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### Publication Date

2015-02-01

### DOI

10.1093/acprof:oso/9780198701873.003.0002

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## Business Model Innovation: The Organizational Dimension

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Print publication date: 2015

Print ISBN-13: 9780198701873

Published to Oxford Scholarship Online: April 2015

DOI: 10.1093/acprof:oso/9780198701873.001.0001

## Business Model Innovation and Organizational Design

### A Dynamic Capabilities Perspective

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### [–] Abstract and Keywords

Dynamic capabilities are deeply enmeshed with business model innovation and implementation. They reside partly in the collective learning and culture of the organization as well as in the entrepreneurial skill of the top management team. Entrepreneurial managers bear the primary responsibility for recognizing the need for business model change, for adjusting or inventing business models, for orchestrating the necessary assets, and, more generally, for (re)structuring the organization when, needed. The top management team is also responsible for strategy formulation, which is separate from, but related to, dynamic capabilities. The organization's structure, incentives, and culture can, in turn, be more or less well suited to the recognition of new opportunities and the implementation of new structures that are integral to the dynamic capabilities of the firm. The design of new business models requires attention to balancing customer needs and technological possibilities consistent with an overarching logic of organization.

*Keywords:* dynamic capabilities, business model innovation, organizational design, boundaries of the firm, entrepreneurial management

### Introduction

A business model is the articulation of the logic by which a business creates and delivers value to customers. Importantly, it also outlines the architecture of prices, revenues, and costs that will, when all goes well, allow the business to earn a profit (Teece, 2010a).

Some contributions to the early business model literature put the main emphasis on the content and structure of the transactions that result in value being delivered in the marketplace (e.g., Amit and Zott, 2001). While the transaction is for many purposes a highly useful unit of analysis, a focus on the content and structure of transactions risks shifting the emphasis away from what we consider to be the essence of a good business model: providing a compelling value proposition for the customer and then capturing a portion of that value (Teece, 2010a). The de-emphasis of value capture in the early literature perhaps reflected poorly thought through business practices in the real world, which might explain why many companies in the late 1990s dot-com era went bust. In short, a viable business model must support the generation of profits, not just the delivery of value to the consumer.

The “organizational dimension” of business models and business model innovation that is highlighted by all contributors to this volume emphasizes that business models are the “architecture” that provides a bridge between value for customers and profits for the business. A viable business model requires smart business logic (reflecting a good understanding of customer needs and willingness to pay) and an organizational structure that results in value being created, delivered, and captured.

Organizational design implicates firm boundaries, that is, the extent to which the firm owns and controls productive assets (Hart, 1995). Critical **(p.25)** design elements include which activities are to be managed in-house and which accessed and managed through contractual governance structures (Williamson, 1996), as well as the specific contractual modes to be used. These arrangements influence, to a large extent, the delivery of value and its division between the firm and its various stakeholders. As indicated elsewhere (Teece, 1986, 2006), the extent to which an innovating firm’s business model (or asset position) enables or allows the firm to control assets that are complementary to an innovation strongly influences the extent to which the firm can garner rents from the innovation, particularly if the appropriability regime is weak.

Business model innovation may thus require changes in the boundaries of the firm, and will usually require changes in internal organizational structure and control, and even changes in company culture. How radical and encompassing these changes will be varies with the nature of the business model innovation (see, e.g., Stieglitz and Foss, chapter 6, this volume).

All business model changes are almost by definition strategic issues, for which the top management team is accountable. In particular, the design of business models typically requires the concerted and collaborative efforts of the top management team, all the more so if the changes are far-reaching.

Unfortunately, much extant thinking on business logic and organizational design, such as transaction cost economics (Williamson, 1996), while very useful to the understanding of vertical structure and lateral scope (Teece, 1980), provides little insight into business model innovation. In particular, with its focus on opportunism and recontracting hazards, transaction cost economics tends to emphasize the need for safeguards against opportunism and to de-emphasize the positive value of collaboration within and across the boundaries of an organization.<sup>1</sup> Opportunity is largely ignored while opportunism is given center stage.

