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Aligning Business and IT from Multi-level Learning Perspectives

Research-in-Progress

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Abstract

Business and IT alignment is increasingly acknowledged as a key for organisational performance. However, alignment research lack to mechanisms that enable for on-going process with multi-level effects. Multi-level learning allows on-going effectiveness through development of the organisation and improved quality of business and IT strategies. In particular, exploration and exploitation enable effective process of alignment across dynamic multi-level of learning. Hence, this paper proposes a conceptual framework that links multi-level learning and business-IT strategy through the concept of exploration and exploitation, which considers short-term and long-term alignment together to address the challenges of strategic alignment faced in sustaining organisational performance.

Keywords: Social dimension, Intellectual dimension, Business-IT alignment, Multi-level learning

1. Introduction

Business-IT alignment is generally considered as an important process for ensuring organisational performance (Chan et al. 2006) and is constantly found as a top executives concern (Luftman & McLean 2004). In a constant change of business environment, there is no static nature of alignment. Business and IT executives face challenges that become a central problem of alignment. Introducing strategic options by one organisation often ensue in coping by other organisations. This challenge entails an on-going process of strategic planning that allows for dynamic alignment (Henderson & Venkatraman, 1993). The problem lies in the time lag during the process of business and IT planning (Van Der Zee & De Jong 1999). The constant change of business environment and technology increases the probability of making the current plan obsolete in response to new changes. Due to this concern, some researchers have distinguished between strategy process and strategy content to better understand the dynamics of alignment (Sabherwal and Chan 2001).

Other researchers, such as Reich and Benbasat (1996) combined business-IT alignment with Horovitz's (1984) duality of social dimension and intellectual dimension. The intellectual dimension of alignment refers to business and IT plans and its relationship with business performance (Morton 1991; Kearns & Lederer 2001). The social dimension focuses on people interaction during alignment creation. However, Rich & Benbasat (2000) study's was limited to business and IT group levels with less attention to individual and organisational levels. In addition to that, the research model discusses the relationship between alignment constructs while alignment is on-going process. According to Bensaou & Earl (1998), business and IT plans are the reflection of peoples' knowledge from multi-levels on utilising IT based resources. Whereas social dimension, represents the process that integrate individual, group and organisational knowledge (Crossan et al. 1999).

In this paper, we introduce and then integrate the topics of alignment from multi-level learning perspective for two reasons. First, the dynamic nature of alignment requires an understanding of knowledge from multi-level populations (Peppard & Breu 2003; Benbya & McKelvey 2006). Secondly, alignment consists of short-term and long-term, which entail perspectives such as exploration and exploitation to support alignment survival (Reich & Benbasat 2000; March 1990).

2. Background

2.1 Alignment Process and Content

Contents and process are considered to be the concern for what should be and what is realized in the strategy creation (Fahey & Christensen 1986; Huff & Reger 1987). The rationale behind this is that strategy content and process are intertwined concepts once connected to performance, hence the content of strategies is influenced by process, while the process strategies are sensitive to content (Ketchen et al. 1996). The aim of strategy content is to classify practices that are related to improved performance. The focus refers to the importance of managing change over time (Chenhall 2005). The process approach concentrates on how individual and groups make decisions that consider strategic concerns.

The dynamic nature of alignment requires not only strategy content, but also strategy process. Sabherwal and Chan (2001) combined these concepts with strategic

alignment, and found that strategy content focuses on what harmonises business strategy with IS strategy, whereas strategy process is concerned with how an organisation establishes and implements its business-IT practices. Further studies need to consider the content and process for better understanding of strategic alignment (Kim 2003).

2.2 Business-IT Alignment dimensions

There is adequate indication that the social dimension and the intellectual dimension of alignment have an impact on performance and organisational collaboration (Campbell et al. 2005). Chan & Reich (2007) found that studying social and intellectual dimensions as interrelated concepts will reduce the complexity of alignment. Both dimensions correspond to strategy content and strategy process in strategic management literature. Social dimension is defined as “the state in which business and IT executives within an organisational unit understand and are committed to the business and IT mission, objectives and plans” (Reich & Benbasat 2000). Whereas intellectual dimension is defined as “the state in which a high quality set of interrelated IT and business plans exist” (Reich & Benbasat 2000). The social dimension is classified into long term and short-term alignment. Long-term alignment refers to the mutual understanding between business and IT executives of IT vision and differs with short-term alignment, which represents common understanding of current and temporary goals of alignment. Baker and Jones (2008) note that shared domain knowledge and strategic planning are vital foundation for long-term alignment, which aim to sustain alignment over time.

