



Contemporary  
Research Issues in  
Business-IT Alignment

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## ABSTRACT

- *Purpose: The importance and the Strategic Business and Information Technology (IT) alignment has been well established. For the past 20 years the researchers and practitioners are working hard for achieving alignment. In this paper an effort has been made to emphasize the need and importance of strategic alignment, derive its definition from research literature and explore various contemporary research issues.*
- *Design/Methodology/Approach: In this paper an attempt has been made to conceptualize and present the various research issues with their meanings and notions adopted by various researchers in this field. These will help those researchers who want to pursue research in this field.*
- *Research limitations/Implications: The study is based on few research articles only. It is possible to identify more research by more intensively reviewing the existing research literature.*
- *Originality/Value: This is important because the many research issues in this research area have contradictory and chaotic existence. Here the authors have a strong notion that presently there is a shortage of research articles in the existing literature presenting these research issues in a systematic and comprehensive manner.*

## KEYWORDS

- Information technology
- Business and IT alignment
- Competitive advantage
- Prospectors
- Analyzers and Defenders.

## 1.0 Introduction

The existing research literature reveals that strategic alignment is imperative for the business organizations to survive and compete in the market. Yet achieving alignment continues to be a major concern for the business executives. Strategic alignment boosts the IT effectiveness (Porter, 1987; Galliers, 1991; Ciborra, 1997), leading to business profitability (Luftman, 1996). Therefore, alignment has been a major concern for the academicians, practitioners, business consultants and research organizations since 1990's. Such an effort has been highlighted by a recent study conducted by Society for Information Management (SIM). The study has identified alignment as the first management concern among all groups surveyed for the Top 10 concerns that included 300 senior IT managers (Trainor, 2003). Galliers and Newell (2003) call it a central tenant of much of the theory and practice of Information System (IS) strategy. Further the importance of alignment has been reinforced by several industrial surveys that reveal executives' perceptions of alignment (Head, 2000; Kennedy, 2000; Weil, 2001). Therefore, the managers and practitioners have been continuously making efforts to identify and device new strategies for achieving alignment between Business and IT.

The research in the area is primarily conceptual and lacks practical considerations (Campbell, Kay and Avison, 2005). There is little agreement on 'how to achieve alignment' and 'how it should be researched' but there are many studies on 'how to practice alignment'. Luftman (1996), Hsiao and Omerod (1998) and Burn (1997) provide some practical aspects of implementation of alignment through enablers and inhibitors of alignment. However, the literature provides little guidance on how to achieve alignment between Business and IT strategies. Also, the judgment and the impact of misalignment on the organization have been difficult to diagnose (Luftman, 1996). Therefore, the prime focus here are achieving alignment and doing research on it.

This paper reviews the definition and the common perception of alignment along with major research issues.

## 2.0 Definition of alignment

Strategic alignment has many pseudonyms. It has been referred to as “Coordination” (Lederer and Mendelow, 1986), “Harmony” (Woolfe, 1993; Luftman, 1996), “fit” (Porter, 1996), “Linkage” (Reich and Benbasat, 1996), “bridge” (Ciborra, 1997), “fusion” (Smaczny, 2001). However, the common theme of all these studies has been integration of strategies relating to Information Technology (IT) and Business. There is still indefiniteness in the definition of alignment such as Tallon et al. (1998) defined alignment as “the alignment of Information systems strategy to the business strategy” and Reich and Benbasat (2000, p.82) as “the degree to which the information technology mission, objectives and plans support and are supported by the business mission, objectives and plans”. Therefore, in research literature it is difficult to find an unequivocal definition of alignment.

Strategic Alignment in present context is concerned with the correspondence and compatibility of IT and the business strategy within an organization (Chang 2006; Henderson & Venkatraman, 1999) persistently appears in practice (Mieritz 2004, Stepanek 2002) and academic media reports (Allnoch 1997; Ball & Adams 2003) and is a key concern of the Top and general management (Eid, Trueman & Ahmed 2002; Laosethakul & Boulton, 2007).

The next section discusses various contemporary research issues in the strategic Business and IT alignment.

**3.0 Research Issues:** The important research issues are:

### 3.1 Issue 1: “Whether IT alignment is an issue in its own right?”

There is debate on the issue that whether alignment of Information System (IS/IT) is an issue in its own right. Some researchers such as Smaczny (2001) emphasize that the IS is so pervasive in business that it cannot be separated from the business strategy, and therefore the issue of alignment does not arise. However, the IT management is actually a problem of aligning the business and IT infrastructure (Reich and Benbasat, 1996) and identifying opportunities to utilize IT for competitive advantage (Ives and

Learmonth, 1984, Wiseman, 1985) and/or analyzing internal processes and patterns of data dispersion throughout the organization (Brancheau and Wetherbe, 1986; Godhue et al., 1992).

