

4 Business in the 21st Century

1. Internet Businesses

1.1 Overview

As used in this section we define Internet businesses as businesses involved in commercial transactions over networks using TCP/IP, businesses undertaking construction of such networks, and related businesses. Within the category of Internet businesses, we define mobile businesses as businesses involving commercial transactions over these networks (and related businesses) when a cell phone or PHS handset that contains a microbrowser is used as

a terminal to connect to the network (Exhibit 15). Internet businesses can be broadly categorized as Internet commerce and Internet-related businesses. The total market value of these businesses amounted to an estimated ¥21,175.6 billion in 1999.

1.2 The Internet Commerce Final Consumption Goods Market

According to *Internet Commerce Survey*, Japan's Internet commerce final consumption goods market was worth ¥350 billion in 1999, up 2.1-fold year over year, equivalent to 0.06% of all-

Exhibit 15. Breakdown of the Internet and Mobile Telecommunications Markets

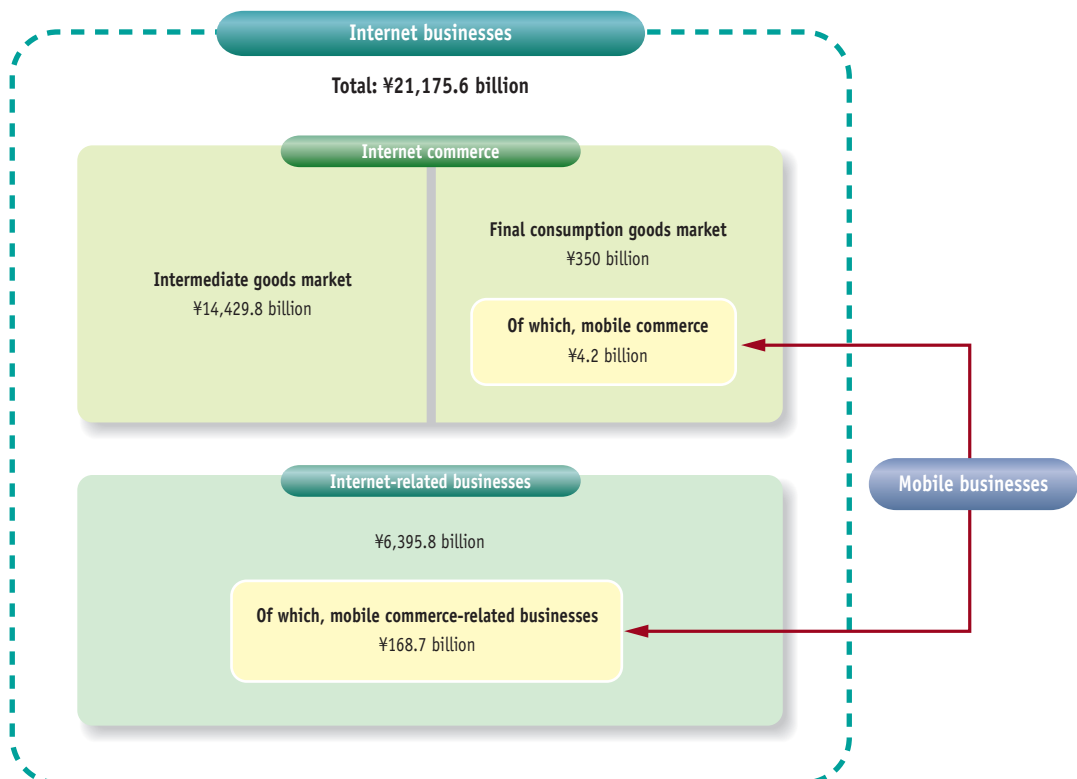
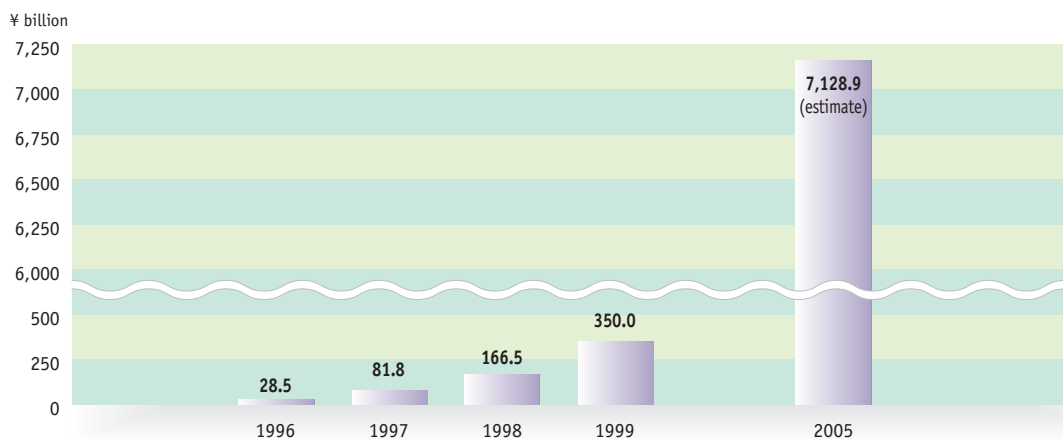


