# VII. JAPAN

# A. INTRODUCTION



Although Japan has experienced rapid Internet growth in the past two years, regulatory, technical and operational factors still exist which stand in the way of optimal e-commerce growth. These include: high telecommunications charges, low computer penetration rates, Japan's slowly recovering economy, the Japanese keiretsu supply, few Japanese-language B2B Internet applications and cultural attitudes toward privacy and electronic payment. Most importantly, Japanese e-commerce requires greater decentralization of the telecommunications industry and a less regulated atmosphere to flourish.

Japan is the second largest economy in the world with a GDP of roughly US\$4 trillion in 1998. The Japanese economy is 9 times the size of China's, 9 times the size of India's and larger than that of Germany and France combined. In 1999, signs were observed that the Japanese economy has begun to recover from the prolonged economic recession triggered by broad-based restructuring and the bursting of the asset-price "bubble" in 1991. Recovery is likely due to the massive government spending program, lower taxes and deregulation. In May 2000, Japan's index of leading economic indicators topped 50, which is generally considered an indication of an economic upturn. <sup>115</sup>

Japan is the world's second largest market for information technology equipment and services (telecommunications, computers, peripherals, software and multimedia). Market demand for networking, personal computers, Internet applications, wireless communications and satellite communications is expected to continue to grow.

Economic recovery and growth have been hampered by problems in the financial sector and relatively high unemployment. The depreciation of the yen in the last few years has led to slower import growth and accelerated export growth. Foreign direct investment has increased but uncertainty over the prospects of the economy and important structural impediments keep foreign investment from accelerating even further.

The difficult work of restructuring necessitated by excessive debt and over-regulation continues and Japan is making gradual but significant progress. Additional measures to accelerate reform and growth are needed to continue the recovery trend.

# **B.** TELECOMMUNICATIONS IN JAPAN

# 1. Regulatory Factors

## Regulatory Authority

Government power in Japan is held by the 12 ministries based in Tokyo which decide most major policies and control the economy through the many required licenses, permits and

<sup>115</sup> Wall Street Journal, July 6, 2000.

approvals which tightly regulate business activity. The Ministry of Posts and Telecommunications (MPT) regulates the telecommunications industry. Much telecommunications policy and regulation is laid out in the Telecommunications Business Act. Regulatory reform has been a central element in the economic structural reform program underway since 1995. An effort has begun to reduce economic intervention in many sectors, including telecommunications, and increase reliance on market forces leading to sustained growth. Even after the planned reforms, however, issues may exist such as the efficient setting of access charges to the telecommunications network.

### Licensing

Research did not uncover any information.

#### Accounting System

Research did not uncover any information.

#### Local Competition

Existing interconnection regimes are barriers to market entry. The MPT will submit legislation to amend the Telecommunications Business Law to introduce a new system of setting interconnection rates (based on long-run incremental costs) which are currently much higher than those in some other markets.

In Japan, the level of support for the national telecommunications company, Nippon Telegraph and Telephone Corporation (NTT), is strong and Japan is not considered to be hospitable to new entrant competitors or foreign investment. Given this basic point, the Japanese telecommunications market is becoming more competitive with decreased regulation and a number of new entrants into the market.

To promote competition in Japan's telecommunications market, the NTT was privatized in July 1998. In November 1998, tariff regulations and the classification of Type II telecommunications carriers were revised. Beginning in May 1998, in order to expedite tariff setting procedures, Type I telecommunications carriers in general were made subject to a prior-notification system in setting their new telecommunications end-user tariffs, instead of having to obtain authorization from the Minister. In the regional communications market, a price-cap regulation was introduced.<sup>116</sup> Between 1991 and 1996, the telecommunications sector gained a higher percentage of new companies than any other industry in Japan.<sup>117</sup> The number of ISDN lines providing high-speed transmission of a large amount of data has been growing almost at an exponential rate due to the expansion of Internet use.<sup>118</sup> On July 1, 1999, NTT's operations were divided into two regional carriers and one long-distance and international carrier under an umbrella holding company.

