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Masao Kakihara

Yahoo! Japan Research, mkakihar@yahoo-corp.jp

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Dynamic Revenue Model Design in the Online Services Business: Two Cases in Japan

Masao Kakihara

Yahoo! JAPAN Research
mkakihar@yahoo-corp.jp

ABSTRACT

This paper addresses the dynamic nature of business model design in the online services business. It particularly focuses on *revenue models* as a critical driver for mobilizing the dynamics of business models in high-velocity market environments. It argues that a dynamic revenue model design should be a fundamental strategic practice especially for online services that face significant market and technological uncertainties. To discuss implications of dynamic revenue model design in real business contexts, we examine two Japanese online service businesses: Yahoo! JAPAN and GREE. We found that the framework of dynamic revenue model design offers both researchers and practitioners an adaptable business perspective on turbulent online service businesses.

Keywords

Revenue model, Dynamic design, Online services, Japan.

INTRODUCTION

In the last decade or so, research on business models has proliferated and a variety of definitions, conceptions, and frameworks have been developed. This trend clearly shows that along with traditional strategic factors such as competence, resources, core assets, etc., the design and implementation of business models have become critical considerations for a firm's growth and success in the contemporary business environment. Without exception, today's firms are faced with rapid changes in their competitive environment. Competitive advantages resulting from long and continuous effort can be wiped out in a very short period of time by unpredictable changes in customer demand. Changes are often driven by the advent of dramatically innovative new technologies from relatively small firms. In particular, all business players, be they hardware-based, software-based, or service-oriented, in every industrial field face the risk of 'disruptive innovations' (Bower & Christensen, 1995; Christensen & Overdorf, 2000) that bring about sudden changes in their environment.

ICT-related businesses are perhaps the most turbulent; the pace of technological advances in this industry is faster than in other technology-oriented industries. For example, cloud computing and mobile technologies have recently begun to overshadow client-PC-based systems. In such a competitive environment, the potential source of sustainable competitiveness is not the tangible, hardware-based assets, but rather 'architectures' of doing business and making money, namely, *business models*. Therefore, it is natural that much of the research on business models has been conducted in technology-oriented fields such as information systems and e-commerce.

However, as only a few scholars have pointed out, the research on business models has failed to take into account an important factor that characterizes ICT-related businesses as distinct from others: the *dynamics of business models*. Even though ICT-related businesses are in a turbulent and competitive environment, business model researchers have implicitly taken a static and linear perspective on their business model design. In reality, though, firms must continuously redesign their business models to survive in a highly competitive market. This is particularly true in the online services business, where many companies, from small startups to mega corporations like Google, Yahoo!, and Facebook, are in severe competition with each other.

This paper emphasizes the dynamic nature of business models in the online services business. In so doing, we particularly look at *revenue models* as a critical driver for mobilizing the dynamics of business models. We argue that a dynamic revenue model design should be a fundamental strategic practice for online service businesses that face considerable market and technological uncertainty. We examine two Japanese online service businesses, Yahoo! JAPAN and GREE, and discuss the implications of dynamic revenue model design in these real business contexts.

A CALL FOR A SIMPLE AND DYNAMIC PERSPECTIVE FOR BUSINESS MODELS

Although the idea was already in the air, few people would deny that Timmers (1998) initiated scholarly discussions on business models. Following Timmers' article, researchers have discussed the roles and significance of business models in contemporary business contexts, and they have tried to define and classify business models. Throughout the last decade, the scholarly debate on business models has searched for a 'definitive' answer for what a business model is. Despite their efforts, there is still a lack of consensus.

Al-Debei et al. (2008) examine a wide range of definitions from various researchers and their underpinning theories and offer the following ten guidelines in the hope of establishing a consensus in subsequent business model discussions:

- 1) A way in which organizations create value;
- 2) A way in which an organization generates revenue;
- 3) An abstraction of the existing business and a future planned business;
- 4) An architecture for the organization, including its assets, products, services, and information flow;
- 5) A business logic relating to the ways in which businesses are being conducted;
- 6) A way in which an organization enables transactions through the coordination and collaboration among parties and multiple companies;
- 7) An organization's strategy or set of strategies;
- 8) An interface or a theoretical layer between the business strategy and the business processes;
- 9) A conceptual tool, a business abstraction, and a blueprint;
- 10) A way of understanding a single organization or a network of organizations.

