Chapter 6.12
Optimal Number of Mobile Service Providers in India:
Trade-Off between Efficiency and Competition

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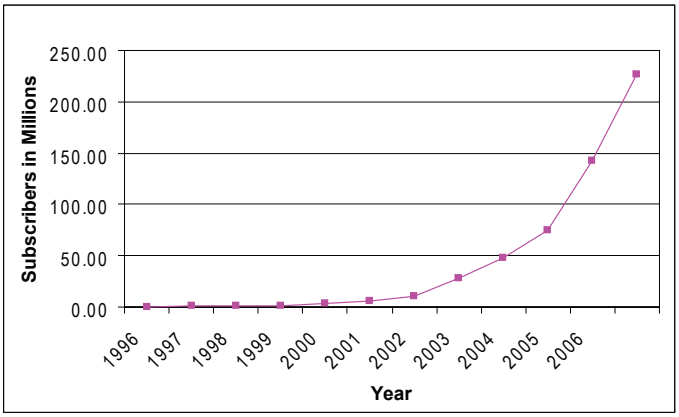
ABSTRACT

With 225 million subscribers, India has the world's third largest mobile subscriber base in the world. The Indian mobile industry is also one of the most competitive in the world with 4-7 operators in each service area. A large number of operators bring competition and its associated benefits such as decrease in price and hence corresponding growth of the market. On the other hand in the presence of economies of scale, too many operators may result in inefficient scales and high unit costs. This article analyses the trade-off between competition and economies of scale by estimating the production function for mobile subscribers and traffic carried. Analysis of panel data reveals the existence of economies of scale in the Indian mobile sector. We then derive an upper bound on the optimal number of operators in each license area and discuss policy implications.

INTRODUCTION

Quick deployment, competition, advancement in technologies, and reduced cost of access have propelled the growth of mobile services in India much like in other emerging countries. The Indian mobile subscriber base continues to grow and has reached about 225 million in December 2007 from about 142 million a year ago. Figure 1 illustrates the exponential growth of mobile services in India. India currently has the world's third largest mobile subscriber base, and is slated to exceed that of the U.S. by the end of this year to become the second largest in the world, next

Figure 1. Growth of mobile services in India



only to China. The compounded annual growth rate of the mobile subscriber base has been 84.2% over the last 5 years. Revenue from cellular mobile services touched $12.5 billion for the fiscal year ending March 2007 (Voice & Data, 2007).

The Indian mobile industry is also one of the most competitive in the world. There are as many as 7 mobile operators in certain areas of the country. Figure 2 illustrates the amount of competition and market power as indicated by

Figure 2. HHI over time period across different categories of Service Areas