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Strategic Management in the Innovation Economy

Strategy Approaches
and Tools for Dynamic
Innovation Capabilities



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**Davenport/Leibold/Voelpel Strategic Management
in the Innovation Economy**

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Strategy Approaches and Tools
for Dynamic Innovation Capabilities

By
Thomas H. Davenport,
Marius Leibold
and Sven Voelpel



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Foreword

Many companies know today that the key for survival is in out-innovating the competition by 'leapfrogging' competitors with value innovation, and not with direct competitive strategies. At Siemens we have realized this perhaps earlier than many other companies, especially those in less technology-intensive industries, and we have taken purposeful steps to create and share knowledge inside our company and with our stakeholders for increased levels of innovation. Not surprisingly, we see many companies battling for survival due to mindsets and approaches that are rooted in traditional ways of competing, or attempting to replicate past successes.

While we have seen many scholarly books and articles emerging on innovation management or strategic innovation, we have noticed a dearth of managerial guides concerning appropriate approaches and tools for strategic management focused on the innovation economy. Most textbooks in use at universities and other places of business learning are still primarily based on the primacy of competitive strategies in the industrial economy. I have been gratified to see this book emerging as one of the first to specifically address strategic management mindsets, approaches and tools relevant to the challenges of the innovation economy.

In our globally networked world, characterized by integrated supply and demand chains, outsourcing (even of innovation), innovative new business ecosystems, and the search for value innovation, it is essential that firms keep rejuvenating themselves through the development of new, experimental business models. The challenge of managing both traditional, sustaining business models and innovative, disruptive business models certainly requires particular strategic management mindsets and capabilities. There is no alternative, however, to adopting these for surviving in a turbulent but exciting world of new creative opportunities and challenges.

This book provides a new platform for strategic management approaches and tools, and I trust it will find a particular place in the field of strategic management for innovation, both in business practice and education.

Heinrich von Pierer
Chairman of the Supervisory Board
Siemens AG

Preface

The Challenge to Traditional Concepts of Strategy and Business

Business strategy and strategic management have long been viewed as the concept and process that link an organization and its competitive environment. The turbulence and significant shifts in the environment towards a knowledge-networked society since especially the mid-1990s, and increasing evidence of company failures due to traditional business models and strategy approaches, imply that traditional ways of articulating strategy and practicing strategic management have to be seriously reconsidered.

Since the 1950s, various approaches to strategic management have been popularized, and these were appropriate for the industrial economy and its competitive features. With a significant new era of what some call 'revolutionary' change – the era of the knowledge-networked innovation economy – now being experienced, it is becoming evident that the traditional approaches to strategic management are showing serious deficiencies in dealing with the discontinuous links between an enterprise and its environment. The very nature of the business enterprise of the 21st century is being transformed, as well as the key notions of innovation and its effects on value creation, value capture and value sustainability.

A number of significant new driving forces in the business environment have created substantial uncertainty in the competitive landscape, and are bringing about fundamental changes in the traditional boundaries of nations, industries and companies. And such changes continue to challenge the traditional rules of competition. The driving forces of the innovation economy have removed the certainty and stability in the economic environment from almost every industry.

The competitive landscape has consequently been undergoing a fundamental change to produce a variety of new industries and combination of old industries, e.g. financial services industry, life sciences industry, 'edutainment' (education and entertainment) industry, the ICT industry (information and communications technology), and the 'individual living environment' industry (previously the home furnishings industry). These are not just new names for old diversifying industries, but new industries based on enterprise business models linked to intellectual capital and organizational rejuvenation, in contrast to business models linked to physical capital (land, buildings, machinery, etc.). Numerous examples are highlighted in this book of fundamental changes in the 'way of doing business' of enterprises in various industries, based on new value innovation concepts that have gained rapid customer acceptance.

New Ways of Value Innovation

The shift to new value innovation, i.e. innovative customer value propositions (products and services), and/or how they are innovatively newly created and provided, breaks decisively with the old industrial economy, in which information scarcity encouraged value capture through knowledge hoarding and physical assets. Successful companies today are those that transform purposefully-shared and networked-knowledge into new value-creating innovations, and aggressively use this to capture new opportunities and additional profit. Furthermore, value innovation is no longer achieved by finding and protecting a defensible position in a single, traditional industry. Rather, it is gained by innovating value in a business ecosystem, i.e. a company network spanning a number of potentially synergistic industries and value chains, that is quicker and better at using knowledge, and reinventing or adapting the system as the firm co-evolves with other organizations and individuals. The impact on strategic management, both in strategic thinking (mindset, approaches, formulating), and strategy implementation (implementation processes, methods, tools and practices) is profound.

The drive to innovate is even more important in the knowledge-networked innovation economy of the early 21st century, where the rapid sharing of knowledge forces players to reinvent and adapt constantly. In addition, ruptures in traditional boundaries in value chains are requiring companies to rethink how they go to market, what they need to own, and how they deal with suppliers and customers. The result is industry value chains today undergoing almost continuous innovation. The innovation value chain – one might call its new form a value web, an extended enterprise, a business ecosystem, or a value constellation – challenges firms that thrived with an integrated, self-contained approach.