Having understood the IT alignment as an issue the next important issue is their role of IT and its alignment in providing the competitive advantage, which is the next research issue.

### 3.2 Issue 2: “Are IT and IT alignment sources of sustainable competitive advantage?”

It is ridiculous to look for IT alignment when it is not clearly known whether IT is a source of competitive advantage or not. Traditionally there is a common notion that IT and IT alignment are sources of competitive advantage. IT can add to the economic value to a firm by either by reducing costs or differentiating its products and services (Bakos and Treacy, 1986; McFarlan, 1984; Wiseman, 1988). However, adding value to a firm either by reducing costs or increasing revenues is not the same as the IT being a source of sustainable competitive advantage. For example, Walmart adopted its purchase and distribution system and K-mart also developed similar system (Steven, 1992). Thus, the Walmart had a temporary and not sustainable competitive advantage (Barney, 1994). The same idea has been supported by a large number of researchers such as Cecil and Goldstein, 1990; and Galliers, 1991.

On contrary several studies point toward falling productivity and rising IT expenditure referred to as “productivity paradox” in the research literature. Loveman (1994) suggests that the IT investment produces negligible benefits. The same idea has been supported by Bakos (1998), Brynjolfsson (1993), Venkatraman (1997), Avison et al. (1999a), Papp (2001). However, the “productivity paradox” has been condemned by Dejager (1995) and Rayner (1995). According to them IT has been found to increase productivity by improving customer satisfaction, quality of product, service and convenience in many organizations.

Lederer and Mendelow (1989) suggest that alignment increases the likelihood of developing a system more critical to the organization and obtaining support of the Top management. As the IT assumes greater role in developing corporate strategy, alignment will facilitate a more competitive and profitable organization (Galliers, 1993). Economic performance is also enhanced by better fitting between external positioning and

internal arrangements (Ciborra, 1997). Through greater alignment of strategy and infrastructure, organizations achieve more synergy, better plan development, increase profitability and efficiency (Avison, 2004). Therefore, alignment in the organizations allows application of IT as a means to leverage their core competencies, skills and technology scope, resulting in improved efficiency (Papp, 1999).

Further, many researchers argue that the insufficient payoffs are due to low level of strategic alignment while others suggest that alignment may not be the solution to the low IT returns in all cases. For example in case of the organizations competing globally strategic alignment can limit the flexibility and aligning IS and business strategy may force the organizations to follow a particular path from which it cannot escape. If a company values flexibility but is facing the environmental flexibility, the strategic alignment is not the best solution. While strategic alignment can contribute towards pay-offs but may limit organizational flexibility and responsiveness to the external conditions.

Hence, contribution of IT in providing competitive advantage has been noticed but do the existing models/frameworks sufficient in achieving alignment?

### **3.3 Issue 3: “ Do the existing models and frameworks sufficient for achieving alignment?”**

A number of models and frameworks have been proposed to help the business managers to better understand alignment and in the continuous search for the significant opportunities for gaining benefits from IT. The application of these try to apply the concepts of strategic fit between resources and opportunities, external and internal environments within an organization, generic strategies of low cost versus differentiation versus focus; and strategic goals, strategies and tactics that make the strategic process rigid (Henderson and Venkatraman, 1993). The alignment will have a positive impact if specifically and meticulously planned, followed and implemented (Hamel and Prahalad, 1990). On the contrary strategic planning may create hindrance to the creative thinking and misguide organizations who adopt it unreservedly (Mintzberg, 1987). Therefore, none of the models provide a way to implement alignment in a practical manner and hence the alignment process is a serious exercise that must be carried out with great care and caution.

Hence, models and frameworks are not sufficient in providing alignment. Then next pertinent question is practicing alignment, which is the next research issue.

### **3.4 Issue 4 : How to practice alignment?**

The notion adopted by many of the researchers is strategizing IT and Business plan in an appropriate way (Henderson and Venkatraman, 1999; Avison et al., 2004). Therefore, there is dominantly an emphasis on structured, systematic and somewhat stable strategy in the research literature despite the fact that there is uncertainty, dynamism and articulation of the strategic intent is difficult (Ciborra, 1997). Real life strategizing is ‘messy’ and human thinking and actions rarely follow strict modular approach (Avison et al. , 1999a,b).

