

Vertical integration and economic performance: a managerial capability framework

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Abstract

Despite the indeterminate economic outcomes of vertical integration, several managers and researchers have questioned its viability. The article proposes that a better understanding of the relationship between vertical integration and economic performance may be made by considering the role of managerial capabilities in directing integration. It is argued that a lack of understanding of non-core businesses and the managerial approach necessary for managing integrated activities contributes to poor integration outcomes. The magnitude of these knowledge deficiencies will be dependent on how far the company moves from its strategic core and on whether corporate managers can abate these deficiencies through knowledge acquisition. Through synthesis of the complex vertical integration literature, a managerial capability framework presents the issues and environmental contingencies involved in the success of the vertical integration effort.

Vertical integration occurs when a firm produces its own inputs or owns its distribution channel (e.g. a manufacturer owning and operating wholesaling facilities or retail stores). It is a critical component of corporate strategy, as it is often one of the first diversification strategies a firm considers (Harrigan, 1984). Integration is a natural response for a top manager who is looking for a means to incite organizational growth, gain scale economies, or attain a higher degree of control. The financial outcomes of vertical integration remain a contemporary issue, particularly in the drug, entertainment and health-care industries, where integration may be used as a means to control hostile environments (Campbell, 1998; Karrer-Rueedi, 1997; Kreisky, 1995). The vertical integration decision, however, has not resulted in predictable economic performance (D'Aveni and Ravenscraft, 1994). The complexity of the strategy, its competitive advantages and disadvantages, and its internal benefits and costs make forecasting its economic outcomes a difficult task (Harrigan, 1985; Perry, 1989). Despite these uncertainties, executives have questioned the value of vertical integration, largely due to the higher costs and inflexibility associated with it. This belief is mirrored in the business literature, which continues to suggest that outsourcing adds value to firms beyond that provided by vertical integration (Kelley, 1995).

We propose that, before the "die is cast" regarding the value of vertical integration strategies, a better understanding of the vertical integration-financial performance relationship must be attained. Building on strategic management theory and research, a managerial knowledge perspective is used to illustrate how vertical integration may enhance economic performance. Managerial knowledge deficiencies are involved in every

vertical maneuver, and these deficiencies act to influence the vertical integration and performance relationship. Top managers must learn new skills to maneuver their firms beyond their strategic core.

Traditionally, the business literature has focused on the firm's industry or value chain environment as the primary determinant of vertical integration success (e.g. Harrigan, 1986; Williamson, 1975). However, the effectiveness of any change in strategy is dependent on both the environmental and organizational changes that accompany it (Rajagopalan and Spreitzer, 1997). Prior investigations into the vertical integration-performance relationship have assumed that an accurate assessment of vertical integration costs and benefits exists. To begin unraveling the relationship, we propose that managerial capabilities, such as the ability to determine costs and benefits, be considered an integral determinant of vertical integration success. From this knowledge perspective, the performance consequences of vertical integration may be a function of both firm-specific competencies and environmental constraints. Vertical integration may have a complex effect on profitability, sometimes raising it, and sometimes lowering it, depending on the interplay of environmental and organizational contexts (Martin, 1986; Reed and Fronmueller, 1990).

In the current business environment, firms must clearly evaluate all possible alternatives before implementing risky strategy. Prudence is not a luxury but a valued necessity for firms wishing to survive turbulent times. The following conceptual framework of considerations may be used as a tool to guide firms wrestling with the ambiguities of the vertical integration decision:

- What is the firm's strategic core and how does it affect the vertical integration-performance relationship?



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- What are the managerial knowledge deficiencies associated with vertical integration?
- What are the factors relevant to the assessment of benefits and costs associated with vertical integration?
- What mechanism of implementation is best for vertical integration?
- How far from the strategic core should a firm vertically integrate?
- What types of organizational learning are relevant to vertical integration success?
- How do industry environments affect the vertical integration-performance relationship?

