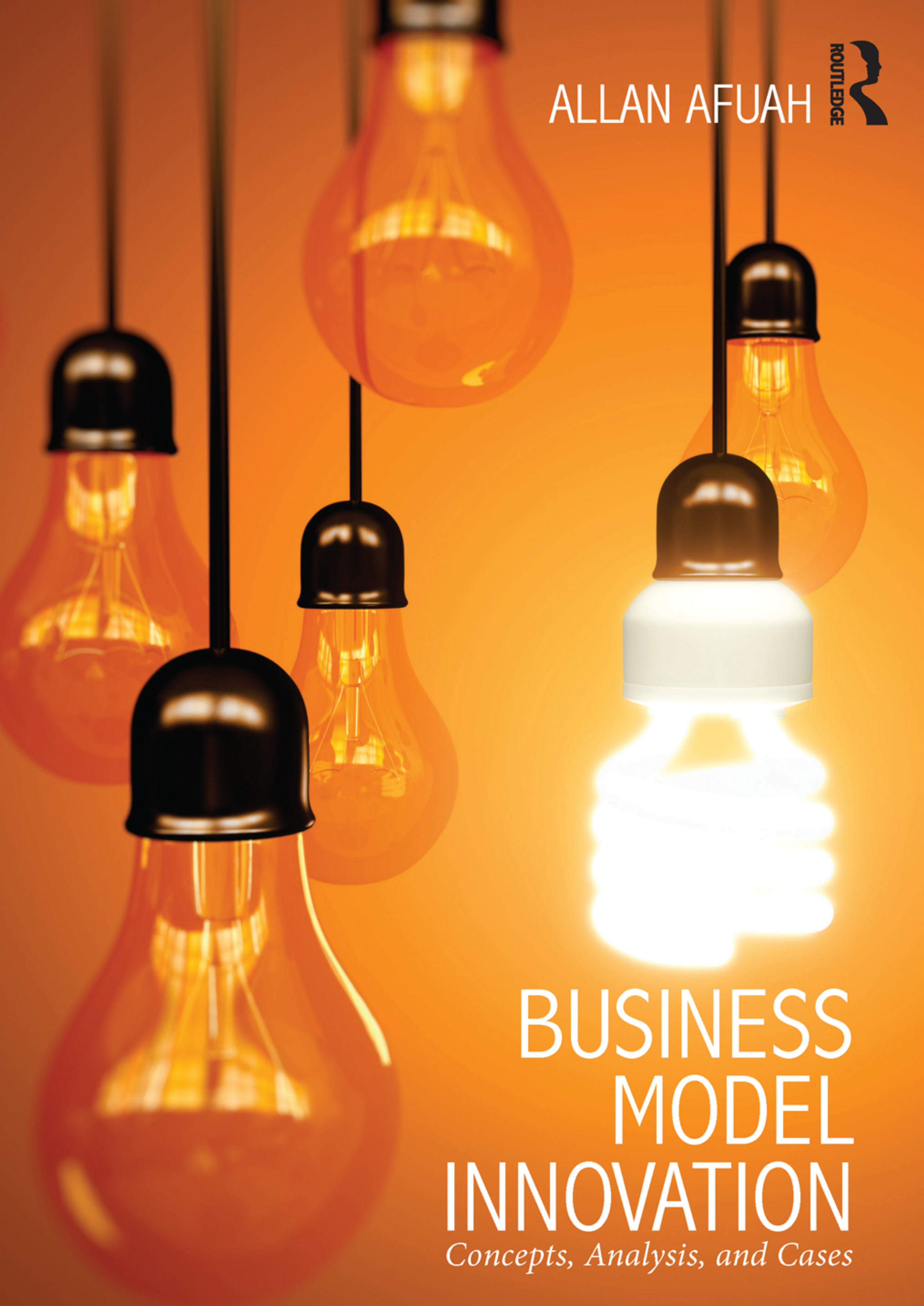

ROUTLEDGE

ALLAN AFUAH

BUSINESS MODEL INNOVATION

Concepts, Analysis, and Cases

Business Model Innovation

For a while now Allan Afuah has been a leading thinker in the areas of business model development, innovation management, and strategic analysis. In his most recent book on business model innovations, he takes us to the next important level of strategic thinking for twenty first century enterprise—the nexus of business model development and innovation, where companies both create and capture value by coming up with novel and original business recipes. Professor Afuah's book provides a comprehensive coverage of the topics that are relevant to this subject, and includes both useful analytical tools as well as many concrete illustrations of how these ideas have been applied. Any business leader who is interested in understanding the importance of inventive business models and how they can be designed should read this book.

—Ira Ginsberg, Professor, New York University
Stern School of Business, USA

As we move deeper into the 21st century with its environment characterized by accelerating technological change, uncertainty, and complexity, business model innovation has become the hottest topic in strategy. In Business Model Innovation, Allan Afuah delivers a fresh paradigm that allows managers to leverage new ways of conducting business to gain and sustain a competitive advantage. Compelling, insightful, and practical.

—Frank T. Rothaermel, The Russell and Nancy McDonough
Chair, Professor & Sloan Industry Studies Fellow,
Georgia Institute of Technology, USA

Allan Afuah unfailingly captures attention with his outstanding work. This time he offers an astonishing new book that explains Business Model Innovation. Exploiting his superior scholarship, he explores recent phenomena and shows how they relate to business models. His discussion of Business Model Innovations highlights not only what happens now (e.g. Long Tail, Social Media, Crowd-sourcing) but also how companies can, with the right capabilities, capture and create value tomorrow. Close to practice, each chapter features case studies and the book closes with implications and helpful applications. This exceptional work deserves your undivided attention.

—Patrick Reinmoeller, Professor,
Cranfield University School of Management, UK

Rooted in strategic management research, *Business Model Innovation* explores the concepts, tools, and techniques that enable organizations to gain and/or maintain a competitive advantage in the face of technological innovation, globalization, and an increasingly knowledge-intensive economy. The book investigates how organizations can use innovations in business models to take advantage of entrepreneurial opportunities from:

- Crowdsourcing and open innovation
- Long tails
- Social media
- Disruptive technologies
- Less-is-more innovations
- Network effects
- Scarcity of complementary capabilities

The book also looks at the ways firms can use innovations in business models to exploit or defend against threats. With twelve supplementary cases to help readers apply the concepts and techniques, this book is a must-have for anyone looking to understand the fundamentals of business model innovation.

Allan Afuah obtained his PhD from MIT and is Associate Professor of Strategy at the Ross School of Business at the University of Michigan. Professor Afuah's honors include *Academy of Management Review* (*AMR*) winner of Best Article Award for the year 2012 for his paper, "Crowdsourcing as a solution to distant search" which he co-authored with Christopher Tucci. *AMR* is No. 1 out of 172 management journals and No. 1 out of 116 business journals in the world.

Business Model Innovation
Concepts, Analysis, and Cases

Allan Afuah

Routledge
Taylor & Francis Group
NEW YORK AND LONDON

First published 2014
by Routledge
711 Third Avenue, New York, NY 10017

and by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

Library of Congress Cataloging in Publication Data
Afuah, Allan.
Business model innovation: concepts, analysis, and cases/Allan Afuah.
pages cm
Includes bibliographical references and index.
1. Strategic planning—Mathematical models. 2. Industrial management—Mathematical models. I. Title.
HD30.28.A3467 2014
658.4′012—dc23
2013035835

ISBN: 978-0-415-81739-4 (hbk)
ISBN: 978-0-415-81740-0 (pbk)
ISBN: 978-0-203-58458-3 (ebk)

Typeset in Minion
by Florence Production, Stoodleigh, Devon, UK

To every family that has been kind enough to welcome a foreign student to its home.

