Chapter 1

Understanding Business Models[1]

"Business model" was one of the great buzzwords of the Internet boom, routinely invoked, as the writer Michael Lewis put it, "to glorify all manner of half-baked plans. . . ." Many people—investors, entrepreneurs, and executives alike—bought the fantasy and got burned. And as the inevitable counter-reaction played out, the concept of a business model fell out of fashion. . . . That's a shame. For while it's true that a lot of capital was raised to fund flawed business models, the fault lies, not with the concept of a business model, but with its distortion and use. A good business model remains essential to every successful business.

Joan Magretta[2]

During the late 1990s, "dot-com" executives and Wall Street analysts routinely justified high valuations by claiming the superiority of emerging Internet business models. They maintained that new business metrics should be applied to calculate economic value and that these business metrics would eventually drive profitability—but only after huge amounts of capital had been invested to "get big fast." Yet few Internet entrepreneurs could trace the path between the new metrics they had chosen—our personal favorite was "eyeballs"—and the tangible economic returns investors would eventually demand. The irrational exuberance for Internet stocks reached its peak during 1999, when the number of Internet initial public offerings (IPOs) surged. During this 12-month period, hundreds of Internet companies went public, and with these IPOs came a flood of public data that highlighted the fatal flaws in many dot-com business models. By early 2000, concerns about the sustainability of these newly public, and not yet profitable, Internet businesses caused stock markets to plummet.

[1] This chapter is based on material developed by Professor Lynda M. Applegate for her online tutorial, Crafting Business Modules, available from Harvard Business School Publishing. Permission to reprint must be obtained from the author.

[2] J. Magretta, "Why Business Models Matter," *Harvard Business Review*, May 2002.

The resulting backlash caused many to question whether the concept of a business model had been invented simply to justify get-rich-quick Internet schemes. But this is far from accurate. While many still believe that business models emerged with the Internet, in fact, the concept can be traced to early management thinking. Published in the 1960s, Chandler's *Strategy and Structure* provided an important foundation for defining the underlying economic model upon which businesses were constructed.[3] This path-breaking book highlighted how alignment of strategy and organizational structure enables efficient coordination and execution while, at the same time, allowing the flexibility necessary to respond quickly and effectively to a changing environment. It also defined how strategy and organization drove capital efficient profitable growth and sustainable competitive advantage. Chandler's work, combined with a large body of increasingly sophisticated twentieth century management research, laid out the theory of the industrial economy business models that guided management practice through much of the twentieth century.[4] By the late 1990s, industrial economy business models had become so well defined that the approach to their analysis was fairly straightforward. Executives familiar with an industry understood the roles various firms played and the mechanisms through which each player created and captured value or, conversely, destroyed it.

In today's global network economy, however, new business models are emerging that are radically changing how firms create value within an industry and across industry boundaries. Indeed, as new technologies provide opportunities to radically change business and industry economics, the need to define strategy and its execution within the framework of a business model has become an increasingly important management tool—especially for executives and entrepreneurs who are searching for opportunities to create and exploit game-changing innovations.

This chapter introduces the basic organizing framework for Module 1 of this book. It begins with a short overview that provides the definition of a business model and then identifies an approach for conducting a business model audit. Chapter 1 also discusses business model analysis from a general business perspective. The remaining chapters in this module provide a more detailed examination of the impact of IT on the three key components of a business model—strategy, capabilities, and value—and the role of IT in transforming business models.

Overview

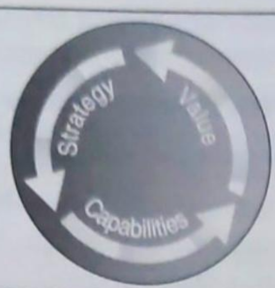
> Few concepts in business today are as widely discussed—and seldom systematically studied—as business models.
>
> *Tom Malone et al.*[5]

[3] A. Chandler, *Strategy and Structure: Chapters in the History of the American Industrial Enterprise* (Cambridge: MIT Press, reprint edition August 1969).

[4] For a summary of the strategy research that formed the backbone of business model research, see H. Chesbrough, and R. Rosenbloom, "The Role of the Business Model in Capturing Value from Innovation," *Industrial and Corporate Change*, June 2002.

[5] T. Malone, et al., "Do Some Business Models Perform Better Than Others?" MIT Sloan Working Paper, 4615-06, May 2006. ©2006, Thomas Malone, Peter Weill, Richard Lai, Victoria D'Urso, George Herman, Thomas Apel, Stephanie Woerner.