The strategic core/center of gravity

The crux of the vertical integration-performance relationship involves changes to a firm's strategic core (Reve, 1990), or its center of gravity (Galbraith, 1983). The center of gravity refers to the stage of the value-added chain in which a firm's operations first began, and where critical lessons were learned that influence organizational values and mind-sets (Plinitch and Zeithaml, 1995). Each industry stage requires specific sets of knowledge and skills for success. These involve product and process technologies, relationships with customers and suppliers, and managerial approaches appropriate for each stage. However, a firm's unique knowledge, that which sets it apart from its competitors, also arose in its center of gravity stage. Thus, the center of gravity stage is where a firm built its core competence (Prahalad and Hamel, 1990) and dominant logic (Bettis and Prahalad, 1995).

The core competence can be interpreted as the firm's unique set of intangible resources or skills that represent collective learning in the organization. It involves a deep commitment to working across organizational boundaries by all functions and may give the firm competitive advantage (Prahalad and Hamel, 1990). Dominant logic can be viewed as the fundamental aspect of organizational intelligence and as the information filter that shapes responses to environmental change (Bettis and Prahalad, 1995). Although conceptually different from each other, both dominant logic and core competency refer to a mind-set or Gestalt that affects the knowledge acquisition and dissemination capabilities.

A center of gravity is also likely to be dominated by a particular functional "thought world", "... a community of persons engaged in a certain domain of activity who

have a shared understanding about that activity" (Dougherty, 1992, p. 182). For example, a downstream firm may focus on marketing, whereas companies involved in upstream stages may focus on product development or perhaps component manufacturing. Since one or more functions may dominate a center of gravity, certain resource allocation processes and patterns are likely to be associated with different stages of the production chain (Galbraith, 1983). So, while a center of gravity may embody the source of a firm's competitive advantage, it may also inhibit the development of new knowledge, if organizational routines embedded in a dominant thought world lead to inertia (Dougherty, 1992). A core competency could then turn into a core rigidity (Leonard-Barton, 1992).

Because all forms of vertical integration involve entry into new product markets, we propose that the dominant logic of the firm is necessarily compromised in the vertical integration process. The top management group's ability to manage a more diversified firm is limited by its collective experiences and dominant logic (Ginsberg, 1989). It is unlikely that a management group of a non-integrated firm can utilize its dominant logic to manage integrated activities. For this to occur, the integrated activities that cross industry stages would have to be strategically parallel (c.f. Ginsberg, 1990; Grant, 1988).

As a result, new managerial knowledge bases become essential for success. Corporate managers must leverage existing knowledge or develop new knowledge to manage the integrated firm. The duties of the corporate management team should not be viewed simply in terms of administrative tasks (resource allocation, strategy formulation, monitoring, control), but also in terms of their ability to learn. Attempts to explain the determinants of vertical integration success must first address the learning capacities of the top management team in terms of core extension and core reconceptualization decisions (Ginsberg, 1990). Thus, it is the learning capacity of the dominant coalition that determines how successful the vertical integration strategy will be.

Managerial knowledge deficiencies

Knowledge deficiencies arise from shortcomings in knowledge structures, or schemata, used by corporate managers. A knowledge structure is a mental template

that individuals use to give information form and meaning (Walsh, 1995). It allows individuals to interpret new information and take action, based on experiences in similar circumstances. Owing to individuals' limited information-processing abilities, schema use may be the most dominant means for individuals to process new information. A common source of schemata are the functional experiences of executives.

It is well-known that executive functional backgrounds have an impact on preferences and beliefs embedded in knowledge structures (Miller *et al.*, 1998). Even if top executives have experience in multiple functions, different combinations of functional experiences affect mental frameworks and strategic choices (Hitt and Tyler, 1991). These combinations of experiences and preferences give rise to a firm's human expertise, which is the wide range of value-added activities in production, marketing, etc. that sets a company apart from other firms (Farjoun, 1994). Human expertise is therefore the basis for a firm's core competence or dominant logic.