The purpose of this chapter is to address some of the shortcomings in the existing literature by applying the dynamic capabilities framework (Teece, Pisano, and Shuen, 1997; Teece, 2007) to understanding the organizational dimensions of business model design. Fundamentally, dynamic capabilities are high-order capabilities that allow an organization to shape and deploy (“orchestrate”) its resource base to meet the current and anticipated needs of consumers while also embracing technological opportunities and managing competitive responses. To a large extent, such capabilities reside at the level of the top management team, but they also involve the entire organization. Indeed, as Burgelman’s (1994) study of a critical transformation at Intel makes clear, dynamic capabilities that succeed in modifying a business model may reside, in part, at lower levels in the organization.

In most cases, however, changing a firm’s business model(s) in response to relevant contingencies is the key task and responsibility of the top management team. The efforts of top management can of course be compromised by the extent to which the rest of the organization is not able, or not willing, to implement and execute a new business model, or even to sense the **(p.26)** need for change (Teece, 2007). Strong dynamic capabilities require both transformational leadership and a flexible organization.

The capacity to sense the need for business model changes is vital. The ability to modify or completely redesign the business model is critical. But the capability that counts most in this context is that of actually re-engineering or displacing the existing business model.

While the ability to effectuate business model innovation is integral to dynamic capabilities, an organization’s design influences the strength of its dynamic capabilities. For example, the ability to sense new threats or opportunities and to calibrate them appropriately are important to business success. Firms with a high degree of delegation and vertical communication are often better than more centralized firms at sensing and evaluating opportunities and threats. Delegation enables employees to interact more with customers, suppliers, and complementors, and open channels of communication permit information to flow to the appropriate decision-making level. In short, a high degree of coupling of the external environment to the organization ensures that “signals” from outside have a better chance of being captured, transmitted to the top management team, and acted on decisively.

The chapter begins with a brief review of the literature on the relationship of business models and organizational design, ending with a discussion of how a capabilities perspective can fill some of the gaps. This is followed by an introduction to the dynamic capabilities framework, including a discussion of two of its main components: managerial actions and organizational routines. With these foundations in place, we turn to a discussion of dynamic capabilities in the context of the organizational challenges associated with business model innovation and implementation. A key insight is that organizational design issues are central to, and intertwined with, dynamic capabilities.

### Business Models and Organizational Design

A business model does not rigidly determine organizational design. Nevertheless, the way in which a company plans to deliver value to its customers must be reflected in its internal division of responsibilities and its strategic priorities. Relatedly, its tactics for capturing value will be reflected in the way it structures its boundaries and in the contracts it strikes with external

parties. In an established company, the introduction of a new business model may require transforming its present structure and managing tensions between constituencies in different parts of the company.

### Early Views

Organization theorists missed the business model aspect of organizational design. For Burns and Stalker (1961), organizational design was determined **(p.27)** merely by the nature of a company's production process. Contingency theorists claimed that systematic relations existed between external contingencies, strategic choices, and organizational design. An example would be the multidivisional organizational form that was developed to effectively manage varied activities on a large scale. In the Burns and Stalker framework, technology basically determines organizational design (see also Woodward, 1965). There was no suggestion that the business model selected by a company might somehow mediate the impact of technology on organizational design. This is a major shortcoming, and it is remarkable that it has not, to our knowledge, been pointed out before now.

Notwithstanding this, later contributions to the contingency stream of research went beyond technological determinism, highlighting the role of internal communication and access to knowledge and information as key determinants of organizational design (e.g., Galbraith, 1974). By highlighting communication and information costs, such contributions anticipated elements of the early formulation of transaction cost economics (Teece, 1982; Williamson, 1975, 1985).

Other scholars implied a link between business models and organizational design, but none were very explicit about it. For example, economic historian Alfred Chandler (1962) noted a systematic tendency of "structure" (i.e., organizational design) to be driven by "strategy." It is now understood that, while business models and strategy are different concepts, they must be compatible (Teece, 2014b).

### Contemporary Views

A more contemporary view is that a combination of technology, strategy, and the applicable "appropriability regime" (Teece, 1986, 2006), as well as transaction costs, jointly drive business model design and the concomitant organizational structure. The aspect of the technology-organizational design nexus that has been most developed in the economics literature is arguably the setting of the firm's boundaries, namely, which functions the firm will perform in-house and which ones it will outsource, and what these decisions imply in terms of asset ownership and the contracts struck with stakeholders (Hart, 1995; Williamson, 1996).