FIGURE 1.1
Business Model Framework and Definition



Business Model Definition
A business model defines how an organization interacts with its environment to define a unique *strategy*, attract the resources and build the *capabilities* required to execute the strategy, and create *value* for all stakeholders.

Have you ever watched young children play football (or soccer as we refer to it in the United States)? The referee blows the whistle to start the game and, immediately, all the players on both teams jump on the ball. Similarly, executives often use this "jump-on-the-ball" approach to formulate strategy. Michael Porter stresses that this approach is particularly common during the emergence of a new business phenomenon or a novel technology. While it is common to look to the marketplace for guidance, he cautions, market signals can be unreliable. "New technologies trigger rampant experimentation by companies and their customers, and the experimentation is often economically unsustainable. As a result, market behavior is distorted and must be interpreted with caution."[6]

The "jumping-on-the-ball" approach was popular during the "dot-com" era of the late 1990s, when many lost sight of the fundamental principles for how to build sustainable businesses. The results were predictable. Few of these businesses survived. How do you distinguish "hair-brained schemes" from "strategic coups"? In stable times, executives often rely on the intuition that comes from experience. When the rules of the game are changing, however, this experience may steer you wrong and new logic has yet to be developed. Renowned management theorist and consultant Peter Drucker cautioned that:

> In turbulent times, an enterprise has to be able to withstand sudden blows and avail itself of unexpected opportunities. This means that, in turbulent times, the fundamentals must be managed and managed well.[7]

An enterprise's business model frames these "fundamentals" and can be used to guide strategic analysis and decision making. As discussed in the remaining chapters in Module 1, the business model framework can also be used to assess IT impacts. The definition of a business model used in this book is presented in Figure 1.1.

A business model—whether it is for a publicly traded company, a new venture, a government agency, or an educational institution—forms the foundation for how executives make decisions about opportunities to pursue, businesses to launch or buy, activities to perform, talent to hire, and ways to organize to deliver value to stakeholders. For a new venture, the business model becomes a predictive forecasting tool that frames the development of a business plan and the assumptions used to forecast future financial returns.

The remaining sections of this chapter provide a more detailed examination of each component of a business model. The key steps in a business model audit are presented in Appendix 1A.

[6] M. Porter, "Strategy and the Internet," *Harvard Business Review*, March 2001.
[7] P. Drucker, *Managing in Turbulent Times* (New York: Harper & Row, 1980).

Analyzing Strategy

> Competitive strategy is about being different. It is about deliberately choosing a different position and set of activities that enable you to deliver unique value.
>
> *Michael Porter, 1996*[8]

Strategy is a series of choices that determine the opportunities you pursue and the market potential of those opportunities. It involves choices concerning products to sell, markets to enter, and ways a company differentiates its offerings from other alternatives. From a business model perspective, decisions concerning a company's strategy define the revenue drivers of the business and its potential for growth over time. These decisions also determine proprietary assets to be kept inside the walls of the firm and those that will be leveraged on the outside. These choices define strategic positioning along four key dimensions:

- *Market positioning* determines the choice of customers to serve, the needs and expectations that will be met, and the channels that will be used to reach those customers.
- *Product positioning* determines the choice of products and services to offer, the features of those offerings, and the price that will be charged.
- *Business network positioning* determines the role an organization plays and the activities it performs within an extended network of suppliers, producers, distributors, and partners.
- *Boundary positioning* determines markets, products, and businesses that will NOT be pursued.

In his best-selling article, Michael Porter stresses that successful strategies define how a company plans to achieve a distinctive and unique position that "woos customers from established players or draws new customers into the market."[9] But successful strategic positions often attract imitation. *Sustainable advantage* occurs when barriers exist that make it difficult for competitors to imitate your actions or for customers to switch. A business model *strategy audit* includes analysis in the four areas discussed below. The role of IT in transforming business model strategy is discussed in Chapter 2 of this module.

Assess business context. Begin by asking: "What business are we in?" Examine industry and competitive dynamics and consider relevant demographic, economic, political, regulatory, and societal factors that influence (or could influence) the business. Identify key trends that will either positively or negatively impact the industry and any disruptors—for example, technologies, globalization, new business models, or regulatory changes—that could be a source of opportunity or threat. Identify specific opportunities to pursue and, most importantly, those opportunities that will NOT be pursued. Analysis of the business context defines industry trends and disruptors. It also defines what opportunities can be pursued and their associated risks. This

[8] M. Porter, "What Is Strategy?" *Harvard Business Review*, November–December 1996, p. 64.
[9] Ibid. p. 65.

analysis helps frame choices concerning a company's boundary positioning. IT trends, disruptors, opportunities, and risks can also be identified.