To my grandmother, Veronica Masang-Namang Nkweta, and the Bamboutos highlands which she tilled to feed me.

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PREFACE

Good theory enables us to explain, predict, plan, and execute. In the words of Kurt Lewin, "nothing is quite so practical as a good theory". The theory of gravity enabled human beings to explain why things fall down, predict what the gravitational pull on the surface of the moon would be, plan how to land a person on the moon, and execute the plans to get to the moon.

Yes, social science theories may not have the precision of the theories of physics. However, strategic management scholars have drawn on social sciences to develop theories that explain why some industries or firms are more profitable than others, predict the impact of technological innovation on industry and firm profitability, explain and predict the impact of a firm's capabilities on its performance, suggest what good plans for using or building capabilities should look like, and how to execute strategies or plans. These theories include the competitive positioning or product-market-position view, resource-based view, dynamic capabilities, social network theory, evolutionary economics, agency theory, institutional theory, resource dependence theory, and transaction costs economics.

Business Model Innovation: Concepts, Analysis, and Cases is about drawing on some of these theories to explain and predict the relationships among a business model, its profitability, and the environment in which the model is conceived and executed. These explanations and predictions help managers better create and execute profitable business models. More importantly, the book is about using management theory to explain and predict *how* and *why* firms can gain and/or maintain a competitive advantage in the face of technological innovation, globalization, and an increasingly knowledge-intensive economy. In particular, the book is about using business model innovations to exploit the opportunities and threats in phenomenon such as crowdsourcing, social media, the long tail, less-is-more innovations, disruptive technologies, and scarce resources.

Yes, the principles of economics have not changed and may not need to change to be effectively used in exploring the so-called new economy. Yes, some of the phenomena—e.g. crowdsourcing, long tail, and social media—have been around for centuries or more. However, technological innovation, the shift to knowledge economies, and globalization have created an environment in which we can better understand the opportunities and threats in the phenomena and how to better exploit the opportunities and/or defend against the threats.

Because the book is about the concepts, tools, and techniques for generating and executing high-performing business models, it should be useful to anyone—manager, scholar, entrepreneur, or venture capitalist—who wants to contribute to creating or capturing value whether in a for-profit or nonprofit organization.

WHAT IS UNIQUE ABOUT THE BOOK

By drawing on strategic management theories and the comprehensive research that has been performed in other areas of management, *Business Model Innovation*:

- Reduces the components of a business model to five comprehensive yet parsimonious building blocks.
- Synthesizes a practical framework (the VARIM)—that is rooted in both the resource-based *and* product-market-position views—for assessing the profitability potential of a business model, product, resource, brand, activities, and any other capability.
- Provides a comprehensive description of the characteristics of seven phenomena whose impact on management and entrepreneurial activity is growing rapidly in the face of technological innovation, globalization, and an increasingly knowledge-intensive economy: Crowdsourcing, social media, the long tail, disruptive technologies, network effects, less-is-more innovations, and scarcity of capabilities.
- Offers a detailed analysis of the impact of each of these phenomena—crowdsourcing, social media, and so on—on an organization's business models.
- Is centrally focused on performance, especially profitability.
- Is peppered with examples throughout.
- Has the latest cases that illustrate the application of the core concepts, tools, and techniques of the book.

NON-UNIQUE FEATURES OF THE BOOK

In addition to the above unique features, *Business Model Innovation* also:

- Explores what value creation and capture are all about especially in the face of innovation.
- Explains first-mover advantages and disadvantages.
- Revisits an organization's system of activities as capabilities.

ORGANIZATION OF THE BOOK

Befittingly, *Business Model Innovation* is organized as follows. Part I, which is made up of two chapters, is the introduction. Chapter 1 defines business models and business model innovation, and then explores five comprehensive yet parsimonious building blocks of a business model. The chapter also explores four types of business model innovations and suggests how a firm can paint a portrait of a business model.

Because business models and strategic management are about performance, it is critical to be able to tell whether one has a winner or a loser when generating or executing a business model. Therefore, Chapter 2 is dedicated to assessing the profitability potential of a business model in its various forms. The model can also be used to assess the profitability potential of products, capabilities, activities, strategies, business units, and so on.

Part II explores the opportunities and threats that firms face when conceiving of, generating, and implementing business model innovations. The first chapter in Part II, Chapter 3, explores what the long tail is all about and its potential as a source of innovation for business models. Chapter 4 explains crowdsourcing and open innovation, pointing out their potential impact on business model innovations. Chapter 5 introduces social media and explores the potential opportunities and threats that they present to business model innovation. Chapter 6 is about a phenomenon called less-is-more innovations and its impact on business model innovation. It is about why more is not always better, and what that means to business model innovations. Chapter 7, the last chapter in Part II, is about disruptive technologies, an extremely useful but often misunderstood concept.

Part III explores the strengths and weaknesses of the firms that must conceive of, generate, and execute business models in the face of the opportunities and threats of Part II. Since capabilities are the core of any business model, Chapter 8 is dedicated to the resources and activities that make up capabilities—to explaining what they are all about. Chapter 9 explores value creation and capture—how the activities and resources of Chapter 8 are used to create and capture value. Moving first or being a follower has some implications that can be critical in the face of an innovation. Therefore, Chapter 10 is dedicated to first-mover advantages and *dis*advantages. No matter how promising, a business model innovation will not amount to much if it is not well executed. Therefore, Chapter 11 is dedicated to implementation of business model innovations.

For a course in which students have not yet taken a core course in strategy, it may be good to go through Part III before Part II since the former contains some of the fundamental strategy concepts that are needed to understand Part II.

Part IV gets into the application of some of the business model innovation concepts to globalization and growth. Thus, Chapter 12 is about globalization and its implications for business model innovation.

Part V consists of cases of firms with interesting business model innovations.

ROOTS OF THE BOOK

Business Model Innovation started out as a revision of *Strategic Innovation: New Game Strategies for Competitive Advantage*, but in implementing the suggestions made by the professors, managers, and students who had used *Strategic Innovation*, I quickly realized that a new book had emerged—a book centered around innovations in business models rather than strategies. That book is *Business Model Innovations*.

Allan Afuah
Ann Arbor, Michigan
August 8, 2013

ACKNOWLEDGMENTS

I would like to thank the Routledge anonymous reviewers, adopters of *Strategic Innovation*, students, and managers whose critique of *Strategic Innovation* enabled me to write *Business Model Innovation*. Their suggestions were extremely valuable to me throughout the process of researching and writing this book.

I continue to owe a huge debt of gratitude to my professors and mentors at MIT. They introduced me to the subject of strategic innovation, and to the virtues of patience and tolerance. I am forever grateful to them. Some of my students at the Stephen M. Ross School of Business at the University of Michigan gave me very useful feedback when I pre-tested the concepts of *Business Model Innovation*. Some of the cases in Part V of the book were written by some of my MBA students under my supervision. In particular, I would like to thank Nung Yoo (Chris), Shana Anderson, and Steve Harutunian for excellent research assistance. Shana Anderson and Steven Harutunian also co-authored some of the cases in Part V of the book.