In the case of a business model (Teece, 2010a) built around an innovation, the necessary co-specialized complements for exploiting technological innovation—possibly including certain marketing, manufacturing, after-sale service, or distribution assets—might need to be internalized. The key factors to consider are competition in the supply of these complements and the strength of the relevant appropriability regime, which varies positively with the availability of legal protections, such as patents, and negatively with the factors influencing the imitability of the innovation, such as its complexity or tacitness (Teece, 1986, 2006). The supply-side dimensions of interest are the bargaining power of suppliers in factor markets; the cost, difficulty, and time to build assets internally; the costs of contracting upstream and downstream;

**(p.28)** and the timing requirements for the introduction of the innovation relative to the product/process lifecycle. Where the services being procured are somewhat specialized and not readily available in a market, they should be internalized, time permitting. Although the enterprise loses some contractual flexibility, it gains the opportunity to build a valuable resource that will be costly for rivals to imitate and difficult to acquire in a market. This model is much more robust than Burns and Stalker's, which does not take into account any of these additional decision variables.

### Toward a Capabilities Perspective on Business Model Design

Transaction cost approaches such as those of Williamson (1975, 1985) and Teece (1986), while insightful, are themselves incomplete. They ignore or minimize the role of learning, resource accumulation, marketing, asset orchestration, and pricing strategy. It is by exercising these capabilities that the organization can structure itself to deliver customer value while also capturing sufficient value to be viable.

Organizational structure should be responsive to shifts in the firm's strategy and business model. For example, a strategy to prioritize excellent customer service as part of the customer value proposition may entail a number of changes (see Kindström and Kowalkowski, chapter 10, this volume, for an empirical example). An outsourced service may, as a consequence, need to be supplanted with a new in-house team. The reporting level of the head of customer service may be elevated. Incentive systems need to be updated. And (cultural) norms of excellent customer service will need to be promulgated.

The influence also runs the other way. Implementation failures with respect to the structural changes noted in the previous example may necessitate a rethinking of the chosen business model (or a redoubling of implementation effort). In short, business models, organizational design, and strategy are interdependent. Transaction cost economics does not capture these considerations very well, if at all.

The organizational requirements of a new business model must be enacted coherently in order to deliver value to customers, shareholders, and other stakeholders of the enterprise. This is not to say that a business model provides a simple "recipe for change" (George and Bock, 2011). Perceiving the need for change and then accomplishing it is hardly a straightforward process. Rather, it is one that requires strong dynamic capabilities (Teece, Pisano, and Shuen, 1997; Teece, 2007).

### Dynamic Capabilities and Entrepreneurial Management

Because dynamic capabilities undergird how firms create and capture value (see Table 2.1), it is vital to understand their nature.

#### **Table 2.1 Activities conducted to create and capture value (organized by clusters of dynamic capabilities)**

|                 | Sensing   | Seizing  | Transforming  |
|-----------------|---|--|---|
| Creating value  | Spotting opportunities and threats; identifying avenues for research and development; “open” innovation; conceptualizing new customer needs and new business models | Investment discipline; commitment to research and development; building competencies; achieving new combinations   | Achieving recombinations; “pivoting” as required; reinventing the business in response to new opportunities |
| Capturing value | Positioning for first mover and other advantages; determining desirable entry timing; lining up required complementary assets                                       | Intellectual property qualification and enforcement; implementing business models; leveraging complementary assets; investment or co-investment in “production” facilities | Managing threats; honing the business model; developing new complements; managing the business ecosystem    |

**Source: based on Katkalo, Pitelis, and Teece (2010).**

## (p.29) The Nature and Importance of Dynamic Capabilities

Capabilities emerge through the assembling and employment of physical and human assets, which leads to collective learning. The longer an organization has been around, and the larger it is, the less its capabilities are likely to depend on particular individuals.

Ordinary and dynamic capabilities are the two main types. Ordinary capabilities, which encompass operations, administration, and governance of the firm’s activities, make a firm capable of producing and selling a defined (and static) set of products and services. They support technical efficiency in performing a fixed group of activities, regardless of how well- or ill-suited the outputs are to the firm’s competitive needs (Teece, 2007: 1321). Routines for new product development, quality control, knowledge transfer, and performance measurement are examples of collective activities that can be part of a firm’s ordinary capabilities (Eisenhardt and Martin, 2000).<sup>2</sup>

Ordinary capabilities are anchored in resources that will be orchestrated by the dynamic capabilities of the firm as it aligns with its environment in the pursuit of evolutionary fitness (Helfat et al., 2007: 7). In some cases, the resources (assets, practices, and know-how) involved in ordinary capabilities will meet the criteria defined by Barney (1991) for resources that can support durable competitive advantage: valuable, rare, imperfectly imitable, and non-substitutable (VRIN). But, more often, the practices can be benchmarked and made vulnerable to imitation by competitors (Teece, 2014a).

