

Business Strategy, Structure and IT Alignment

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INTRODUCTION

The structure of production during the last decade has been changed radically. The importance of design, flexibility, quality, and dependability increased. The main motive behind that restructuring seems to be the qualitative and quantitative diversification of demand (regulatory, technology, and other issues can be mentioned as well). The diversification of demand forced production to be more flexible in order to accommodate the environment's variations. Information systems (IS) proved to be a perfect 'partner' for the enterprise who wants to move along at this pace: to increase competitive advantage and retain its competitive position in the market. The capabilities of information technology (IT) for increasing competitive advantage forced management to consider IT in the strategic planning process and to consider IT not as a mere tool of bolts and nuts, but as a strategic partner. The key for the successful IT-IS adoption is the strategic IT alignment model. According to this, IT should be aligned with organizations' structure and employees' culture in order to avoid resistance and increase core competence at the strategic level. But the strategic options offered by advanced IT investments are not appraised by using the usual hard financial criteria. Instead, Black and Scholes developed a financial formula to value derivative financial products and open the road to value options offered by real investments. Thus, the application of Black and Scholes' formula offers an opportunity to value financially strategic IT investment.

The importance of alignment among IT-business structure and strategy-environment is increased strategically, but the relationship among all those variables is complicated. Generally, in the classical strategy school, strategy is determined by environmental uncertainty. Structure (as well as technology) should follow the needs of strategy, and advanced information technology must be aligned with business strategy and structure. This alignment is a prerequisite for the creation of competitive advantage. Information technology is a key element of structure to bypass environmental uncertainty. In this model, other contingencies like size, age of organization, political forces, regulatory framework, and so forth must be taken into account as the interaction among all those factors forms the alignment model.

BACKGROUND

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 of information systems. Strategic alignment and strategic fit have been among the top concerns of business executives (Rodgers, 1997; Brancheau, Janz & Wetherbe, 1996) and the core concept in the normative models. Alignment 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 a determinant of strategy. Structure follows the alterations of strategy, while the role of IT is collateral. Strategy follows environmental variations and determines the structural form. IT as a part of structure follows strategy as well. In contrary to this view, Mintzberg and Quinn (1996) proposed a bottom-up approach that is free of the 'environmental biased' (Theodorou, 1997). Practical experience shows that variables which should be aligned are interrelated in a multidimensional way; but for the sake of simplicity, a simple bivariate approach is usually used among:

environment↔strategy, structure↔strategy, IT↔strategy and IT↔structure.

Moreover, it should be mentioned that the concept of alignment in business strategy has two dimensions (Horovits, 1984; Reich & Benbasat, 1999)-the intellectual (interrelated IT and business plans) and the social dimension (understanding and commitment of participants). Furthermore, alignment is more an ongoing process and not a stable state, thus sustainability can be gained only by continuous efforts. No strategy is universally superior, irrespective of the environmental or organizational

context (Venkatraman, 1989). A flexible structure that follows demand capable to produce in low volume, low cost, and high quality needs long-term investment. Strategic alignment enables enterprises to avoid over-simplicity while targeting competitive and distinctive advantage assisting to dominate in competition (Drago, 1999). According to that concept, business strategy should evolve while taking into account the impact of IT. On the other hand, if information technology is applied without taking into account the strategic targets of cost, design, quality, flexibility, and dependability, then only operational benefits will be created without any impact on competitive advantage.

Generally the strategic alignment problem has multiple dimensions, but the main determinants are the following: environmental uncertainty, business structure, IT and business strategy. Except for the previously mentioned variables, we could refer business culture, managerial knowledge/processes and individual roles, the regulatory issues, political forces, and so forth. The alignment model should consider among other contingencies the impact of industry and competitive change (particularly under the influence of IT and the generic strategies in the strategy portfolio), the strategic changes induced by IT that affect the reengineering of internal and external value chain, the IT capabilities that shift or expand the business scope and domain, and finally, the size and the age of the firm. In the “management in ’90s” research framework, Morton (1991) illustrates some of the various aspects of the firm that must be considered in the alignment process. In this model, strategic fit is defined by looking at the IT potential to shape and support business strategy; alignment at the organizational level is defined by looking at organizational infrastructures and processes. Thus, four perspectives of alignment arise: the strategy execution, the technology, the competitive potential, and the service level. Moreover, four alignment mechanisms are identified: value management, governance, technological, and organizational capability. Misfit and misalignment is responsible for why many IT applications are not meeting expectations and do not cover the needs of the company.

MAIN THRUST OF THE ARTICLE

As previously mentioned, the concept of strategic alignment has various dimensions. The most important according to the bivariate approach are business strategy, business structure, information technology, and business environment. Thus, the interrelation among those variables captures the purpose of the alignment model. The external environment is characterized as dynamic, if the firm experiences often exogenous changes, such as: prod-

uct design by competitors, variability in time of deliveries (by suppliers), high growth in market share, changes in relative market share, changes and innovation in information technologies adapted by competitors or offered in the marketplace, and so forth. Every source of uncertainty which the firm realizes from the external environment (capable to affect competitive advantage) is a main drive to reconsider the alignment mechanism. Through strategic analysis the firm realizes (if possible) the changes in the external environment to take action realigning the business structure in order to reply to competition. Information technology in this context offers the flexibility needed for quick and efficient response. Thus, the relation of information technology and business strategy and structure is of vital importance. Following, we will present the strategy-IT and structure-IT alignment.

Strategic Alignment of Advanced IT

An important aspect of strategy and IT alignment was to correspond the strategic content with IT capabilities, in other words, IT to strategic objectives, and examine how they are affected. That topic is basically investigated in strategic information system literature where matrix models developed in order to determine strategic alignment. Porter’s work comprised the basis for the development of strategic information systems even though his model is more familiar in strategic management literature. Neumann (1994), in his book about strategic information systems, denotes that Porter’s model of ‘5-forces’ is the framework of frameworks. Specifically, regarding the strategic objectives, Porter attempted a generalization of specific strategic targets, the so-called generic strategies, which are: cost, differentiation, and focus (niche) strategy. Furthermore, Wiseman (1998) extended that logic by adding the strategic targets of alliance, growth, and innovation. Generally, business strategy should take into account IT in order to generate strengths and attain opportunities that increase competitive advantage. Competitive advantage from IT can be derived by taking into account the opportunities that can be exploited from the 5-forces model; for example, how can the firm: build barriers to entry, build switching costs, change the basis of competition, change the balance of power in suppliers relationship, and generate new products? Moreover, the sustainability issue raised the importance of business strategy and IT integration. Strategic information systems literature tried to explain alignment among strategy and IT with the use of matrix models. Synnot made a composition of the Boston Consulting Group’s matrix and Porter’s generic strategies in order to identify IT strategic options and achieve strategic alignment. A well-known model for the attainment of strategic opportunities criti-

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