Special thanks go to Michael and Mary Kay Hallman for the funding that enabled me to explore the topic of business model innovation with more freedom and dedication.

Finally, I would like to thank Sharon Golan, Routledge Editor for business books, for a great editorial job. The chapter on social media was Sharon's suggestion, and it fit in beautifully with the other building blocks of the book.

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Part I

Introduction

1

INTRODUCTION TO BUSINESS MODEL INNOVATIONS

Reading this chapter should provide you with the conceptual and analytical tools to:

- Define business models and business model innovation.
- Understand the components of a business model.
- Describe different types of business model innovations (regular, resource-building, position-building, and revolutionary).

INTRODUCTION

Consider the following business examples.

When Goldcorp, a Canadian gold mining company, had difficulties striking gold on its Red Lake, Canada property, it turned to the world to help it find the gold. It offered prizes totaling $575,000 to anyone from anywhere in the world that could analyze its banks of geological survey data and suggest where to find the gold. Fractal Graphics, an Australian company, won the top prize of $105,000. More importantly, the contest yielded targets that were so productive that the firm started producing 504,000 ounces of gold per year, at a cost of $59 per ounce, compared to the pre-contest annual rate of 53,000 ounces at a cost of $360 per ounce.[1] Remarkable!

With a market value of over $160 billion for most of 2008, Google was one of the most valuable companies in the world. Its net income in 2007 was $4.2 billion on sales of $16.6 billion, giving it a net profit margin of 25.4 percent, one of the highest of any company of its size. This was a remarkable performance for a company that only four years earlier, in 2002, had revenues of $439 million and a net income of $99 million in a struggling dotcom industry.

These extraordinary stories are not limited to high-tech businesses. In 2006, Threadless, an online T-shirt company founded in 2000, had profits of $6 million on revenues of $18 million, from T-shirts that had been designed, marketed, and bought by members of the public. Such a high rate of profitability made the firm one of the most profitable in the T-shirt business.

In 2007, Pfizer's Lipitor was the world's best-selling drug with sales of $12.7 billion, more than twice its nearest competitor's sales (Plavix, with $5.9 billion). This was the third year in a row that Lipitor had topped the best-seller list. One of the most telling things about Lipitor is that it was the fifth cholesterol drug in its category (statins) in a pharmaceuticals industry where the third or fourth product in a category usually has little chance of surviving, let alone of becoming the best seller in the world.

BUSINESS MODEL INNOVATION

At the core of each of these fascinating success stories is a business model innovation. To define a business model innovation, we first define a business model and an innovation. A *business model* is a framework or recipe for making money—for creating and capturing value.[2] Innovation is about doing things differently from the norm. Therefore, a *business model innovation* is a framework or recipe for creating and capturing value by doing things differently.[3] It is often about changing the rules of the game. For example, rather than keep its databanks of geological survey data on its Red Lake, Ontario, Canada property secret, and struggle to pinpoint the location of gold on the property, Goldcorp made the data available to the public and challenged the world to locate the gold. Goldcorp was looking to the public, rather than to its employees or a designated contractor, to solve its problem. Only the winners—those who produced desirable results—were paid. Contrast this with the situation in which employees or designated contractors are paid whether or not they succeed in locating the gold.

Business model innovation does not have to involve leapfrogging competitors with products that have better product characteristics than competitors'. In fact, some of the more interesting business model innovations are those in which firms cut back some product/service characteristics that have come to be considered sacred cows by some customers. For example, when Nintendo offered the Wii, it deliberately used much cheaper three-year-old microprocessor and graphics technologies, rather than trying to outmuscle Microsoft and Sony, which used the latest and fastest but much more expensive technologies which many avid gamers had come to expect in each new generation of game consoles. The Wii had other features that appealed more to non-avid gamers, such as the ability to play games that also enabled people to get some physical exercise.

More importantly, some of the most profitable business model innovations have little to do with a product. The story of the Xerox 914 photocopier is an astonishing example.[4] The 914 copier was a good new copier but was going to cost so much if sold outright that Xerox was advised by consulting firms to shelve it because of the machine's economics. However, the machine's sales and profitability shot through the roof when Xerox decided to lease the machines rather than sell them.

The winner in the face of business model innovation can be the firm that moved first to change the rules of the game, or a firm that came in later and pursued a better business model. Google was neither the first to introduce search engines nor the first to introduce sponsored ads (paid listings). However, it played the new game very well. It was better at business model innovation and therefore was more successful at monetizing search engines. To understand business model innovation, it is important to first understand what business models are all about, starting with the five building blocks of any business model.[5] (For more details on how these five components were derived, please see the Appendix at the end of this chapter.)

Components of a Business Model

The components of a business model are shown in Figure 1.1. Before we explore each of these components in detail, a word about the rationale behind the components and the linkages between them is in order. Recall that a business model is about making money, and money comes from customers. For customers to buy from a firm, the firm must offer them something that satisfies their needs—that is, the firm must offer the right *customer value proposition*. However, the right customer value proposition to the wrong customers will do the firm little good. Therefore, a firm may be better off targeting the type of *market segment* whose needs it can satisfy, and that has many customers with a high willingness to pay.

A *revenue model* is the structure through which a firm monetizes the value proposition that it offers customers. The wrong revenue model can leave money on the table or drive customers away. If a firm starts making money by targeting a high willingness-to-pay market segment with the right customer value proposition and revenue model, competitors are likely to want to imitate the firm so as to make profits also. Thus, part of a firm's business model is its *growth model* in which the firm figures out how to grow profitably even as competitors try to imitate it. Finally, delivering customer value proposition to the target market segment, and so on, requires the right *capabilities*—the right resources/assets and the activities that use the resources/assets to create and capture value. We now explore each component in more detail (Figure 1.1).[6]

Customer Value Proposition

A firm's value proposition to customers consists of those things that the firm and its products/services can do for customers to solve their problems and/or satisfy their needs better than competitors. It answers the question: What is so compelling, engaging, rewarding, or delightful to customers about what a firm has to offer them that will attract customers from competitors or from the sidelines? It's about the benefits that a firm

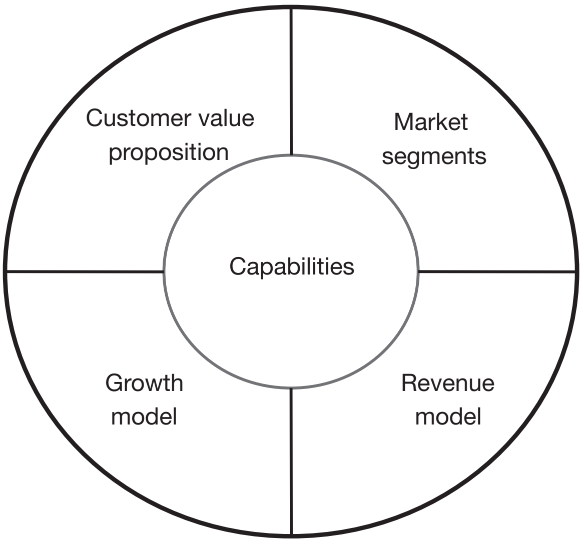

Figure 1.1 Components of a business model

and its products offer customers and how much these customers perceive the benefits as valuable. The right customer value proposition meets customers' needs and/or solves a problem for them, and provides them with a reason to buy from you rather than your competitors. Note that customers do not always know, *ex ante*, what they need in a product or service. For example, many customers did not know that they needed touch screens and Internet access in their cell phones until the iPhone was introduced to them. Few knew how much the Internet would change their lives until it did. Thus, part of a customer value proposition may involve helping customers to discover their own latent needs for products/services.

A firm's customer value proposition depends on not only its products/services and their attributes, but also on its reputation/image and the other assets that it controls such as relationships with customers. For example, a car enthusiast may buy a car not only because it handles well on the road, but also because it is a BMW or Lexus. A brand-minded customer may buy a product because it is sold in one store rather than another. Effectively, customer value proposition is rooted not only in products and services but also in other assets such as brands, access to distribution channels, and so on.

Market Segment

Money comes from customers and a firm needs to know what these customers want, how many of them there are, their willingness to pay, and how profitable it will be serving these customers. The market segment component is about the groups of customers to whom a value proposition is being offered or should be offered, how many customers there are in each group, their willingness to pay, and the attractiveness of each group. The larger the market size, the higher would be the likelihood of more revenues. And the higher the willingness of customers to pay, the better a firm's chances of obtaining high prices for the benefits offered to customers. The market segment component of a business model is also about the quality and quantity of the coopetitors—of the suppliers, customers, complementors, competitors, and any other institution with which the firm has to cooperate to create value and compete to capture value.[7] From a cooperation point of view, a firm can work with knowledgeable customers, suppliers, governments, complementors, and even rivals to co-create products, thereby better meeting customers' needs and increasing the number of high willingness-to-pay customers. From a competition angle, a market segment—with customers and suppliers who have bargaining power over the firm, that experiences high rivalry, and that is rife with high threats of substitutes and potential new entry—is likely to be less profitable than one in which competitive forces are low.[8] That is, a market segment in which industry forces are weak (attractive segment) is more likely to be profitable for the firm than one in which the forces are strong (an unattractive segment). Just as important is what the firm does to improve its position within the market segment, whether the market is attractive or not. A firm's customer value proposition contributes immensely to its position in a market segment.[9]

Segmentation can be by the type of customers and their preferences, type of product being offered, demographics, geography, willingness to pay, distribution channels, and the type of relationships that a firm has with its customers. Segmentation results in different types of market segments: niche market, mass market, and multi-sided market.[10] For example, a multi-sided market segment is one in which two or more groups of customers are interrelated and the firm makes money by facilitating that interaction.[11] For example, a credit card market is a two-sided market since cardholders are on one side and merchants on the other. The more cardholders that own a particular credit card, the better off would be the merchants that accept that particular card and, of course, the better off would be the credit card company.

Note that, because many customers often do not know their needs, *ex ante*, in the face of some innovations, the entrepreneur may have to work with them—especially so-called lead users—to help them discover their needs.[12] Also note that the attraction of a market segment to a firm is a function of not only the product/services that meet the segment's needs but also of the firm's other assets such as the firm's access to distribution channels, brand name reputation, and relationships with customers that the firm needs to profit from the segment.

Revenue Model

The revenue model component is about how many customers get to pay how much for what product/service, when and how. It is about getting as many of the customers who like the value proposition as possible to pay a price that is close to their reservation prices without driving them away. (A customer's reservation price for a product is the highest price that the customer is willing to pay for the product.) Making money starts with revenues. Without revenues, no amount of cost cutting would amount to anything good. Revenue models are what are sometimes referred to in the popular press as "business models." Types of revenue models include: advertising, razor-blade or razor-and-blade, brokerage, subscription, freemium, leasing, licensing, asset sale, loss leader, bait-and-hook, usage fee, cash and carry, recurring revenues, and so on.[13] In Google's advertising model, for example, it has two sets of customers: those who conduct searches, and those who advertise. Google has to deliver compelling value to both sets of customers but only one of them pays Google directly. In general, each revenue model has advantages and disadvantages that can make or break a business. For example, in the razor-and-blade model, a firm sells products (e.g. razors) at very low prices but sells a complementary product (blades) at higher prices and/or more often. Kodak used the razor-blade model in its film-based photography business and it worked beautifully. However, the firm failed miserably when it tried to apply the same model to digital photography.[14]

Since price is such an important component of revenues, a firm's pricing model is usually a critical part of its revenue model. Because pricing determines how much a customer gets to pay for the customer value proposition, getting the price right has one of the most direct impacts on revenues. Too high a price can drive customers away, possibly to competitors or substitutes. Too low a price—without any strategic motives—unnecessarily leaves money on the table. Types of pricing models include: Auction pricing, posted pricing, cost-plus, skimming, tiered pricing, value pricing, limit pricing, bundling, give-away, loss-leader, and two-part tariff.

Sources of revenues can also be critical. Many car dealers make their money from servicing cars and not from selling them. In fact, one reason why IBM was able to turn around after years of decline was because it decided to also focus on services as a key source of revenue rather than focus only on products. In 2013, a reasonable fraction of Ryanair's profits came from onboard sales, advertising, hotel, and car rental referral—that is, the airline's revenues came from more than just air tickets.

The ideal revenue model would get as many of the customers—who find the customer value proposition compelling—as possible to pay prices that are as close to their reservation prices as possible without driving customers away.

A firm's revenue and pricing models depend on the customer value proposition, market segments, growth model, and capabilities components of the business model. For example, a firm in a market segment with little or no competition and with customers who have a high willingness to pay can afford to charge high prices.

Growth Model

The primary question in the growth model component of a business model is: How can a firm grow *profitably*? Most businesses want to grow. However, growing for growth's sake without profitability or a strategic path to profits is irresponsible. The growth component of a business model is about what a firm has to do to increase the number of customers, increase willingness to pay, keep prices close to customers' reservation prices while keeping costs low. This can be very difficult because, once a firm offers the right customers the right value and starts making money, its coopetitors are likely to want a piece of the action. Suppliers may demand higher prices for the firm's inputs or push to start delivering inputs with lower quality, thereby increasing costs or forcing the firm to ship lower quality products to its customers. Customers may want lower prices or demand higher quality products.

More importantly, competitors (incumbents and potential new entrants alike) may want to imitate or leapfrog the firm, forcing it to lower its prices or raise its costs. Macro-environmental factors such as shortages resulting from higher demand or government regulations may increase the cost of inputs. In some countries, the government may step in, demanding that prices be lowered. What is even more important than the reaction of coopetitors is that major events such as technological change can disrupt the basis of business models, giving rivals, suppliers, and customers an advantage. For example, the Internet turned the business models of many newspapers and other traditional media upside down, eroding the basis for their profitability. An important part of a business model is finding ways to maintain or grow revenue levels relative to competitors, and keeping costs low or driving them even lower relative to revenues.

Maintaining higher revenues. Three strategies can help a firm stem erosion of its revenues and grow profitably.[15] First, a firm can pursue a *block* strategy in which it defends its position in the market vigorously even as it tries to win over more customers. It can do so proactively or in response to competitors' moves. For example, when a pharmaceutical company applies for and obtains a patent for a new drug, it is making a proactive move to block others from legally replicating the drug. If a firm sues someone for violating its intellectual property, or retaliates in some other way, it is making a blocking move in response to being challenged. Second, a firm can pursue a *run* strategy in which it is one of the first to innovate and before competitors have had a chance to become a significant threat, it has already moved on to something better by innovating again. That is, in a run strategy, a firm grows by growing the market. For example, since the 1980s, Intel has often introduced a new generation of its microprocessors before sales of an existing generation have peaked.[16] When Apple introduced the iPod, then the iPhone, and then the iPad, it was pursuing a run strategy. As proved by Apple and Intel, a run strategy is one of the best approaches to grow profitably.