Technical excellence in exercising ordinary capabilities is not enough to support durable competitive advantage. Something more is needed. That “something more” is dynamic capabilities.

Dynamic capabilities govern how the organization’s ordinary capabilities are developed, augmented, winnowed, and combined. They can be weak or strong.

Strong dynamic capabilities enable firms to orchestrate their resources effectively. They enable a firm to identify and exploit opportunities, synchronize business processes and models with the business environment, and/or shape the business environment in its favor (Teece, Pisano, and Shuen, 1997). The real competitive strengths of a firm lie in dynamic capabilities and strategy formulation, underpinned by value-enhancing “signature” processes and other VRIN resources that the firm and its management can command. High-performance signature processes embody positive elements of a company’s unique history, experience, culture, and creativity. This makes them relatively hard for rivals to imitate (Gratton and Ghoshal, 2005).

Dynamic capabilities encompass the entrepreneurial activities, processes, and leadership skills by which (1) the need for changing/innovating existing business models is recognized, and (2) the necessary assets are (a) accessed and (b) orchestrated in the pursuit of new value creation. On the **(p.30)** organizational side this involves identifying complementarities between the various elements of the new business model, that is, how the value proposition is supported by the value-chain structure selected, and how the revenue and value capture mechanisms influence value creation (see Stieglitz and Foss, chapter 6, this volume). Dynamic capabilities also guide choices on how to secure the necessary services of assets currently missing. They determine the firm’s agility and flexibility in implementing the new organizational design, including the alignment of new and existing activities and responses to the unforeseen internal and external contingencies that unavoidably accompany deploying a new business model. In short, dynamic capabilities enable a firm to identify and orchestrate the necessary resources for designing and implementing a business model that will, if employed in conjunction with a good strategy, be associated with high levels of sustainable profits (Teece, 2007).

### Dynamic Capabilities and the Firm’s Top Management Team

Dynamic capabilities are grounded in a combination of organizational learning and top management skills. They are shaped by the firm’s unique history, values, and routines (Teece, 2012) and enable the firm to alter its activities as the business environment shifts. Accordingly, they contribute to the firm’s evolutionary fitness, that is, its ability to survive longer term, rather than merely achieving a temporary fit. The ongoing strategizing and asset orchestration (the essence of dynamic capabilities) associated with evolutionary fitness can only be routinized in a limited sense. Indeed, the astute asset orchestration demonstrated by firms with strong dynamic capabilities is often extremely difficult, if not impossible, to routinize beyond the recognition of shared principles.

The exercise of dynamic capabilities often requires top management to make critical, high-quality “one-off” decisions. Creative managerial and entrepreneurial acts (e.g., pioneering new markets) are, by their nature, strategic and non-routine, even though there may be underlying principles that guide those choices.

Entrepreneurial managers in established firms, like entrepreneurs in start-ups, must excel at the scanning, learning, creative, and interpretive activities needed to sense new technological and market opportunities. They must also calibrate reasonably well how technologies will evolve and how—and how quickly—competitors, suppliers, and customers will respond. As Jack Welch (2005: 89) put it, dynamically capable managers must have “the ability to see around corners.”



Competitors may or may not see the same opportunity, and even if they do they may calibrate it differently.

Entrepreneurial managers in firms with strong dynamic capabilities have the time (and the necessary information) to look ahead for opportunities and openings. They avoid getting bogged down managing legacy assets and the **(p.31)** firm's ordinary capabilities and must be able, in a distinctive and advantageous manner, to align people, processes, and assets in order to deliver value continuously as the business environment evolves. Much of the ordinary activities can be outsourced (with appropriate oversight), enabling greater focus by management on what is most important strategically.

### The Key Clusters of Dynamic Capabilities: Sensing, Seizing, Transforming

As discussed in Teece (2007), dynamic capabilities can usefully be disaggregated into three clusters of processes and managerial activities: (1) sensing (the identification and assessment of opportunities), (2) seizing (the mobilization of resources internally and externally to address opportunities and to capture value from doing so), and (3) transforming (continued renewal of the organization). The first two of these clusters relate, but are not identical to, the processes of opportunity recognition and exploitation highlighted in the entrepreneurship literature (e.g., Shane, 2000; Shane and Venkataraman, 2000).

