V viewpoints

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Technology Strategy and Management

Business Models for Strategy and Innovation

While often ambiguously defined, business models are central to innovation.

WE FREQUENTLY HEAR the term *business model* roll off the tongue of not only technology entrepreneurs and venture capitalists, but also corporate managers, public officials, and professionals. When the President of the Law Society of England and Wales asks what the business model for lawyers should be, or when a commodore states that his naval acumen has been put to test by the business model of Somali pirates, it is time to become more circumspect. What is so enticing but also elusive about business models and business model innovation? This column considers when and how the term came into use, and then addresses three intriguing questions: Why does it continue to be an important concept in practice? Who should be in charge of innovating in business models? How transferrable is a business model across companies?

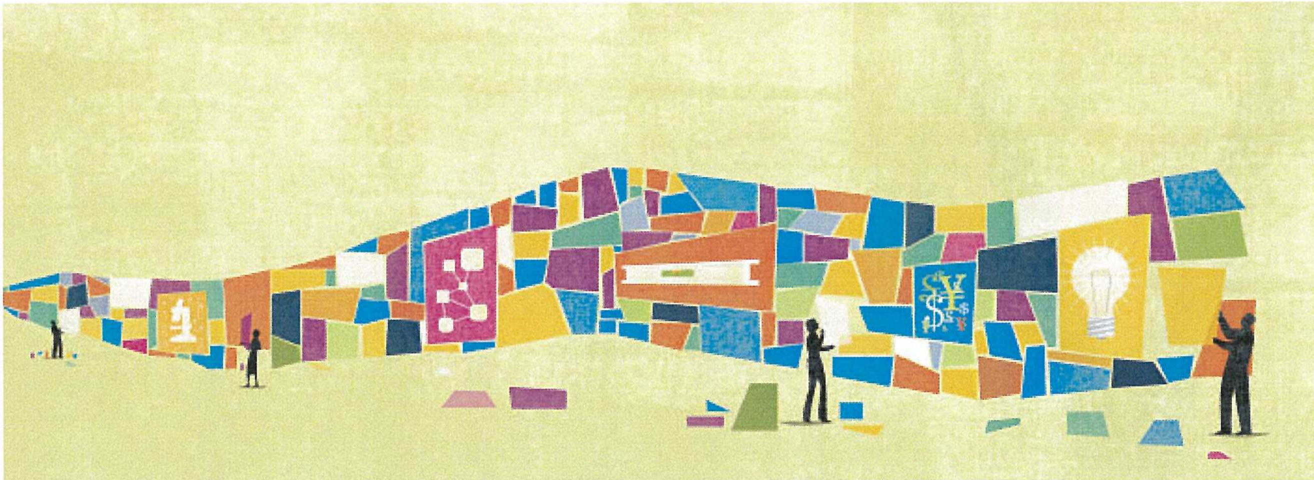
The notion of business models is as old as the hills, and human history is strewn with business model innovations that precede the U.S.-centric management education in the 20^{th} century. However, the proximate origin of the use of the term (rather than the concept) of business models may be traced to specialists in computing and systems modeling. They used the term to refer to computer simulations of business processes. It was argued that as the business environment became more complex, the potential value of business models would inevitably increase, and that as managers gain more knowledge in modeling techniques, computerized models should become an indispensable aid in many business functions.

However, *business model* did not acquire prominence in the lexicon of the start-up community until the mid-1990s.[2,6] With the exponential growth in the usage of the term during the dot-com boom, the early literal meaning of business model (and modeling) morphed into a new meaning, referring to the creation of value in digital business. This value focus came about in the face of users' presumption that information should be made available free on the Web.

Business Models Triggered by Digital Technology

Business models are essential for converting new technologies into commercial value. Every company has an implicit business model in the sense of linking ideas and technologies to commercial outcomes. However, it is the startups that had to articulate their business model, not least to obtain initial funding. A fantastic piece of new technology remains unexploited if it lacks the "go to market" mechanisms for creating value for end users.

Starting with e-commerce and more recently with interactive Web applications and cloud computing, digital technology has created opportunities for new business models. Technology impacts two sides of business models: cost and revenue. For example, the disintermediation of retailers adopted by Amazon and Dell touches on



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both sides, as does the "pay per click" advertising-based search by Google. By contrast, a pricing model (such as the "freemium" model adopted by Adobe, Skype, Myspace, and open source software companies to give basic service away for free and charge premium prices for value-added services) affects the revenue side.

The so-called Web 2.0 and cloud computing lie on this continuum in the potential development of new business models, addressing both sides. On the cost side, cloud computing removes the need to invest up front in expensive servers, thus turning capital expenditure into operational expenses and lowering barriers to entry. However, to turn various service models such as "infrastructure as a service" or "software as a service" into a business model, providers must work out the revenue side with the choice of a specific pricing policy and targeted customer segments. Without working out these dimensions, the money will not follow no matter how cool the technology.

Business Models in Strategy

Business strategists started to pay greater attention to the business model once its central focus on value creation became evident. In contrast to business process design at the operational level, a business model defines the overall business logic of a company at the strategic level. However, there are two ambiguities that, if resolved, would make the business model a more useful tool in strategy: first, what elements constitute a business model; and second, the extent to which business models can be planned in advance.