Exhibit 16. Internet Commerce Final Consumption Goods Market

Source: *Internet Commerce Survey*.

sector final demand, and equivalent to ¥12,934 for each Internet user. The market is forecast as expanding to ¥7,128.9 billion in 2005 (Exhibit 16).

1.3 The Internet Commerce Intermediate Goods Market

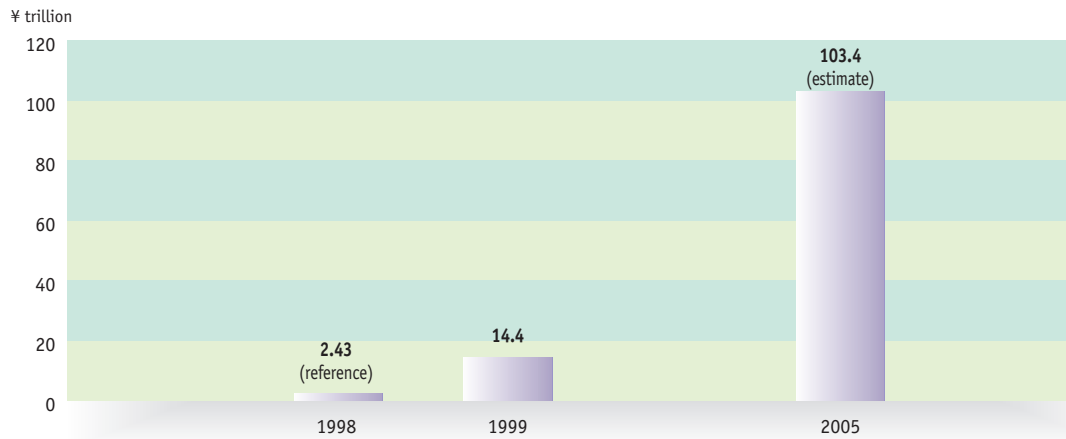
The same survey reported that the Internet commerce intermediate goods market was worth ¥14,429.8 billion in 1999, equivalent to 3.3% of all-sector intermediate demand

(Exhibit 17). Thanks to the rapid penetration of the Internet technology, companies that do not handle transactions involving intermediate goods electronically at present and companies that use electronic data interchange (EDI) are forecast as shifting to Internet- and extranet-mediated transactions over the coming years. As a result, the scope of the Internet commerce intermediate goods market in 2005 is projected at ¥103.4 trillion (Exhibit 18).

Exhibit 17. 1999 Internet Commerce Intermediate Goods Market, by Main Business Category

Business category	Market scope (¥ billion)
Manufacturing	14,250.9
Of which, automobiles	11,441.3
Of which, electrical machinery	2,548.3
Wholesaling, retailing	39.3
Transportation, communications	37.9
Construction	28.9
Other	72.8
Total	14,429.8

Source: *Internet Commerce Survey*.

Exhibit 18. Scope of the Internet Commerce Intermediate Goods Market

Note: The 1998 figure, found in the 1999 White Paper: Communications in Japan, is the sum of figures from various surveys cited in that publication and not an estimated value of Japan's intermediate goods market; it is therefore used here as a point of reference.
Source: *Internet Commerce Survey*.