Each of the three clusters is tied to business model innovation, development, and implementation. Thus, sensing involves exploring technological possibilities, probing markets, listening to customers, and scanning the business environment. It requires management to be entrepreneurial and to build hypotheses about market and technological evolution, with an emphasis on identifying unmet needs. Although sensing activities must be embedded throughout the company, with knowledge flowing from the farthest reaches of the organization to the top management team, the development of business models that harness the most valuable knowledge is the responsibility of top management.

Seizing occurs after opportunities are properly sensed and calibrated. To seize opportunities, the firm deploys resources to create and capture value from discoveries, inventions, or innovations in which top management has identified the greatest promise. The capabilities behind seizing involve identifying, establishing control or influence over, then coordinating complementary assets, for example, by building a global supply chain, establishing alliances and joint ventures, and much more.

Transformation requires capabilities for selectively phasing out old products, adjusting lines of communication, and changing, as needed, business models, methods, and organizational culture. In some cases, it may require adopting a radically different structure, even one which may not be stable but which shakes up the organization in a way that helps it achieve an improved, durable design (Foss, 2003). Santos, Spector, and Van der Heyden (chapter 3, this volume) provide an example in which a change in Nissan's business model with its suppliers necessitated company-wide modifications.

**(p.32)** Transformational capabilities are needed most obviously when radical new threats and opportunities need to be addressed. But they are also needed periodically to soften the rigidities

that develop over time from asset accumulation and the development of standard operating procedures.

An example of these principles at work can be seen at Starbucks. The world wasn't clamoring for a coffee house on every corner, but Howard Schultz recognized and then successfully developed and exploited the potential after he bought the six-store Starbucks chain in 1987. As the company globalized starting in the late 1990s, management identified the need to adapt the Starbucks business model, particularly the products and overall experience, for a variety of tastes and cultural habits in Europe (Alderman, 2012) and, even more so, in China (Burkitt, 2012). In 2011, the location-aware business model necessitated an organizational change to ensure a better balance between local voices and corporate initiatives, leading the company to change from a functional to a regional management structure.

Start-ups generally find transformation easier than do mature firms because they have a less definite trajectory, fewer fixed assets to redeploy, and fewer established positions to re-engineer. The "lean start-up" model now popular in Silicon Valley requires the capacity to quickly test, discard, and replace ideas and business models that do not work (Ries, 2011). This is especially true for Internet companies and in circumstances where social media can provide fast feedback.

Once designed and implemented, business models must be re-assessed for relevance and potency, particularly in young industries, such as cloud-based services, and in high-velocity environments more generally. In fact, over time, all firms implementing a particular business model eventually face the need to modify it (Greiner, 1998). When dynamic capabilities are weak, the pressures build to dangerous levels with no organized management response, which sometimes leads to "ad hoc problem solving" (Winter, 2003: 993). With strong dynamic capabilities, management quickly recognizes incipient problems, and perhaps even anticipates them. A recent example is the transition of Netflix from its original physical disc-by-post business model to a streaming video-on-demand business model, which was introduced ahead of offerings by rivals such as Amazon and Blockbuster, who were in a position to exploit the same opportunities. Reed Hastings, Netflix CEO, received heavy criticism from the investor community for his prescient efforts to push subscribers toward streaming films over the Internet. By contrast, in the dynamic capabilities framework, what he did can be recognized as necessary.<sup>3</sup>

### **(p.33) Creating and Capturing Value**

The understanding of dynamic capabilities can perhaps be deepened by grouping them in two essential classes of (interrelated) activities—those that (are mainly intended to) create value and those that (are mainly intended to) capture value. The former relate to the ability of firms to impact positively on the determinants of value creation, such as their human resources, technology, innovativeness, unit cost economics, and physical infrastructure. The latter relate to their ability to build value capture architectures that combine strategies, such as entry deterrence, integration, cooperation, and diversification (Pitelis, 2009), with the organizational designs that facilitate realizing such strategies.

Table 2.1 lists representative activities conducted to create and capture value, organized by the three clusters of dynamic capabilities mapped in Teece (2007). As the requisite resources for the

design and building of value creation and value capture architectures are likely to differ, perhaps significantly, it is arguable that the successful intertemporal management of (the tradeoffs between) value capture and value creation-related capabilities is a critical dynamic capability in itself.

