

# Chapter L

## The Evolution of Broadband Industry in the Developing World: A Comparison of China and India

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### ABSTRACT

*Telecommunications networks of India and the People's Republic of China are among the largest in the world. The two economies have a number of areas for broadband use ripe for exploration. Broadband networks in some regions in these two economies are even more developed than in some parts of the industrialized world. There are, however, a number of reasons to believe that these two countries may exhibit distinct and varied patterns of broadband diffusion. This chapter compares and contrasts the diffusion patterns of broadband technology in the two economies. We examine factors driving broadband diffusion in the two economies in three major categories: demand and cost conditions, industry structure, and export conditions.*

### INTRODUCTION

Telecommunications networks of India and the People's Republic of China (henceforth, China) are among the largest in the world. Both have a number of areas for broadband use ripe for exploration. One estimate suggests that thanks mainly to rapid broadband diffusion in China and India, broadband revenue in the Asia-Pacific region will

cross \$55 billion by 2011 compared to \$20 billion in 2005 (Indiantelevision.com, 2006).

As of 2005, in terms of the numbers of the Internet users as well as broadband users, China ranked the second in the world—only after the U.S. One study suggested that by the early 2006, a Chinese Internet user was more likely to be on broadband connections than U.S. counterparts (Koprowski, 2006). By the early 2006, over half of Chinese Internet-users had broadband compared

to only 6.6 percent at the end of 2002 (Special report, 2006).<sup>1</sup> By the early 2004, China had 10.95 million DSL (a form of broadband) users, the highest in the world.<sup>2</sup> Moreover, China's broadband network growth rate is among the fastest in the world (Country growth rates, 2004). By the end of 2006, China is expected to have more Internet users and broadband lines than any other country in the world (China.net, 2004).

Currently, India is far behind China in terms of broadband and other related indicators (Table 1). A report released by Forrester Research in May 2006 indicated that the top three socioeconomic classes in urban India had only a 3% adoption rate of the broadband technology (zdnetindia.com, 2006). Nonetheless, India is rapidly catching up in the broadband race. India's Ministry of Communications and Information Technology hopes

*Table 1. Indicators related to broadband development in China and India*

Indicator	China	India
Personal computers (PCs) in use('000) (2004)	62241.13	12627.19
Online households (million) (2004)	20.42	5.85
PC households online (% of PC households) (2004)	70.97	53.17
Number of Internet users ('000) (2004)	162097.46	54159.55
ISDN subscribers ('000) (2004)	1615.74	37.53
Broadband users as a percentage of Internet users (2005) <sup>d</sup>	45	6
Number of broadband households (2005-end) <sup>b</sup>	30 million	550,000
Composition of broadband access modes (mid-2006)	70% via DSL, 18% via fiber to the premises (FTTP), 12% via cable or other means (e.g., fixed wireless, WiFi or satellite) <sup>e</sup>	
Average monthly broadband charges (\$, 2004) <sup>a</sup>	16	20
Digital main lines % of telephone main lines (2004)	100	100
Capital investment in telecommunications (million, \$) (2004)	26033.78	5036.52
Telephone lines in use ('000) (2004)	282524	47188
National telephone calls (million minutes) (2004)	66339.08	36.52
International outgoing telephone calls (million minutes) (2004)	1263.16	680.81
Mobile telecom revenues (% of telecom revenue) (2004)	57.8	17.95
Mobile telephone users ('000) (2004)	334082	40323.45
Mobile SMS messages sent, million (2004)	93156.85	NA
Number of television sets (2005) <sup>c</sup>	400 million	
Number of cable TV subscribers (2005) <sup>c</sup>	150 million	

Sources: <sup>a</sup> Mishra (2004); <sup>b</sup> Burrows et al. (2005); <sup>c</sup> Basu (2006); <sup>d</sup> Need to revolutionize (2005); <sup>e</sup> Lindstrom (2006). All other data are from Euromonitor International's Global Market Information Database.

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