<sup>116</sup> MPT, White Paper

II7 Id. In FY1998, there were 179 Type I telecommunications carriers, up by 26 from fiscal year 1997.
Between 1991 and 1996, the number of telecommunications businesses operating in Japan increased by 153%, reflecting the surge in Internet service providers, according to the MPT.

<sup>&</sup>lt;sup>118</sup> Id. Chapter II-4-1. Currently, there are two ISDN services available in Japan.

Available Services Research did not uncover any information.

## Foreign Competition and Ownership

Formal restrictions on foreign exchange, investments, and imports and exports have been removed but government controls remain. In general, Japan is well known for having a large arsenal of informal means by which non-Japanese products are either effectively kept out of or delayed entry into the domestic market. Lately, however, the U.S. and Japanese have worked to cut restrictions in sectors of key economic importance, including telecommunications.

In addition to the "Fiber to Home" program, the government has decided to make a number of other significant pro-competitive changes to telecommunications policies. MPT will allow foreign firms to use leased lines in order to bypass the international settlement system. It will eliminate all restrictions on foreign investment in telecommunications carriers and in the CATV business.

## 2. Technical and Operational Factors

## Spectrum Efficiency and Management

High prices for traditional telecommunications use in Japan remain a factor limiting public access to communications in general and to the Internet. According to a study by the MPT, while charges for local telephone calls needed to connect to the Internet are average in Tokyo, the initial charge for subscribing is relatively high. These high rates result from a combination of local call charges and high subscription rates for wired telephone lines. The typical Japanese Internet user pays about US\$100 a month to spend an hour a day online. The MPT pledged to encourage reduction of the relevant charges.<sup>119</sup> According to *The Economist*, however, the Japanese government has lately reversed its position, fearing that a price reduction would lower NTT's profits, force a worker layoff and ultimately add to Japan's record unemployment figures.<sup>120</sup>

International telecommunications charges have decreased due to new entrants to the Japanese market. Since October 1998, due to entry by WorldCom Japan and DDI Corporation, users can now make international calls at almost the same charge level as Internet telephony services and international "Ko-Sen-Ko" services.<sup>121</sup>

The recent surge in mobile communications may circumvent the higher priced subscription fees for traditional telecommunications. Accessing the Internet on mobile phones is proving increasingly popular in Japan and 67.8 percent of households now have at least one mobile phone, up from 62.3 percent last year. NTT DoCoMo's I-mode, a cellular phone with Internet service including e-mail, web browsing, online entertainment, transactions, news and

<sup>119</sup> MPT, White Paper

*<sup>120</sup>* The Economist, "Cutting Off NTT," 13 May 2000

<sup>&</sup>lt;sup>121</sup> Id. Chapter II-7-2. Ko-Sen-Ko services are telephony and other telecommunications services made available through interconnection of international leased circuits with public switched telephone networks at both ends.

information and database, is the country's most popular mode of Internet access with projected user numbers of 10 million by year's end.<sup>122</sup>

"Keitai" mobile phones with Internet capability are also becoming increasingly popular.<sup>123</sup> These phones are popular with content providers as well as consumers because plagiarism of information sent to keitai phones is difficult. Conversion of existing Internet content into keitai content is relatively simple.<sup>124</sup> The current maximum speed for sending data to mobile phones is 64kbps, however, NTT Mobile Communications Network Inc is planning to launch a 384 kbps keitai service in early 2001. At this speed, video transmission to mobile phones should be possible.<sup>125</sup> Providers are investing in mobile phones in the hope that these will act as e-commerce terminals.

Japan will become the first country to introduce a next-generation cell phone service in spring 2001. The cell telephone, which can be used overseas, features up to 2 megabits of throughput per second, about 200 times faster than a conventional cell telephone, allowing high-speed Internet access and transfer of video images. Capital spending in the advanced cell phone market is expected to total one trillion yen. <sup>126</sup>

The Japan E-Commerce Initiative is intended to build on Japanese leadership in mobile technologies. Substantial government resources have been marshaled to push mobile applications for Internet services.

*Network Architecture* Research did not uncover any information.

### Infrastructure and Rights-of-Way

Japan has a fully developed infrastructure including roads, railways and telecommunications and is engaged in a large expansion of its infrastructure. Investment in telecommunications infrastructure is forecast to grow from its current level of US\$33 billion annually to US\$500 billion by 2007. Fueling the current strong demand for telecommunications infrastructure is the government program, known as "Fiber to the Home", designed to connect all Japanese businesses, government offices, schools and homes by 2010.