### Dynamic Capabilities and the Organizational Design Dimensions of Business Model Innovation

The dynamic capabilities framework adds to the understanding of the organizational implications of business model innovation. Organizational change (**p.34**) is a vital element of dynamic capabilities. This section covers several focus topics that further clarify how the three concepts are related.

#### Dynamic Capabilities and Organizational Design Intertwined

The notion that the successful intertemporal management of value creation and capture is a key dynamic capability puts organizational design in a central position. Ireland, Covin, and Kuratko (2009: 25), for example, identify what they call a “pro-entrepreneurship organizational architecture,” encompassing a firm’s structure, norms, reward systems, and resource set, that can foster entrepreneurship at all levels of the organization. Entrepreneurship is an important aspect of dynamic capabilities (Al-Aali and Teece, 2014).

Business model implementation requires that entrepreneurs and top managers go beyond merely choosing the boundaries of the firm; they must also articulate a vision, establish a culture, and build flexible organizational structures and incentives that support the creation of organizational identification and loyalty (Augier and Teece, 2009; Ireland, Covin, and Kuratko, 2009). As observed earlier, strong dynamic capabilities depend not only on the insight and orchestration capacities of entrepreneurial managers, but also on the supporting routines and resilience of the organization. Entrepreneurship can be thought of as a social process or a “state of mind” that can characterize the whole enterprise (Foss et al., 2008).

It is also the case that changes in an organization’s design can improve the recognition of new opportunities. Consider, for example, the well-known case of leading hearing-aid producer, Oticon’s radical organizational change in 1991. Oticon (now William Demant Holding A/S) is a Danish world leader in the hearing aids industry (Lovas and Ghoshal, 2000). The radical decentralization initiatives undertaken by CEO Lars Kolind were a key factor in the revitalization of Oticon’s innovative and entrepreneurial capabilities, leading to the discovery and seizing of a series of opportunities in the hearing-aid business. The radical change of Oticon’s organizational design, from a typical hierarchical structure to a largely self-organizing project-based structure backed up by powerful performance incentives, illustrates how firms, by virtue of organizational design, can fuel innovation and entrepreneurship (Foss, 2003).

In this example, the organizational redesign of Oticon was enabled by the firm’s dynamic capabilities for sensing and transformation. The firm’s new structure in turn helped enable its dynamic capabilities for sensing and seizing. Thus, organizational design and dynamic capabilities are intertwined. If dynamic capabilities are thought of as a latent construct, organization design is one of several indicator variables.

Similar linkages between organizational design and capabilities can be found in several research streams. In international business research, Bartlett (**p.35**) and Ghoshal (1993) posit that the specific organizational form adopted by a multinational enterprise influences the extent to which it can recombine and leverage knowledge from across the enterprise. An emerging literature on the problem-solving theory of the firm (Nickerson and Zenger, 2004) reaches similar conclusions. Work on organizational ambidexterity increasingly points to a critical role of organizational design in the ability of a firm to successfully pursue new opportunities while maintaining existing businesses (O'Reilly and Tushman, 2004, 2008; Simsek, 2009). Ambidexterity can be enabled, for example, by segregating the new activities, encouraging experimentation, ensuring they have access to adequate resources, and shielding them from internal competition with the existing lines of business (O'Reilly and Tushman, 2004).

### The Centrality of Cooperation in the Dynamic Capabilities Framework

The dynamic capabilities framework is also useful for understanding the internal arrangements that enable innovation, including business model innovation. This is in part because the dynamic capabilities framework, unlike some other approaches, such as transaction cost economics and agency theory, embraces cooperation and partnership.

Using the transaction cost approach, Williamson (1981: 549) explicitly addressed the "manner in which human assets are organized," and his work holds numerous implications for organizational design, personnel economics, and human resource management issues. Transaction costs, however, sometimes provide a jaundiced lens for viewing internal issues. The central notion is that "skills acquired in a learning-by-doing fashion and imperfectly transferable across employers need to be embedded in a protective governance structure" (Williamson, 1981: 563) so that they are retained within the firm to the extent possible. As with other transaction cost analyses, the emphasis here is on controlling opportunistic behavior by employee and employer alike. This is indeed an important element of organizational design, but it should not blot out equally critical issues around creating and capturing value, as opposed to merely protecting against recontracting hazards. Understanding how to address opportunity is just as important as understanding how to manage opportunism.