Analyze customers. Armed with a high level of understanding of the industry, attention can now turn to an analysis of current (and future) customers. Identify pressing problems customers face and evaluate how a company's current products and services, as well as those under development address those problems. While both market research and internal customer information are critical to customer analysis, it is also important to get a first-hand perspective by talking with and observing customers. Watch them work and consider how easy or hard it is for them to use a company's offerings. Whenever possible, involve them in designing and developing products and services. This analysis helps frame choices concerning a company's market positioning. The ability to use IT to collect and analyze real-time and historical market information and to interact with current and future customers provides an important foundation for market positioning decisions.

Analyze competitors and substitutes. At this point, it is helpful to analyze alternatives customers have for meeting their needs. Which firms provide those alternatives? What makes one company's product or service offerings different from other offerings? Do these differences matter to customers? How much are customers willing to pay? How do prices differ from one competitor to another? Do competitors possess proprietary knowledge, assets, or intellectual property that serve as barriers to entry? What market share do different competitors have and how are these shares changing over time? Are there new entrants that offer radically different business models or offerings? This analysis helps frame choices concerning a company's product positioning. For many firms, IT serves as an important source of differentiation and proprietary advantage.

Assess the business network. Complete the business model strategy audit by analyzing the network of suppliers, distributors, and other partners needed to execute strategy. What activities do different players perform and what are the relationships among the various players? How powerful are individuals and organizations that control key activities, resources, or capabilities required to execute strategy? How is the network organized?

Traditionally, the activities of various players in a business network were organized as a sequential chain of inputs and outputs, which Michael Porter termed a "value chain" since it described the steps through which the inputs from one player were transformed into outputs that enabled various players to create and claim value.[10] Today, open standard networks enable companies like Google and Amazon.com to organize into densely connected "value networks" within which value is created and claimed through a complex set of interactions among multiple participants.[11]

Analysis of a company's business network helps frame more choices concerning the role a firm plays and its positioning within a business network. A more detailed discussion of approaches to organizing business networks is available in Appendix 1-B. The analysis of a company's business network serves as an excellent transition to a business model capability audit.

[10] M. Porter *Competitive Strategy: Creating and Sustaining Superior Performance* (NY: Free Press, 1985).

[11] P. B. Evans and T. S. Wurster, "Strategy and the New Economics of Information," *HBR OnPoint* (#4517), Boston: Harvard Business School Publishing, 2000.

Analyzing Capabilities

> The fundamental purpose of organizations is to [enable the] attainment of goals that require coordinated efforts. Interdependence and uncertainty make goal attainment more difficult and create the need for organizational solutions.
>
> *McEvily et. al., 1998*[12]

Once strategic positioning and direction have been defined and strategic goals have been set, the next step is to assemble the resources and build the capabilities required to achieve those goals. Capabilities enable a company to execute current strategy while also providing a platform for future growth. They define the resources needed to execute strategy and, in doing so, define the cost model of an organization. Capabilities also define the assets of a firm and the efficiency with which those assets are used. A business model *capability audit* frames analysis in the four areas discussed below (refer back to Appendix 1A). The role of IT in transforming business model capabilities is discussed in Chapter 3 of this module.

Analyze processes and infrastructure. It is helpful to begin the capability audit by extending the analysis of a company's business network through a more in-depth evaluation of core processes. This analysis should address core processes required to produce products; deliver services; acquire and serve customers; manage relationships with key stakeholders; and deliver a continuous stream of new products, services, and innovations. In addition, the analysis should include activities performed by a company and its suppliers, customers, and business partners. Once core operating processes have been analyzed, end-to-end support processes (e.g., payroll, finance, human resources management, and data center management) should be examined. Do these processes enable efficient and effective strategy execution? Do people and partners at all levels have the information needed to coordinate and control end-to-end processes and the infrastructure required to support them? Are operations best in class in terms of speed, quality, cost, and productivity?

Just as today's open standard IT networks and systems form the foundation for sharing information and transacting business among members of a business network, so too does IT form the foundation for the processes and infrastructure within a firm. Indeed, streamlined, synchronized processes are one of the most powerful sources of IT-enabled proprietary advantage. Not only does IT enable companies to coordinate activities and share information inside the organization and across an extended network of suppliers, customers, and partners; but IT also provides real-time information that enables executives and employees at all levels to make decisions and take actions that create value today and position the company for delivering increasing returns over time.

