

# Chapter 6.13

## Evolution of Telecommunications and Mobile Communications in India: A Synthesis in the Transition from Electronic to Mobile Business

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### ABSTRACT

Electronic business is a concept that has been adopted by businesses all over the world. The developing world takes it as a viable economic opportunity to catch up with other economies. A significant underlying factor in this development is the evolution of telecommunication infrastructure, especially in developing economies. In this chapter, we have synthesized this critical evolution in India. In the process, we found that there is a second layer of evolution into mobile communications and subsequently mobile busi-

ness, which is gaining momentum in India. We conclude with an outlook for the future for these developments.

### INTRODUCTION

The electronic business revolution, an idea that caught the imagination of many businesses, governments and individuals across the world during the second millennium has now become a reality (Chen, 2001). Many economies across the globe have transitioned their business processes and service delivery into the electronic mode, ushering

in the digital or rather electronic business era. It is now widely accepted by policy makers, enterprises and societies that information communication technologies are at the centre of an economic and social transformation that is affecting all countries (UNCTAD, 2003). Lately, the technological advances in mobile communications, which form part of the information communications infrastructure, has caught the attention of many an economy. While it is a natural transition for developing nations, to use mobile technologies to facilitate electronic businesses and progress from electronic to mobile business, developing nations find potential in the low-cost, convenient infrastructure it offers.

Among the world's population, more than 80 percent live in developing countries where socio-economic progress continues to be slow, due to a variety of reasons such as poor infrastructure, low education, etc. (Spletstoesser, 2002). In this context, India is a geographically disparate developing economy, with a population of over 1.2 billion people spread over 35 states, speaking different languages, relatively unequal in the distribution of wealth, education and progress, is finding the transition of its domestic economy into the digital world rather challenging. To begin with, there was regulation not permitting foreign direct investment in the country for decades until the 1990s. However, during the latter half of 1990s, with the deregulated telecommunications industry opening up to private competition, combined with the federal regulations permitting foreign direct investment into the economy, the domestic economy began its transition. This transition has been enabled by the government and the growing middle-class information technology professionals, who found potential for progress through information communications technologies. Lately, it has been realized that mobile communications provide a low-cost infrastructure which provides for economic progress within the economy by enabling electronic business processes beginning

with electronic government delivery to revenue generating models for network operators.

In this chapter, we aim at capturing the transition of India into the digital world by closely examining the key influencers, i.e., the evolution of telecommunications and mobile communications. In the process, we have also touched upon other influencers in the evolution, such as the effect of information technology and some government initiatives. This chapter is meant to inform academia, policy makers as well as all concerned forums involved in developing nations. This chapter offers an example for other developing nations who wish to exploit the power of telecommunications and especially mobile communications, in their economic progress as well as their transition into electronic business processes.

## **BACKGROUND**

Examining the impact of globalization and the Internet on developing nations, Kshetri (2001) contends that the main factors that lead to the explosion of e-commerce include the development of better and faster computer technology, the creation of more user-friendly software, people's trust in electronic transactions, and low costs. However, some factors such as cultural beliefs, lack of computer literacy, technological infrastructure, and government policies are a major deterrent for the spread of e-commerce in developing nations. The UNCTAD (2003) report, which analyzed developing nations, confers with this view, suggesting that developing nations have manifold challenges such as coping with new technologies as well as exploiting their full potential, and managing embedded logical relationships with the developing world in their transformation to knowledge societies. This section leads into various subsections that briefly examines and traces the evolution of India in this context.

India, being a developing nation, has many interesting challenges. The main issues have been

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