## C. THE INTERNET IN JAPAN

Today, there are nearly 20 million Japanese online 127 and that number is expected to reach 111 million by 2003. Much of this growth is occurring through the use of wireless devices such as

<sup>122</sup> Reuters: "Japan Becomes Increasingly Wired," April 11, 2000, http://www.nua.ie

<sup>123</sup> Keitai is the Japanese word for 'mobile.' AsiaBizTech, "Mobile Internet Takes Off in Japan," December 1, 1999.

<sup>124</sup> Id.

<sup>125</sup> Id.

<sup>126</sup> PROFILE OF JAPAN'S TELECOMMUNICATIONS INDUSTRY, Asia Pulse Analysts, March 31, 2000.

<sup>127</sup> Las Vegas Sun, "Nearly 20 Million Online in Japan," 12 June 2000.

NTT DoMoCo's i-mode cellular phone service with some growth attributable to an increasing number of wired homes and offices. Five years after the launch of commercial Internet services in Japan, the household penetration rate has surpassed 10 percent. <sup>128</sup> Despite this growth, Japanese goods and services purchased online last year last totaled a mere 3% of American purchases. <sup>129</sup>

Average Internet users in Japan spend 2 hours and 30 minutes online over five sessions every week. They visit six unique sites each and view 49 pages per session. The average advertising banner click-through rates are 1.96 percent.<sup>130</sup> The top ten most visited sites in February 2000 were Yahoo!, NEC, MSN, Sony Online, Geocities, Dream Train Entertainment, Nifty Corporation, Lycos Network, Hi-Ho Internet Service and Goo.

## 1. Regulatory Factors

Regulatory Authority

Research did not uncover any information.

## Cost of Access

The proliferation of the Internet may be hampered by the low penetration rates of personal computer use in Japanese small and medium businesses (SMBs). Less than 40 percent of small businesses in Japan own personal computers and less than 20 percent have Internet access.<sup>131</sup> In comparison, in the U.S., 80 percent of small businesses use computers and 60 percent are online.<sup>132</sup> Of those Japanese companies that do have PCs, only 20 percent supply one for each employee.<sup>133</sup> Nevertheless, the MPT reports that over 78 percent of businesses in the country are now using the Internet, up from 63.7 percent last year.<sup>134</sup>

According to the MPT, most government employees at ministries and agencies are provided a PC.<sup>135</sup> The ratio of computers to officials is 0.51 at central government ministries and agencies as a whole. At internal bureaus and departments, 92.6 percent of computers are connected to LANs. Since January 1997, the LAN's in each ministry and agency have been linked by the Kasumigaseki WAN. At the local level, only 2.3% of governments have allocated computers to at least 80% of their officials.<sup>136</sup>

<sup>128</sup> Id.

<sup>&</sup>lt;sup>129</sup> The Economist, "Japanese Portals Foot in the Door," 7 August 1999.

<sup>130</sup> Id.

<sup>131</sup> Financial Times.com, "Japanese B2B to Grow Despite Obstacles," January 6, 2000, http://www.nua.ie

<sup>132</sup> FT, "Japanese Middlemen and the Internet," January 1, 2000, http://fox.rollins.edu

<sup>133</sup> Reuters, "Internet Fever Spurs PC Sales in Japan," February 9, 2000.

<sup>134</sup> Reuters, "Japan Becomes Increasingly Wired," April 11, 2000.

<sup>135</sup> Id. II-9-4

<sup>136</sup> Id. II-9-4

Despite the recent economic downturn in Japan, sales of PCs to individuals are on the upswing. <sup>137</sup> Approximately 28 percent of Japanese homes now have PCs, an 8 percent increase since 1998. Though penetration rates are still about half that of the United States, <sup>138</sup> the Japanese Electronic Industry Development Association reports first-time buyers are eager to get connected to the Internet.

*Labor and Immigration Policies* Research did not uncover any information.

*Government Incentive Programs* Research did not uncover any information.

*Content Control/Censorship* Research did not uncover any information.

## 2. Technical and Operational Factors

*Protocol Standards and Development* Research did not uncover any information.

### Language Barriers

The growth of the Internet is hindered by a shortage of Japanese language software and content.<sup>139</sup> According to Goldman Sachs, most Internet business solutions packages are designed in the West and are not geared towards the local market or translated into Japanese characters.<sup>140</sup> In fact, one reason for the surge in popularity of mobile communications in Japan is the difficulty of adapting written Japanese to computer keyboards.

### Skilled Labor Force

The recent restructuring and recession in Japan have resulted in relatively high unemployment as labor market changes have released more highly skilled workers into the marketplace. These workers are available to the IT and Internet-based industries.

A significant foreseeable trend in Japan is the rapid aging of its population which will take place in the next quarter century. By 2025, one in four Japanese will be age 65 or over. Businesses have recognized this eventuality and have been planning with reduced labor inputs in mind.

## Government Incentive Programs

Research did not uncover any information.

<sup>137</sup> Reuters, "Internet Fever Spurs PC Sales in Japan," February 9, 2000, http://www.nua.ie

<sup>&</sup>lt;sup>138</sup> Id.

<sup>139</sup> Access Media Internation, "Net Thriving In Japan Despite High Charges," February 16, 2000

<sup>140</sup> Financial Times, "Japanese Middlemen and the Internet"

## **D. E-COMMERCE IN JAPAN**

According to the Electronic Commerce Promotion Council of Japan and Andersen Consulting, the Japanese business-to-consumer (B2C) Internet market in 1999 was 336 billion yen (US\$3.2 billion), or roughly four times the 64.5 billion yen (US\$610 million) of 1998. Categories expected to significantly increase in market scale include automobiles, travel and real estate, each of which alone should top one trillion yen in 2004. Electronic commerce's share of total household consumption will reach 2 percent by 2004, up from 0.1 percent in 1999. The bulk of expected e-commerce growth will be in (B2B) e-commerce with a 20,000 percent increase expected compared to a 4000 percent jump for B2C e-commerce.

Product or service	1999	1998
PCs	51 billion $(3.6\%)$	25  billion (1.8%)
Books, CDs	7 billion (0.3%)	3.5 billion (0.1%)
Clothing	14 billion (0.09%)	7 billion (0.04%)
Foods	17 billion (0.06%)	4 billion (0.01%)
Hobbies	10 billion (0.08%)	3.5 billion (0.03%)
Gifts	1.5 billion (0.03%)	0.5 billion (0.01%)
Other goods	10 billion (0.05%)	6 billion (0.03%)
Travel	23 billion (0.15%)	8 billion (0.05%)
Entertainment	3 billion (0.02%)	1.5 billion (0.01%)
Automotive	86 billion (0.9%)	2 billion (0.02%)
Real Estate	88 billion (0.2%)	
Financial products	17 billion (0.2%)	1.5 billion (0.02%)
Services	8.5 billion (0.01%)	2 billion (0.00%)
Total, not including real	248 billion (0.10%)	64.5 billion (0.03%)
estate		
Total	336 billion (0.11%)	

### The Present State of Business-to-Consumer E-Commerce in Japan\*

\*Joint survey, Electronic Commerce Promotion Council of Japan (ECOM) /Anderson Consulting

### 1. Regulatory Factors

### Taxation

Research did not uncover any information.

### Privacy

In December 1998, MPT released revised "Guidelines on the Protection of Personal Data in the Telecommunications Business," in order to keep pace with developments and the increasing

diversity in telecommunications services.<sup>141</sup> In April 1999, a bill was submitted to the Diet prohibiting unauthorized access.<sup>142</sup>

#### Content

Research did not uncover any information.

### Content - Intellectual Property Rights

The Japanese Trademark Law was extensively amended on June 12, 1996, effective April 1, 1997 to recognize the increasingly border-less nature of trade in goods and services. The amended Law prohibits applications filed with the intent of unfairly competing with the owner of a trademark that is famous outside Japan, despite whether the mark is well known in Japan. The amended Law allows a trademark owner to register the text file version of the trademark instead of providing specimens.<sup>143</sup>

Though the Japanese Patent Office has realized that the changes in commerce wrought by the Internet and electronic transactions will require changes in trademark and patent protection laws, they are waiting to see how electronic commerce and trade develop before legislatively expanding or narrowing the scope of infringement. Moreover, a separate committee advising the MITI, the Committee on Developing an Environment for Electronic Commerce, is studying this and other issues.