When we see a well-functioning business model in action, it is not difficult to see there are several components that fit into a coherent whole. In particular, a business model articulates the customer value proposition; it identifies a market segment; it defines the structure of the value chain; it specifies the revenue generation mechanisms; it describes the positioning within the value network or ecosystem; and it also elaborates on competitive strategy by which the firm gains and holds advantage over rivals.[1]

For example, Apple, with its iPods, iTunes, iPhones, and iPads, provides a unique experience to consumers, by targeting the market segment that cares about style as well as performance. Apple has an outsourced positioning in the supply chain, has specified its revenue generation mechanisms that bundle products and services, and has created an ecosystem that includes telecom providers, music content providers, and other suppliers. Apple's business model behaves like a platform as it attracts external companies to invest in activities that enhance its value.

Thus, business models are firm-centric, but with a lot of thought that goes into their boundary-spanning function. The latter ensures the focal firm can rely on the resources and capabilities of third parties, and harness external technologies and ideas through "open business models."[1]

However, the first unhelpful disagreement among strategists is on how to bound the business model concept. In particular, should the business model focus on value creation or also incorporate the notion of value capture? Some argue that a business model is about co-defining total value creation—the overall size of the pie—for all parties involved. How much of the total pie the focal firm actually captures depends on its revenue model, which should remain separate from its business model.[5] By contrast, others argue that a business model defines both the "go to market" and "value capturing" strategies.[4] In the latter, designing and implementing a business model is the essence of strategy. In the former, a business model must be combined with other things (a revenue model, resources and capabilities, and so forth) to constitute a good strategy.

A second point on which strategists disagree lies in the balance between planning and experimentation to arrive at an appropriate business model. The planning perspective regards a business model as a matter of designing an activity system.[5] By contrast, the experimentation perspective emphasizes a discovery process of trial and error, just as Google experimented in the process of a transition from pay-per-transaction to advertising-based Internet search. Any novel idea goes through a process of trial and error before it becomes viable as a prototype, then a model to be adopted widely. In this sense, followers may attempt to imitate a well-articulated business model. But inventing a novel business model is a matter for innovators taking risks in the process.

Business Model Innovation

Thus, business model can be a subject of innovation in itself, pursuing novel forms of value creation and capturing mechanisms. Even without novel technology, new business models can be central in their own right to ensure business success. For example, Dell did not focus on improving the personal computer, but innovated in an aspect of its business model, namely supply chain and distribution systems, to deliver compelling value to end users.

A usage-based auto insurance scheme, called Pay As You Drive (PAYD) developed by Progressive Corporation, is a good example of a business model that has undergone a process of innovation and adaptation over a decade.[a] Based on a family of business method patents, this insurance method is part of a new business model that empowers drivers to control their consumption (customer value proposition), serves latent markets for consumers previously reluctant to insure because premiums were too high (market segment identification), and fundamentally restructures the revenue model through lower premium levels but also lower claims. Back in 1999, PAYD used GPS satellites to determine when, where, and how much an insured vehicle was driven in order to determine the premium.

High technology costs and policyholders' perception of privacy invasion posed challenges to implementing the business model. Progressive worked in partnership with insurance telematics suppliers to lower the cost of monitoring devices. Progressive also took a long-term view in educating drivers via the PAYD portal, in order to achieve a right balance between the perceived cost of privacy invasion and the benefits of greater control over driving behavior and hence insurance cost. Thus, the ecosystem for a business model takes time to develop, not only in terms of the development of affordable supporting technologies, but also in terms of the emergence of educated consumers and regulatory bodies.

As firms experiment with novel mechanisms for value creation and capture, they must bring to bear cross-functional capabilities in technology, intellectual property management, marketing, procurement, and finance.

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What Causes Disruption in Business Models?

Business model innovation can be subjected to continuous and incremental changes, as previously mentioned, but it may also have the potential capacity for disruption. So, what are the sources of disruption in business model innovation?

Disruptions occur, of course, as a result of technological progress such as in information and communications technology. They also occur as a result of identifying new latent markets. Within the developed world, companies in industries as diverse as airlines, automobiles, banking, and media have seen their markets invaded by new and disruptive business models. New entrants, such as Southwest Airlines and EasyJet in air travel, have captured market share by targeting distinctive market segments. More recently, low-cost disrupters hail from emerging markets, such as Tata Motors from India with the Nano in automobiles and Galanz from China with microwave ovens.

What is common across these new players is their ability to produce value-for-money products or services for low-end markets that have been hitherto underserved and latent.[3] Ultimately, what turns such low-cost innovation into a disruptive business model is the new players' ability to create new markets with new value propositions—offering high tech and niche market products at low cost—for customers. Thus, in identifying new markets, we are back to basics, to one of the fundamental principles of innovation according to Joseph Schumpeter, known for coining the term "creative destruction" in economics.

Conclusion

Business model is a term much used but seldom defined explicitly. The next time someone asks you "what is the business model?" you know, at a minimum, to refer to the way your enterprise creates and delivers value to customers. Some strategists would also want to know the manner in which the enterprise captures value and converts it into profit. If this notion is adopted, designing and implementing business models is the essence of strategy, to ensure sustainable competitive advantage.

Despite some definitional ambiguity, business model remains an important notion precisely because of its integrative nature. Unlike technological innovation led by the R&D department, business model innovation requires cross-functional mechanisms for creating (and capturing) new value for users.

Moreover, business models are at the heart of innovation in distinctive ways. First, new technologies create opportunities for new business models. Second, appropriate business models are necessary to translate technical success into commercial success. Third, business models themselves are subject to innovation involving discontinuous changes in the paradigm used by firms to go to market. In this sense, the ability to sense deep truths about what consumers really want, to satisfy consumers' unmet needs, is perhaps the most important driver of business model innovation.

a This case is based on Panos Dessyllas and Mari Sako, "Profiting from Business Model Innovation: Evidence from Pay-As-You-Drive Auto Insurance," *Research Policy*, 2012, forthcoming.

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