The third strategic move that a firm can take is to *team up* with one or more coopetitors. (Recall that coopetitors are the suppliers, customers, complementors, competitors, and any other institution with which a firm has to cooperate to create value and compete to capture it.) Firms usually team up through strategic alliances, acquisitions, joint ventures, licensing, and venture capital participation. Teaming up can enable a firm to share valuable and rare complementary assets enabling the team to attain and prolong profitability. For example, Pixar teamed up with Disney—first through a strategic alliance and later, an acquisition—and each party brought something to the table. Pixar brought digital animation technology to the team while Disney brought its valuable, rare, and difficult-to-imitate-or-substitute brand name in animation movies, merchandising might, theme parks, distribution channels, and story-telling competence to the team. In the face of an innovation, teaming up to go far growth-wise is reminiscent of the African proverb, "If you want to go fast, go alone. If you want to go far, go together." Many firms pursue some combination of the *block*, *run* or *team-up* strategies in parallel or series over time.[17]

Cost structure. The other component of profits—that a firm must pay attention to as it grows—are the costs that are incurred in offering customers the right value proposition, targeting and meeting the needs of the right market segments, pursuing the right revenue models, and acquiring the relevant underpinning capabilities. There are two types of costs that a firm has to worry about: production and transaction costs. Production costs—made up of fixed costs, variable costs, marginal costs, and sunk costs—are the costs that go into conceiving, designing, and manufacturing a product or delivering a service. Transaction costs are the costs associated with (1) searching and acquiring information about inputs, (2) the contracting associated with value creation and capture activities, and (3) the monitoring and enforcement of contracts/agreements. The profile of these costs is the cost structure of the business model.[18]

Keeping costs low is important, but it is even more important for a cost-driven business model than for a differentiation-driven one. In a cost-driven business model, a firm's competitive advantage comes from positioning itself as a low-cost provider. Wal-Mart's business model is cost-driven. In a differentiation-driven business model (sometimes called value-driven business models), a firm's competitive advantage comes from being a product differentiator. Apple's business model is differentiation-driven. In any case, it is critical to ensure that as a firm grows or faces other challenges, its costs do not rise faster than its revenues.

Of course, growth depends very much on the underlying capabilities. To pursue a block strategy, a firm needs to have difficult-to-imitate-or-substitute capabilities. To pursue a run strategy, a firm needs to have what it takes to innovate. Not everyone who wants to pursue a run strategy can do so. Apple had Steve Jobs, a strong brand, and distinctive design capabilities that were critical to the firm's run strategy. To successfully pursue a team-up strategy, each member of the team has to bring valuable complementary capabilities to the table.

Capabilities

As already hinted above, capabilities are central to every business model.[19] For example, at the core of every entrepreneur's business model are the people, including the entrepreneur, who must obtain financing for the venture and deliver its first products. At the core of Google's business model are search capabilities that enable it to deliver searches that are perceived as very dependable by many customers, software that enables the firm to serve the needs of the long tail of its customers, the many tools that it offers its apps developers, copyrights to its look-and-feel, and so on. An important part of an entrepreneur's challenge is to build the capabilities to take advantage of any opportunities to offer better customer value propositions, find attractive market segments whose needs it can satisfy, increase the number of high-willingness-to-pay customers in an existing market or move to new markets, look for better revenue models or improve an existing one, implement better pricing models, or pursue profitable growth.

Capabilities consist of *resources* and *activities*. Resources or assets are what a firm *owns* or *has access* to, while activities are what it *does*. Activities transform resources into value created and/or captured. How much value is created and captured depends on the quality of the resources.[20] Resources include brands, people, equipment, products, culture, financing, knowledge, patents, copyrights, trademarks, trade secrets, relationships with coopetitors in an ecosystem, distribution channels, shelf space, position in a network or vis-à-vis coopetitors, installed base, and so on. More recent research suggests that a firm's social capital can be just as important in a business model as other resources.[21] For example, a firm can use its ties (relationships) to members of its social network to locate and acquire vital information during business model generation or execution.[22]

How much value is created and captured also depends on *which* activities are performed to build and/or transform the resources, *who* performs the activities, *when* they are performed, *where* they are performed, and *how* they are performed.[23] All the activities of a value chain, value network, and value shop are candidates.[24] That means all activities from vertical integration (forwards and backwards) and alliances to the seemingly mundane ones such as accounts receivable are candidates. One of the best examples of how the choice of seemingly unimportant activities can impact the value created and/or captured comes from the founding of Genentech. Its founders went to venture capital heavyweight Kleiner Perkins and asked for about $3 million, most of which was to go towards buying capital equipment to perform the pioneering research in gene-splicing—to produce proteins—that would lead to the production of human insulin and a lot more. By convincing the founders to outsource some of the work to existing scientific laboratories, Kleiner Perkins was able to reduce the amount needed to $250,000, making the investment in the venture more plausible.

More specifically, activities are the instruments that a firm uses to build and/or transform resources into value created and captured. For example, firms advertise to build brands or leverage brands to enhance the value perceived in products by customers, use access to distribution channels to get products to customers, transform knowledge embodied in patents into new products, transform designs into products, use pricing activities to capture more consumer surplus by leveraging their positions vis-à-vis coopetitors, network with suppliers to keep input costs low, and so on. Increasingly, firms also take the right actions to build and take advantage of large dependable networks/platforms.[25]

Effectively, capabilities consist of the resources/assets and the activities that use these resources to create and capture value—to offer the right customer value proposition, target the right market segments, promote the profitability of revenue models, and enable the firm to grow profitably.

Business Model as a System

In general, a business model is a system with components and linkages between them—that is, a system with interrelated components.[26] However, the interrelationships are not symmetric since one component—capabilities—drives the other four components. One advantage to the systems nature of a business model is that although it may be easy to imitate a few components of a business model, it can be difficult to replicate all components and the linkages between them.[27] This difficulty in replicating a business model can be an asset to a firm that wants to pursue a block strategy. One disadvantage is that a firm can also get trapped in its own business model even as competitors leapfrog the business model using a disruptive technology, eroding its competitive advantage.[28]

Finally, it is important to note that a business *model* has the core ingredients of a business *plan*. That is, although the structure of the business plan that one entrepreneur or manager would present when seeking venture capital can vary considerably from the plan presented by the next entrepreneur, the *plan* still has the core components of a business *model*. Somewhere in a business plan—explicitly stated or embedded in other elements—there is usually a customer value proposition, a market that is being addressed by the customer value proposition, the revenue model (including the pricing model and sources of revenues), a growth model, and the capabilities—especially the people and funding—needed to execute the plan profitably. (Note that because a business model is a system whose components interact, there is likely to be overlap when analyzing a business model using these components as a framework.)

