Factors Influencing ICT Development in BRICS Countries

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ABSTRACT

The hasty development of information and communication technologies (ICTs) has overwhelmingly altered many aspects of life and societies all around the globe. High-quality information and communication technology (ICT) infrastructure is essential for developing countries to match the pace of economic growth. This can be achieved only with sophisticated infrastructure. Enormous competitive pressure on businesses across the world has made Information and Communication Technologies (ICTs) one of the main drivers of economic growth. This paper studies a select set of economic factors and their respective impacts on ICT development in five leading emerging economies known as BRICS (Brazil, Russia, India, China, and South Africa). The authors' findings demonstrate that in addition to deregulation, existing conditions (socioeconomic factors) must also be considered. They conclude by avowing that policy makers can more easily realize economic development via ICTs if they consider these conditions while cultivating their technology strategies.

Keywords: *BRICS, Economic Development, Emerging Economies, Financial Development, ICT Development*

INTRODUCTION

Diffusion of Information and Communication Technologies (ICT) has become a vital factor in the economic growth of any country in the world. There is no doubt that the deployment and adoption of these technologies will increase productivity. Contribution of latest technologies is responsible for innovation-led economic growth.

Over the past couple of decades, there is quick dissemination of ICT use. However, use of technology still differs significantly across countries. Use of ICT in all developing countries is substantially lower as compare to the developed countries. These inequalities leads to different economic consequences.To grow an economy with healthy rate access to information and communication technology (ICT) becomes important.

Unfortunately, promotion of diffusion and technology change are not be consented by many countries because of different cultural and social systems. This ultimately increased the gap in terms of access, usage and share in benefits during the increase in technology diffusion, investment and development. Not only economic but political constraints also limit the use of

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ICT for betterment of the people. The Information and Communication Technologies opens new dimensions to enhance the level of development in developing economies.

Due to these new digital techniques less developed countries might contribute in a more dynamic the fashion in to the global economy. Presence of some necessary conditions that countries should satisfy to be able to get the positive effects generated by ICT, since national capabilities determine the degrees of excludability of the international communication network and its effects.

OECD (2001) defines digital divide as "gaps between individuals, households, Businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access in ICTs and to their use of the Internet for a wide variety of activities". When digital divide prevails in the economy, there is a concern that the poorer group of society without access to technology would be further side-lined in the ICT age. In Asia, the same concern of poverty and digital divide still holds.

Despite having acquired a substantial market share in the production of ICT goods, developing countries seem to be lagging behind in the adoption of ICT compared to developed countries. Another worthy point to mention is that, the digital divide phenomenon which occurs in developing countries may not be caused by the same factors as in developed countries.

LITERATURE REVIEW

Information and communication technology (ICT) infrastructure is found essential ingredient for fast development of developing economies (Dholakia & Harlam, 1994; Madon, 2000; Pohjola, 2001; Roller & Waverman, 200, Jukka & Pohjola, 2002;). There are many researcher who believes that along with ICT expansion, sufficient attention is also required in human capital, health, and civil infrastructure (Fielding, 2002; Kneller, 2005; Lamberton, 2001; Nwagwu, 2005; Von Lubitz & Wickramasinghe, 2006 ; Bollou, 2006;). In addition to these arguments, ICT infrastructure expansion also need the movement of capital and global coordination in production and transportation, new methods of cross-border investments and the expansion of services (Antonelli, 2003; Carayannis & Sagi, 2002; Henderson et al., 2002; Kumar, 2005; Werthner & Klein, 1999; Zaheer & Manrakhan, 2001).

Many researchers have also studied positive spillover effects of ICT expansion on numerous dimensions of social life i. e. enhance learning (Aduwa-Ogiegbaen&Iyamu, 2005; Kankaanranta, 2005), improve healthcare (Branko, Lovell, & Basilakis, 2003; Von Lubitz & Wickramasinghe, 2006), empower marginalized women (Gurumurthy, 2003; Huyer, 2005), promote indigenous knowledge (Jain, 2006), and maintain good governance (Meso, Datta, & Mbarika, 2005).

Many institutions such as the World Bank, International Telecommunications Union (ITU), and International Monetary Fund (IMF) have been continuously insisting emerging economies to invest in ICT infrastructure as it is essential for socioeconomic progress.

The idea that all emerging economies can achieve high rates of economic growth by expanding their ICT infrastructures has come under intense scrutiny (Estache, Perelman, & Trujillo, 2005; Gasmi, Laffont, & Sharkey, 2000; Gutierrez & Berg, 2000). Although some emerging economies have managed to achieve significant outcomes in ICT expansion and economic growth, others still face significant difficulties. In a 2002 report on a study of 60 countries, The Economist cautioned that developing countries may not see the same returns on their ICT investments as developed countries. According to this study, ICT begins to deliver gross domestic product (GDP) per capita growth only after a certain threshold of ICT development is attained. Others have argued that unlike developed countries, developing countries have little of the supporting infrastructure necessary for the expansion and utilization of the productive capacity of ICTs

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