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Organizational Alignment and Performance: Past, Present and Future

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Organizational Alignment and Performance: Past, Present and Future

Abstract

The concept of organizational alignment has been a central theme in management research for several decades. But what is alignment and does it really matter? What are the theoretical arguments for the importance of alignment and is the theory supported by the empirical research? Based on a thorough review of both theoretical and empirical research, this study identifies and defines the types of organizational alignment, discusses the conceptual arguments for it, examines the empirical evidence for the alignment-performance relationship, and proposes research questions and practical implications to advance the theory and practice of managing alignment.

Introduction

The concept of fit or alignment is a central theme in the field of strategic management (Venkatraman & Camillus, 1984; Venkatraman, 1989; Tan and Tan, 2005). For instance, Porter contends:

Strategic fit among many activities is fundamental not only to competitive advantage but also to the sustainability of that advantage. It is harder for a rival to match an array of interlocked activities than it is merely to imitate a particular sales-force approach, match a process technology, or replicate a set of product features (1996, p. 73).

When formulating corporate strategy, researchers have emphasized the importance of fitting or aligning the organization's strategy with an internal appraisal of the firm and an external assessment of environmental opportunities and threats (cf., Ansoff, 1965 and Andrews, 1971). Alignment is important in formulating strategies as well as in their implementation. Implementation is fostered by aligning and adjusting key

systems, processes, and decisions within the firm (Galbraith & Nathanson, 1978; Lorange & Vancil, 1977; Stonich, 1982; Kaplan, 2005).

The idea of fit has been promoted in the strategy literature from various perspectives. For instance, *In Search of Excellence*, the 1982 best-selling book, proposed that when firms achieve an integrated harmony among three "hard" "S's" of strategy, structure, and systems, and four "soft" "S's" of skills, staff, style, and super-ordinate goals, they tend to become higher performing or excellent firms (Peters and Waterman, 1982). Similarly, in examining high performing firms, Miller (1986) argued a firm's strategy, structure and environment often coalesce or configure into different types that are predictable and hence manageable. Linking his argument with fit, Miller further states, "configurations (or gestalts, or archetypes, or generic types) are said to be predictively useful in that they are composed of tight constellations of mutually supportive elements" (p. 236). The mutually supportive elements that lead to fit can become sources of competitive advantage (Miller 1996).

Alignment requires a shared understanding of organizational goals and objectives by managers at various levels and within various units of the organizational hierarchy. A firm's ability to seek and maintain a competitive advantage rests upon its ability to acquire and deploy resources that are coherent with the organization's competitive needs (Porter, 1996). However, some strategy researchers have argued that too much alignment may result in firms with components that are very tightly coupled and lead to problems with adapting to a dynamic external environment. For instance, Hagel and Singer (1999) argue that fit should be considered in light of the interaction costs faced by a firm. They contend that if the interaction costs of performing an activity within the confines of the

firm are higher than the costs of performing it externally, then it ought to be performed externally rather than attempting to create a fit within the tightly couple bounds of the firm.

Similarly, Pascale (1999) argues that if the fit in an organization leads to equilibrium, it can actually be counterproductive. He contends that the firm should strive for adaptive systems rather than equilibrium. In the same vain, Hamel and Prahalad (1994) have argued that if fit is achieved by paring down organizational ambition, the firm will not achieve its strategic potential. Thus, they argue, “This is why the genesis of the strategy process must be a purposefully created misfit between where the firm is and where it wants to be” (p. 147). To overcome this dilemma between fit and flexibility, Miller (1996) argues that configurations (through fit) can provide competitive advantage only if they are dynamic and flexible.

Forms of alignment: The literature distinguishes between two types of organizational alignment – vertical and horizontal or lateral. *Vertical alignment* refers to the configuration of strategies, objectives, action plans, and decisions throughout the various levels of the organization. The conceptualization of strategy at three levels – corporate, business, and functional (which we refer to as Levels 1, 2 and 3, respectively in Figure 1) – has gained widespread acceptance in the literature. In addition to coordinating activities and priorities across each of these three levels, vertical alignment depends on coordination at a fourth level – the decision areas within each function (Kathuria and Porth, 2003). Figure 1 shows this hierarchy of relationships. Strategic management is an iterative process that starts with the development of an overall strategy at the corporate

level to guide the entire organization. Strategy implementation is effectively carried out in a bottom-up fashion, with an aim to make lower level decisions consistent with the decisions at the upper levels. When this consistency is achieved, vertical alignment has been realized.