The Innovation Difference

So far, we have explored the components of a business model—any business model. The question now is: What does business model *innovation* mean as far as these components are concerned? Business model innovation is about doing things differently—about *change*. It is often about changing the rules of the game—slightly or radically—to make money. These changes are often about creating and/or taking advantage of opportunities to better create and capture value. The changes can be manifested in one or more of the components of a business model. Many innovations involve a new customer value proposition that is compelling enough to attract customers from competitors' products or from the sidelines. This compelling customer value proposition can come from new ideas/capabilities or a re/combination of existing ideas/capabilities. For example, Apple's iPod business model changed the rules of the game in the way people could now buy music—through its iTunes music store—and the relationships between MP3 player makers and music label companies. In its iPhone business model, Apple's App Store, access to the Internet, and relationships with chip suppliers also changed the rules of the game. Nintendo's Wii business model changed the rules of the game in video game consoles. Ford's innovative assembly line model also changed the rules of the game, starting with the model-T.

The *innovation* in the business model can also be in the way a market is addressed. For example, in the 1990s and early 2000s, Dell changed the rules of the game in the PC industry with its build-to-order and direct sales models. It can also be in the revenue model. For example, as we saw earlier, it was Xerox's decision to lease rather than sell its Xerox 914 that may have enabled the company to climb to the top of the photocopy-machine business, earning the right for its name to become a verb—to Xerox something.[29] Sponsored ads revolutionized advertising in the search world and enabled Google to rise to prominence.

A common mistake that firms often make during innovation is to focus on one component of a business model and forget about the innovation's potential impact on other components. Consider the case of Kodak again. In film-based photography, Kodak pursued a razor-and-blade revenue model that worked incredibly well.[30] It sold cameras at relatively low prices and made most of its money from film, chemicals, and paper. In the face of the digital photograph, Kodak developed digital technology but did not know how to deal with the razor-and-blade revenue model that had worked so well with film-based photographs. The result was that Kodak's new business model failed, and may have ushered Kodak into bankruptcy.

Effectively, a firm that pursues a business model innovation is better off looking carefully at which components should change by design, and what changes are triggered by these designed changes. Some of the questions that can help a firm better identify changes in different components of a business model and the potential impact on business model profitability are:

- *Customer value proposition*: What is so compelling about the customer value proposition of the new business model (relative to the old one) that would attract customers from competitors or from the sidelines?
- *Market segments*: How many customers does the innovation attract? How many of these customers are from growing the market and how many are from existing markets? What is their willingness to pay? Is the new market any more attractive than the existing one?
- *Revenue models*: Does the business model innovation create an opportunity for new profitable revenue models, and/or change old revenue models? Does the business model innovation require a new pricing strategy?
- *Growth model*: How can the firm grow *profitably*?
- *Capabilities*: Does the firm have the capabilities needed to deliver superior customer value proposition to many high-willingness-to-pay customers, pursue the right revenue and growth models? To what extent do a firm's existing capabilities help or hurt what it needs to do to succeed with the new business model from the innovation?

TYPES OF BUSINESS MODEL INNOVATIONS

An important question for firms in the face of a business model innovation is: To what extent are the rules of the game changed by the innovation?[31] That is, how game-changing is the business model innovation? Are the rules of the game changed so much that old ways of doing things are no longer effective? One approach to understanding the degree to which the rules of the game have changed in a business model innovation is to use two important strategy variables.[32] The first variable is the degree to which existing products/services are rendered noncompetitive as a result of the innovation. The idea here is that if the rules of the game change radically, the new business model is likely to be such that products/services that are rooted in the old business model will no longer be competitive in the market addressed with the new business model. The second variable is the degree to which existing capabilities are rendered obsolete by the new business model. If the rules of the game in a new business model change drastically, the capabilities needed to pursue the new business model may be so different that existing capabilities are rendered obsolete (of no use in pursuing the new model). For example, the rules of the game changed so much from film-based photography to digital photography that film-based capabilities were rendered obsolete.[33] These two variables are shown in the two-by-two matrix of Figure 1.2.

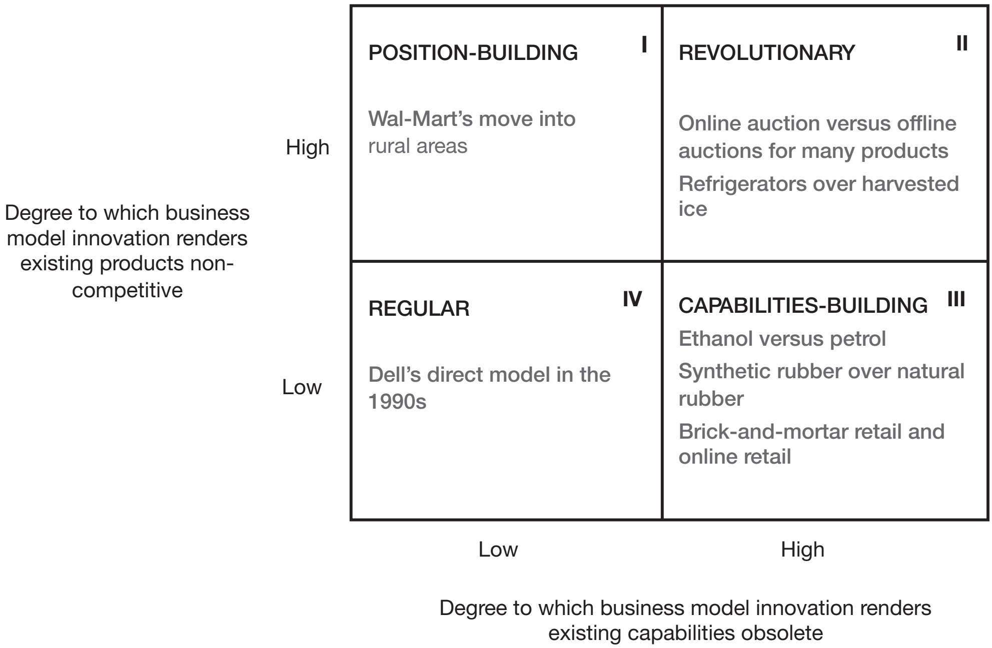

Figure 1.2 Types of business model innovation

The four quadrants of the two-by-two matrix represent different types of business model innovation. The degree to which the rules of the game change increases as one moves from the origin of the graph to the top right corner. In a *regular* business model innovation, there is little or no change in the rules of the game.[34] The biggest changes in the rules of the game are in a *revolutionary* business model innovation since it renders existing products non-competitive and existing capabilities obsolete (Figure 1.2). Changes in the rules of the game are about the same in *position-building* and *capabilities-building* model innovations. We now discuss all four types in more detail.

Regular

In a *regular* business model innovation, a firm uses existing capabilities—e.g. value chain activities and underpinning resources—to build the new business model. The business model is such that existing products in the market remain competitive. That is, products rooted in a regular business model may take some market share from those that use the old model, but the latter remain profitable enough to be a competitive force in the market. The business model pursued by Dell in the 1990s when it introduced its build-to-order direct model was a regular business model innovation. Rather than pass through distributors to sell its computers, Dell sold directly to customers who could order their computers directly from Dell, specifying what they wanted in their computers. Dell did some things differently but the capabilities that it used were not radically different from those needed for the indirect model. More importantly, the business model was such that computer makers such as Compaq and HP who sold through distributors were still competitive.