As these guidelines imply, the discussions on what a business model is and what role it plays in actual business are so multifaceted that the researchers have been trying to define them in altogether diverse ways. We believe this can only result in further confusion about the definitions and roles of business model concepts. To make good use of a concept and realize its full potential, we need a simplified approach that avoids hype and buzzwords.

Hence, in this paper, we will not propose alternative definitions or classifications of business model concepts since doing so would only complicate things. Rather, we shall critically look at a fundamental assumption underpinning conceptualizations of business models, i.e., their static nature, or lack of dynamics.

With few exceptions (e.g. MacInnes, 2005; Bouwman & MacInnes, 2006; de Reuver et al., 2009), discussions relating to business models have adopted a *static* and *linear* perspective on their design. By static, we mean that a conceptualization sees a business model as unchanging over time, even in a rapidly changing environment. By linear, we mean that it assumes that a business model follows from higher levels of strategic decision-making, i.e., from missions, objectives, and strategies. This assumption is based on conventional frameworks of strategic management research that presuppose, explicitly or implicitly, a 'waterfall' model of strategic decision making.

Various perspectives in strategic management hold to the assumption that the competitive environment around the firm is stable and mostly unchanging. The position-based perspective of competitive strategy based on industrial economics (e.g. Porter, 1980; 1985) assumes that the economic structure of competition is stable and that taking a superior position to competitors is of paramount importance. The resource-based perspective of firms' capability also assumes stable competitive environments (e.g. Barney, 1991; Grant, 1991). By its nature, a firm's resources cannot be enhanced in a short period of time. Although some recent studies have tried to take environmental dynamics into account (e.g. Brandenburger & Nalebuff, 1996; Eisenhardt and Martin, 2000), they still presuppose a linear, 'waterfall' model of strategic decision making that goes from *missions* and *objectives* to *strategies* and *tactics* (the everyday operations of a firm's business) (See Figure 1).

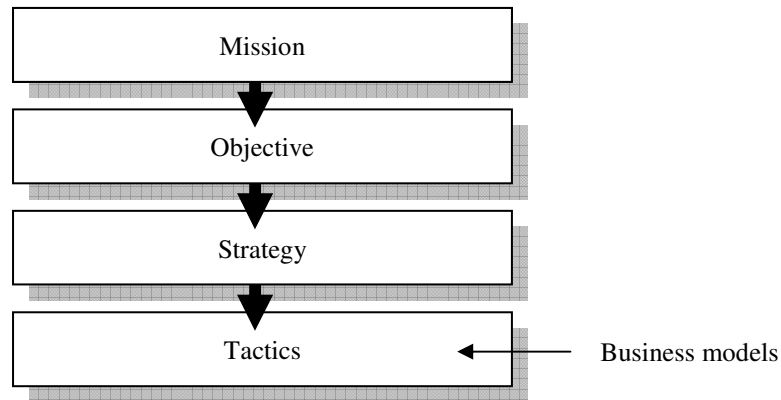


Figure 1: The conventional ‘waterfall’ model of strategic decision making

However, given that competitive environments are rapidly changing and technological innovations such as digital and network technologies are accelerating this change, we believe that the setting of concrete missions and objectives or even of strategies is no longer a critical task in strategic management. In a fast-moving environment, missions, objectives, and strategies might have to be continuously revised over time, and the firm would have to focus on tactics rather than strategy. The faster the environmental changes are, the more important the firm’s practical ways of value creation and value capture become. That is, for businesses to survive in rapidly changing, highly competitive environments, their business models have to be ‘tactically’ designed and operationalized.

To cope with rapidly changing competitive environments, particularly in ICT-driven businesses, we need a simpler, more dynamic and non-linear perspective for design and operationalization of business models, not the static and linear ones upon which most of the previous business models have relied.

Here, we shall employ one of the simplest business model concepts. Weill et al. (2005)’s definition consists of two elements: (a) *what the business does*, and (b) *how the business makes money doing these things*. Whereas many researchers have tried to expand this definition to make it more comprehensive and general, we will keep the concept as is, i.e., simple and practical enough for real business settings. Weill et al.’s definition of the business model concept consists of two core elements: *operation* and *value*.

