

# On the creation and evaluation of e-business model variants: The case of auction

Juneseuk Shin <sup>a,1</sup>, Yongtae Park <sup>b,\*</sup>

<sup>a</sup> *Sungkyunkwan University, Department of System Management Engineering, School of Engineering, 300 Chunchung-dong, Jangan-gu, Kyunggi-do, 440-746, Republic of Korea*

<sup>b</sup> *Seoul National University, Department of Industrial Engineering, School of Engineering, San 56-1, Shilim-Dong, Kwanak-Gu, Seoul, 151-742, Republic of Korea*

Received 7 February 2006; received in revised form 17 February 2007; accepted 25 June 2007

Available online 9 April 2008

## Abstract

E-business model variants aim at creating customer value through differentiation. At the core are two major components of the business model concept—business process and customer value. Focusing narrowly on these components, this paper provides a new and systematic way to identify both, create potentially competitive variants, and to evaluate them quantitatively. With a clear presentation of the whole business process, it is possible to highlight key sub-processes, and increase a shared understanding between multiple stakeholders. Moreover, understanding customer preference and the expected market share of potential variants can allow managers to benefit from clear value propositions for variants' potential profitability. Our method also promotes rapid and efficient consensus-building about the most competitive variant. Taken together, our proposed method will help both managers and researchers refine the business model more precisely. An e-auction case in Korea is presented to illustrate the empirical application of our method in detail.

© 2008 Elsevier Inc. All rights reserved.

*Keywords:* E-business model variant; Creation; Evaluation; E-auction

## 1. Introduction

As information systems have increasingly become integral parts of business, it is essential to develop business models as abstractions of how a business functions (Eriksson & Penker, 1999). A number of studies have attempted to define the concept of a business model, or at the very least, to identify its major components (Applegate, 2001; Timmers, 1998; Weill & Vitale, 2001). But disappointingly, the business model concept, which is grounded in multiple domains, remains ill-defined and unclear (Chesbrough & Rosenbloom, 2002; Magretta, 2002). A wide range of definitions have been advanced, from comprehensive and strategic frameworks involving actors such as customers, competitors, suppliers, etc. (Joyce & Winch, 2004; Timmers

1998; Venkatram & Henderson, 1998; Weill & Vitale, 2001) to codified business processes which are integrated with information technology (Kiolov, 2002; Kukalis & Senf, 1994).

There have been similar difficulties in arriving at a consensus about an e-business model, with no generally accepted definition emerging from the wide array of suggestions as of yet. Some researchers have focused on identifying theoretical components, and have drawn up some general categories based on similarities (Joyce & Winch, 2004; Morris, Schindehutte & Allen, 2005). Put simply, the primary concern for any business model is how to make money; hence, an economic concern is indispensable in any definition. Relevant components include financial structures, revenue sources, price, etc. Given the strong emphasis on the need to achieve sustainable competitive advantage, another prominent but more rudimentary category consists of strategic components. Value creation is particularly important to the customer and other stakeholders. Finally, the architectural configuration at the operational level, where there are close links to information systems, has to be represented. Business

\* Corresponding author. Tel.: +82 2 880 8358; fax: +82 2 878 3511.

E-mail addresses: [astraeus@hanmail.net](mailto:astraeus@hanmail.net) (J. Shin), [astraeus44@hotmail.com](mailto:astraeus44@hotmail.com) (Y. Park).

<sup>1</sup> Tel.: +82 2 3780 8315.

processes have to be at the core of the model, as people recognize that processes are what business is about (Olud, 1995), while other necessary components include resource flows, logistical streams, product/service delivery methods, etc. Put together, the notion of an e-business model must build on economic, strategic and operational aspects (Morris et al., 2005).

For any e-business model, these three aspects have their specific demands, which must be satisfied simultaneously. However, e-business model variants face most of the same demands as the original e-business model, and thus it should be sufficient to focus on a couple of core components. In developing variants, companies' primary concern is how to differentiate them, and thus create customer value. There is an important perception that a business process should clarify what a business does and how it does it. Hence, once business processes are described in detail, the difference between the original and its variant will become clearer. Suffice to say, a clear business process, together with a sound customer value proposition, should be central to e-business model variants.