#### Security – Encryption and Authentication

In April 2000, the MPT, the MITI and the Ministry of Justice submitted to the Diet a bill on Electronic Signature and Electronic Certification Operations. In addition, the Japanese government has created a Council of Government Ministry and Agency Heads on Information Security to study the problem of illegal access to computer networks. No regulatory or legislative action has been taken; a report is due at the end of December 2000.

### Security - Payment Mechanisms

A lack of confidence over security is still the most common reason given by Japanese companies and individuals for not using the Internet to complete transactions. Typically, the Japanese credit card holder is not responsible for misuse of their card by third parties. However, because payments are made by direct debit from the consumer's bank account, consumers are in effect forced to pay the total invoiced amount to the credit card company and then wait for the refund. Since the refund process may take a while, consumers in Japan may be more reluctant to use credit cards on the Internet then consumers in other countries.

The Japanese government and major companies have paved the road to increased use of electronic cash. For example, the MITI organized the Electronic Commerce Promotion Council in Japan (ECOM) in January 1996 to study various electronic commerce issues including digital cash.

<sup>141</sup> White Paper, Telecommunications in Japan

<sup>142</sup> Id.

<sup>143</sup> Law Partially Amending the Trademark Law, Law No. 68 of 1996, amending the Trademark Law, Law No. 127 of 1959.

*Participation in New International Standards Development* Research did not uncover any information.

### 2. Technical and Operational Factors

*Protocol (Standards) Making Process* Research did not uncover any information.

*Product Restrictions* Research did not uncover any information.

*Delivery Infrastructure* Research did not uncover any information.

### Availability of Payment Mechanisms

One element in the traditional Japanese business structure may survive and even flourish in the "New Economy" of clicks and bricks. "Konbini", Japan's low-cost and high-tech convenience stores, could become ideal conduits to facilitate the spread of e-commerce. Because these shops can be found on nearly every street corner and have sophisticated, reliable distribution systems, they could help solve delivery and distribution problems for shopping at home and at in-store terminals.<sup>144</sup> Konbini could also become payment collection sites where e-commerce transactions could be conducted on a cash or credit basis. According to *The Economist*, by transforming themselves into low-cost local community banks, konbini can capitalize on the growth of e-commerce.

#### General Business Laws

Research did not uncover any information.

### Public Attitudes to E-Commerce

At the consumer level, B2C e-commerce in Japan has been hampered by concerns over inappropriate Internet content, privacy, financial fraud and payment problems experienced by Internet users. The MPT found in a FY1997 survey, that 38.1% of Japanese Internet users believed they had been subjected to illegal or harmful information online. <sup>145</sup> Furthermore, during 1998, the Japan Computer Emergency Response Team Co-ordination Center received 923 complaints from Internet users concerning unauthorized access to private information and other problems, an increase of 87% from the previous year. Recent surveys suggest fear about fraud and misuse of personal information will prove an even bigger deterrent to Internet shopping in Japan than in Europe or America. <sup>146</sup> Form of payment may be a problem. While credit cards are widely held in Japan, they are rarely used in traditional transactions and even more rarely for payment online. <sup>147</sup> Various other concerns are impacting the growth of B2C e-commerce, including lack of knowledge regarding merchant and product reliability, inadequate encryption,

<sup>144</sup> Id.

<sup>145</sup> Id.

<sup>146</sup> Id.

