DYNAMIC CAPABILITIES

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Understanding Strategic Change In Organizations

By

Constance E. Helfat
Sydney Finkelstein
Will Mitchell
Margaret A. Peteraf
Harbir Singh
David J. Teece
Sidney G. Winter

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Book Authors

Constance E. Helfat is the J. Brian Quinn Professor in Technology and Strategy at the Tuck School of Business at Dartmouth, and previously held appointments at the University of Pennsylvania, Northwestern University, and the University of California, Davis. Her research interests include dynamic capabilities, technological innovation, and top management. She is the editor of the *SMS Blackwell Handbook of Organizational Capabilities*, author of the book *Investment Choices in Industry*, and has published numerous articles in academic journals. She is an associate editor of *Management Science*, serves on several additional editorial boards of academic journals, edited a special issue of the *Strategic Management Journal* on the evolution of firm capabilities, and is in the process of co-editing a special issue of *Organization Science* on strategic renewal.

Sydney Finkelstein is the Steven Roth Professor of Management at the Tuck School of Business at Dartmouth, where he teaches courses on leadership, top management teams, and mergers and acquisitions. He has written several books, including *Strategic Leadership* and *Why Smart Executives Fail*, and published more than 50 articles, many in the top journals in strategy and organization. His research interests include top management teams (power and dynamics; executive tenures), corporate governance (boards; executive compensation), understanding business failure (learning; strategic mistakes), and mergers and acquisitions (complementarity; integration). He is currently working on a series of new studies on learning in mergers and acquisitions, and serves on the editorial review boards of the *Strategic Management Journal*, *Administrative Science Quarterly*, and *Strategic Organization*.

Will Mitchell is the J. Rex Fuqua Professor of International Management and Professor of Strategy at Duke University's Fuqua School of Business. He studies business dynamics, focusing on how businesses overcome constraints to change and, in turn, how business changes influence performance. Will has published multiple articles in the academic and managerial strategy literature on different aspects of business dynamics, including acquisitions, alliances, and internal change. He is an associate editor of the *Strategic Management Journal* and *Management Science*, as well as a member and past member of multiple editorial boards of academic journals, and co-edited a special issue of *Strategic Management Journal* on the interaction of organization and competition in shaping firm strategy.

Margaret A. Peteraf is Professor of Strategic Management and Organization at the Tuck School of Business at Dartmouth and previously held appointments at Northwestern University and the University of Minnesota. She is best known for her work on the resource-based view, having won the 1999 *Strategic Management Journal* Best Paper Prize for her 1993 *SMJ* article on this topic. She is a member of the Board of Governors of the Academy of Management, having served as both Program Chair and Division Chair of the Academy's Business Policy and Strategy Division, as well as Chair of the Competitive Strategy Group of the Strategic Management Society. Presently, she serves on seven editorial boards and is an associate editor for the *International Journal of Strategic Change Management*, *International Journal of Learning and Intellectual Capital*, and *Managerial and Decision Economics.*

Harbir Singh is the William and Phyllis Mack Professor at the Wharton School, and the Co-Director of the Mack Center for Technological Innovation. His research interests have centered on strategies for corporate development, creation of relational capabilities within firms, and on corporate restructuring. His research has appeared in a variety of academic journals, including *Strategic Management Journal*, *Academy of Management Journal*, and *Administrative Science Quarterly*. Prior to joining the Wharton faculty, he received his doctorate from the University of Michigan and his Master's in Business from the Indian Institute of Management.

David J. Teece is Mitsubishi Bank Professor and Director of the Institute of Management, Innovation and Organization, Haas School of Business, University of California, Berkeley. He received his PhD in Economics from the University of Pennsylvania in 1975 and he has honorary doctorates from three European universities. His research interests span the economics of technological change, the management of innovation, strategic management, and public policy. According to *Science Watch* (Nov./Dec. 2005), published by Thomson Scientific Essential Science Indicators, his 1997 paper (with Pisano and Shuen) titled "Dynamic Capabilities and Strategic Management" (*Strategic Management Journal*, 18 (7): 509–33), was the most cited paper in economics and business for the decade 1995–2005. Other publications include *Managing Intellectual Capital* (Oxford University Press, 2000) and *Essays in Technology Management and Policy* (World Scientific Publishers, 2003).

Sidney G. Winter is the Deloitte and Touche Professor of Management at The Wharton School of the University of Pennsylvania, and previously served on the faculties of the University of California, Berkeley, University of Michigan, and Yale. He also spent some years in policy research and in government, in various capacities. Most of his research has been in the areas of firm behavior, technological change, and corporate strategy; its current focus is on the study of management problems from the viewpoint of evolutionary economics. He co-authored, with Richard

Nelson, *An Evolutionary Theory of Economic Change* (1982), and has been a frequent contributor to scholarly journals and symposia. A Fellow of the Econometric Society and of the AAAS, he received his undergraduate degree from Swarthmore College and his doctorate from Yale, both in economics.