These same distinctive competencies, however, also curtail the development of capabilities outside those competencies (Levinthal and March, 1993). Successful competencies invite their further development and utilization, sustaining a current focus. Therefore, a vertical shift suggests an immediate managerial knowledge shortcoming. Managerial cognitions provide the underlying logic for managerial actions (Walsh, 1995), so how decision makers interpret strategic issues affects organizational responses to environmental changes (Dutton and Duncan, 1987). When a firm integrates, the responses to environmental issues in an unfamiliar industry stage may be influenced by the functional experiences and expertise germane to a firm's center of gravity stage. Success in a center of gravity stage, and the ideology developed there, might even shape responses to issues in unfamiliar industry stages in inappropriate ways. Managers may be unaware of the critical success factors of product lines not closely linked to the core business. Managerial knowledge deficiencies might also inhibit the adjustment of organizational structures and processes necessary to manage a vertically integrated firm. Of course, the exact nature of managerial knowledge deficiencies in the vertical integration process is firm- and situation-specific.

In the next sections, we discuss two primary sources of top management knowledge deficiencies in the vertical

integration process. These deficiencies may arise in forming and implementing vertical integration strategies. Top managers must make accurate assessments of the strategic benefits and costs of integration to avoid integrating when it is inappropriate, or to deintegrate when conditions change to make it unfavorable. They must also have the knowledge to design a managerial approach specific to the stage of the integrated activities.

Formation-assessing strategic benefits and costs

The ultimate success of vertical integration will be dependent on the ability of top managers to accurately assess its net benefits and costs. This necessarily involves a consideration of transaction cost theory (Williamson, 1975) and recent developments in the knowledge-based theory of the firm (Liebeskind, 1996; Conner and Prahalad, 1996). The transaction cost perspective is concerned with the static analysis of transactions involving primarily fixed, tangible assets (Liebeskind, 1996). Firms are theorized to organize transactions either by internal hierarchy (vertical integration) or external contracting, dependent on which alternative economizes on cost. In contrast, the knowledge-based perspective concerns itself with the dynamic analysis of intangible assets such as organizational learning, brand equity, or reputation that provide firms with competitive advantage (Liebeskind, 1996). Vertical integration offers advantages, if it allows the firm to leverage and/or protect its knowledge more efficiently than through market contracts (Grant, 1996; Liebeskind, 1996).

The transaction cost perspective maintains that the increased efficiency of internalizing activities and increased cost of bureaucracy combine to influence firm performance (D'Aveni and Ravenscraft, 1994; Jones and Hill, 1988; Mahoney, 1992). Transaction costs are the negotiating, monitoring and enforcement costs involved in buyer-supplier relationships. Firms benefit from internalization when the economic benefits of a vertical hierarchy economize on transaction costs. Firms must offset these transaction cost savings, however, with the additional bureaucracy costs involved in managing intra-firm exchange. These include control and communication problems that arise from increasing organization size and complexity, and higher production costs which result from the removal of direct competitive pressure on costs. Managers of

firms must find the proper balance between internal benefits and increased bureaucracy costs to maximize performance associated with the vertical integration strategy.

The knowledge-based view of the firm holds that knowledge is the most strategically important firm resource (Grant, 1996; Liebeskind, 1996). In addition to viewing the firm in terms of transactions and costs, managers can perceive it as an information-holding facility that can be used to sustain advantages in the marketplace. The knowledge-based view builds on the transaction cost perspective by suggesting that integration decisions may be analyzed in terms of knowledge utilization within the firm. That is, it predicts that firms will integrate, if it is more efficient to access or leverage knowledge at different stages of production through integration than through market contracts (Conner and Prahalad, 1996; Grant, 1996). Additionally, it predicts that firms will integrate in situations where learning or unexpected opportunities may arise (as in dynamic and uncertain competitive environments), or in situations where knowledge protections are weak or costly. Hence, vertical integration may be used to conceal information from competitors (Choi, 1998). Organizational knowledge is therefore an intangible asset that can be absorbed, developed and protected by vertical integration (Lundgren, 1990).