In practicing alignment the following sub-issues are quite important:

(a) *“Whether the IT strategy can meet the challenge of dynamism of business strategy(if it exists)?”*

The business processes are often emergent, serendipitous and continuously changing. The IT strategy must also be dynamic accordingly. The IT tries to define the applications with strong element of stability, predictability, systematic and structured manner which is contradictory to the dynamic business strategy having dynamism, agility and ability to capture diverse, fluid and informal characteristic. On the other hand in the opinion of the IT professional strategy is functional, quantifiable and has an element of certainty. Therefore, not only business processes but the IT process engineering is quite important.

(b) *“Are the Business processes in the organization are well structured as per the technology upgrades? Will only aligning of IT be important in future?”*

Business processes are seldom structured with the possibilities of new technologies in mind, and therefore the full potential of technology is actually not fully tapped (Giaglis, 1999). Even worse, some of the researchers argue that most of the organizations have actually never designed their business processes at all and rather they have evolved over time (Hansen, 1994). Due to their ad-hoc evolution, they are not suitable for streamlining, cost-effectiveness and appropriately aligned to the business objectives, goals and strategy. Most of the studies in research literature focus on aligning IT. However, there is a need to make efforts in Business engineering that involves process based organization design, IS development and execution.

(c) “Is management in full control? Can the information infrastructure be aligned as per the management insights?”

The management is in full control is a hypothetical notion. Involvement of all the people in the strategic alignment planning and implementation, culture building are quite important (Aggarwal et al. 2005) for practicing alignment.

Practicing alignment is questionable if it is not possible to measure IT and its alignment which is the next research issue.

### **3.5 Issue 5 : “ Is it possible to measure IT and IT alignment?”.**

The measurement of alignment persists as a research issue whose solution is not very clear or obvious. Most of the benefits related to IT and IT alignment are so intangible and implicit that it is almost impossible to measure the impact of IT alignment through the conventional approach primarily based on financial measures. These measures study the firm performance on the basis of firm output, measured using value added by the organization, and total sales; business results, assessed using return-on-assets (ROA), and return-on-equity (ROE) measures of financial performance; and intermediate performance, assessed using labour productivity and administrative productivity (Rai et al., 1997). These measures do not address the benefits imparted through IT such as higher customer satisfaction, product innovation and providing business opportunities which would have been un-imaginable without IT.

According to Ciborra (1997) management through knowledge and understanding of alignment can classify their strategy in terms of linear boxes and strategies. But in real world it is practically not possible for them to measure these relationships and apply alignment maps.

In research literature there are two approaches have been predominantly followed with the first approach focusing on process of achieving alignment and other on how the firms have aligned there IS's with organizational strategy. For example, Atkins (1994) adopted three different models to measure strategy and assess alignment (McFarlan 1984; Ansoff, 1965 and Miles and Snow, 1978).

The most comprehensive attempt in this area has been given by Chan et al. (1997) via empirical investigation based on development of four survey instruments to measure each construct of business

strategy, IS strategy, IS effectiveness and Business performance. Here, Venkatraman's (1989) STROBE instrument has been adopted together with STORIS instrument development by Chan to assess IS strategy. Both instruments were used to check the strategic fit.

Measures are required that align everyone every functionality within the organization with the key goals of the organization, to achieve strategic alignment, but there is no clear idea about what these measures might be (Labovitz and Rosanky, 1997).

Even if it is assumed that the measurement of alignment is possible, it is important to find if it is a final or continuous process which is the next research issue.

### **3.6 .Issue 6: “Whether strategic alignment should be treated as an outcome or as a dynamic process?”**

The former view had been dominant in the past (Weill and Broadbent, 1998, Earl, 1989) and the need to maintain alignment was rarely acknowledged. But, more recent studies support the dynamic alignment (Labovitz and Rosanky, 1997; Venkatraman, 2000).

However Smaczny (2001) argue that there are no studies focusing on how organizations actually achieve alignment or alignment is the right way of looking at the issue. Most of the researchers have adopted a clinched approach of adopting alignment and developed theories based on it and overlooked the question that alignment is an outdated notion. Most of the models developed adopt mechanistic and planning oriented management approaches to the business objectives. Therefore, Smaczny recommends developing Business and IT strategies simultaneously and implementing them simultaneously.

If the processes are dynamic than they are applicable homogeneously or not is the next research issue.