Chapter Contributors

Jaideep (Jay) Anand is Associate Professor of Corporate Strategy and International Business at the Fisher College of Business, Ohio State University and Research Fellow at the William Davidson Institute, University of Michigan. He previously held appointments at the University of Michigan Business School and Ivey Business School at the University of Western Ontario, and he earned his PhD from the Wharton School, University of Pennsylvania. His research interests are in the areas of redeployment of firm capabilities, mergers and acquisitions, strategic alliances, and multinational firms. He serves on the editorial boards of *Organization Science*, *Journal of International Business Studies*, and *Journal of Management Studies*. Professor Anand co-authored chapter 6 with Will Mitchell and Laurence Capron.

Laurence Capron is Associate Professor of Strategy at INSEAD. Her research focuses on mergers and acquisitions, modes of capability acquisition, and issues of corporate governance in the context of M&As. Her work has been published in *Strategic Management Journal*, *Journal of Marketing*, and *Industrial and Corporate Change*, and has received media coverage (*Financial Times*, *The Economist*). She serves on the editorial board of *Strategic Management Journal* and *Strategic Organization*. Professor Capron co-authored chapter 6 with Will Mitchell and Jaideep Anand.

Jeff Dyer is the Horace Beesley Professor of Strategy at the Marriott School, Brigham Young University, and previously held an appointment at the University of Pennsylvania's Wharton School. His research focuses on alliances, learning, trust, and innovation. Professor Dyer has published widely in the top journals, including *Strategic Management Journal*, *Harvard Business Review*, *Academy of Management Review*, *Organization Science*, *Sloan Management Review*, *California Management Review*, and *Journal of International Business Studies*. His research has won awards from McKinsey & Company, the Strategic Management Society, The Institute of Management Science, and the Academy of Management, and his book *Collaborative Advantage* won the Shingo Prize Research Award for Excellence in Manufacturing. Professor Dyer co-authored chapter 5 with Harbir Singh and Prashant Kale.

Prashant Kale is Assistant Professor of Strategy at the Stephen M. Ross School of Business, University of Michigan. His research focuses on understanding how firms can create value through interorganizational relationships such as alliances and acquisitions, and how they can develop organization-wide capabilities to manage these relationships more successfully. His work has been published in a range of academic and managerial journals, and has received several awards. He is currently on the editorial boards of the *Strategic Management Journal* and *Strategic Organization*. Professor Kale co-authored chapter 5 with Harbir Singh and Jeffrey Dyer.

Catherine A. Maritan is Associate Professor of Management in the Whitman School of Management at Syracuse University. Her research interests include strategy process and operations strategy, and she focuses on how firms build and use capabilities. Her work has been published in the *Academy of Management Journal*, *Strategic Management Journal*, and the *Journal of Operations Management*. She earned a PhD in strategic management from Purdue University. Professor Maritan co-authored chapter 3 with Margaret Peteraf.

Preface

This co-authored book is a group effort in the best sense of the word. Each of us has brought his or her individual perspectives and knowledge base to a truly collaborative project. Our aim: to create a body of work where the whole exceeds the sum of the parts. We seek to provide a more focused and integrated treatment than a standard edited volume would generally allow and a more detailed analysis than a single journal article could accomplish. The topic of this book – dynamic capabilities – has attracted a great deal of interest among management scholars and has important implications for practitioners. The study of dynamic capabilities to date, however, has raised many unanswered theoretical and empirical questions. The literature also stands to benefit from greater integration of topics relevant to dynamic capabilities. Obviously, no single book on dynamic capabilities can possibly answer all remaining questions or integrate all of the relevant domains of study. Instead, we seek to provide clear definitional foundations, to point the way toward resolving important theoretical issues, and to bring relevant empirical findings to bear on these issues.

The process of writing this book involved many conversations among us, including day-long meetings of the co-authors to discuss key concepts and chapter drafts as the book took shape. Each of us took the lead in writing specific chapters, which enabled us to take advantage of our individual areas of expertise while benefiting from the wise counsel of the other book co-authors. The lead authors on each of the chapters are as follows: chapter 1, Connie Helfat, with substantial input from all of the book authors; chapter 2, David Teece; chapter 3, Margie Peteraf; chapter 4, Syd Finkelstein; chapter 5, Harbir Singh; chapter 6, Will Mitchell; chapter 7, Connie Helfat and Sid Winter; chapter 8, Connie Helfat. A project of this type also requires a chief organizer and integrator, which in this case was Connie Helfat.

