CHAPTER 2: **THEORETICAL FOUNDATIONS OF BUSINESS MODELS**

Online Supplement

1. Business Model as Activity System

Consistent with the definition presented in Chapter 1, a business model describes *the system of interdependent activities that are performed by a focal firm and by its partners and the mechanisms that link these activities to each other*. We define a business model as a specific type boundary-spanning activity system that aims at total value creation for all parties involved. Research on more general activity systems is broader in scope and does not always focus on organizational systems designed to produce and deliver value. This work has yielded insights on widely diverging phenomena, such as the social nature of knowledge production, taking advantage of technology through new business arrangements, and how to balance cooperation and competition.[1] This research forms an important basis from which to describe and analyze business models.

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Because discrete activities often influence one another, the activity system approach emphasizes interdependencies and the importance of fit.[2] Three types of fit have been described.[3] The first type of fit is consistency between an activity and the firm's strategy. Consistency ensures that the competitive advantage arising from activities accumulates and does not erode or cancel out. The second type of fit occurs when activities are mutually reinforcing, i.e., when the marginal value of one activity increases as another activity is increased.[4] Finally, the third type of fit goes beyond activity reinforcement to

[1] Engestrom and Middleton (1998); Piccoli and Ives (2005); Wasko and Faraj (2005)
[2] Siggelkow (2002)
[3] Porter (1996)
[4] Milgrom and Roberts (1990, 1995)

produce global optimization; it is a system-level type of fit, which optimizes the entire set of activities to eliminate redundancies and minimize waste. Understanding the context of interactions may be crucial in order to grasp the sustainability of competitive advantage.[5]

When the competitive landscape changes dramatically, firms face the challenge of reassessing their set of activities and deciding which ones to keep performing and which ones to discontinue.[6] For example, Porter and Siggelkow (2008) describe how two large American home improvement retail stores, Home Depot and Lowe's, have differing activity systems that reflect their two distinct strategies. Home Depot targets price-conscious small contractors and DIY consumers, by providing knowledgeable sales people, minimal merchandising, and a constant flow of deliveries via select vendors. On the other hand, Lowe's uses a hub-and-spoke model to frequently restock its merchandise, which is arranged in appealing displays and features a greater number of higher-margin items, thereby targeting a different type of consumer.

The activity systems perspective has important implications for managers who need to design, steer, and properly manage functioning and well-performing firms along with their business models, strategies, internal organization, and external collaborations. It suggests that business model designers need to develop a fine-grained understanding of how to design business models that are (a) internally consistent (i.e., where the activities mutually reinforce each other); (b) as a whole consistent with other elements that characterize a focal firm, such as its strategy or the design of its internal organization (human capital, hierarchies, roles, incentives, etc.); and (c) consistent with the business

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5 Porter and Siggelkow (2008)
6 Siggelkow and Levinthal (2003)

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models of other firms that contribute by performing activities that are part of the focal firm's business model. In other words, managers need to pay close attention to the notion of fit and how it applies to business models, what constitutes fit (or misfit), and the performance implications of various forms of (mis)fit.

2. Business Model and Ecosystem

According to the *Encyclopaedia Britannica*, an ecosystem in biology is "the complex of living organisms, their physical environment, and all their interrelationships in a particular unit of space." From the sciences, the analogy has spread to organization theory, which has led some scholars to suggest that the term "industry" should be replaced with the term "business ecosystem," which is "an economic community supported by a foundation of interacting organizations and individuals."[7] As in natural ecosystems, firms cannot thrive alone; they depend on each other, and the broader environment, for their effectiveness and survival.[8] In many situations, different firms, not necessarily from the same industry, are drawn together in a relationship of complementarity or even dependency.

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The ecosystem metaphor provides an interesting lens through which to approach the idea of value generation through cooperation. The success of an innovating firm, for example, often depends on the activities performed by third parties in its environment.[9] Adner (2012) explains how Finnish telecommunications firm Nokia built the world's first 3G phone in the early 2000s, delivering it in 2002—a significant technical achievement at the time. Although Nokia (correctly) envisioned an explosion in 3G devices, it was off in

[7] Moore (1996, p. 26)
[8] Moore (1996); Iansiti and Levien (2004)
[9] Power and Jerjian (2001); Adner and Kapoor (2010)

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its estimation of *when* this phenomenon would occur. For 3G phones to be useful to consumers, they required a whole ecosystem of complementary products and technologies (such as the video sizing conversion software required for mobile streaming) to be developed alongside the handset. Nokia's innovation was not matched by the necessary "co-innovation" of other firms in its ecosystem; "with 3G, a handset's value creation depended not just on its own quality but also on the quality and availability of a broad variety of complementary products and services that were key enablers of the vision of mobile data"[10]

The ecosystem concept can be viewed as closely related to the notion of the business model because it recognizes the need to go beyond a focal firm's boundaries and adopt a more systemic perspective that emphasizes interdependencies and complementarities between a firm and third parties in order to properly understand how value is created. Yet, in contrast to a business model, an ecosystem as a unit of analysis is not anchored on a focal firm; different firms can share the same ecosystem, but have very different business models. Ecosystems also include enabling factors, such as the technologies (and the firms that make and maintain them) that make a product or service possible. Consider again the example of Uber. Uber's business model is underpinned by 4G technology, which provides a fast and reliable network connection that has allowed drivers to pick up clients efficiently. This 4G network is part of the Uber's ecosystem, and it is used by countless other companies whose business models rely on mobile communication and data transfer. The technology is not, however, part of Uber's business model.