Capabilities-building

In a *capabilities-building* business model innovation, the capabilities that are needed in the new model to create and capture value are radically different from those of the old model (Figure 1.2).[35] However, products that are rooted in older business models are still competitive. Changes in the rules of the game are largely capabilities-related. We describe such a business model as capabilities-building because the capabilities needed to pursue the model need to be built from scratch or to be acquired in some other way. For example, a firm that pursues energy from renewable resources is pursuing a capabilities-building business model innovation since it needs to develop new capabilities that are very different from petroleum-based business models. Consider the pursuit of ethanol as a fuel for cars. Making ethanol—especially from cane sugar, sugar beat, corn, or sweet potatoes—requires very different capabilities from those used to drill, pump out, transport, and refine petrol to get gasoline for use in cars. However, both fuels coexist in the market. Thus, a renewable energy business model is capabilities-building.

Another example of a capabilities-building business model is the use of synthetic rubber (made from oil) and natural rubber from trees to make and sell tires. Making synthetic rubber from petroleum is very different from tapping sap from trees in tropical forests and turning it into rubber. Synthetic rubber was an innovation over natural rubber and required capabilities-building business models. Natural rubber remained competitive in many markets.

A more familiar example in developed countries is brick-and-mortar versus online retail. The capabilities needed for one are radically different from those needed for the other and yet both coexist and are doing well.

Position-building

In a *position-building* business model innovation, products/services rooted in the new business model render products/services rooted in old business models non-competitive (Figure 1.2). However, the capabilities that underpin the new business model are primarily the same as the capabilities that underpin the old business model or build on them. We describe this model as position-building because it renders existing products noncompetitive. Wal-Mart's business model when it moved into small towns in the United States was a position-building business model. The capabilities on which the company's business model was rooted were largely the same as, or built on, those that underpinned incumbent retailers' business models. However, Wal-Mart's business model rendered many small businesses in these small towns noncompetitive since these competitors could not offer customers the cost savings offered by Wal-Mart.

Revolutionary

In a *revolutionary* business model innovation, the core capabilities that underpin the new model are so different from those that underpin the old business model that these old capabilities are largely useless for pursuing the new business model.[36] Products that are rooted in the old business models are also rendered obsolete. A revolutionary business model redefines what creating and capturing value in a market is all about while overturning the way value chain activities were performed before. The rules of the game are changed both capabilities-wise and market-wise. It is the most game changing of all the business model innovations. Examples of revolutionary business model innovations include the business models pursued by online auctions firms such as eBay. Online auctions require radically different capabilities from offline auctions and, for many products, offline auctions business models are no longer competitive. The business models pursued by makers of the refrigerators that replaced harvested ice as a cooling device were also revolutionary.

Dynamics and Application

It is important to note that the classification of business model innovations in Figure 1.2 is at a point in time. The figure assumes that business model innovations are static —that is, once a business model innovation is regular, it remains regular forever. However, many business model innovations that start out as regular can quickly become position-building, capabilities-building, or revolutionary. In fact, disruptive technologies usually start out as regular or capabilities-building innovations before becoming position-building or revolutionary. One can show the evolution of a business model innovation in Figure 1.2 by adding dates to show when the innovation was regular, position-building, capabilities-building, or revolutionary. An organization can also use Figure 1.2 to plot its progress relative to its competitors in a business model innovation that is evolving.

THE EXTERNAL ENVIRONMENT AND BUSINESS MODEL INNOVATION

Entrepreneurs and firms do not pursue their business models in a vacuum. They operate in ecosystems made up of an industry environment, and an overarching macro environment (Figure 1.3). An industry ecosystem is made up of the suppliers, customers, complementors, competitors, substitutes, and other institutions with which the firm has to cooperate to create value and compete to capture the value created.[37] The macro-environment is made up of the political/legal, economic, social/demographic, technological, and natural environments (PESTN). Firms usually pursue business model innovation when they want to take advantage of the opportunities and threats of their environments. These opportunities and threats may come in the form of phenomena such as disruptive technologies, less-is-more innovations, crowd-sourcing, social media, and the long tail (Figure 1.3). The opportunities and threats could also come from factors such as government regulations.

BUSINESS MODEL DISCOVERY PROCESS TO GENERATE A PORTRAIT

A business model discovery process is a procedure in which groups of people set out to discover and describe—using the building blocks of a business model—how a firm creates and captures value.[38] It is the process of painting a portrait of the business model. The process depends on whether the firm already has a business model or not. We consider both cases.

Business Model Already Exists

If a firm already has a business model, then the task is one of uncovering it. This may sound trivial but it's not. One reason is because very few employees—including the CEO—know everything that they need to know about every component of their business models.

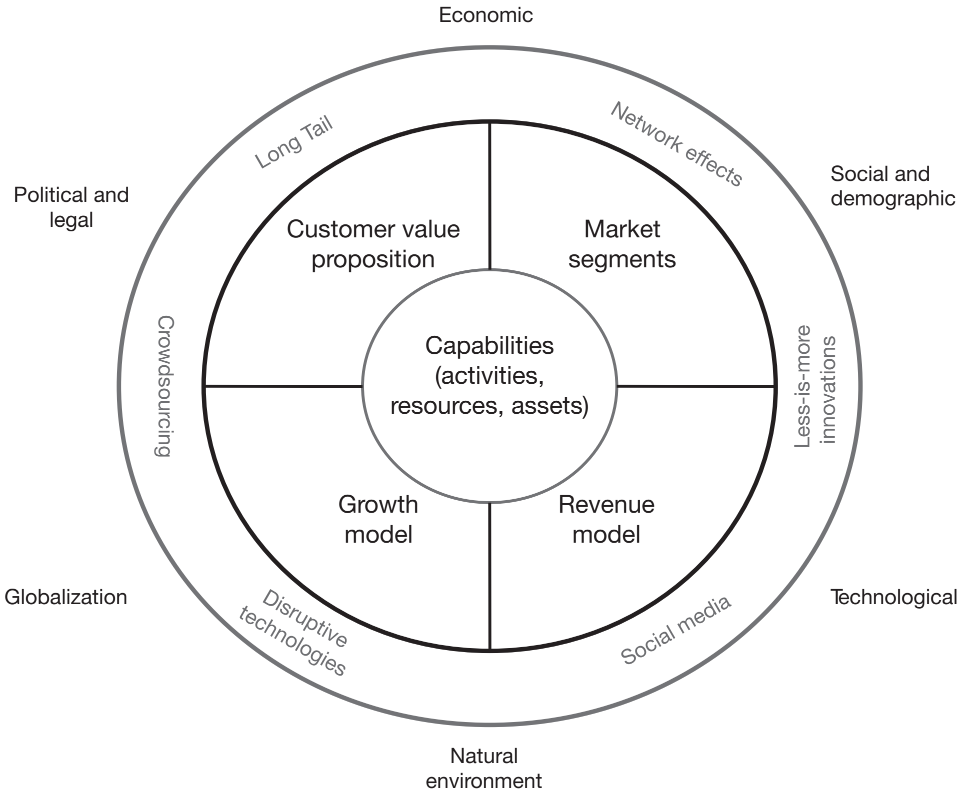

Figure 1.3 A business model innovation's environment

The idea here is not so much to make judgments about whether the firm is doing the right thing or not, as it is to detail what is going on within each of the building blocks of the model. The task is "to call them as you see them." After painting an accurate portrait of its business model, a firm can then appraise the model to determine what is good or bad about the model and what the firm can do to reinforce the good while changing the bad.

The process is simple but the payoff can be huge. Each group gathers around a board or any other surface on which post-it notes can be posted. Every participant's ideas about each of the five components of the business model are posted in the appropriate component box for everyone to examine, learn from (discover what's new), and contribute to. Towards the end of the process, the groups can vote or seek the help of experts to decide what belongs in the model and what does not—that is, what is part of the firm's value creation and capture activities and what is not.