Take in Figure 1 Here

Horizontal alignment refers to coordination of efforts across the organization and is primarily relevant to the lower levels in the strategy hierarchy. Horizontal alignment can be defined in terms of *cross-functional* and *intra-functional integration*. Cross-functional integration connotes the consistency of decisions across functions (e.g., Level 3) so that activities and decisions across marketing, operations, HR, and other functions complement and support one another. Intra-functional coordination is achieved through coherence across decision areas (Level 4) so as to achieve synergy within each function. For successful implementation, decisions within a function (Level 4) should be aligned vertically with that function's strategic objectives, as well as, laterally – across decision areas within a function (Kathuria and Porth, 2003). The process of horizontal alignment requires exchange and cooperation among various functional activities.

The notion of intra-functional coordination is also referred to as internal fit. Internal fit is, in part, due to the consistency between a function-specific task and that function's policies and practices. In the case of manufacturing strategy studies, it means the consistency between manufacturing task and manufacturing policies and practices (Skinner, 1974). For example, Kathuria and Partovi (1999) focused on the internal fit

between manufacturing priorities, in their case flexibility, and work force management practices used by manufacturing managers.

Alignment: The Early Research and the Measurement Challenges

Early works on the topic were conceptual and theoretical. As early as 1961, Likert emphasized the importance of coordinating the corporate, business and functional priorities and strategies of the firm, using the notion of a “linking pin.” Hofer and Schendel (1978) also underscored the need to link strategies at the three levels. Likewise, the “vertical linking process” was stressed by Hrebiniak and Joyce who argued that “successful implementation of strategy depends on this integration and the development of short-term operating objectives that relate to strategic plans” (1984: 113). The need to link strategies at the three levels is also widely accepted in functional areas, such as the manufacturing literature (cf., Skinner, 1969; Skinner, 1978, Hayes and Wheelwright, 1984, Skinner, 1985). Skinner (1978, 1985) argues that the levels of strategy operate in a hierarchical way. Corporate strategy (level 1) provides direction and guides business strategy (level 2), which, in turn leads to strategies in the functional areas (level 3).

Subsequently, researchers started to empirically test the notion of alignment. Swamidass (1986) observed that executives at different levels in a firm, chief executive officers (CEOs) and manufacturing managers (MMs), emphasised different priorities. Findings revealed the existence of a mismatch of manufacturing priorities between CEOs and MMs, raising the concern that decisions at the manufacturing and operations level could be undermining business strategy. The above conclusion is consistent with the literature which indicates that manufacturing is poorly understood, and missing from, or inconsistent with business strategy (Skinner 1969, Wheelwright 1978, Hayes and

Wheelwright 1979).

Schroeder, Anderson, and Cleveland (1986), however, found that the mission of manufacturing was usually consistent with the business strategy. They identified elements of manufacturing mission as: quality and reliability, customer service, economic performance, flexibility, resource and equipment utilisation, technology, organisational development, employee and community relations, and inventory control. Based on an exploratory study of manufacturing managers, their conclusion was that the manufacturing mission was usually aligned with business strategy.

The conflicting findings of the above mentioned empirical studies could be attributed to the lack of a refined measure of alignment. Vickery et al. (1993) tested a refined measure of production competence, which they define as "the degree to which manufacturing performance supports the strategic objectives of the firm" (p. 436). They claimed their measure better captured the notion of alignment compared to earlier measures of alignment, such as the one used by Richardson et al. (1985) that deployed a binary classification (1,0) based on the perceived match between the corporate mission and manufacturing capabilities.