This book might never have materialized but for Rosemary Nixon, our editor at Blackwell, who suggested the idea of a co-authored book in the first place. Rosemary's sage advice at many stages of this project was invaluable. We also greatly appreciate the help of co-contributors on selected chapters: Jay Anand (chapter 6), Laurence Capron (chapter 6), Jeff Dyer (chapter 5), Prashant Kale (chapter 5), and

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Constance E. Helfat
Sydney Finkelstein
Will Mitchell
Margaret A. Peteraf
Harbir Singh
David J. Teece
Sidney G. Winter

Chapter 1

Dynamic Capabilities: Foundations

Strategy matters most during times of change. Businesses and people find it far easier to do more of the same than to do something different. But the world does not stand still. As markets become more globally integrated and new forms of technology and competition arise, companies cannot rest on their laurels. Firms must adapt to and exploit changes in their business environment, while seeking opportunities to create change through technological, organizational, or strategic innovation. Creating, adapting to, and exploiting change is inherently entrepreneurial, for large firms and small, for old firms and new. But entrepreneurial activity of this sort does not imply a lack of strategy or organization. Indeed, effective change often requires both. To survive and prosper under conditions of change, firms must develop the "dynamic capabilities" to create, extend, and modify the ways in which they make their living.

Since the concept of dynamic capabilities was first introduced, additional research has elaborated on the initial idea. Many questions remain, however. The core concept requires clarification and development of the conceptual underpinnings along with grounding in empirical observation. This book addresses both the conceptual and empirical grounding of dynamic capabilities. We provide a succinct yet comprehensive definition of dynamic capabilities to serve as the basis for future work. We also provide a starting point for assessing the performance of dynamic capabilities, both conceptually and empirically. Additionally, a substantial portion of the book focuses on empirical observations regarding dynamic capabilities, including case examples and statistical analysis.

A capability, whether operational or dynamic, is the ability to perform a particular task or activity. Operational capabilities enable an organization to earn a living in the present (Winter, 2003). In contrast, dynamic capabilities concern change. A dynamic capability is *the capacity of an organization to purposefully create, extend, or modify its resource base*. Dynamic capabilities come in many forms. Some dynamic capabilities enable firms to enter new businesses and extend old ones through internal growth, acquisitions, and strategic alliances. Other capabilities help a firm to create new products and production processes. Yet others involve the capabilities of the managers responsible for leading profitable firm change and growth. The types of dynamic capabilities extend even further, far beyond what a single book can incorporate. We focus here on a few in-depth examples of dynamic capabilities involving alliances, acquisitions, and management.

The concept of dynamic capability includes the capacity with which to identify the need or opportunity for change, formulate a response to such a need or opportunity, and implement a course of action. Not all dynamic capabilities serve all three functions. Instead, different dynamic capabilities serve different purposes.

To understand how organizations identify and respond to the need for change, we must examine the underlying organizational and managerial processes. The transformation of an organization (even a nascent one) through additions, deletions, or modifications to its resource base entails processes for achieving these changes. We need to know not only what organizations do – which markets they enter, which products they introduce, how fast they grow, which firms they acquire or ally with – but also how they do it. This book therefore pays close attention to the managerial and organizational processes that are part and parcel of dynamic capabilities.

The benefits that firms obtain from their dynamic capabilities depend not only on the efficacy of the underlying organizational and managerial processes, but also on the context in which the capabilities are employed. That is, how well dynamic capabilities "fit" with the internal and external environment of the firm affects their usefulness as a means for adapting to, exploiting, and creating change in the business environment. Accordingly, we extend the concept of "fit" to begin to develop conceptual yardsticks for evaluating how well or poorly dynamic capabilities perform.

To begin the analysis, in this chapter we elaborate on the concept of dynamic capability and introduce conceptual yardsticks for assessing the performance of dynamic capabilities. The following chapters analyze conceptual issues involving managers and organizational processes in greater detail, and then examine empirical evidence regarding the nature and consequences of dynamic capabilities. The book concludes with an overall assessment and look to the future.

The Dynamic Capabilities Concept

The original definition of dynamic capabilities referred to "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (Teece, Pisano, and Shuen, 1997: 516). In this definition, organizational competencies denoted managerial and organizational processes or "patterns of current practice and learning" (Teece, Pisano, and Shuen, 1997: 518), through which "firm-specific assets are assembled in integrated clusters spanning individuals and groups" (Teece, Pisano, and Shuen, 1997: 516). By altering the organization's resource base, dynamic capabilities could then open new strategic alternatives or "paths" for the firm (Helfat, 1997).

Subsequent work refined and expanded the original definition of dynamic capabilities. Eisenhardt and Martin (2000: 1107) defined dynamic capabilities as "the firm's processes that use resources . . . to match and even create market change." In this conception, dynamic capabilities took the form of organizational processes. Eisenhardt and Martin (2000) provided examples of dynamic capabilities as processes, such as product development routines, alliance and acquisition capabilities, resource allocation routines, and knowledge transfer and replication routines. In addition to defining dynamic capabilities as processes, Eisenhardt and Martin (2000) extended the original definition of dynamic capabilities to include the creation of market change, as well as the response to exogenous change. These authors further noted that dynamic capabilities can operate in environments other than those experiencing rapid change.