2.3 Multi-level Learning

Multi-level learning aims to develop knowledge of organisation through interpretation and common understanding. Coping with dynamic business nature requires on-going learning for aligning people and creating positive change. Learning perspectives have been frequently applied to other disciplines such as sociology, psychology, cybernetics and economics (Garratt 1995). Crossan et al. (1999) developed the 4I framework, which addresses the relationship between learning process and levels. The framework was shown to have had a practical value in strategic renewal through linking intuiting, interpreting, integrating, and institutionalizing (Crossan and Bedrow 2003; Bontis et

al. 2002). As the strategy change over time, Crossan et al. (1999) recognises that the competitive position of a firm needs to be built on exploration and exploitation perspectives (March 1991).

Individual learning can be generally defined as individual capability and motivation that carry out particular tasks. The multi-level learning theory (Crossan et al. 1999) put forward the process of intuiting and interpreting as critical for individual level. These processes have been generated into items to capture theoretical aspects (Bontis et al. 2002). Looking at things differently and in new ways is a result of generating new insights and breaking out of traditional mind-sets. Bontis et al. (2002) refer to the importance of understanding how individuals interpret new insights and form them through the process of learning. The individual learning concerns the creation of novel insights, building actions based on experience, developing mentality in business situations, examining the business environment, and sharpening the skills to promote organisational change. Nonaka & Krogh (2009) found that implicit knowledge is transformed to embody a significant input; they described how implicit meaning converts into explicit perception, and become shareable with other individuals.

The second level is group learning which covers shared cognition, language and common understanding. Senge (1990) refers to this level as group learning rather than team learning since groups often struggle to develop common understanding. This learning level aims to capture the integration process through commitment to work in groups, fruitful meetings, assigning the right people to the right positions, willingness to achieve success and sharing risk (Crossan & Bedrow 2003).

The final level of learning is organisation level, which is not only limited to information processing perspective or product innovation perspective (Levitt & March 1988; Hubert 1991). The organisation level translates the common understanding of individual and group into non-human aspects such as strategy, infrastructure and process, which goes beyond the large-scale understanding (Crossan et al. 1999).

3. Business-IT Alignment from Multi-level Learning Perspective

Reich & Benbasat (2000) argue that the major factor that influences long-term alignment (IT vision) is shared domain knowledge, which refers to mutual understanding between business and IT executives. The short-term alignment includes

communication, IT history, connection between business and IT plans and knowledge sharing, which enable for common understanding of current business goals (Reich & Benbasat 2000). Several researchers have proposed methods and techniques to build shared understanding. Tan & Gallupe (2006) used Personal Construct Theory (Kelly 1955) and found that higher shared cognition lead to shared understanding and related to higher level of business-IT alignment. They define shared cognition as the overlapping collection of individuals' cognition which means the more individuals interact and participate in groups the more understanding will be shared over time (Langfield-Smith 1992). Other researchers have also found that experience and shared language play a vital role in executives understanding, which result in a mature alignment (Bassellier et al. 2003; Preston & Karahanna 2009). However, there is no clear process that translates common executives understanding into strategy, plans and infrastructure. Moreover, measuring the influence of organisation on groups and individuals and vice versa is limited which affect IT vision (Brabston et al. 1999). Hussain et al. (2002) reviewed a number of articles relating to alignment and found little agreement regarding the elements involved and processes linked to alignment. Mintzberg (1993) suggests that creating strategy is not limited to formal planning. He proposes that relying on the strategic learning perspective will enable organisation to integrate business and IT vision to cope with a dynamic environment. We believe that alignment still lack into a comprehensive mechanism that takes in account all the organisation levels and processes. Table 1 shows that business-IT alignment research on this aspect has been done independently. Therefore, several researchers such as Henderson & Lentz (1995); Peppard & Breu (2003); Maes et al (2011) suggest for future research, learning process or exploration and exploitation loops to build shared understanding and create business and IT vision.

We use the dynamic strategic renewal of multi-level learning as an approach that attempts to understand how strategic alignment occurs (Crossan et al. 1999). It recognises that business and IT planning is not static, and consists of a complex configuration of social process and intellectual content. Multi-level learning consists of individual, group and organisation, which are linked to learning process and correspond with business-IT alignment.