Contemporary researchers deploy not only refined measures of alignment, but have also extended this research to include its impact on performance under varying situational contingencies. With increased awareness of managers due to greater dissemination of knowledge over time, one might expect to find increasing evidence of and support for alignment in recent studies. Contrary to expectations, however, some studies have found various levels of disagreement on competitive priorities between functional managers and their business unit managers. For example, based on a study of

98 manufacturing units in the U.S., Kathuria et al. (1999a) noted that differences between general managers and manufacturing managers about the competitive priorities of their units were still prevalent. Kathuria et al. (1999a) collected data from matched pairs of individuals from each participating organization, a functional manager and the business unit manager, such as a general manager, and they deployed the matched response approach to arrive at the degree of alignment between the two. This marked an improvement in the measure of alignment previously deployed. Researchers (cf., Joshi et al., 2003) also started using more refined measures of alignment, such as the Euclidean distance measure of alignment that was originally proposed by Venkataraman (1989).

Venkataraman (1989) proposed six different perspectives on operationalizing the concept of fit in strategy research. In some recent studies, such as Joshi et al. (2003) and Tarigan (2005), the fit is viewed as the opposite of the level of disagreement between managers. Due to GMs' relatively senior position in any organization and correspondingly higher involvement in strategy formulation, both studies considered their perception of priorities as "ideal" profiles relative to their MMs. The Euclidean distance was calculated as a square root of the sum of squared differences between the two managers on the competitive priorities in question. Subsequently, the disagreement score was then converted to an alignment score for each pair of GMs and MMs by subtracting their respective disagreement score from the maximum disagreement score among all matched pairs. The example below illustrates the process of calculating the alignment scores.

In this example, GMs and MMs rate their organization's competitive priorities (e.g., quality, flexibility, delivery, and price) on a scale of 1-5. Consider, for example, the GM's emphasis in a given unit on the four competitive priorities was as follows: price = 3.50, quality of conformance = 4.00, delivery = 2.75 and flexibility = 3.25. The MM of that same unit, however, rated the four priorities as follows: price = 3.00, quality of conformance = 4.34, delivery = 3.33 and flexibility = 4.80.

Based on the above scores,
Misalignment (as Euclidean distance) for the given unit is calculated as
 $= \text{SQRT} ((3.50-3.00)^2 + (4.00-4.34)^2 + (2.75-3.33)^2 + (3.25-4.80)^2) = 1.76$

Theoretically, the maximum misalignment score would be 8 if all items were emphasized by a GM at 5 and all items were emphasized by MMs at 1, or vice versa). The misalignment score is then converted into an alignment score as follows.

Alignment score for the given pair
 $= (\text{Max misalignment score from the sample} - \text{Misalignment score of the responding pair})$

Vertical Alignment and Performance

Lingle and Schiemann (1996: 59) state that “Effective organizations are organic, integrated entities in which different units, functions and levels support the company strategy — and one another”. Researchers in strategic management have examined this issue of coherence or alignment and its impact on performance. For example, by studying a firm’s overall business strategy and relating it to different functional areas, Nath and Sudharshan (1994) developed a measure of coherence. They found a monotonic relationship between coherence and performance among their sample of acute care hospitals. Nath and Sudharshan (1994) urged researchers to examine the relationship between a firm’s environment, organizational structure, business strategy and the coherence or fit between a firm’s business strategy and its functional strategies. Whipp, Rosenfeld, and Pettigrew (1989) found that alignment between strategic and operational aspects is more “visible” in successful firms. This is consistent with Day (1984) who suggested that business strategy should be integrated with functional strategies to achieve a sustainable competitive advantage. These studies lend credence to the fact that when various levels of strategy, and strategic priorities are consistent, linked, and mutually supporting, the performance of the organization would be higher than otherwise.

In an empirical study, Smith and Reece (1999) found that the fit between business

strategy and decision categories or operational elements (e.g., inventory and logistics decisions, workforce issues, and organization structure), leads to improved business performance. Further, focus on the vertical alignment between manufacturing and business strategy is evident in an empirical study (Sun and Hong, 2002) to examine the alignment between manufacturing and business strategies. Using data obtained from across 20 countries, they concluded that as alignment between manufacturing and business strategies increases, firm performance increases. Additionally, the incremental contribution to performance due to the manufacturing function increases as the alignment increases.

