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Chapter IV

Strategic Information Systems: The Concept of Alignment

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ABSTRACT

Certain contingencies of business environment raise the importance of alignment in the explanation of tactics with strategic implications. Alignment is an important aspect that has to be examined in all multivariate and normative models. In this paper, the Information Technology (IT) alignment is examined along with business strategy and structure, while taking into account environmental contingencies. The concept of alignment raises the strategic role of information technology through the integration of business and IT strategy. Most of the firms nowadays cannot capture the strategic role of IT and underestimating its value as persisting only on financial valuation. In this work, an attempt has been made to fill out this lack of strategic estimation by the use of the alignment model. A taxonomy of strategic information technology applications is presented and an integration of IT with business strategy and structure is attempted in order to create competitive advantage.

INFORMATION TECHNOLOGY AND STRATEGIC ALIGNMENT

The concept of alignment has been widely examined in strategy and organizations theory literature, underlying the contingency theories and constituting the groundwork of management of technology and strategy information systems. Strategic alignment and fit have been among the top concerns of business executives

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(Rodgers, 1997; Brancheau, Janz & Wetherbe, 1996) and the core concept in the normative models, having desirable performance implications. Alignment according to literally means an arrangement of groups or forces in relation to one another. The determination of those forces is an important aspect of strategic alignment research. The following aggregate variables are commonly found in many alignment models: environment uncertainty, business structure, information technology (IT) and business strategy. Among those variables, Miles and Snow (1984) determine strategy as the basic alignment mechanism and organizational structure and management processes as the internal arrangements. In the classical school of strategy, environment has the most important role as the determinant of alignment; structure should follow the alterations of environment while the role of IT is collateral. Strategy should follow environment and determine the structural form according to variations; IT should follow strategy as well. In contrast, Mintzberg and Quinn (1996) proposed a bottom-up view that is free of the "environmental biased" (Theodorou, 1997). The alterations that originated, either in the internal or in the external environment of the business, create the need to exercise a flexible strategy. Practical experience suggests that those variables—which should be aligned—are interrelated in a multidimensional way usually for the sake of simplicity. A simple bivariate approach is used among: environment↔strategy, structure↔strategy, IT↔strategy, and IT↔structure. It is worthwhile to mention that strategy creation and strategic alignment have two dimensions (Horovits, 1984; Reich & Benbasat, 1999), the intellectual (interrelated IT and business plans) and the social dimensions (understanding and commitment of participants); among these the first will be examined.

Nowadays enterprises face increased uncertainty as the external environment becomes volatile. Volatility increases in a positive way along with supply and demand variability. Enterprises proceed with process reengineering and restructuring in order to achieve higher performance. Elements of internal structure like intermediate inventory, equipment maintenance, absenteeism, etc. (Theodorou, 2000) increase uncertainty and thus the need for flexibility. Firms in order to keep pace with competition need a flexible internal structure. The variations from which the need for flexibility emerges are the following: demand variability, supply variability, process variability, product variability, workforce variability, and equipment variability (Theodorou, 1996a). As the need for flexibility increases and as the enterprises attain the rest of strategic priorities like cost and quality, the role of IT will be increased drastically until its strategic importance for the achievement of competitive and distinctive advantage, will be recognized. Information technology as part of internal structure proved capable to affect strategy and create competitive advantage. IT is not a mere collection of bolts and nuts due to the programming capabilities of microprocessors; thus, it has a direct effect on business structure as an important contributor that increases flexibility. The flexibility of structure enables enterprises to take advantage of IT's full potential in order to bypass environmental uncertainty. Just-in-time responding to environmental changes is critical for the survival of the synchronous enterprise in a highly competitive environment. IT and structure fit are

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