Chapter IV
Broadband Policy, Market Competition, and User Adoption in Taiwan

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ABSTRACT

Taiwan has been making great efforts to promote the fulfillment of its National Information Infrastructure (NII), with broadband network technology and its application having rapidly developed in recent years. In relation to the two major forms of broadband network technology, cable modem and ADSL, two multiple system operators—namely, Eastern Multimedia Company and China Network System—provide broadband network via cable modem, and HiNet and Seednet are the major ADSL service providers. Three new fixed networks have offered ADSL services as well since they began their operations. There are 5.25 million households (HHs), or 72.11% of the household population in Taiwan, using the Internet, and 4.74 million households, or 65.05% of the HH population, using broadband (TWNIC, 2006). This chapter analyzes the broadband adoption, the competition among providers of broadband, and relevant policies in Taiwan. The research methods adopted include literature reviews, in-depth interviews, and secondary analysis of previous surveys conducted by TWNIC. Since Taiwan's broadband penetration is the fifth highest in the world, the discussions of the major factors contributing to broadband deployment in this chapter might provide some experiences from which other countries can learn.

INTRODUCTION

In May 2002, the ROC government announced its "Challenge 2008" Six-Year National Development Plan to transform itself into a high-tech service island. The six-year plan involves a budget of NT$2.6 trillion (approximately US$75 billion). One of the objectives of this plan is to develop a "Digital Taiwan," aiming to promote e-life, e-government, e-commence, and innovative digital industries in Taiwan. To this end, there are five goals that have been set for achieving this, with one of the most important aspects of the plan being to install broadband Internet in every household, with a view to reaching six million households by the end of 2007 (CEPD, 2002).

The four fixed networks planned to invest a total of NT$364.4 billion (US$10.5 billion) in broadband deployment between 2002 and 2007. The Directorate General of Telecommunications (DGT), the former telecommunications regulator, had been asked to play an active role in opening up the telecommunications market, deregulating the unnecessary rules and controls, lowering the entry barriers, maintaining market order, providing a stable and competitive environment, and removing the obstacles to the broadband infrastructure. However, there exist doubts about whether the goals can be achieved, since it may be impossible to reach 82.36% of the 7.28 million households in Taiwan, in view of the fact that some of the households might not consider it necessary to subscribe to broadband.

The purpose of this chapter is to:

1. Describe the development and current status of broadband in Taiwan
2. Analyze broadband adoption and user demand
3. Analyze broadband strategies among providers
4. Analyze the government's broadband policy
5. Discuss the obstacles to the deployment of broadband
6. Propose solutions to facilitate a more rapid deployment of broadband.

While broadband includes ADSL, cable modems, wireless LANs, leased line, optical fiber, and so forth, this chapter focuses mainly on ADSL and cable modems.

THE BROADBAND DEPLOYMENT

According to a Point-Topic report conducted in March 2006, Taiwan has the fifth highest broadband household penetration in the world, only being surpassed by South Korea, Hong Kong, Iceland, and Israel (Cox, 2006). In July 2006, there were 5.25 million households (HHs) using the Internet, representing a 72.11% penetration, and 4.74 million households using broadband, or 65.05% of the HH population (TWNIC, 2006).

In Taiwan, the two major forms of broadband network technology are the cable modem and ADSL, with cable modem services having been in operation since the end of 1998. ADSL services started one year later than the cable modem services. Before the government opened up the fixed networks, Chunghwa Telecom (CHT), the incumbent operator, monopolized the telecommunications market and hesitated to promote an ADSL service, fearing that the new broadband service might hurt leased line revenues from the business sector. When the government opened up the fixed networks in 2000, CHT realized that it could not postpone the ADSL service any longer. After ADSL came on the market, it grew very fast. By the end of 2000, ADSL penetration surpassed that of cable modem. There were four main reasons for this:

1. The NII established a penetration goal in July 2000 to reach three million users in three years.
2. The government opened up three fixed networks in March 2000, all of which subsequently provided ADSL service.
3. The residential demand for broadband steadily increased.
4. Many ISPs started to provide ADSL services.

Since competition within the broadband market has become increasingly fierce, the cable modem providers have hesitated to invest more money to upgrade their one-way infrastructure to a two-way infrastructure. The situation resembles that of the chicken and the egg. If the cable modem providers do not upgrade their infrastructure, the subscribers will lose patience and might convert to ADSL services. A one-way cable modem is not only slow but also costs more, because the subscribers still have to pay the circuit fees. GigaMedia (owned by one of the multiple system operators, or MSOs) decided to provide ADSL service in addition to cable modem service in March 2001.

In September 2002, there were only 241,495 cable modem subscribers. When the cable operators began to upgrade their systems to two-way,