Examining strategic capabilities of small and medium sized firms, O'Regan and Ghobadian (2004) concluded that when a fit is obtained between generic capabilities and strategic planning the resultant organizational performance is at a higher level. For them, generic capabilities consisted of organizational abilities such as the ability to promote the product or service, ability to offer a broad product range, wide distribution, responsiveness to changes in demand, ability to compete on price and provide after sales service, ability to maintain delivery schedule, quality levels and organizational ability to obtain involvement of both top management as well as line managers in organizational activities. Similarly, Papke-Shields and Malhotra (2001) found that the influence and involvement of manufacturing executives does affect alignment, which, in turn, affects business performance. Edelman, Brush and Manolova (2005) using data from 192 firms concluded that small firms fit their strategies to the available resource profiles in order to achieve higher performance. Using a sample of 206 global firms Xu, Cavusgil, and White (2006) examined if the interrelationships among strategy, structure, and processes

influence firm performance. They concluded that the fit among strategy, structure, and processes is positively linked with performance.

Horizontal Alignment and Performance

In the case of horizontal alignment, some work has been conducted in linking two functional areas, such as operations management and marketing management. For instance, using data obtained from US banks, Rhee and Mehra (2006) found that strategic fit between operations and marketing was more critical in understanding organizational performance as compared to the choice of competitive strategies alone. Similarly, in an effort to examine the horizontal alignment between marketing and manufacturing, Alegre and Chiva (2004) examined two cases studies and concluded that for the successful firm a fit between product innovation and manufacturing competitive priorities was necessary.

Youndt, Snell, Dean and Lepak (1996) examined the horizontal alignment relationships between Human Resources (HR) systems, manufacturing strategy, and firm performance. They found certain types of HR systems were directly related to operational performance measures, such as employee productivity, equipment efficiency, and customer alignment. Further they found that certain competitive priorities or manufacturing strategies moderated this relationship. For example, they found that the interaction effect of a cost strategy with an administrative HR system was positive on equipment efficiency, whereas that of a delivery flexibility strategy was positive on customer alignment. Additionally, they observed the interaction effect of a quality strategy with the human-capital enhancing HR system was positive on all three operational performance measures noted above.

Compared to the research of vertical alignment and linkages, the work on

horizontal alignment is sparse. For instance, let us revisit the quote by Porter (1996) used in the introduction of this article. In his paper explaining the concept of strategy and how a firm sustains competitive advantage over time, Porter emphasizes the importance of horizontal alignment across many activities of the firms rather than one or two key activities. In that vein, Kathuria and Igarria (1997) presented an integrated framework for aligning information technology applications across various functional areas, such as product design, demand management, capacity planning, distribution, etc., with manufacturing strategy—competitive priorities and process structure, in particular.

Let us explore this distinction further, using Southwest Airlines as an example. Currently in the USA, Southwest is one of the few major airlines that is profitable and the only airline to report 33 years of consecutive profits. Many competitors have been frustrated in their attempts to imitate Southwest. This is due in part to the difficulty of imitating Southwest's underlying horizontal alignment among many aspects of its strategies and operations. It is well documented that Southwest is a no-frills, low priced carrier. Others who have tried to replicate the Southwest model have not succeeded because they were unable to achieve other horizontal components of the strategy. This includes HR practices such as non-union workers, and a vibrant corporate culture, operational practices such as flying only one kind of aircraft and serving mostly smaller metropolitan areas, and Southwest's supply chain management of parts and supplies. In addition, Southwest's choice to not become part of any industry-wide reservation system allowed it to sell through the Internet much earlier than others (an IS function) combined with many email/Internet based promotion approaches (a marketing function) again show many levels of horizontal alliances not easily replicated by any one single competitor.

Our assertion is that while ample research exists to suggest that vertical alignment leads to higher levels of business unit performance, the empirical research to support a similar relationship between horizontal alignment and performance needs to be buttressed. The anecdotal evidence of Southwest Airlines would suggest that performance at the corporate level may improve as horizontal alignment is achieved as conceptualized in the arguments by Porter (1996).