Zollo and Winter next focused on organizational learning as a source of dynamic capability, which they defined as "a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness" (Zollo and Winter, 2002: 340). This definition implicitly distinguishes dynamic capabilities from operational capabilities. This definition also suggests that, like operational capabilities, dynamic capabilities consist of *patterned* organizational behavior that companies can invoke on a repeated rather than idiosyncratic basis. Unlike some implications of prior research, in this definition dynamic capabilities do not necessarily improve firm performance. Although firms pursue greater effectiveness of their operating routines, they may or may not achieve it. Hence, the definition of dynamic capabilities does not suffer from any sort of tautology with regard to the superiority of performance (see also Winter, 2003).

Zollo and Winter's (2002) definition focuses on dynamic capabilities that modify an organization's operating routines. Not all dynamic capabilities, however, act upon operating routines. Of particular importance are information processing capabilities that may enable the firm to identify the nature of the changing market environment and sense opportunities that it holds (Teece, Pierce, and Boerner, 2002). This ability to identify strategic opportunities in a changing environment provides a potential continuing source of competitive advantage (Denrell, Fang, and Winter, 2003).

Recently, Teece, Pierce, and Boerner (2002) have noted the importance of managerial capability to sense opportunities. Taking account of the role of management more generally, Adner and Helfat (2003: 1012) used the term "dynamic managerial capabilities" to refer to the capacity of managers to create, extend or modify the resource base of an organization. Like dynamic organizational capabilities, dynamic managerial capabilities arise from prior learning and experience.

The foregoing research includes a range of definitions of dynamic capabilities.[1] Although these definitions overlap, they capture different attributes of the phenomenon. In order to provide a solid foundation for subsequent work, we next provide a succinct and comprehensive definition of dynamic capabilities. Additionally, prior research suggests that dynamic capabilities serve two main functions with regard to

[1] Many other authors have utilized similar definitions to those reviewed here, including: Rosenbloom (2000), who highlights the importance of management leadership as a dynamic capability; Zott (2003), who focuses on dynamic capabilities as routine organizational processes that guide the evolution of firm resources and operational routines; Galunic and Eisenhardt (2001), who analyze dynamic capabilities as the processes through which managers manipulate resources into new configurations as markets change; Pisano (2000), who focuses on dynamic routines that regulate the search for improved routines; and Collis (1994), who includes strategic insights that derive from managerial or entrepreneurial capabilities.

the resource base of an organization: 1) search and selection, including resource creation, and 2) deployment. Although the deployment, or implementation, aspect of dynamic capabilities has tended to receive the most attention, search and selection are equally important. In what follows, we elaborate on these different functions of dynamic capabilities as well.

Dynamic Capability: Definition

Building on the prior literature, we provide this definition:

> *A* **dynamic capability** *is the capacity of an organization to purposefully create, extend, or modify its resource base.*

We recognize that a single phrase cannot include everything of importance with regard to dynamic capabilities. This definition, however, captures many of the critical features of dynamic capabilities. The words in this definition have specific meanings, as follow.

The "resource base" of an organization includes tangible, intangible, and human assets (or resources) as well as capabilities which the organization owns, controls, or has access to on a preferential basis. An organization need not own a resource or capability for it to comprise part of the resource base. For example, organizations do not own their employees. Organizations also have access to many other sorts of resources and capabilities on a preferential basis that they do not own. Preferential access through alliances to the resources and capabilities of others clearly falls into this category.

As our use of the term "resource base" implies, we consider capabilities to be "resources" in the most general sense of the word. By this we mean simply that resources are something that the organization can draw upon to accomplish its aims. This usage is consistent with the way in which the most widely used English dictionaries, including the Oxford, Merriam-Webster, and the American Heritage, define the word "resource."[2]

Since dynamic capabilities are themselves capabilities, it follows that dynamic capabilities comprise part of the resource base of an organization. Since dynamic capabilities create, modify, or extend the resource base of an organization and since dynamic capabilities also comprise part of this resource base, this implies that dynamic capabilities can modify or extend dynamic capabilities. At first glance, the latter statement may appear contradictory, but it is not. While it may be difficult for a particular dynamic capability to modify or extend itself (although we cannot rule out such a possibility), we can find many instances where one dynamic capability can and

[2] Consider the following definitions of *resource* according to these online dictionary sources: a) An action or thing resorted to (*Compact Oxford English Dictionary*); b) Means that can be used to cope with a difficult situation; the total means available to a company for increasing production or profit (*American Heritage*); c) A source of support: an available means (*Merriam-Webster*); d) A means of support (*Chambers*).