Evaluate people and partners. Armed with an understanding of end-to-end processes, evaluate whether the company has the expertise needed to carry out the required activities and processes. How easy or difficult is it (or will it be) to attract, develop, motivate, and retain the expertise needed to carry out activities

[12] B. McEvily, V. Perrone, and A. Zaheer, "Trust as an Organizing Principle," *Organization Science* 14, No. 1: 91–103 (1998).

and coordinate and control operations? Does the company have the reputation and image required to attract and retain top talent? Do culture and incentives enable leaders to engage and inspire? Have leaders developed clear performance targets, measurement systems, rewards, and punishments that ensure transparency and fairness? Keep in mind that performance measures for people and partners are often specific to the roles they have been hired to perform. For example, sales force quality and productivity are often measured in terms of sales per employee, customer retention per employee, and customer profitability per employee while manufacturing employees may be measured using production quality and efficiency measures. Once again, IT is a powerful tool for defining, organizing, and building knowledge assets within a firm and a business network. In fact, in 2007, an increasing percentage of the IT investments within firms were directed toward improving business intelligence.

Assess organization and culture. Once processes and people have been evaluated, assess whether the organization design makes it easier or harder for people to make decisions and get work done. Have people been grouped into work units and do they have the accountability and decision-making authority needed to do their work, make decisions, and meet performance targets? Are roles, responsibilities, and authority clear and are mechanisms in place for coordinating work across units? These coordinating mechanisms may include formal reporting relationships, steering committees, and liaison positions. They may also include information and communication systems. Does the informal culture support or hinder individuals and groups as they attempt to fulfill their roles and responsibilities? Do shared vision and values enable people and partners to work together to achieve shared goals? Does everyone understand the boundaries for decision making and action beyond which they must not cross? The ability to use IT to share relevant information and closely monitor decisions and actions made in the field enables companies to organize to achieve the speed and flexibility of a small firm while also leveraging the power, resources, and control of a big company.

Evaluate leadership and governance. Success over time demands strong leadership. Effective leaders use governance structures and systems to balance the creativity and vision needed to set goals and prioritize investments with the discipline needed to execute and deliver results. Governance systems include strategic controls (scanning the environment, defining strategic position, setting goals, and prioritizing projects and investments); operating controls (defining short-term objectives and controlling current business operations and projects); effective risk management (identification and management of key risks); and effective development and management of the shared values and culture that guide decisions and actions. Have leaders communicated a compelling and clear vision for the future that unites people and partners around common goals? Do leaders at all levels balance creativity and innovation with disciplined execution? Can they set goals and deliver results? Are leaders well connected and have they demonstrated a track record of success? Are there a high-performing board of directors and an executive team that closely monitor strategic and operating performance? Do the board and executive team have systems in place to identify and manage risks while also ensuring that the organization's culture and values guide decisions and behavior at all levels?

Analyzing Value Created for All Stakeholders

Behind every major resource allocation decision a company makes lies some calculation of what that move is worth.

Tim Luehrman[13]

The final component of a business model identifies value delivered to all stakeholders. Most executives of publicly traded for-profit firms begin their analysis of business value by looking at company financials.[14] These measures of economic value define the financial returns for business owners and investors, which, in turn, influence stock price and market value. Below we discuss how the business model strategy and capability audits define the drivers of economic value and financial return. The role of IT in driving financial returns and the implications for defining the business case for IT investments are discussed in Chapter 4 of this module.

Given that financial analysis often involves comparisons with other companies or with historical performance over time, *financial ratios* are often used. While specific financial ratios provide answers to questions about the economics of a business model, multiple ratios and measures are often required to understand the impact of strategic decisions or investments on economic value. For example, the decision to acquire a company or enter a new international market may involve new revenue streams and costs that change a company's profit margin while also decreasing cash, increasing debt, or increasing the value of assets on the balance sheet. Executives must be able to analyze the interaction of these financial metrics to make sound business decisions.

The DuPont Formula, created by financial analysts at E.I. du Pont de Nemours and Company in the 1920s, enables comparison of multiple ratios to assist in strategic decision making. This financial metric (see Figure 1.2) relates three different ratios—profit margin, asset efficiency, and leverage—that combine to determine return on equity (ROE).

While ROE is important for understanding business model performance, simply looking at financial returns is not enough. This is especially true when the business is growing quickly or an entrepreneurial executive is launching a new business where financial returns are speculative at best. When the business environment is rapidly changing and highly uncertain, understanding the drivers of value creation is essential. These drivers are identified during the strategy and capability audit. For example, during a strategy audit, an executive may learn that a company's current market is mature and does not provide sufficient revenue growth potential to enable the company to meet its growth goals. Given this analysis, the ability to offer value-added services to customers in the current market may be a key driver for revenue growth. But the decisions to invest in building and launching these value-added services would need to factor in the potential revenues that could be generated, the estimated cost and time

[13] T. Luehrman, "What's It Worth?: A General Manager's Guide to Valuation," *Harvard Business Review* (No. 97305), May–June 1997.