The researchers of Boston Consulting Group offer a sophisticated conception of a business model (Lindgardt et al., 2009). Through their research on business model innovations in various firms, they identified two essential elements that a business model should have: the *value proposition* and the *operating model*, each of which has three sub-elements. The value proposition consists of the *target segment(s)*, *product or service offering*, and *revenue model*. The operating model consists of the *value chain*, *cost model*, and *organization* (See Figure 2). This framework is intended to be a general one that can be applied to many other businesses besides ICT-related ones.

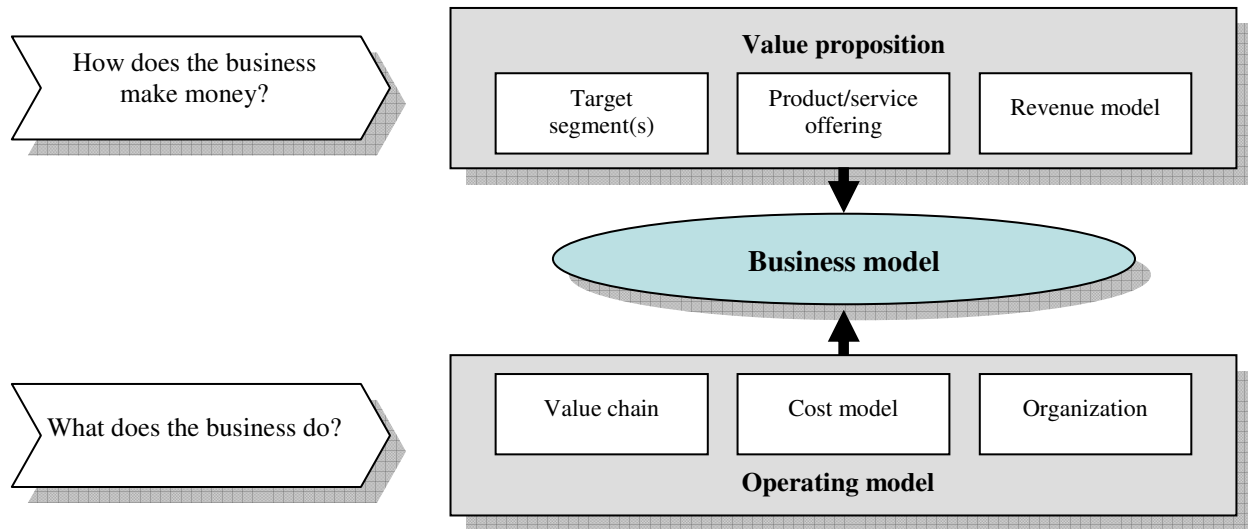


Figure 2: A simple framework of a business model (After Weill et al., 2006 and Lindgardt et al., 2009)

DYNAMIC REVENUE MODEL DESIGN FOR ONLINE SERVICE BUSINESS

The online services business is one of the most competitive markets today. Its advent more or less coincided with the release of the first beta version of Netscape Navigator in 1994 and Windows 95 in 1995. These systems enabled ordinary people to browse World Wide Web services on their personal computers. It has since taken only fifteen years or so for many online service businesses to emerge, and some have developed into mega corporations, e.g., Yahoo!, eBay, Amazon.com, Google, MySpace, and Facebook. It should be noted too that even more online service businesses disappeared during the same time.

There are a variety of online services, ranging from traditional services such as portals, search engines, and e-commerce sites to emerging online services such as SaaS (Software-as-a-Service), social computing tools and services, and virtual worlds (Lyons et al., 2009). The proliferation of online services has been accelerated by the rise of social stream media such as Twitter and location-based services such as FourSquare.

Besides being associated with the rapid pace of changes in the market, technology, and regulation, the online services business has the characteristic of *dynamic design of revenue models*.

As the stories of Google, Yahoo!, and many other firms clearly show, most online services businesses start operations without a clear revenue model. For example, the two young Stanford graduate students who founded Google in 1998 had no particular revenue model in mind. The company existed on venture capital (VC) until it started selling keyword advertisements two years later (Battelle, 2005). The case of Google is typical. Most of the successful online service firms did not have a clear revenue model when they began operations. Rather, they developed cutting-edge, technology-driven services and offered them free to customers. Then, they rapidly improved their customer's experience to get a good reputation as soon as possible. The latest example of this sort of development is Twitter, a text-based micro-blogging service that has rapidly expanded since beginning in 2007. Although Twitter has millions of monthly unique visitors, it still lacks a concrete revenue model and just announced their potential revenue model, 'promoted tweets,' in April 2010.