In this article, we take the view that managers should utilize these alternative vertical integration perspectives in tandem. Neither is sufficient by itself to aid managers in vertical integration decision making. Both paradigms assume that firms will integrate, if incentives are in place that make integration beneficial, and deintegrate when these incentives are no longer in place, minimizing the cognitive role of strategic decision makers in the integration/deintegration decision and implementation process. To explain the vertical integration-performance relationship, an understanding of how the knowledge structures used by managers influence strategic decision making in this process must be developed.

By focusing solely on economic costs related to the strategy, the transaction cost perspective ignores the processes through which integration decisions are made (Sutcliffe and Zaheer, 1998). Yet, processes are important to managers, and those things to which managers pay attention matter in the integration decision. Transaction costs that matter, in that they determine an outcome, are only those that the manager perceives (Buckley and Chapman, 1997). Not

all corporate managers can make these assessments effectively; some will need to develop skills in these areas at the expense of the firm. The knowledge-based view also fails to identify the managerial skills or aptitudes necessary for vertical integration success. It assumes that managers can identify the knowledge access and knowledge protection opportunities that might make integration beneficial. It is unlikely, however, that access to knowledge or knowledge protection alone will guarantee vertical integration success. Like the transaction costs paradigm, the knowledge-based view, by itself, is insufficient to explain the performance outcomes of vertical integration, since it does not yet address how managers should administer or implement vertically integrated activities.

To be successful with integration, we propose that corporate managers will require new functional skills to interpret the strategic costs and benefits of integration activities, incorporating the logic of both transaction cost theory and the knowledge-based theory of the firm. In other words, they must expand their knowledge structures to address these complementary perspectives. A vertical shift places firms in areas where they may not possess the functional competencies for success, since there are unique functional capabilities specific to each stage in the industry chain. What managers perceive as relevant in their environments is influenced by the functional emphasis of their firm, such that managerial world-views focus on fewer environmental cues, particularly after initial success. Different managerial judgments will make for different decisions, so managerial skill in perceiving relevant environmental factors in different stages of their industry chain may explain the performance differences of integrated firms (Buckley and Chapman, 1997).

Implementation – developing a new managerial approach

For vertical integration to be successful top managers must adapt their managerial approach to suit the changes in functional activities that accompany their vertical shift. They must organize their firm to take advantage of existing functional knowledge, while simultaneously allowing new functional knowledge to develop (Kazanjian and Drazin, 1987). Porter (1980) suggests that managers capable of operating successfully at one stage of the vertical chain may be incapable of doing so at another, particularly

if the managerial techniques from the base business are indiscriminately applied upstream or downstream. Corporate managers' ability to manage new businesses might therefore be limited by their current dominant logic (Pant and Lachman, 1998).

Command and control problems are likely to occur when the functional emphasis of the firm changes. Downstream maneuvers will require more emphasis on market research, customer support and sales. Upstream positions will require more emphasis on product engineering and design or production/operations. The organizational structure, processes and people who comprise the dominant coalition may need to be shifted or otherwise changed, so that the company can operate successfully in a new stage (Galbraith and Kazanjian, 1986). The way people are rewarded and even organizational cultures may need to be modified. For some firms, these changes may be a fundamental reorientation involving adjustments to strategy, organizational structure and process (Tushman and Romanelli, 1985). Adopting a new managerial approach will be difficult, since the lessons learned by managers and the organizational culture of firms have been shaped and formed in fundamentally different ways across different stages of the production chain (Galbraith, 1983).

To maximize the performance potential of integrated activities, corporate managers must design organization structures and processes that smooth interdependencies between operating divisions, suggesting a more centralized approach. But by doing so, they compromise the autonomy and accountability of operating divisions, inviting internal monitoring and control problems. If corporate managers structure divisions as profit centers to encourage financial economies, they may encourage divisional managers to undertake behaviors that further divisional gain rather than inter-divisional cooperation. The ability of corporate managers to redesign organization structures and processes is therefore dependent on managerial information-processing capabilities. Top managers must have detailed information-processing systems in place to balance the conflicting demands of corporate coordination and division accountability.