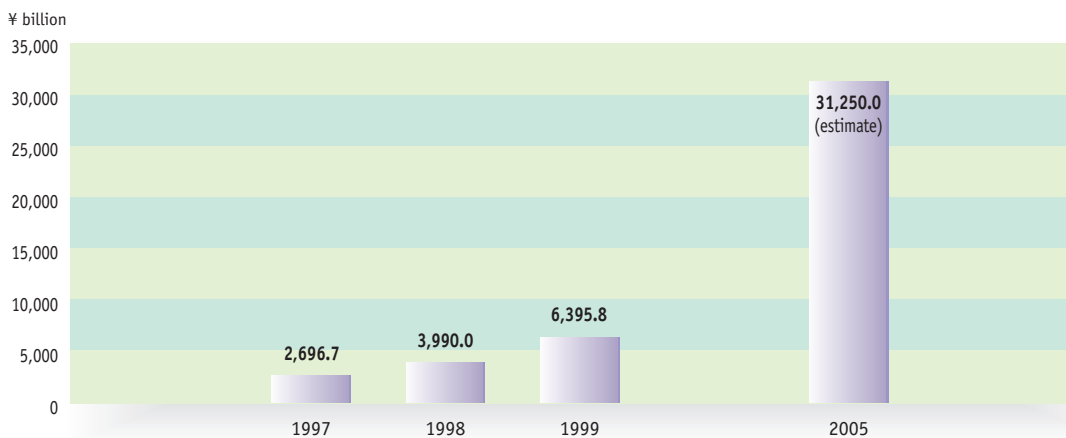
1.4 Internet-related Businesses

Internet-related businesses can be categorized as belonging to one of the following: (1) the Internet connection business market, (2) the Internet connection terminal market, (3) the Internet construction-related market, and (4) the Internet peripheral business market. The

overall Internet-related business market was worth ¥6,395.8 billion in 1999, up 60.3% year over year and is forecast as expanding to ¥31,250 billion in 2005 (Exhibit 19).

1.5 Mobile Businesses

The mobile business market is categorized into

Exhibit 19. Estimated Scope of the Internet-related Business Market

Sources: *Internet-related Businesses Survey*; *Advertising Expenditure in Japan for 1999*, Dentsu.

two large groupings: (1) the mobile commerce market, in which cell phones and PHS handsets equipped with microbrowsers or personal digital assistants (PDAs) directly access fee-based Internet content written in C-HTML or another language, or engage in commercial transactions, and (2) the mobile commerce-related business market, comprising such as terminals used in mobile commerce, telecommunications charges generated by mobile-commerce transactions, and fees generated by Internet connection services provided by mobile telecommunications carriers. Based on surveys of telecommunications carriers in this category, the MPT estimates the Japanese mobile business market at ¥172.9 billion in 1999 and projects a scope of ¥4,520.6 billion in 2005 (Exhibit 20).

2. New Business Formats

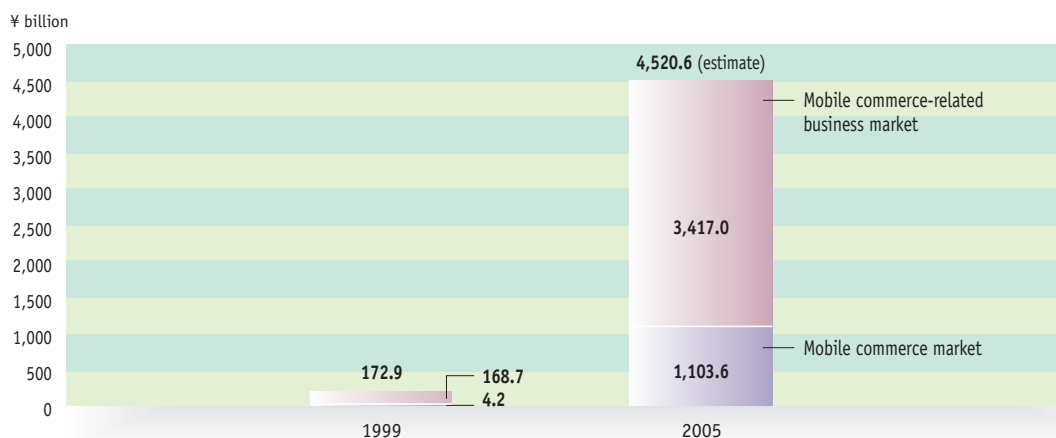
2.1 Portal Sites

Portal sites—the entryways to the Internet, often with such features as a search engine—usually garner their revenues from sponsors who place banner advertisements on their homepages. The most-accessed portal site in Japan is Yahoo! Japan, advertising on which has been very effective.

2.2 Shopping Malls

An application service provider (ASP) known as Rakuten Ichiba (or simply Rakuten) was one of the first Internet businesses in Japan to create online shopping malls. The company is the subject of great interest because the start-up costs charged to clients for setting up online stores are very reasonable.