Williamson also addresses the metering problem raised by Alchian and Demsetz (1972). When skills are highly (asset-) specific and difficult to monitor, then Williamson recommends "relational teams" whose members are socially conditioned and assured of their job security, but adds that "it is uncertain how widespread or sustainable [such teams] are" (Williamson, 1981: 565). Since that was written, creative teams of highly skilled and (**p.36**) relatively autonomous experts, such as engineers and social scientists, have become widespread. They are now a mainstay of innovation and strategizing.

The cooperative potential of organizations has, of course, been understood to some extent since at least since the work of Barnard (1938). The dynamic capabilities framework, however, sees internal cooperation as foundational for the firm's dynamic efficiency. In particular, the asset orchestration function, which is central to dynamic capabilities, requires strong cooperation inside the organization (and with partners). The framework also recognizes the importance of strategy along with the challenges associated with appropriability and other environmental factors ignored by Barnard and most organization theorists.

Collaboration is not an end in itself and there are numerous ways that teams and partnership arrangements go astray, including poor decision making, unproductive conflict that leads to indecision, and peer pressure that leads the group to flawed decisions. Avoiding conflict often results in low-quality decisions (Tjosvold, 1985), although the desirable type of conflict is task-related rather than merely emotional (Pelled, Eisenhardt, and Xin, 1999). More generally, encouraging the expression of “minority” or unpopular opinions can lead to higher-quality decisions (Nemeth, 2012).

As the distinction between positive and negative conflict suggests, good management of creative teams is vital and must avoid defining the goals of the team and its linkage to strategy so narrowly that real innovation is impossible. Takeuchi and Nonaka (1986: 137) call this “subtle control,” which involves a monitoring function that leads to intervention (e.g., eliminating a team member) only when absolutely necessary. The generation of new knowledge is an iterative, exploratory process (Nonaka, 1994). Bogers, Sund, and Villarroel (chapter 13, this volume) provide an empirical example of this process specific to business models. Furthermore, collaborative forms of innovation, to be effective, must be embedded in a knowledge-friendly enterprise. Experts are unlikely to be productive and satisfied in a traditional hierarchical organization (Teece, 2011).

### Dynamic Capabilities, Business Models, and Strategy

So far, we have discussed business models and capabilities without much reference to strategy.<sup>4</sup> Strategy, capabilities, organizational structure, and the business environment co-evolve.

A strategy is integral to a business model. It typically requires a more segmented approach to the business (Teece, 2010a). While the business model conveys the general logic of the proposed value proposition, strategic analysis differentiates it for various market segments and ensures that the planned positions are defensible. A strategy that is consistent, coherent, and **(p.37)** accommodating of innovation is needed to help achieve competitive advantage. Dynamic capabilities must be used in aid of a good strategy in order to be effective. A firm with strong dynamic capabilities is able to flesh out the details around strategic intent and to implement strategic actions quickly and effectively. Implementation is enabled (or hampered) by organizational structures at the same time that the structures must make necessary adjustments to the new strategy (Santos, Spector, and Van der Heyden, chapter 3, this volume).

To be clear, we see, following Rumelt (2011: 6), a strategy as “a coherent set of analyses, concepts, policies, arguments, and actions that respond to a high-stakes challenge.” For Rumelt, a good strategy has (1) a diagnosis, (2) a guiding policy, and (3) coherent action. Rumelt’s trichotomy interacts with the three clusters of dynamic capabilities: sensing, seizing, and transforming. Sensing contains a strong element of diagnosis, which is important to strategy. Seizing needs to be connected to both a guiding policy and coherent action. Transforming that protects and enhances value requires a guiding policy and coherent action. The nature of the managerial tasks for various elements of strategy and dynamic capabilities is outlined in Table 2.2.

**Table 2.2 The inter-relation of dynamic capabilities and strategy**

| Strategy kernel                            | Diagnosis       | Guiding Policy             | Coherent Action            |
|--|-----------------|----------------------------|----------------------------|
| <b>Related dynamic capabilities schema</b> | Sensing         | Seizing/<br>Transformation | Seizing/<br>transformation |
| <b>Nature of managerial orchestration</b>  | Entrepreneurial | Administrative             | Leadership                 |

**Source: Teece (2014a).**

Strategy and dynamic capabilities both occur at the line-of-business as well as the company-wide level. This is consistent with other views of modular organizations (e.g., Helfat and Eisenhardt, 2004), where company-wide strategy is different and separable from the day-to-day positioning strategy at the division level (Casadesus-Masanell, Ricart, and Tarziján, chapter 4, this volume).

