Toward an objective-based typology of e-business models

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Discussion of e-business models has gained popularity with the rise and fall of Internet firms. Numerous models have been developed and elaborated, but rarely has the underlying rationale been explained. This comprehensive typology sorts and classifies them according to two key strategic objectives that companies may consider in conducting e-commerce: relational and value-based objectives. Such a typology is helpful in understanding existing e-business models, identifying potential areas for the development of new ones, and reinforcing the notion that the tried-and-true principles of successful business in the bricks-and-mortar world apply in the virtual world as well.

Despite the staggering statistics cited for the number of Internet users and the growth in e-commerce activity, not all e-businesses are surviving. More than twice as many shut down or declared bankruptcy in 2001 as in the preceding year. The famous Boo.com fashion stores declared bankruptcy after less than one year of operations. Webvan filed Chapter 11 in July 2001. Other well-known failures include Garden.com, Pets.com, and discount retailer Value America. After the downfall of so many dotcoms, people have begun to wonder if e-commerce would ever live up to its expectation of jolting the business world.

Consider the case of Andrew Yao, a distributor of steel products in Asia who was deciding whether or not to launch iSteelAsia.com as a platform to trade steel in that region. According to Kanter and Yatsko (2000), a classmate asked Yao if he had ever heard of Priceline.com, a pioneering e-commerce platform that puts consumers of airline tickets and other items directly in touch with sellers. Priceline's market capitalization, he said, was far higher than the airlines. So Yao began thinking about the similarities between the steel and airline industries—both capital-intensive, both offering low returns on investment, and both plagued by inefficiencies.

The decision proved difficult for Yao because many e-businesses created around 1999 in Asia were merely "me-too" strategies. Such firms were not familiar with their revenue sources, and analysts had begun to question their business plans for raising capital. Yao faced a strategic dilemma: If he created iSteelAsia.com, he would have to transfer the majority of his customers to the new platform, which would require a major financial commitment. "Everyone was talking about their new idea for the Internet," said Yao. "I asked myself: 'What am I doing?'… I had to make a decision whether to build a processing facility or do something like iSteelAsia.com."

Yao was confused because rarely have people asked why they need e-businesses in the first place. Some companies feel compelled to create them simply because others have done so. Is there a strategic objective an e-business can fulfill that an existing bricks-and-mortar firm cannot? If so, then business models should clarify those objectives in the first place. In delineating strategic objectives for expansion into e-business, a firm must identify the model appropriate to it—the model it will use in pursuit of its long-term performance goals.

There may be as many as 50 revenue-generating business models on the Internet. Some, such as the product sales vs. merchant models, are so closely related that one wonders if they are really fundamentally different methods. Some business strategies, such as the infomediary or information collection models, are so immediately recognized and accepted that one could argue they are not business models at all. To make matters worse, there is currently no single, cogent, and comprehensive typology of Internet business models to point to. "Defining, selecting and categorizing business models is a difficult and arbitrary process," maintain Strauss and Frost (2001).

Our purpose here is to provide a typology of e-business models that speaks clearly regarding strategic objectives. The typology we have developed can assist companies in their decision on whether or not to expand into e-business and, if so, how their e-business can tie in to the corporate mission and objectives.

E-business models: Definitions and types

E-business models are methods, concepts, frameworks, or architectures by which companies can use the Internet or the Web to carry out their strategies of capturing dominant market positions, establishing viable market niches, adding value for their stakeholders, or sustaining themselves over time. They have gained much attention recently because e-commerce has given rise to new ones, and even reinvented how bricks-and-mortars operate. As Applegate (2000) explains:

> [Since] the Industrial Age…we knew what we meant if someone said, "I sell insurance" or "I sell cars." We had developed a shorthand way of describing how a business was structured, what type of people were needed, and what roles they filled.…In contrast, the Internet enables us to create new business models and redefine existing ones.…This highly interactive and engaging channel offers new opportunities and enables development of new capabilities that were difficult to achieve before the commercialization of the Internet.

The Industrial Age business definitions with which we have become so familiar may have reached their limits. As Sandberg (2002) notes, "We no longer talk about what business we're in but what business model we use."

The popularity of e-businesses has given rise to numerous families of models. Rappa (2001), for example, describes brokerage models as those that "bring buyers and sellers together and facilitate transactions." These can be further classified into online auction models, reverse auction models, bounty broker models, and so forth, depending on the specific form of the transactions. **Table 1** identifies a number of popular models.

Recent years have seen sporadic attempts to classify existing e-business models. Most classifications were derived by authors using their specific disciplinary languages. For example, Strauss and Frost (2001) and Shin (2001) use marketing's four Ps—product, price, place, and promotion—to arrange e-business models and strategies. Afuah and Tucci (2001) explain how business models can be structured around the value chain of suppliers and buyers. Gordijn and Akkermans (2001) use IT systems and architectures to explain how certain models add value to users. Applegate analyzes business models based on their technical platforms. Dubosson-Torbay et al. (2002) propose a number of dimensions to characterize e-business models (required security, traffic scale), but stop short at classifying them.

Our typology does not refute these efforts. Rather, it serves a different purpose: to explain from a strategic viewpoint why companies need to create e-businesses in the first place. When any dotcom is created, most founders seem to have an indisputable need to believe in its necessity. However, the sudden deflation of the Internet bubble has exposed the difficulty of being profitable in e-business. With the rapidly changing landscape of e-commerce, it is necessary to establish a robust typology that speaks to the strategic objectives of these e-business models, in addition to the technical details of how they should be operated.

Proposed objective-based typology

The purpose of a typology is to conceptualize the underlying dimensions of the subjects or phenomena being studied. Essentially, it is a mental map of classification that allows for easier recognition of complex subjects and enables readers to classify them into fewer categories. For example, some of the most common typologies in management were developed by Blake and Mouton (1964) and Miles and Snow (1978) to classify strategy types, personality traits, and leadership styles. Such classification frameworks have guided strategy and OB research for many years.

When choosing e-business models, two questions emerge that speak to the strategic objectives of running an e-business. First, for what purpose will the website be used? Per-