Learning Levels	Learning Process	Business-IT Alignment	References
Organisation	Institutionalizing	Large scale understanding of strategy, process and structures	Scott Morton (1991); Henderson & Venkantraman (1993); Maes et al. (2000)
Group	Integrating	Shared understanding of business and IT objectives	Reich & Benbasat (2000); Kashanchi (2008)
	Interpreting	Shared cognition between business and IT, common language	Tan & Gallupe (2006); Preston & Karahanna 2009
Individual	Intuiting	Personal experience, awareness of critical alignment issues	Bassellier et al. (2003); Newkirk & Lederer (2006)

Table 1. Business-IT Alignment and Multi-level Learning Perspective

4. Towards a Conceptual Framework from Multi-level Learning Perspective

As the social dimension of alignment represent the process perspective (Gregor et al. 2007). We need to discuss the social construct and influence between organisation levels. Building shared understanding is not a straightforward issue which entails considering organisation levels that translate the captured knowledge into strategy, plans and infrastructure. Exploration and exploitation have basically dissimilar perspectives under the social construct. The long-term alignment in our research approach corresponds with exploration perspectives of organisation learning. Exploration enables long-term alignment through assimilating new learning while exploitation supports short-term goals with what has been learnt. These loops (short-term and long-term alignment) are significant for organisational survival and alignment (March 1990; Peppard & breu 2003). However, the nature of exploration and exploitation create tension, which has to be managed (Crossan et al. 1999).

The other major dimension is intellectual alignment, this represents the content perspective, which concern about learning stock of business and IT planning at particular points of time. The social process of short-term and long-term is captured by intellectual content, which consist of individual, group and organisation (see Figure 1).

The misalignment between the flow of social process and intellectual content of organisation levels will affect organisational performance.

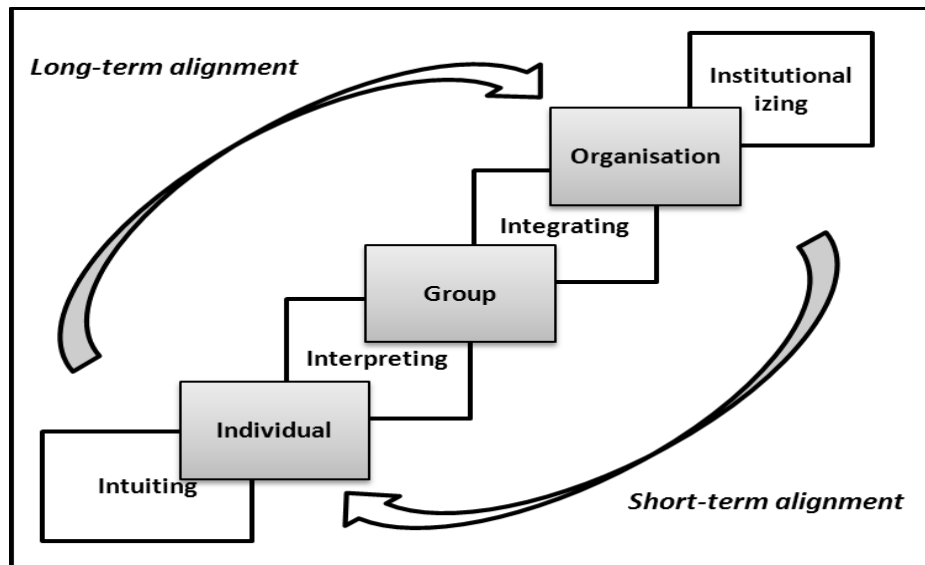


Figure 1. A Conceptual Framework for Business-IT Alignment from Multi-level Learning Perspective (adapted from Crossan et al. 1999)

The individual and group knowledge becomes embedded at the organisational level, which includes strategy, infrastructure and structure (Crossan et al. 1999). Different studies on alignment concentrate on the organisational level with less attention to other alignment levels (Henderson & Venkantraman 1993; Baets 1992). Exploitation refers to what has already been crystalized at organisational level, which becomes utilizable as existing knowledge from the organisation towards group and individual levels. Hence, in order to improve organisational performance both strategic learning perspectives have to be balanced (see Figure 1).

5. Conclusion

The proposed framework is developed based on business-IT alignment and multi-level learning theory in order to incorporate alignment process and content and to enable for practical value. Multi-level learning has a mechanism that describes social process across intellectual content, which reveal alignment complexity. We argue that organisational performance is contingent on aligning social processes and intellectual content of individual, group and organisation.

We recognise that this conceptual framework needs to be validated empirically. Current research includes the development of a case study to examine the process of connecting strategic business-IT alignment with multi-level learning perspective in order to evaluate the impact on organisational performance.

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