A DSS Model that Aligns Business Strategy and Business Structure with Advanced Information Technology: A Case Study

Petros Theodorou
Technological Educational Institution of Kauala, Greece

EXECUTIVE SUMMARY

Advanced information technology must be aligned to business strategy and structure if premium earnings and competitive advantage has to be created. Strategy is mainly driven by the uncertainty of the environment where business works. Information technology is a key element of business structure in order to bypass environmental uncertainty. In this study, the case of a firm is examined that is located in Northern Greece and has to make some decision regarding the modernization of the technology applied in production. An integrated system needs to be applied in order to manage enterprise resources, from warehouse and logistics to front office and client service. The ultimate purpose of this system is to increase flexibility and cut time of response to environmental changes, without increasing cost and inventory. In order to achieve the target, strategy is analysed first, in relation to environmental changes. Various types of flexibility are determined according to the firm's uncertainty and variability. Finally, the correlation between flexibility and variability determines the type of information technology that needs to be adopted and increase competitive advantage. The model proposed is based on the alignment theory and the strategy execution perspective. A "strategies map" model is constructed to help the decision regarding the strategy and information technology to overcome the variability problems and increase competitive advantage.

BACKGROUND

Information technology (IT) is generally accepted as a strategic tool that can create a competitive and distinctive advantage. IT can be used to catch-up the "primer" and decrease the pre-emption potential (Feeny & Ives, 1997). But these benefits can be attained only if a strategic perspective of IT selection and implementation is used. Strategic alignment theory provides the appropriate framework for the strategic utilization of information technology applications (*Figure 1*; Theodorou, 2003).

Henderson & Venkatraman (1996) argue that any given planning process must consider the interaction between the functional integration and the dimension of strategic fit. They identify four alignment perspectives: strategy execution, technology potential, competitive potential and service level. The fit among the internal and external domain (strategic fit) is critical to economic performance. Strategic fit creates a competitive advantage when it is combined with functional integration at the strategic and operational level. According to Luftman (1996) business strategy (in strategy execution and technology potential perspective) is the anchor domain that drives the planning process. In the strategy execution perspective, business structure is the pivot and IT structure is the impact domain. In the technology potential perspective, IT strategy is the pivot and IT structure is the area that will be affected by the change. Both in the competitive potential and in the service level perspective, IT strategy is the anchor domain. In the case of competitive potential, business strategy is the pivot and business structure is the impact. In the service level, IT structure is the pivot and business structure is the impact domain (*Figure 2*).
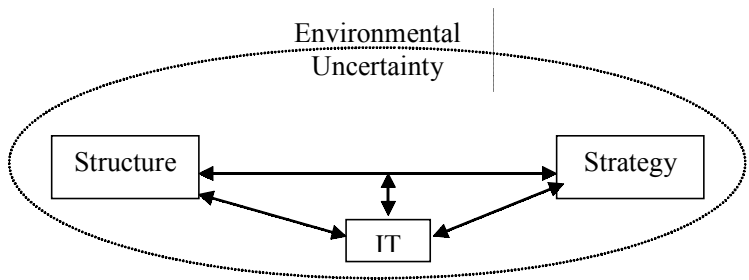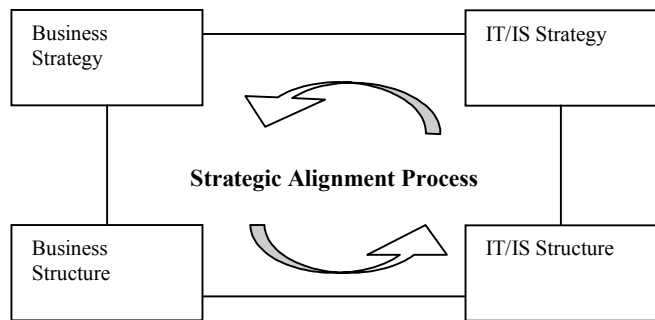
Figure 1

Figure 2

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