Chapter XXXIX
Social Consequences of Broadband Access in Japan

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ABSTRACT

In Japan, both the cheapest wired broadband services and the most advanced 3G mobile phone services are widely available. Because of recent procompetitive policy drives such as the "e-Japan policy," the Japanese broadband market has become very competitive. While the digital divide has narrowed in recent years in terms of Internet access, a divide still exists with regard to Internet usage. Comparison between narrowband and broadband users demonstrates that broadband services currently are used mainly for entertainment. Unlike wired Internet use, mobile Internet is not used for information-gathering activities. Results do not support the media substitution effect of the Internet. Mobile Internet use significantly and positively correlates with socializing with friends, whereas the wired Internet use does not correlate with socializing. Experience of past policies suggests that customer orientation will be a key factor in the success of the "U-Japan" policy.

INTRODUCTION

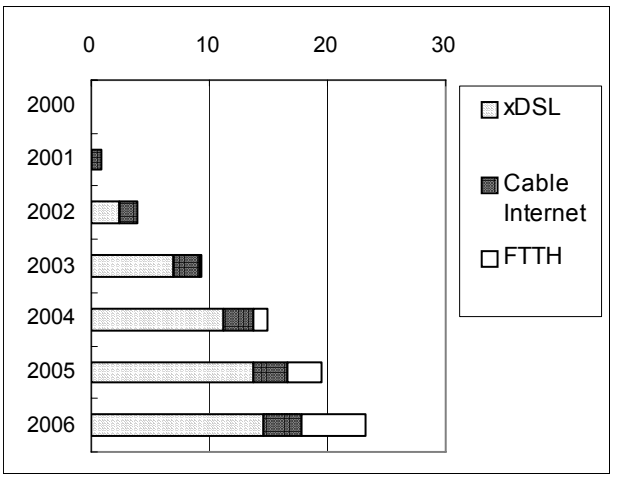
Transition to broadband access has been rapid since 2000. As of February 2006, the household penetration rate of broadband access reached 41%, and approximately 70% of Internet users access the Internet via a broadband connection. The International Telecommunications Union defines broadband as a technology providing transmission capacity that is faster than primary rate ISDN (1.5 or 2 Mbps) (Distaso, Lupi, & Manenti, 2006). According to this definition, broadband connection is widely available via 3G (third-generation) mobile phones in Japan.

BACKGROUND

Wired (PC-Based) Internet

In 2006, of Japan's wired broadband (PC-based broadband) users, 62.3% had access via xDSL, 14.2% had cable Internet, 23.4% had FTTH (fiber-to-the-home) and 0.1% had FWA (Figure 1). Japanese people enjoy the highest-speed broadband services in the world. The International Telecommunications Union reports that, in 2004, Japanese consumers paid the smallest charge per 100 kilobits per second in the world (U.S. $0.06), compared to that paid by South Koreans (U.S. $0.77), Americans (U.S. $1.77), Germans (U.S. $2.77) and the Brit-

Figure 1. Number of subscribers to wired broadband services in Japan (in millions)



Source: Ministry of Internal Affairs and Communications (2006)

ish (U.S. $6.18) (Ministry of Internal Affairs and Communications, 2005). For example, a 100 Mbps FTTH connection service with ISP, IP, phone, and VOD services for an apartment is provided for 7024 yen (U.S. $61; $1 = 115 yen) per month by Nippon Telegraph and Telephone Corporation (NTT). As a result of low charges, FTTH subscribers recently surpassed DSL subscribers. In March 2006, the number of FTTH subscribers reached 5.4 million. During the last three months of 2005, FTTH services saw a jump in subscriber numbers, which reached 658,000, almost three times as much as DSL (175,000).

Mobile Internet

In addition to the cheapest wired broadband services, Japan also offers unique and advanced mobile Internet services. Figure 2 demonstrates that mobile phones outnumber PCs in the market for Internet-connected devices. Internet-enabled mobile phones accounted for 94% of all mobile phones, as of September 2004 (Ministry of Internal Affairs and Communications, 2005). Mobile Internet services, such as picture/video mail and picture characters in e-mail, are commonly used by the Japanese people (Ishii, 2004). In terms of business model, "i-mode"—the Web access protocol on NTT DoCoMo's terminals—is one of the most successful mobile Internet business models in the worldwide telecom market. This service, launched in Japan in February 1999, attracted more than 33 million users three years after its launch (Ishii, 2004). In the mobile Internet market, mobile phone carriers play a dominant role because the carriers are the only ISPs in the mobile Internet. The carriers operate the major portal Web sites, called "official sites," which are linked directly to the ISP's menu page. Carriers handle the billing of those charges on behalf of the content provider (Ishii & Ogasahara, 2006).

3G mobile phones (cdma-one/W-CDMA/CDMA2000x) comprised 70% of all mobile phones in January 2007 (TCA, 2007). These mobile phone services enable connections that are as quick as the wired broadband services. Currently, NTT DoCoMo, Japan's top mobile phone operator, provides a W-CDMA service with a maximum data transmission of 3.6 Mbps, while the second-largest operator, KDDI, provides cdma-one services with a maximum data transmission of 2.4 Mbps. KDDI's EZ Channel service offers video content—including news, weather, movies, and music information—via push technology (Ishii & Ogasahara, 2006). In this chapter, the term "mobile Internet" will be used to refer to Internet access via mobile phones, and not to the wireless LAN access, because wireless LAN usually is connected to wired broadband only in a limited area.