<sup>&</sup>lt;sup>147</sup> The Economist, "Banking at Your Convenience," 22 January 2000.

unavailability of Japanese language contract documents and the safety of electronic communication, to name a few. <sup>148</sup>

## Business Attitudes to E-Commerce

The attitude of the entrenched business community in Japan, while difficult to quantify, is a very real obstacle to the economic growth and opportunity possible through e-commerce. As a result of the recent economic slowdown in Japan, many businesses there have adopted a conservative attitude, especially toward experimenting with new ventures such as e-commerce. Many companies, such as the large retailer Daiei, are downsizing and retrenching and have announced closure of some retail outlets.<sup>149</sup> According to the *Financial Times*, many Japanese companies have frozen or even slashed information technology budgets. As a result, businesses may not be investing sufficiently in new software technologies to create e-commerce platforms necessary to success.<sup>150</sup> A change in this overly-cautious business attitude would benefit the growth of e-commerce in Japan.

Japanese business customs and labor concerns exert inertial force on adapting to new models and transitioning to Internet time in the "New Economy." The Japanese keiretsu system of business depends of a network of intermediaries such as distributors and wholesalers to facilitate transactions and limit competition among suppliers. In contrast, the price-driven dynamic of e-commerce emphasizes disintermediation, or the reduction or elimination of middlemen. <sup>151</sup> Some Japanese companies, whose desire to succeed in the e-marketplace outweighs their adherence to the keiretsu system, are starting to unwind kieretsu structures. <sup>152</sup> Exclusive, long-established business arrangements may give way to flat, open and competitive web-based markets. <sup>153</sup> As a result, as many as four million jobs could be lost in more traditional sectors, <sup>154</sup> and up to 2.5 million new jobs could be created in the information technology industry<sup>155</sup> with a net loss of 1.6 million jobs.

### **E.** CONCLUSION

In Japan, many legal, regulatory and cultural obstacles to the growth of the Internet and ecommerce still exist, but overall movement is towards a more hospitable Internet/e-commerce environment.

<sup>148 &</sup>quot;Popularizing the Use of Electronic Payment Between Consumers and Businesses: A Survey of Progress to Date," http://www/ecom.or.jp

<sup>149</sup> Where Does Japan Stand in the World of E-Commerce, Kumi Sato, President, Cosmo Public Relations, Nikkei Weekly, March 22, 1999, http://www.cosmopr.co.jp

<sup>150</sup> Financial Times, "Japanese Middlement and the Internet"

<sup>151</sup> FT, "Japanese Middlemen"

<sup>152</sup> Id.

<sup>153</sup> The Economist, "Business-to-business in Japan: No Room in the Nest," 15 April 2000

<sup>154</sup> FT.com, "Japanese B2B to Grow Despite Obstacles," January 6, 2000, http://www.nua.ie

<sup>&</sup>lt;sup>155</sup> The Economist, "Costly Wiring Survey 8 of 10," 27 November 1999.

For the next few years, shortcomings in telecommunications competition policy will continue to hinder e-commerce. Despite the recent restructuring of NTT, the Japanese government is reluctant to push reforms because it wishes to protect the national telecommunications champion and intermediaries of the bricks-and-mortar retail industry. The need persists to loosen the restrictions on local competition and foreign competition, investment and ownership.

The Internet strikes at the heart of traditional Japanese business practices that keep prices high and hinder productivity. Long supply chains and numerous intermediaries make for an inefficient distribution system, but there is room for improvement. As the Internet develops, changes in this system are already being seen. Established Japanese businesses such as Fujitsu, Sony, Matsushita, Toshiba, and NEC <sup>156</sup> have realized the commercial power of the Internet and are beginning to adapt their business practices to exploit e-commerce opportunities.

The potential for e-commerce growth in Japan is enormous. More and more Japanese consumers are using the Internet and e-commerce in their daily lives. A crucial element remains the cost of access to the Internet via fixed landlines which are still mainly controlled by NTT. Certainly, the rise in the use of mobile telephony will increase the number of those with access, but most of these are users who can afford the access, mainly the more affluent in urban areas.

In both word and increasingly in deed, the Japanese government is climbing aboard the New Economy bandwagon, in the hope of reaping the benefits of sustained growth. On May 19, 2000, Prime Minster Yoshiro Mori pledged to prioritize areas "as effecting an information revolution in education, realizing e-government, and developing cutting edge IT," in order to ensure "that the promotion of IT will serve to catapult Japan into the 21<sup>st</sup> century."

<sup>&</sup>lt;sup>156</sup> The Economist, "Japanese Portals Foot in the Door," 7 August 1999.