Factors affecting the alignment-performance relationship

The need to examine these linkages continues because not all studies are able to support a direct relationship between alignment and performance. For example, Joshi et al. (2003) reported the lack of a direct relationship between alignment and performance, but under certain moderating conditions found the relationship was significant. West & Schwenk (1996), Homburg et al. (1999), and Lindman et al. (2001) reported similar findings. For example, Lindman et al. (2001) did not find consensus among managers on the firm's business-level strategy to influence manufacturing performance. Homburg et al. (1999) also did not find support for the alignment-performance relationship in the case of a cost leadership strategy for any of their three performance dimensions. Similarly, West & Schwenk (1996) found no significant relationship between consensus among top management teams and any of the three performance measures. All of the above studies, however, found alignment or strategic consensus to influence performance indirectly, either through a mediating variable (cf., Lindman et al., 2001) or in the presence of some moderating variables. In the paragraphs below, we examine the influence of contextual factors on the alignment-performance relationship.

Joshi et al. (2003) integrated the strategy and operations literature to focus on the alignment-performance relationship in the wake of certain organizational factors. Based on a sample of matched pairs of manufacturing managers (MMs) and general managers (GMs), they found that organizational factors (such as organizational tenure of MMs and length of association of MMs with GMs) moderate the relationship between alignment of manufacturing priorities and manufacturing performance. Their study showed that alignment is especially critical when the managers are relatively new to the organization.

Similar to Joshi et al. (2003), Tarigan (2005) focused on the perceptions of GMs and MMs concerning manufacturing priorities of their business units as a representation of the alignment to evaluate manufacturing unit performance. His focus was on managers from Indonesia (Joshi et al. focused on U.S. managers) and the moderating organizational factor of decentralization. Tarigan found that alignment of priorities between MMs and GMs is positively related to manufacturing performance. In addition, his results show a negative moderating effect of decentralization on the alignment-performance relationship.

The importance of aligning the information systems (IS) function with other business functions is widely examined in the IS literature (Luftman and Brier, 1999). In a special issue of the *Decision Sciences* journal that focused on the interface between operations and information systems, Kathuria et al. (1999b) presented an intelligent decision support systems approach to align information technology applications with manufacturing strategy. Similar to manufacturing and business strategy vertical linkages, studies have found IS strategic alignment to positively affect business performance (Jarvenpaa and Ives, 1993). Specifically, in an effort to examine the fit between IS

strategies and business strategy of the firm, Sabherwal and Chan (2001) linked Miles and Snow's (1978) typologies to IS strategies and found that prospectors and analyzers (two of the four typologies proposed by Miles and Snow) showed a positive performance relationship when examining business strategy and IS strategy. In a further effort to explore subtle aspects of IS fit and performance, Chan et al. (2006) concluded through an empirical examination that the effect of alignment on performance varies across different industries and for different business strategies. This is consistent with a finding in the manufacturing strategy literature by Kathuria et al. (1998), who noted that the alignment on some (not all) competitive priorities was influenced by industry membership.

In the marketing literature, Olson, Slater and Hult (2005) focused on relationships between business strategy, marketing strategy, and organizational performance. They argued that different business strategies (using the Miles and Snow (1978) model) will require a different focus on marketing activities (such as customer, competitor, innovation, and cost control on behalf of the marketing department) in the presence of structural characteristics of the organizations such as formalization, centralization, and specialization. Using responses from 228 senior marketing managers, Olson, Slater and Hult (2005) conclude that each strategy type requires different combinations to be used by marketing function in terms of the organizational structural characteristics as well as different marketing activities. Other contextual variables that have been found to affect the alignment-performance relationship include the type of business environment (Homburg et al., 1999), human capital in the form of prestige of partners and tacit knowledge gained through experience (Hitt et al., 2001), among others.

Conclusions and Implications

We set out to examine the evolution of the concept of organizational alignment over the past several decades in the management literature. Our survey of the literature reveals that management sub-fields such as manufacturing, operations, marketing, information systems, human resources, and business strategy have focused on the concept of vertical alignment across different levels of the organization as a starting point in this research stream. Initially the focus was on whether vertical alignment existed. Over time, the discussion shifted to the impact of alignment or non-alignment on the performance of a specific set of functional activities or on overall business unit performance. More recent studies have taken this idea one step further to examine the moderating effects of various contingencies in explaining the alignment-performance relationship.