### **3.7 Issue 7: “Are the firms homogeneous with respect to the strategic processes?”**

The early work on strategic processes essentially viewed the firms as homogeneous. However, the recent research focuses on competencies and capabilities. This is particularly a more realistic thought as the resources are heterogeneously distributed in the firms and they are differently able

to utilize them. Tallon et al. (2000) suggest that the strategic alignment is the most important issue in the opinion of the IT executives and they have very different goals for IT. The environment in which IT operates is the key factor in determining payoffs. They have examined the executive's perceptions of the Business value of IT. Based on the different corporate goals the firms can be classified into four focus types – unfocused, operations focus, market focus and dual focus. These differently focused firms use different techniques for analyzing the impacts of IT. The focused firms are better able to realize the Business value of IT and make greater use of IT investment evaluation. In unfocused firms do not have clear goals for IT and executives are indifferent to it. Here, IT is viewed as an expense, so management delays IT related purchase decisions and after its purchase mis-manages the IT investments. In the operations focused organizations, the aim is achieving operational effectiveness of IT. In market focused firms, IT is useful in enhancing the strategic positioning by creating or improving value propositions for the customers. The dual-focus firms use IT to improve operational effectiveness and market position by improving market reach and new market creation. In the research authors have assessed strategic alignment using a single dimension: extent to which Business strategy supports the IT strategy. The results of the study show that the dual focus firms are able to realize highest pay-offs from IT investments, followed by market-focus, operations-focus and finally unfocused firms. Executives with more focused goals for IT perceive higher extent of alignment resulting in realization of higher Business value of IT. Although it has been established that the firms are heterogeneous with respect to the strategic processes but performance implications are still questionable, which is the next research issue.

**3.8 Issue 8 : “What are performance implications of alignment ? Whether alignment affects performance for all or some of the business strategies?”**

Shifting from firm focus, Sabherwal and Chan (2001) using Miles and Snow's (1978) typography showed that the alignment improves business performance. Prospectors should develop market information system and strategic decision support systems rather than the operational support system. Moreover, imitating competitor's systems is less advantageous

to a business than expected, unless there are strong similarities in the firms' business strategies. There is a significant correlation between alignment and performance for Prospectors and Analyzers but not the Defenders. Hence, the managers within Defenders should not emphasize alignment. Having categorized the firms into Prospectors, Analyzers and Defenders it is important to know the handling of the alignment by these types of firms, which is the next research issue.

**3.9 Issue 9 : “How Prospectors, Analyzers and Defenders differentially tackle the alignment problem?”**

Hirschheim and Sabherwal (2001) identified three problems in tackling alignment namely paradoxical decisions, excessive transformations and uncertain turnaround. They are due to sequential attention to goals, knowledge gaps, and division of user responsibilities and underestimation of the extent of problem. Defenders have 'utility' profile for IS usage, achieved through low cost delivery through outsourcing. Analyzers will look for alliances, most likely through strategic sourcing. Prospectors will have infusion profile involving alignment through business leadership. Here, IS is in-sourced. The suggestion of the authors is employment of knowledge and process integration, process planning involving multiple perspectives and transitional figures or powerful external forces can aid the IS alignment endeavour.

The next research issue is to determine the Critical Success Factors in the form of enablers and inhibitors.

**3.10 Issue 10 : “ What are the processes enabling and Inhibiting alignment?”**

Neo, 1988; King et al., 1989; Luftman, 1996 and Kanungo and Chouthoy, 1999 have contributed to the understanding of the processes that may enable or inhibit alignment. The important enablers include Executive's support, Close relationship between IT and non-IT people, IT department prioritizes the workload well and sharing of IT resources. The inhibitors include IT department prioritizes the workload poorly, power & politics within the Firm, IT department does not meet its commitments.

After establishing the Critical Success Factors the next important issue is determining the focus of alignment.

### 3.11 Issue 11 : “What is the focus of alignment?”

Hussain et al. (2002) argued that different researchers have focused on different parts of the Henderson and Venkatraman (1989) model, either process or content. They include achieving alignment through social element (involved people) and intellectual element (Methods and techniques). Reviewing a large number of articles relating to fit the authors have concluded that there is little consensus regarding the factors involved. They conclude that there is a need to research into processes associated with alignment.

After knowing the focus of alignment, the unit of analysis in alignment research is quite important.

### 3.12 Issue 12 : “What is the unit of analysis in the alignment research?”

Tallon and Kraemer (2003) examine alignment at process level rather than the Firm level. They tried to establish relationship between executive’s perception and reality. They used the notation of IT shortfall (When IT fails to support business strategy) and Strategy shortfall (When strategy fails to use IT). There results indicate that the alignment is highest in production, operations and customer relations and lowest in sales and marketing. They suggest that the benefits in terms of IT pay-offs through strategic alignments are realizable only up to a certain critical level. The authors feel that more research is required to analyze the unit of analysis.

### 4.0 Conclusion:

The discussion of the important research issues has shown that there is a clear need for further research into the Strategic alignment area. The paper provides an overview of the business and IT alignment and highlights the gaps in the research.

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**Phase-III: Theme Based Paper**