There seem to be two reasons for the absence of revenue models at the beginning. Firstly, online services typically do not require a lot of assets and/or funding to start up. By using commercial infrastructural services such as server hosting, online storage, and database services, people can start an online service with a limited amount of initial funding. Secondly, online services need to get a widespread and favorable customer reputation as quickly as possible because network externalities among customers can be a critical driver for service expansion (Chun & Hahn, 2006). Therefore, online services companies tend to put much more effort, tangible or intangible, on how to gather customers quickly rather than how to monetize themselves, particularly in the first phase of their business.

As discussed above, post-launch, dynamic design of revenue models is probably the most distinctive characteristic of the online services business. It should be noticed too that revenue models in the online services business can be designed

independently of other business model elements. For instance, the service may remain the same but different revenue models may be implemented within the business model (See Figure 3).

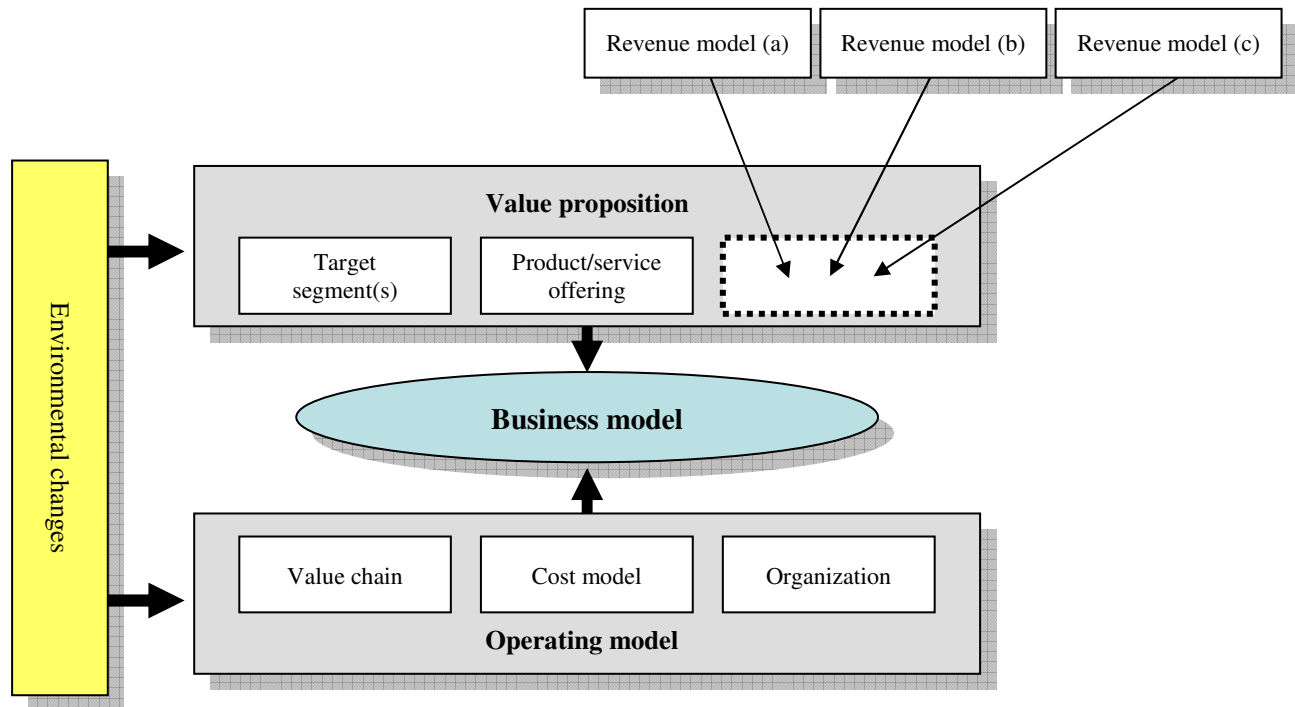


Figure 3: Dynamic Revenue Model Design in Online Service Business

MAIN REVENUE MODELS FOR ONLINE SERVICE BUSINESS

Scholars have paid little attention to how revenue models are associated with business models. Although some see revenue models as an important element in business model design (e.g. Rappa, 2000; Alt & Zimmermann, 2001; Magretta, 2002), they do not see them as ‘critical’ to the design and operationalization of business models in real markets. As indicated above, making money through effective value creation and delivery is of paramount importance for competitiveness in high-velocity market environments. Therefore, we here examine several revenue models especially for the online services business.