Exhibit 20. Scope of the Mobil Business Market



2.3 EC Platforms

Convenience stores are generally relatively small shops that, because of their size, require numerous deliveries during the day to keep their shelves stocked. Since delivery trucks are constantly arriving at the stores anyway, recently Japanese convenience store companies are planning to take advantage of the situation by getting involved in electronic commerce (EC)—for example, by allowing customers to have items ordered over the Internet delivered to a nearby convenience store for pickup. The idea has generated much interest.

2.4 Reservations Services

The usual way of reserving tickets for musical or dramatic performances has been to search through the newspaper or magazines for the desired event and then get in a long line at a ticket sales site or make a reservation by telephone. Pia, a publisher of magazines on forthcoming performances and ticket reservation service, is helping people save time by using Internet commerce to provide a digital lottery-format ticket sales service.

2.5 Financial Transactions

Compared to face-to-face financial services, Internet-based financial services offer users the convenience of not having to go out to an actual branch office and not being restricted to banking hours. The first Internet banking service was balance inquiries, offered in 1996; this was followed a year later by inter-account transfer service. At present virtually all city banks, many regional banks, and other financial institutions

offer these services. Additionally, Internet-based securities transactions were first offered in April 1996. Currently 50 securities companies provide such services as of March 2000.

3. In Pursuit of Efficiency

3.1 Supply Chain Management

Supply chain management (SCM) refers to a management method for comprehensively managing all phases of a product's manufacturing and sale, from materials and parts supply to manufacturing, wholesaling, inventory control, shipping, retailing, and delivery to the consumer. Cisco Systems, Inc., for example, has successfully combined Internet commerce and SCM to boost its in-house efficiency. By organically fusing the final consumption goods market and intermediate goods market of Internet commerce into a single system, Cisco is using SCM very effectively.

3.2 Mobile Intranets

Mobile telecommunications have engendered major changes in the workplace. Many companies supply their field staff with cell phones or PHS handsets with which to keep in touch with the office. Now, thanks to the advances in info-communications technology, handsets can send and receive short text messages and e-mail, and access information services, as well as be used as telephones. With the onset of Internet access, the possibilities of "mobile working" have widened; for example, with NTT DoCoMo group's i-mode handsets, a new service which

provides access to special in-house servers for users outside the company has been in actual use.

4. Telework and SOHO

4.1 Overview

The role played by telework and SOHO in solving the social and economic issues facing Japan as it moves into the 21st century will be significant. With society rapidly aging, resulting in a contraction of the working-age population, these work formats will allow people who have been unable to work to find work, enhancing the labor participation rate in society as a whole. Telework and SOHO should also make it easier for women to work while they raise children, thus boosting the birth rate (Exhibit 21).

4.2 Back to the Country

The typical desire of many Japanese has been to move away from home to Tokyo to find work. Over the past several years, however, more and more people would prefer to avoid life in the big city and either return to the region in which they grew up or simply to move to a less congested setting. Sometimes

this involves “getting back to nature” or personal health. In any case, local governments are actively wooing such people to their regions, using both published materials and the Internet. The result has been the appearance of various SOHO formats, including remote offices away from downtown Tokyo.

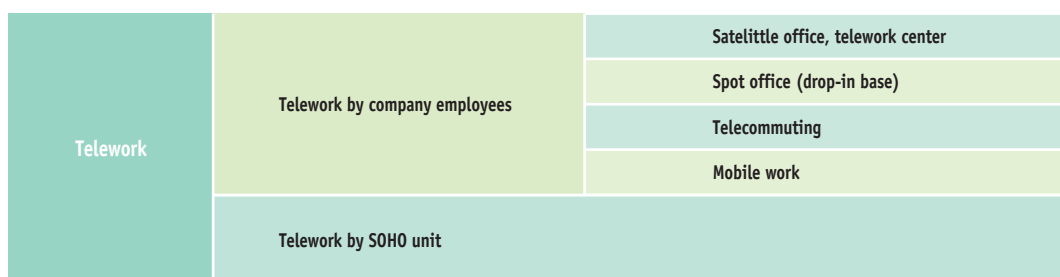
4.3 Women

Telework allows women who want to both raise their young children at home and engage in employment, to do both. During the past several years a number of companies, interested in retaining women who have left the workplace to get married or have children, have formalized a work-at-home status for them.

4.4 The Elderly and Disabled

Telework is an effective way of allowing people who would find it difficult to commute, such as the elderly and disabled, to work. Thanks to recent advances in info-communications technology, the national government, local governments, and private-sector companies, recognizing the value of telework, are making efforts to expand employment opportunities for the elderly and disabled.

Exhibit 21. Telework



Source: 1999 White Paper Communications in Japan, MPT.