[14] See W. Bruns, "Financial Ratio and Financial Statement Analysis," Harvard Business School Publishing (No. 193-029).

FIGURE 1.2
Using the DuPont Formula to Deconstruct ROE

Profit Margin	Asset Efficiency	Leverage

$$\text{ROE} = \frac{\text{Net Income}}{\text{Revenue}} \times \frac{\text{Revenue}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Shareholders' Equity}}$$

needed to achieve expected returns, the ability to differentiate the service over time, the opportunity cost of not pursuing other opportunities, and a host of other factors. A business model *value audit* frames analysis in the three areas discussed below.

Identify internal and external stakeholders. Begin the value audit by identifying internal and external stakeholders. Assess their interests and expectations. What do they require and what are they able (and willing) to provide? Can the company attract, retain, and motivate key customers and are these customers willing and able to pay? How do the interests of other stakeholder groups (e.g., employees, partners, government, society) influence a company's ability to attract and serve customers? What are the objective and subjective benefits that each of the key stakeholders (or stakeholder groups) receive from doing business with the company?

Identify business model drivers and alignment. When the analysis of each key component of the business model is complete, take a moment to review the insights gained. What are the key opportunities and threats identified during the strategy audit? What are the key strengths and weaknesses identified during the capability audit? From this "SWOT analysis,"[15] identify key revenue, cost, and asset efficiency drivers and develop a business model dashboard that reflects linkages and alignment among the various components. Identify how IT enables each of the key drivers of economic value. For example, does IT enable the company to reach new markets, which, in turn, drives revenue growth? Does IT enable the company to improve quality or streamline processes, which drives cost reductions?

Develop the financial model and determine financing needs. Once business model drivers and the value delivered (or to be delivered) to key stakeholders is understood, develop the financial model for the company. What assumptions have been made about the drivers of revenue, costs, and asset efficiency? How much uncertainty is there in these assumptions? How do changes in these assumptions based on best-case/worst-case scenarios change the economics of the business? In for-profit firms, translate the financial model into the three components of shareholder returns—profit margin, asset efficiency, and leverage—and calculate ROE. (Note: Other measures of shareholder value, such as return on invested capital (ROIC), may also be used.) How does the economic value delivered by a business relate to the market value expectations of shareholders? Are there any fatal flaws in the business model? If so, how should these problems be addressed?

[15] The term SWOT analysis refers to "Strengths, Weaknesses, Opportunities, and Threats." An example of the SWOT analysis that resulted from the business model analysis of Amazon.com in 2001 is available in Appendix 1A.

Description of the Three Components of ROE

Profit margin is a measure of a company's success at turning revenues into profits. It answers the question: For every dollar of revenue that we generate, how much of that dollar goes to net income (also called profit)? In its most basic form, net income is calculated by subtracting expenses from revenues. As a result, anything that lowers expenses and increases revenues improves profit margin.

Asset efficiency measures the efficiency with which an organization utilizes its assets by answering the question: How many dollars of revenue do we generate for each dollar of assets on our books? Of course, traditional financial measures of asset efficiency often don't reflect the value of intangible assets such as the skills and knowledge of employees, the value of information and know-how captured in databases and computer applications, the value of a company's brand and reputation, or the value of its network of business partners and customers. In today's global network economy, these "intangible assets" become even more important as sources of asset value. As a result, forward-thinking executives are expanding the way they calculate the value of their assets to include financial surrogates for intangible assets.

Leverage measures the percentage of a company's assets that would be available to shareholders if the company was sold after first subtracting how much of its assets would be needed to pay off creditors. Understanding a company's leverage enables executives to answer the question: For every dollar of value that I create, how much goes to increasing shareholder value?

In summary, the power of the business model audit does not come from collecting and analyzing independent "buckets" of data. Instead, a business model defines the linkages among key strategy, capability, and value drivers of business performance. Figure 1.3 illustrates these linkages. Refer to Appendix 1A for key questions you can ask to identify the drivers of business model performance. In addition to the role of IT in transforming business models, IT can also be used to develop a business model dashboard and to monitor performance over time.

FIGURE 1.3
Analyzing Business Models

Source: L. M. Applegate, *Crafting Business Models*, Harvard Business School Publishing #808705, 2008.