The question of how to create and evaluate e-business models has rarely been dealt with. Given so many different definitions and the daunting number of components, it is no wonder researchers have struggled to organize them into systematic methods. Although value has always been a key center of interest, previous studies do not go beyond identifying sources of value and suggesting qualitative mechanisms of value creation, delivery and appropriation (Afuah & Tucci, 2000; Amit & Zott, 2001; Han & Han, 2001; Rayport & Jaworski, 2001). While such work is still useful as strategic guidance, it cannot respond to one of the urgent demands of today's e-business industry. As risks are high and returns are difficult to secure, the e-business world has realized that it is crucial to develop a quantitative evaluation method to judge whether an e-business model will be truly competitive or not. Recent studies such as Joyce and Winch (2004) are beginning to work on this problem, but there is still a long way to go. No less important, the challenge of exploring ideas and creating new e-business models in a formal way has also hardly been addressed. However, challenged on many fronts to create new e-business models as engines of future growth, both researchers and managers are beginning to address this problem. Gordjin and Akkermans (2003) proposed the e<sup>3</sup> value approach, and extended it into BASSIE (business-oriented approach supporting web services idea exploration) by adding the i\* framework (Van der Raadt, Gordijn & Yu, 2005). Such methods aim at searching for profitable new e-commerce ideas, but cannot define the underlying business process.

However, in the case of e-business model variants, the fact that there are fewer core components allows us to focus specifically on business process and customer value. The generic NPD (new product development) process provides the conceptual basis for the overall development process. With some modifications, it is possible to develop a new and systematic e-business model variant creation method with a quantitative customer value proposition and a well-defined business process. To this end, methodologies from multiple disciplines are used in combination. For creation, business process modeling, DSM (design structure

matrix) and concept combination table are used sequentially. Conjoint analysis plays a central role in evaluation, and makes it possible to estimate the potential market competitiveness of generated e-business model variants.

The next section introduces the basic concepts and applications of these methods. A conceptual framework follows, giving a rationale for how these methods are inter-related. The empirical research framework and the general theoretical procedure are then noted, after which an empirical case of developing e-auction variants in Korea is presented to illustrate the application procedure in practice. Our final sections discuss theoretical and managerial implications and draw some conclusions as to the pros and cons of our method.

## 2. Theoretical background on primary notions

Put theoretically, our attempt is to get various methods to work seamlessly together under a systematic framework. They are used together only rarely, and thus most readers will be comfortable with one or some, but perhaps not all of them. We therefore touch briefly on what they are and where they have previously been used.

### 2.1. Business process modeling

At heart, the business process substantiates the abstract idea of how a business functions, and further determines how customers perceive what the business is about. In order to create new e-business model variants, it is essential to describe the business process as clearly as possible. More to the point, the implementation of new variants in practice demands a shared understanding of the business process between multiple stakeholders; thus clear business process modeling is central to the understanding of what a business is and how it functions. Such modeling has been very conducive to both shared understanding of business and the alignment of information systems with business. Moreover, there are numerous situations where this technique has proved useful, including incremental improvement programs such as TQM (total quality management) or radical change programs such as BPR (business process re-engineering).

A variety of methods and tools have been developed for business process modeling. These methods and techniques are usually classified into three levels (Shen, Wall, Zaremba, Chen & Browner, 2004). At the top level, there have been enterprise-modeling frameworks such as CIMOSA, GIM, PERA, etc, which provide generalized reference architectures and methodologies for the whole business life cycle (Vernadat, 1996). The middle level is composed of O-O (object-oriented) and structured methodologies. Here, Unified Modeling Language (UML) and SADT (Marca & McGowan, 1988) lead the way: despite their differences, both methods are basically general system modeling methods. The bottom level includes particular modeling methods for specific purposes. At first, the functional and organizational views were dominant, such as IDEF0 and the organization chart. More recently, the number of views has increased to include information, decision, economic and dynamic views, and DFD,

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات