIRICAL CONTRIBUTION

In reconciling our findings with previous theoretical and empirical work, this research has a number of contributions. From a theoretical perspective, it develops a valid theoretical foundation on how to accomplish alignment in an uncertain environment. In this regard it attempts to extend the existing research on strategic alignment by considering the implications of environmental uncertainty as an external antecedent to strategic alignment.

Further, it theoretically contributes to extend the application of the contingency theory and the strategic alignment concept in developing country context. The alignment literature indicates that most empirical evidence was based on studies conducted in developed countries such as USA and Canada (Yayla & Hu, 2009). Researchers have not focused their attention on organizations in developing countries. There is a lack of empirical support for the arguments raised in alignment studies in a developing country context (Chan & Reich, 2007). Therefore this study will provide empirical evidence in the context of a developing country since the study will be conducted in Sri Lanka.

Although research on strategic alignment emphasizes the antecedents of alignment, most of the existing research studies are largely exploratory (Yayla & Hu, 2009). This research will present a quantitative assessment of the key antecedents of strategic alignment. This research will assess the relative importance of the antecedents. Therefore, this research will provide confirmatory evidence for antecedents which affect strategic alignment by testing a conceptual model in the context of a developing country.

Another important contribution is the investigation of the implication of environmental uncertainty as an antecedent to the strategic alignment. With respect to environmental uncertainty, empirical studies in the

literature that have postulated its effect on strategic alignment indicate mixed result and fell short of providing statistical support for their arguments.

From an empirical perspective, it assists managers in answering some of their fundamental questions of whether and how environmental uncertainty influences the alignment, which antecedents contributes most, and which of them are more crucial in achieving strategic alignment.

Moreover, managers have little direction from the existing literature that informs them of how to accomplish strategic alignment in a complex and dynamic environment. In this regard, this study endeavours to improve managers' understanding of the influence of environmental uncertainty on alignment and provide a guide for managers on how to improve the integration of IT with business even when operating in an uncertain environment.

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