The mainstream revenue model in the online services business is the *advertising model*. Almost all online services have at one time been offered to customers for free. In the advertising model, third-party advertisers pay money to service providers to utilize the service’s media functions for promoting their products and/or services. The advertising model has been so dominant in the online services business that many people tend to think all the online services should be free, just like TV broadcasting (not cable TV services).

The global financial crisis of 2009 has been a significant problem for any business relying on the advertising model as their primary revenue model. Big advertisers, e.g., large consumer product manufacturers and service providers, have reduced their advertising expenditures on mass media such as TV, newspapers, and magazines. This has directly hit the revenues of advertising-based businesses, and the online services business is no exception. It is time for online service firms to embrace dynamic redesign of their revenue models so that they can adapt to and take advantage of the environmental changes.

Online services have several potential revenue models (See Table 1). As mentioned above, the *advertising model* is the most widely used model for monetization of online services. It creates revenues by providing media functions of the services to advertisers. Display ads (banner ads) are a traditional form of online ads, whereas search ads and content-match ads are new forms. The *brokerage model* is widely utilized for e-commerce and auction services, and it monetizes by matching shoppers and sellers of services. The *platform model* is a way of offering a business platform to third-party service providers and end users. As the success of Facebook and Apple’s iTunes Store shows, the accumulation of products/services and potential customers can heighten the value of the platform itself.

The advertising, brokerage, and platform revenue models all presuppose ‘multi-sided markets’, where two or more distinct user groups interact with each other for their own benefit (Eisenmann et al., 2006; Boudreau & Hagi, 2009). In contrast, the *service/content sales model* is a direct approach to sell certain values to a single user group. Multi-sided market models are common in the online services business, whereas the direct-to-user sales model is still largely unexplored.

	<i>Mechanism</i>	<i>Core sources of value</i>	<i>Multi-sided/single-side market</i>	<i>Examples</i>
Advertising model [AD]	- Offers advertisers promotional media functions - Offers users online services for free or low price	- Site traffic (the number of visitors)	- Multi-sided (advertisers, users)	- Display ads - Search ads - Content-match ads
Brokerage model [BR]	- Offers market participants intermediary functions for matching their demands	- Scale and frequency of transactions - Efficiency of matching	- Multi-sided (different market participants)	- E-commerce - Auction
Platform model [PT]	- Offers service providers a platform for doing business - Offers users a wide range of services	- High level of accumulation of content/services and (potential) customers	- Multi-sided (service providers, users)	- Facebook widgets - iTunes Store
Service/content sales model [SA]	- Offers users certain pay services/content	- Direct value to users for usage/possession of the service/content	- Single-side (direct users)	- Subscription fees - Utility fees for SaaS - Content sales

Table 1: Revenue models in the online services business

TWO CASES IN THE JAPANESE ONLINE SERVICES BUSINESS

Japan’s broadband internet access and 3G mobile networks are comparatively better than those of other developed countries. As a result, Japanese online services have been highly competitive and have developed rapidly (OECD, 2008; Kakihara, 2008). A rigid strategy employing a static business model cannot sustain a firm’s development in a situation where numerous internet-driven start-ups arise and severely compete with each other. As examples of dynamic revenue model design, therefore, the online services *Yahoo! JAPAN* and *GREE* are particularly worth looking at; they succeeded in dynamically redesigning their business operations and prospering a highly turbulent and competitive market.

For each case, two dimensions will be examined: *core business domains* that accommodate continuous revenue streams for their constant business operations, and *revenue models* that actually create those streams. Publicly available online financial information was used in this analysis. The operating models including cost models will not be discussed in this paper.

Yahoo! JAPAN: Diversifying Revenue Models

Yahoo! JAPAN (www.yahoo.co.jp) is Japan’s largest online portal service and one of Japan’s most successful companies in the last decade in terms of expansion of revenue and market capitalization. Since its debut in 1996, Yahoo! JAPAN has expanded by continuously redesigning its business models. The 2008 fiscal year (ended in March 2009) was Yahoo! JAPAN’s 12th consecutive year of record sales and profits, and this achievement was despite the global financial and economic downturn. It is also important for us to note that whereas Google, Amazon, eBay, and other online services are popular or even dominating the markets in most of the Western countries, Yahoo! JAPAN is still the top online service in Japan in search, web-based email, online news, and auctions (Yahoo! JAPAN, 2009).