The distance from the strategic core

Besides new product markets, managers of integrated firms might face new product and

process technologies (Kazanjian and Drazin, 1987) that complicate the managerial learning required, dependent on the complexity of the integration activity pursued. Integration might be "mundane" in that it encompasses successive stages within a core technology, or it might be more complicated (e.g. involving off-site or between-stage activities, such as integration into materials or distribution) (Williamson, 1985). Thus, the farther away a firm moves from the stage of its core competencies, the less likely it is to succeed with vertical integration. Managerial knowledge deficiencies in the formation and implementation of integrated activities will rise, as a firm moves away from its center of gravity, and will decline only with managerial knowledge acquisition and development (see Figure 1).

Managerial knowledge acquisition and development

Corporate managers must determine how to direct and operate their firm beyond its original boundaries, if vertical integration is to be successful. This will require the assimilation either of new top manager expertise or managerial learning. The amount of managerial knowledge acquisition and development required will be significant, if the vertical shift becomes a center of gravity shift (Galbraith, 1983), but less so if the integration activity does not fundamentally move a company outside its core. As an illustration, Wal-Mart integrated backwards from consumer retailing to distribution and logistics as part of its cost-saving strategy. It internalized a process that the organization had historically outsourced. Little learning was involved, since it evidently understood how to solve its distribution difficulties. Conversely, the major airlines have attempted to integrate forward toward their point-of-sale by installing massive computer reservation systems (CRS) and supporting e-commerce. American Airlines was successful at operating its Sabre system, primarily due to the marketing information system experience and emphasis of then-CEO Robert Crandall. Other airlines that attempted to imitate this forward integration were not as successful because of the different constellation of knowledge and skills necessary to operate a retailing system. Ultimately, they sold these businesses, because knowledge deficiencies and bureaucratic costs appeared to outweigh the benefits. Right now, for example, Sabre

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Holding Corp. operates both the CRS and e-commerce for US Airways, American Trans Air, and others.

For most corporate managers, a straightforward approach to revising their firm's dominant logic is to incorporate the experiences of new top managers into decision making. Functional and managerial experiences in areas outside a firm's dominant logic may aid the firm when considering both the formation and the implementation of vertical integration. Before undertaking the vertical integration effort, top managers should survey the breadth of functional and managerial experiences of top managers. If top managers possess few experiences in upstream or downstream firms, or few experiences in integrated activities in other industries, then it will be necessary to bring individuals who possess these valuable skills into the top management group. Recent research has shown that the alignment of managerial functional experiences congruent with the particular strategy pursued leads to superior performance (Beal and Yasai-Ardekani, 2000). Thus, whether firms contemplate vertical integration for cost-saving or knowledge protection reasons, they must ensure that their collective managerial experiences allow them to carefully reflect on the cost vs benefit issues of integration and facilitate its implementation, should it be attempted.

It might be assumed that vertical integration by acquisition would entail lower knowledge deficiencies than integration by start-up, since acquired-firm managers can assist with coordination and implementation decision making. However, bringing new management team members from an acquired firm into strategic decision making

might increase organizational conflict, which is dysfunctional (Amason, 1996). While diversity among decision makers is beneficial, the lack of openness to outside opinions can impair learning through misunderstandings and biased assumptions (Ginsberg, 1994). This infers that using the knowledge of acquired-firm managers who have different organizational and industry experiences might be challenging and difficult for corporate managers.

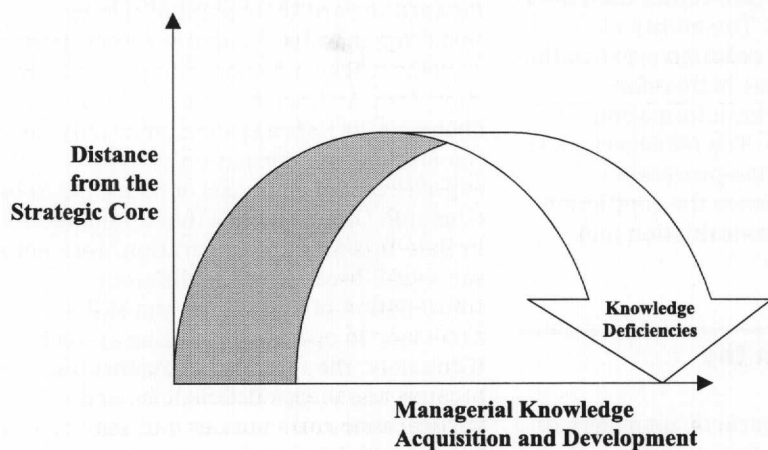
A second approach to developing the dominant logic for managing integrated activities is by means of managerial learning. As a firm moves away from its knowledge base, its probability of success parallels that of a start-up operation (Kogut and Zander, 1992), suggesting that managerial learning is a prerequisite to successful vertical integration. Learning, however, might be hampered by individual or collectively shared perceptions and biases among organizational decision makers (Ginsberg, 1994). Thus, the addition of new top managers into the firm (as discussed above) might lessen the disadvantages of shared perceptions by bringing into the firm new perspectives on which to draw, which may enhance learning capacities.

The distance of the vertical shift from the firm's strategic core will determine the type of learning mode necessary to reduce knowledge deficiencies. Learning may involve acquiring either explicit or tacit knowledge (Grant, 1996). Explicit knowledge may be defined as knowing what something means, whereas tacit knowledge may be defined as knowing how to do something (Kogut and Zander, 1992). If a firm integrates close to its core, it will need to acquire more explicit knowledge, with learning primarily restricted to corporate managers. Top managers must scan and analyze more information to generate action options, but learning will involve primarily single loop learning. This type of learning refers to learning within the existing knowledge structure and system of rules, and the generation of actions based on existing organization interpretations (Fiol and Lyles, 1985).

If the firm moves far from its core, it will need to acquire more tacit knowledge. Learning will necessarily involve organizational members in addition to the top management team. Corporate managers must initiate learning that involves the generation of insights about issues facing the organization. This type of learning involves cognitive development (double-loop learning), and the development of shared understandings among organization

Figure 1

Managerial knowledge deficiencies, distance from the strategic core and knowledge acquisition over time



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members with the aim of adjusting overall rules and behaviors (Fiol and Lyles, 1985). Tacit knowledge acquisition may be characterized as more intuitive, combining different bits of knowledge in new ways, experimentation, learning by doing, or even improvisation. Peteraf (1993) suggests that intangible resources like firm-specific knowledge are path-dependent and developed and learned over a firm's history, so it is unlikely that managers and their firms will learn new skills quickly, if knowledge deficiencies are high. Brown and Eisenhardt (1997) propose that successful development of core competencies occurs when a company perfects a set of practices and uses them to invent the future. This process covers an uncertain but significant period, after which the practices become difficult to imitate.

The effect of environment

We have argued that integration success is dependent on the knowledge acquisition and development capabilities of top managers, but acknowledge that environmental contingencies also play a critical role in determining vertical integration success (see Figure 2).

Several researchers suggest that industry conditions act to make vertical integration favorable or unfavorable (Balakrishnan and Wernerfelt, 1986; D'Aveni and Plinitch, 1992; Porter, 1980; Sutcliffe and Zaheer, 1998; Walker and Weber, 1984). Conditions that favor integration generally involve low levels of uncertainty. Except for supplier uncertainty, competitor, demand, and technological uncertainties prompt integration at lower levels. Therefore, management must remain aware of these costs and benefits and the factors that could cause them to change.

If an industry environment is benevolent – when environmental uncertainty components

are favorable for vertical integration – and knowledge acquisition capabilities are limited, vertical integration may nonetheless become profitable for a short time (see Figure 2, cell 1). Such was the case with the motion picture industry early in its life cycle. There were few competitors and, although the center of gravity of most firms was in artistic production, it was a short step to develop an end-user outlet for viewing. This was particularly true, since the equipment needed in retail outlets was closely related to the equipment of production. However, as the environment became more competitive and the audiences became more sophisticated, the environment became more restrictive (malevolent) and vertical integration was less successful. The theaters themselves became the object of strategic activity and costs of monitoring and coordinating rose (see Figure 2, cell 4). On the other hand, in a terminally benevolent environment without limits to the information acquisition capabilities of top managers, the managerial knowledge deficiencies in executing vertical integration remain low and firms can profit over the long term (see Figure 2, cell 2). We therefore suspect that in benevolent environments the transaction cost arguments for optimizing economic benefits and costs drive vertical integration success.

When industry conditions are malevolent, however, knowledge acquisition capabilities and demands become a primary issue. Under these circumstances, vertical integration success is more difficult. If a firm can develop needed knowledge, firm performance will improve over time (see Figure 2, cell 3). This is illustrated well by the expansion of pharmaceutical companies into drug dispensing through the physician network and managed health-care system to the end-user consumer. The complexity of the system demands an understanding of a totally different business and regulatory environment to gain the large margins of the value-added activity. These companies have been successful, because they seem to have steadily reduced both the new bureaucratic costs and managerial knowledge deficiencies that stem from a core reconceptualization. On the other hand, if they had been limited somehow in their knowledge acquisition and development efforts, then we suspect that they would never have been successful (see Figure 2, cell 4). It is by means similar to what has been presented here that managers must assess the multidimensional nature of vertical integration under varying environmental circumstances.

Figure 2
The impact of knowledge acquisition and environmental contingencies on vertical integration performance

	Knowledge Acquisition and Development	
	Limited	Unlimited
Benevolent Environment	<i>Profitable (Short-Term)</i> 1	<i>Profitable (Long-Term)</i> 2
Malevolent Environment	<i>Not Profitable</i> 4	<i>Profitable (Over Time)</i> 3

Conclusion

We have offered a framework that suggests how vertical integration can be profitable. When corporate managers face few distractions (a shift close to the strategic core), vertical integration can be successful, if managers learn to assess strategic benefits and costs accurately. However, we have argued that a shift far from a firm's core stage is less likely to enhance performance. With these types of shifts, integration can be successful only when corporate managers establish new functional skills and expertise to parallel the skills at the core stage. Ultimately, a totally new managerial approach may be necessary. For a firm to succeed with this type of shift, it is likely to be only after an uncertain, but significant amount of time that managerial knowledge structures are adjusted in response to the broader scope of firm activities.

Future research is needed to assess the utility of our framework. A first step would be to investigate and determine whether different managerial profiles are associated with the performance outcomes of vertical integration. Previous research has shown that managerial backgrounds are associated with business-level strategies and their performance outcomes (Beal and Yasai-Ardekani, 2000; Thomas *et al.*, 1991), so efforts to extend this work to vertical integration might prove fruitful to corporate managers. Future research might also address the limitations of our framework. Vertical integration decision making is a very complex phenomenon but we have taken a broad-brush approach to highlight the important issues that it encompasses. Our framework focuses on firms new to vertical integration decision making and may be enhanced by incorporating the influence of previously integrated activities on new integration decisions (cf. Winter, 1991). Additional work is also needed to account for the impact of unique country and industry conditions that may influence vertical integration decision making (Desai and Mukherji, 2001). Finally, our capability framework might be extended by including the option of strategic alliances or quasi-integration strategies which fall between integration and market contracting alternatives.

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Application questions

- 1 Has vertical integration been advantageous to your organization?
- 2 What is your firm's strategic core? Has it influenced the formation and implementation of vertical integration efforts?
- 3 What additional functional expertise or capabilities would have assisted your organization in vertical integration decision making?