It is becoming evident that the best value-capturing mechanisms now operate outside the individual firm's boundaries. Yet, the value created by a firm's own initiatives may be essential to the viability of its entire business ecosystem. The nature and definition of the firm are also undergoing profound changes, thanks to the ubiquity of information and leveraging of knowledge. The firm is shifting from a self-contained value-creation and -capture apparatus into one part of an interdependent community whose members continually negotiate responsibility for value creation and the right to value capture.

Focus on a Traditional Business Model only is Inadequate for a Firm's Survival

In the more stable industrial economy, enterprises were used to operate a single business model in a particular industry. In the fast-changing innovation economy, mainly driven by advanced technology, knowledge-networking and globalization, the resulting socio-techno-economic environment is one that challenges the essence of relatively stable traditional business models that firms used to achieve their particular goals.

No matter how successful and superior a company's current business model has been, it will be easily imitated, diluted and commoditized by others and challenged by new business models in the innovation economy. Moreover, major and unpredictable

changes in the business environment, the increasing importance placed on innovation and knowledge as value-creating attributes, and the accelerating pace of the business environment create major challenges in sustaining the efficacy of existing business models.

Towards a New Strategic Management Approach for the Innovation Economy

This book proposes a new strategic management approach for the innovation economy – the *poised strategy* approach. The innovation economy requires substantially different ways in which corporations are led, businesses are managed, and organizational capabilities and structures are developed and utilized. Managing multiple business models, with different approaches for sustaining and disruptive business models, and shifting the focus to business ecosystem collaboration and not just company and industry value chain effectiveness, renews organizational energies and rejuvenates company life. This raises a number of challenges concerning ambidextrous leadership and managerial capabilities, and innovation-enabling organizational structures, as addressed in this book.

Organizational energy, in the sense of positive and continuous dynamics (or impetus) to be able to rejuvenate organizational value, is the result of managing a portfolio of business models for desired value-innovation activities in business ecosystems. This is achieved through dynamic innovation capabilities, with focus on a relevant range of ‘speed-to-market’ value-innovation configurations.

The Key Message of This Book

This book provides understanding of the dramatic shifts in the innovation economy and the resulting significant implications for traditional strategic management theory and applications. It furthermore helps the reader to learn and discover pre-eminent writings as well as methods and tools for strategic management in the innovation society. Strategic management in the innovation economy requires a new mindset, rooted in a systemic (networked, interactive) view and not a traditional (mechanistic) value-chain, industry-bound, or an existing (physical, internal) resource capability orientation. Companies can no longer focus only on efficient *intra*-organizational knowledge creation and sharing, but should also include the *inter*-organizational realm, as well as other relevant stakeholders in its business ecosystem.

The key message is that the new knowledge-networked innovation economy requires a totally different strategic management mindset, approach and toolbox. The traditional approaches are not completely obsolete, but used on their own they are deficient for sustainable organizational performance and survival in today’s knowledge-networked innovation economy.

Step by step, each chapter leads the reader towards a better understanding of the knowledge-networked environment, the need for a new managerial mindset, new strategic management approach, and appropriate tools to assist in the processes of strategic management in the innovation economy. Per chapter the authors furthermore offer

a brief introduction and theoretical overview, followed by selected research papers and viewpoints, which are concluded by clearly related and embedded case examples.

Who Should Read this Book and How Should It Be Used?

The book is aimed primarily for use at MBA-level and business executive courses, as well as for capstone undergraduate courses in strategic management. In addition, strategists and top managers will find it an effective aid in understanding the shifts and impacts of the knowledge-networked society on strategic management in the innovation economy, as well as the need for new tools and methods. The book originated from a realization that students and business leaders cannot be educated/oriented in strategy by simply reviewing extant strategic management theory and applications. Our approach is not to teach theory or cases, but to understand the evolution of strategic management thought, related to historical timeframes and contexts, and the difficulties of extant strategic management approaches and tools in dealing with major shifts and ‘discontinuities’ in the environment. Additionally, we provide integrated substantiation for a new approach by corporate leaders and strategists to strategic management in the innovation economy – *poised strategic management*.

The contents and style of the book are significantly different from the usual strategic management textbooks. The content is a unique combination of theory, published articles, and case examples, all designed to make key points and bring across messages that substantiate the proposals for new and complementary strategic management approaches and applications. The style of the book is easily readable by advanced students and business executives alike. Case vignettes are provided to amplify key points, and a list of questions are provided at the end of each chapter to stimulate further review, comparison and debate.

The overall learning objective is to provide a strong basis (aptly argued and substantiated) for the acceptance of a new strategic management approach and tools to be used complementary to extant strategy approaches and tools. The purpose is not to make a case that extant approaches and tools are obsolescent or invalid in the innovation economy, but that they are inadequate if used on their own.