The most striking difference of Yahoo! JAPAN from other online service companies is that it has well-balanced, multiple revenue models (See Table 2 and Figure 4). The company started operations as a portal, and its initial revenue model was advertising. It launched Japan’s first online auction service, Yahoo! Auction in 1999, and it followed that development with

an ISP service, Yahoo! BB, and a search advertising business in 2001. These new businesses have posted steady revenues since 2001, and like many other online services, they have adopted new revenue models, i.e., *personal services* and *business services*. Thanks to this revenue model diversification, Yahoo! JAPAN prospered in severe market environment after the bursting of the dot-com bubble. Moreover, Yahoo! JAPAN invested in emerging business domains much more swiftly than its competitors did. It launched new-generation ad services (e.g. behavioral targeting ads) and consumer-generated media services like social Q&A services, which further expanded its ad sales.

The case of Yahoo! JAPAN clearly shows that in severe economic situations, diverse revenue models can be a significant driver of growth and stabilization of online companies. Even though strong competitors like Google and eBay have been in the Japanese online services market since the early 2000s, Yahoo! JAPAN, through its dynamic and continuous reconfiguration of its revenue models, has maintained a significant competitive advantage and has had superior financial performance.

	1996-2000	2001 - 2005	2006 -
Core business domains	- Portal	- Portal + - Auction - E-commerce - ISP - Search	- Portal - Auction - E-commerce - ISP - Search + - New-generation ads services (Behavioral targeting etc.) - CGM services etc.
Revenue models	- Display ads [AD]	- Display ads [AD] + - Search ads [AD] - Personal services [SA] - Business services [BR, PT]	- Display ads [AD] - Search ads [AD] - Personal services [SA] - Business services [BR, PT] + - Behavioral targeting ads [AD] - Content-matching ads [AD]

Table 2: The evolution of Yahoo! JAPAN's business

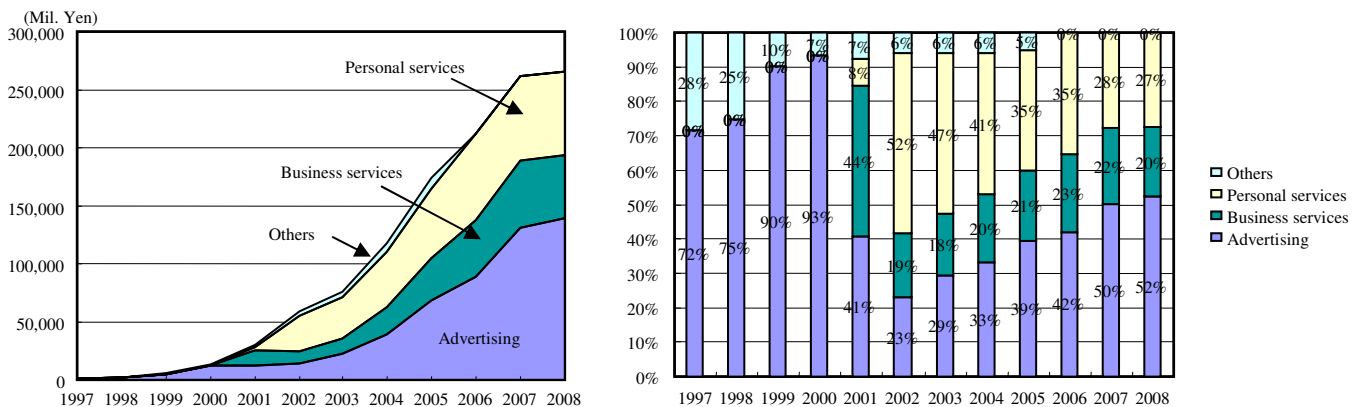


Figure 4: Trend of Yahoo! JAPAN's revenue models

GREE: Switching Revenue Models

As of March 2010, GREE (gree.jp) is the second largest SNS in Japan, with 17 million subscribed users. GREE’s financial performance in the past year has been nothing less than spectacular. In fiscal 2008 (ended in June 2009), this relatively small company with less than 200 staff generated 14 billion yen in annual revenue, a 375% increase from the previous fiscal year, and even more surprisingly, it had 8 billion in operating income, a 696% increase from the previous year (GREE, 2010).