This survey of the literature provides us with several insights about organizational alignment as well as some gaps and questions to be addressed. Of the two types of organizational alignment – vertical and horizontal – it is clear that vertical alignment has received considerably more attention in the literature. Perhaps this is because studies of vertical alignment are easier to conceptualize and allow researchers to study questions within their fields of functional expertise. For example, a researcher specializing in marketing investigates the alignment of marketing activities within the business unit, emphasizing the importance of the marketing function in the success of the business unit. A similar focus has emerged from researchers in the fields of operations management, human resources management and information systems, who investigate questions of vertical alignment between strategies and activities within their respective functional areas and the business strategy of the firm.

Studies of the concept of horizontal alignment within organizations are less common. Furthermore, our literature review suggests that when horizontal alignment is studied, the focus tends to be dyadic. That is, horizontal alignment studies tend to examine relationships between two functional areas, such as marketing and operations, or manufacturing and HR, or IS and operations. In studies of horizontal alignment, the operational definition of the concept of fit across functions becomes critical. Based on Venkatraman's (1989) work, many researchers have developed measures of alignment that mirror some form of Euclidean distance measures that work very well in the form of a dyadic measurement of either vertical alignment or horizontal alignment. The limitations posed by the dyadic approach suggest gaps in the research and opportunities for future research. These gaps are critical to understand for both researchers and managers from any perspective.

We also contend that as firms grow and diversify, becoming multi-business organizations, the importance of horizontal alignment will be elevated. Grant (2005) reported that over a period of 70 years from 1930 to 2000, the 100 largest industrial companies increased their share of the US economy from less than 35% to 65%. This shows that larger businesses are indeed becoming more complex and suggests the need to further understand the role of horizontal alignment in organizational performance. As mentioned earlier, researchers may find that present measures of horizontal alignment using dyadic approaches are not sufficient to capture emerging requirements for multi-point alignment. There is, however, some work done in the field to overcome these limitations, such as the profile deviation method proposed by Venkatraman (1989). Hill's

(1994) profile analysis in operations strategy may also be adapted to measure horizontal alignment across several functions within an organization.

Our survey of the alignment literature has implications for both researchers and practitioners. Researchers interested in further understanding vertical alignment might do well to focus on developing larger sets of moderating variables beyond individual factors (e.g., years of association) and organizational characteristics such as formalization or decentralization. These new factors may include the morale of the workforce, or the life cycle of the firm or industry for instance. On the other hand, researchers interested in exploring alignment might find fertile ground in focusing more on horizontal alignment. This will entail exploring new and exciting areas of multi-point horizontal alignment more so than the dyadic studies that currently exist. This multi-point approach, studying fit in several functions of an organization simultaneously, may necessitate a deeper understanding of profile analysis and require statistical methods that also allow for moderating variables.

The implications of this study for practitioners are highlighted in the example of Southwest Airlines. Managers need to understand and explore both multi-point horizontal alignment and vertical linkages in their organization. Ways to measure and manage both types of alignment are needed as well as studies that clarify the contextual nuances and moderating variables of the alignment-performance relationship. For these studies to have value for decision makers, research methods that are focused on qualitative data as well as quantitative data might become critical and methods such as ethnographic approaches will have to be explored.

The contribution of this study is that it documents the existing literature on the concept of organizational alignment and identifies new opportunities to continue to build and expand the research stream. While we appreciate and acknowledge the contributions of many researchers from a variety of sub-fields of management, we also strongly feel that in the new hypercompetitive, global marketplace, the time has come for a renewed focus on certain aspects of vertical alignment and, perhaps more importantly, a new focus on horizontal alignment. Our review identifies opportunities for fruitful research on the topic of organizational alignment.

Application Questions

Managers in organizations with multiple strategic business units could use the following questions to assess the state of alignment in their respective units and the organization as a whole.

1. Are business unit managers in agreement with corporate managers on their organizational priorities? Are they in agreement with functional managers? Are functional managers in agreement with corporate managers?
2. Are functional managers from areas, such as marketing, operations, finance, in agreement with one another regarding their functions' priorities?
3. Are decisions within a function, such as operations management, aligned so as to support the functional strategy? For example, are decisions related to capacity planning, location, manufacturing planning and control systems, etc. aligned so as to support core competencies of the operations function?

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Figure 1: Hierarchy of Alignment