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[10] Adner (2012, p. 45)

The insight that companies with very different business models can share the same ecosystem raises important questions for managers and entrepreneurs. One important set of questions revolves around the issue of how to adapt the business model to an evolving ecosystem. How do the actions of key firms in business ecosystems affect the business models of others in that system? How can such actions be monitored and better understood? When is the right time to update or revise one's business model, given the possibility that further changes might happen in the ecosystem? How can managers of focal firms achieve maximum fit between their business model and ecosystem, and what exactly defines such fit?

3. Business Model: A New Organizational Form?

The past 40 years have seen extensive work from organization scholars on "new organizational forms."[11] Terms such as post-industrial organization, post-bureaucratic organization, modular organization, cluster organization, virtual corporation, network organization, perpetual matrix, and holacracy were introduced to represent the so-called new (and generally less hierarchical) organizational forms.[12] The holistic approach of this literature, as well as the quest for a more meaningful unit of analysis beyond the focal firm, were important preludes to the business model perspective.

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One example of a new organizational form is the so-called "self-organizing" company, which officially forgoes traditional hierarchical roles. Valve Corporation, a video game producer based in Bellevue, Washington, describes itself as a "flat" organization. In the company's handbook for new employees (2012), it states that this term is a "shorthand way of saying that we don't have any management, and nobody 'reports to' anybody else.

[11] Daft and Lewin (1993)
[12] Lee and Edmondson (2017)

We do have a founder/president, but even he isn't your manager."[13] Online footwear seller Zappos, which was purchased by Amazon in 2009, is a "holacracy," having adopted an organizational management system created by a coder-turned-consultant, Brian Robertson.[14] According to Zappos, "holacracy is like an operating system for your organization. It is a predefined set of rules and processes, checks and balances, and guidelines that an organization can use to help them become self-managed and self-organized by giving every employee (instead of just management) the power to innovate, make changes, and have a voice."[15]

Another firm with a highly innovative organizational structure is Chinese appliance conglomerate Haier, which was founded in 1984.[16] The firm's chief executive officer, Zhang Ruimin, completely restructured the firm's hierarchical and bureaucratic structure, moving instead towards a model of direct accountability and "zero distance" between Haier employees and customers. Haier's new management model, known as "rendanheyi," emphasizes open innovation and the creation of business ecosystems. The term rendanheyi "connotes a tight coupling of the value created for customers with the value received by employees."[17] One of the defining features of Haier's organizational model is the existence of over 4,000 microenterprises comprised of small, highly specialized teams. These microenterprises are broken up into three types: market-facing microenterprises, incubator-type microenterprises, and support-focused "node" microenterprises. Support-focused microenterprises compete with each other to obtain

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[13] Valve (2012)
[14] Greenfield (2015)
[15] Zappos Insights.
[16] Haier website. Company Overview.
[17] Hamel and Zanini (2018)

fulfillment contracts from market-facing microenterprises, and collaboration is highly encouraged across Haier.[18]

The concept of new organizational forms refers to those characteristics that identify the firm as a distinct entity and/or classify it as a member of a particular group of similar firms.[19] As shown by the examples mentioned above, it often focuses on aspects of internal organizational design, such as span of managerial control, worker autonomy, and degree of inter-unit collaboration. The concept differs from the business model in that it shares neither its focus on activities nor its central purpose of explaining total value creation.

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The central concern of research on new organizational forms has been understanding why and how new organizational forms come into being. This question has been approached through three dominant perspectives: (a) an organizational genetics view that focuses on characteristic features of organizations and sees variation as a random event; (b) an environmental conditioning view that emphasizes the role of the environment and exogenous forces in determining variation in organizational forms; and (c) a social system view that considers organizational form variation as resulting from embedded social organizational interactions.[20]

Although the concepts of business models and new organizational forms differ, managers tasked with analyzing and (re-)designing business models can nonetheless draw analogies with, and inspiration from, new organizational forms. They need to ask: Why and how

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[18] Hamel and Zanini (2018)
[19] Romanelli (1991)
[20] Romanelli (1991)

do new business models come into being? What is the process behind the development of business model innovations? Do business model innovations naturally emerge as part of an evolutionary dynamic, or can (and should) they be purposefully designed? In the latter case—which we adopt—which parts of the design process are planned, and which parts are emergent? What are important design drivers? We address these questions in Chapters 5-7 of the book. We also explore the importance of fit between the business model and the internal organization of a firm in Chapter 10.

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