Strategy, when developed properly, provides the specifics of how the firm will deploy its scarce assets to implement the business model. Strong dynamic capabilities provide the flexibility to make the necessary adjustments. As Lou Gerstner said at the start of his tenure as CEO of IBM, “you have to be fast on your feet and adaptive or else a strategy is useless” (Sellers, 1993). He might as well have said that strategy is useless without strong dynamic capabilities.

Put differently, VRIN resource accumulation and the managerial orchestration discussed earlier must be guided and informed by strategy. Frank Hoffman’s (2004) analysis of the British Navy’s inability in 1916 to win the Battle of Jutland seems relevant here. Despite the British Navy’s numerical advantage, the battle was a stalemate. British Vice-Admiral Sir David Beatty (**p.38**) ruefully proclaimed at the time that “there seems to be something wrong with our bloody ships today” (which can be interpreted as surprise that superior British naval resources did not prevail). Hoffman, reviewing the situation nearly a century later, concluded that “[t]he real deficiency, however, was the loss of [Vice Admiral Horatio Lord] Nelson’s touch. It was not the bloody ships that were principally at fault. It was the inadequate doctrine of command and control” (2004: 70). Put differently, the British failure to leverage their superior resources into a victory reflected a failure of both (military) strategy and dynamic capabilities. It was not a lack of resources that was at fault. The British (aided by the Australians and Canadians) had 151 combat ships, including twenty-eight battleships. The Germans had ninety-nine combat ships, including sixteen battleships. Some commentators are convinced that Jellicoe missed a tremendous opportunity to annihilate the German fleet and win what would have been another Trafalgar.

## Conclusion

The purpose of this chapter has been to develop a case for considering business model innovation and its organizational design ramifications in the context of the broader framework of dynamic capabilities. The dynamic capabilities approach integrates strategy and organizational design issues to show how firms can stay in alignment with, and sometimes shape, the business environment.

For practical purposes, dynamic capabilities can be decomposed into three sets of activities, namely, sensing opportunities, seizing them, and transforming the organization to do so. Business model innovation, implementation, and renewal are all key outputs from, and inputs into, these activities, suggesting that the dynamic capabilities framework can further the



understanding of the role of business models in the long-run performance of the business enterprise.

The role of organizational design in dynamic capabilities is an important topic that so far has received little attention. Another purpose of this chapter has been to show that there are important overlaps and links. We are not yet able to offer a full-blown theory of the relations between dynamic capabilities, business models, strategy, and organizational design. That is a matter for future research.

At least two overall themes emerge from the discussion. Each theme suggests different causal and constitutive relations between dynamic capabilities, the dynamics of business models, and organization design.

First, the successful intertemporal management of value creation, delivery, and capture is a key dynamic capability. Yet much research indicates that such management—whether by means of organizational oscillation or structural ambidexterity—involves deploying different organizational design mechanisms to optimize value creation and capture, respectively. A fuller **(p.39)** understanding of dynamic capabilities will require a more granular analysis of the respective organizational design aspects of value creation and capture.

Second, certain aspects of organizational design, such as shallow hierarchies and pro-entrepreneurial incentive design, are important supports for dynamic capabilities. Indeed, the dynamic capabilities framework points to the importance of a high level of internal cooperation supported by a culture of openness and knowledge-sharing. Activities such as sensing may be supported by decentralization combined with extensive internal communication.

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### Notes:

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<sup>(1)</sup> A notable exception is Williamson's (1985, 1996) extensive treatment of relational contracting, which is too often ignored.

<sup>(2)</sup> Although earlier treatments of dynamic capabilities have included these routines, they are more likely to support ordinary capabilities unless they involve unique characteristics that make them signature processes.

(<sup>3</sup>) Employing the framework, Teece (2010b) wrote favorably about Reed Hastings' actions at the time. Subsequent events have confirmed the correctness of Hastings' forward-thinking focus on streaming, and investors (and subscribers) have responded accordingly.

(<sup>4</sup>) This section is adapted from Teece (2014b).