GREE’s dramatic growth since 2007 is due to its strategic shift in business domains (See Table 3 and Figure 5). At its launch in 2004, GREE was a SNS for desktop PCs. Over the next two years, GREE struggled with slow growth of its user base, and it was outpaced by its largest competitor, *mixi*. As mentioned before, online services need to garner a widespread and favorable customer reputation as quickly as possible because network externalities among customers are a critical driver of growth. By 2006, GREE had clearly lost in the initial PC-based phase of the SNS business in Japan.

However, instead of folding operations, its officers decided to concentrate almost all their effort on an emerging business domain: mobile services. They modified their mobile services to offer official service content from Japanese mobile carriers, au of KDDI in 2006 and DoCoMo and Softbank in 2007. They also started to offer their own mobile game content that users could buy to get more fun from their game play. The subsequent mobile content sales were an immediate windfall for GREE, and it went on to make an initial public offering in December 2008. Currently, virtual content sales account for 77% of its annual revenue (Jan-Dec 2009); the rest comes from advertising.

The GREE case shows that a strategic shift in business domains was the critical factor in a dramatic revitalization. In particular, GREE’s shifting priority from a PC-based SNS to a mobile SNS driven by game content was the key to transforming its business models and changing the nature of its business as a whole.

	2004-2006	2007 -
Core business domains	- PC-based SNS	-PC-based SNS + -Mobile SNS
Revenue models	- Display ads [AD] - Content-match ads [AD]	-Display ads [AD] -Content-match ads [AD] + -Virtual content sales in mobile game services [SA]

Table 3: The evolution of GREE’s business

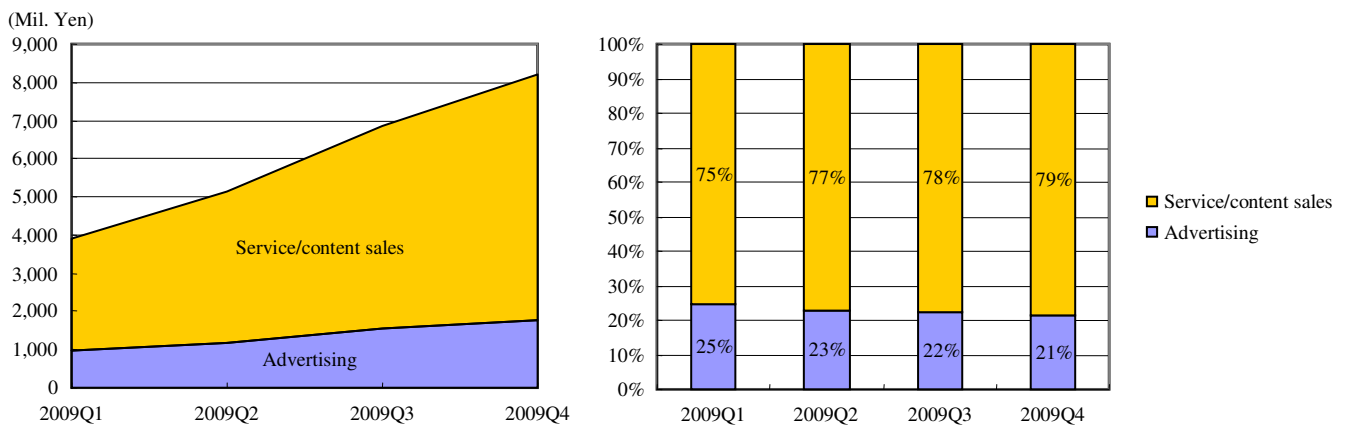


Figure 5: Rapid change in GREE’s revenue models

CONCLUDING REMARKS

We discussed the dynamic nature of business models by looking at the dynamic revenue models of two Japanese online service businesses.

Due to the limited paper length, we could not consider cases from other countries. However, we believe there must be many more good examples of dynamic revenue model design in the U.S. and Europe. Furthermore, we know there are other business fields that are as fast-moving and turbulent as the online services business is. For example, the apparel business is a fast-moving one where firms businesses are always trying to predict ever-changing customer tastes in fashion. We did not discuss the generalizability or applicability of dynamic revenue model design in other business settings. These issues will be theoretically and empirically addressed in our future work.

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