The major points of uniqueness of the book are:

- The concept of *poised strategic management*, in contrast to the traditional concept of analytical, mechanistic strategic management approaches and processes.
- The analogy of poised strategy with Einstein’s theorem of $E = MC^2$, with *purposeful energetic rejuvenation* – to counter the inexorable process of entropy of an enterprise – through management of multiple business models, both sustaining and disruptive in nature.
- The strong differentiation between, and the linkages necessary, between the concepts of *business model* and *strategy*.
- The total departure from the traditional mechanistic process of analysis-formulation-implementation-change to strategic management (as still evidenced in most strategic management textbooks), to a *holistic, interactive process* that enables the

breaking of the mold of the traditional business model thinking for appropriate disruptive innovation.

- The presentation of a *range of appropriate tools to enable strategy innovation* as part of the poised strategy approach.
- A *framework for appropriate leadership and management requirements* for poised strategic management, with *practical guidelines* and examples for implementation.
- The concept of *poised scorecard (PSC)* in contrast to the traditional balanced scorecard (BSC). The latter focuses on single enterprise strategy dynamics, while the PSC emphasizes innovative stakeholder systems dynamics and their measurement, for innovation performance across enterprise value chains and business ecosystems.

The Writing of This Book

This book became reality due to stimulating personal meetings and an intensive virtual knowledge exchange between the authors. The common systems-oriented background, dynamic teaching and practical experiences, and exposure to learning-based corporate case examples allowed the authors to make it happen. But many other people's contributions have made this book possible. First of all, we are indebted to Gerhard Seifudem for his incisive and excellent professional editorial assistance. Many thanks are due to Michael Beer, Quinn Mills, Charles Baden-Fuller, Alan MacCormack, Dorothy Leonard, Richard Whittington and other colleagues in personal and group (e.g. conference) interactions. Our discussions with them, their ideas, queries and comments helped us greatly in shaping our thoughts, for which we are of course solely responsible. Special thanks to Ms Hanneke du Preez for the word processing of the chapter texts, and to our research assistants Mr Solomon Habtay and Ms Eden Tekie at Stellenbosch University, and Mr Chris Streb and Ms Alexandra Wisniewski at International University Bremen, for reading and editing ably on the early draft chapters. Walter Claassen, vice-rector (research) at Stellenbosch University, provided strong support by his continuous interest, positive comments, and enabling seminal research funding, and we thank him for that. And last but not least, we thank our post-graduate students as well as the managers and executives who have been exposed to our concepts and ideas, and co-refined these with us over the past two years through critical debate and practical applications.

Thomas Davenport, Boston, USA
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I The Innovation Economy and Strategy

Synopsis

The chapter motivates that there has been a fundamental change from the industrial economy to the innovation economy, and that this has particular implications for strategic management and its traditional dimensions. It includes the initial outline of a new 'formula' for business dynamics, i.e. $E = MC^2$ (Einstein's well-known formula, applied and expanded in later chapters), and three key requirements of management in the innovation economy. Major 'box' examples are of a country (Germany) and an industry (global wine industry), with implications for firms. The case example concerns India and its innovative businesses, and one relevant article is included.

Chapter 1

The Global Innovation Economy and Strategic Management

Nature of the Global Innovation Economy

Historians of the late 20th and early 21st century are already recording the significant shift in the features of the global economy between 1980 and 2005. The proportion of economic value now attributable to the innovative capacity of intangible capital in business has dramatically shifted to 80% of market values as reflected in the Dow Jones Industrial Average (DJIA) in 2005. By contrast, in 1980 the same index reflected market values due to intangible assets at nearly zero. In other words, the value of the DJIA in 1980 – only 25 years ago – was largely confined to traditional book values, or hard assets. Since then, the value of the innovative capacity of intellectual assets as a component of total market values has increased exponentially.

As a consequence, the foundations of traditional economic and business thinking, and strategic management, have been shaking. The nature of economic value and wealth creation, not only for enterprises but also for countries, regions, and industries, has become fundamentally different, requiring not only new mindsets but also new management approaches and tools. It is not surprising to hear the reaction of some observers, rooted in traditional practices that resulted in past successes, that nothing has really changed, that the old economy is “alive and well,” or to contend that traditional economic and business activities are ‘just more information and knowledge-based’ than in the past. The fundamental criterion, however, is how value is created, captured, and sustained in an economy, and if this is fundamentally different from the past, new strategic management approaches have to be adopted.¹

The speed of technological change has had great impact on the three-phase sequence from value creation to value capture to value sustainability. Innovations such as greater microprocessing power, Internet protocol networking, hyper-storage, and genomics are transforming value chains in almost every industry. In the past, many of these value chains, and the very structure of industry in the old economy, were knitted together by closely-held, protected information in vertically integrated companies. Today, however, these technology innovations are rendering information abundant, ubiquitous, fast, and free, enabling innovative value creation, capture, and sustainability for firms and industries.

The ubiquitous availability of information and knowledge is perhaps the single most significant contributor to corporate innovation and change. As Nobel laureate economist