Increasingly, such processes are taking place via social media such as wikis in which participants can include anyone from anywhere who wants to participate. In any case, diverse groups are more likely to paint an accurate portrait of the model than homogeneous ones. This is particularly true of revolutionary business model innovations than regular, position-building, or capabilities-building ones.

The first mistake that is easy for a firm to make in undertaking a business model discovery process—in painting the business model portrait—is to start making judgments about what the group sees. Such judgments can turn potential eager participants into very defensive participants, especially if the participants are from the firm whose business model is being described. When the portrait has been painted, a different group at a different time can make the judgments using a framework such as the VARIM framework that we will explore in Chapter 2. The second mistake is to generate a long laundry list of items in each component, many of which are not important. The process should be such that what gets into the portrait is comprehensive and yet parsimonious. That is, it (the process) should not leave out something that should be in the model but make sure that items that should not be there are not. One way to assure parsimony and comprehensiveness is to have an outsider—such as a consultant that is familiar with the industry and can look at the firm with an outsider's lens—be present as an observer. The third mistake in generating a portrait of a business model is to relegate the whole process to one person. In many companies, not even the CEO knows everything that is going on in all the five building blocks of a business model.

No Business Model Exists

Many start-ups and entrepreneurs do not yet have business models. Therefore, one cannot paint a portrait of what one does not have. Consequently, the task here is to try to determine what should go into the model. In that case, one can make judgments about what should go into the new model and what should not. One of the best ways to do this is to use the VARIM model of Chapter 2. Alternatively, the group can use the business model innovation questions that we saw earlier. These are paraphrased below:

- *Customer value proposition*: What is so compelling about the start-up's customer value proposition that will attract customers from competitors or from the sidelines?
- *Market segments*: How many customers does the start-up expect to attract? How many of these customers are expected to be from growing the market and how many are expected to be from existing markets? What is the willingness to pay of each group? How attractive is the market expected to be?
- *Revenue models*: Will the new business model innovation create an opportunity for new profitable revenue models? Will the firm have an opportunity to pursue better pricing strategies?
- *Growth model*: How can the firm grow *profitably*?
- *Capabilities*: Does the start-up have access to—or can it acquire—the capabilities needed to deliver superior customer value proposition to many high-willingness-to-pay customers, pursue the right revenue and growth models?

By answering these questions, a diverse group can help generate a business model for a start-up.

NONPROFIT BUSINESS MODELS

Because we defined a business model as a framework or recipe for making money, the phrase "nonprofit business models" may sound like an oxymoron. However, a closer look at what nonprofits do suggests the contrary. Nonprofits usually have two kinds of customers: donors and clients. Nonprofits have to raise money from donors and use it to serve clients. Donors usually have many nonprofits competing for their money. Therefore, for any donor to choose one nonprofit over another, the nonprofit must offer something that the donor cannot get from competing nonprofits. The nonprofit also needs to keep its costs down. Thus, each nonprofit needs to offer its customers (clients and donors) something that they value—a value proposition. Market segments can be a function of geography, demographics, the type of service offered to clients, and so on. A visible difference is in pricing where many nonprofits do not set "prices" but depend on donors to donate what they like. This is not to say that some for-profits cannot use a donation-pricing model. The point here is that nonprofits need business models as much as for-profits. In fact, the main distinction between a for-profit and nonprofits is that for-profits redistribute the difference between revenues and costs to shareholders whereas nonprofits reinvest theirs in serving clients.

Nonprofits need to pay attention to their business models so as to better offer their clients the benefits that they value and convince donors to keep donating. If nonprofits doze at the wheel and the benefits become stale or costs become too high, entrepreneurs can move in with for-profit or nonprofit business model innovations. A case in point is higher education in the United States where the cost of obtaining an undergraduate degree has become very high. Professor Vance Fried of Oklahoma State University has long proposed a higher education model in which graduates obtain their high quality education but at very low cost.[39] In one scenario, Professor Fried showed that an undergraduate in the United States could obtain a first-class education for as little as $6,700 a year compared to $25,900 in public research universities, or $51,500 in a private university.[40] Many for-profit start-ups have targeted the higher education market in the United States with new business model innovations that draw on some of Professor Fried's ideas, hoping to disrupt existing high-cost models.

KEY TAKEAWAYS

- A business model is a framework or recipe for making money—for creating and capturing value. Innovation is about doing things differently from the norm. Therefore, a *business model innovation* is a framework or recipe for creating and capturing value by doing **things** differently.
- Components of business model include:
  - *Customer value proposition*: Consists of those things that the firm and its products/services can do for customers to solve their problems and/or satisfy their needs better than competitors. It answers the question: What is so compelling, engaging, rewarding or delightful to customers about what a firm has to offer them that will attract these customers from competitors or from the sidelines?
  - *Market segments*: Is about the groups of customers to whom a value proposition is being offered or should be offered, how many customers there are in each group, their willingness to pay, and the attractiveness of each market segment.
  - *Revenue models*: The revenue model component is about how many customers get to pay how much for what product/service, when and how.
  - *Growth model*: Answers the question: How can a firm grow *profitably*?

  - *Capabilities*: Capabilities consist of *resources* and *activities*. Resources or assets are what a firm *owns* or *has access* to, while activities are what it *does*. Activities transform resources into value created and/or captured. How much value is created and captured depends on the quality of the resources. It also depends on *which* activities are performed to build and/or transform the resources, *who* performs the activities, *when* they are performed, *where* they are performed and *how* they are performed.

- A business model innovation can come through a change in any of the components of a business model.

- Business model innovations can be grouped into four:
  - In a *regular* business model innovation, a firm uses existing capabilities—e.g. value chain activities and underpinning resources—to build the new business model. The business model is also such that existing products in the market remain competitive.
  - In a *capabilities-building* business model innovation, the capabilities that are needed in the new model to create and capture value are radically different from those of the old model and need to be built or acquired (Figure 1.2). However, products that are rooted in older business models are still competitive.
  - In a *position-building* business model innovation, products/services rooted in the new business model render products/services rooted in older business models non-competitive (Figure 1.2). However, the capabilities that underpin the new business model are primarily the same as the capabilities that underpin the old business model.
  - In a *revolutionary* business model innovation, the core capabilities that underpin the new model are so different from those that underpin the old business model that these old capabilities are largely useless for making the new product. Products that are rooted in the old business models are also rendered noncompetitive.

- Since business models do not operate in a vacuum, their competitive environments as well as their macro-environments can also have a huge impact on the profitability of business models. The conditions that enable phenomenon such as crowdsourcing, the long tail, social media, less-is-more innovations, and disruptive technologies to thrive, can play a critical role in a firm's business model.

- How can one uncover a firm's business model? By having diverse groups of employees and coopetitors undertake a process of exploration and discovery in which they collectively paint a portrait of the model. No attempt is made to judge the model. Trying to make judgments may make many contributors defensive and less likely to contribute to painting a true picture of the business model, especially if the contributors are employees. What if it's a start-up and no business model exists? Use the VARIM model of Chapter 2 or the following questions to generate the new model. *Customer value proposition*: What is so compelling about the start-up's customer value proposition that will attract customers from competitors or from the sidelines? *Market segments*: How many customers does the start-up expect to attract? How many of these customers are expected to be from growing the market and how many are