

Chapter 26

Leveraging Broadband for e-Government and Development in Africa: Opportunities and Challenges

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ABSTRACT

This study investigated the extent and benefits of Africa's broadband connectivity, its impact on e-government and economic growth, and the challenges and best practices for addressing them. Studies by the UN and ITU over the years have revealed Africa lags behind in the global broadband connectivity and e-government diffusion. The Connect Africa summit held in 2007 by the ITU and its partners came out with five specific goals to connect the continent and help improve its economy. This study reviewed the Connect Africa Outcomes Report, and analyzed the publications of three independent studies conducted by: a) the ITU, b) the World Bank and the African Development Bank, and c) Informa Telecoms and Media. The findings reveal that Africa has made substantial progress in international connectivity and mobile broadband penetration. Additionally, broadband connectivity has contributed toward some improvements in e-government initiatives and economic growth. The study concludes with recommendations to address the existing challenges to consolidate the gains made.

INTRODUCTION

This study aims at determining the extent and benefits of Africa's broadband connectivity, as well as the challenges and best practices for addressing them. The diffusion of broadband Internet infrastructure is shaping modern society and the nature of traditional information and telecom-

munication technology (ICT) sectors. The impact of broadband can be analyzed in three different contexts: economic, political and social. In the economic context, broadband is measured in terms of efficiency, productivity and economic growth. In the political contexts, broadband has an impact on e-government and e-democracy, and promotes democratic forum in the cyberspace.

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Finally, in the social context, broadband diffusion leads to a better quality of life, by providing better healthcare, expanded education opportunities, and increased responsiveness by governments to citizens (Ferro et al., 2006). Broadband as a tool for e-government can assist citizens to be more informed and improve access to government information and service delivery. Indeed, some studies (e.g. Ferro et al. 2006) have revealed a positive relationship between broadband availability and the implementation of e-government services. Generally, governments are able to influence broadband markets either on the demand or on the supply-side to improve e-government infrastructure and private economic activity.

In recent years, a variety of studies have detailed several benefits of broadband networks. These benefits include the ability to expand economic opportunities and innovation, increase trade and productivity, reduce business costs, create jobs and encourage foreign investments (Lehr et al., 2005; Qiang et al., 2009; Kelly & Rossoto 2011). These benefits have been linked to the transformational effect of broadband throughout the sectors of the economy, raising productivity and efficiency (Kelly & Rossoto 2011). Mobile broadband has been found to have a higher impact on GDP growth than fixed broadband, through the reduction of inefficiencies (Thompson & Garbac, 2011). Broadband lowers costs of international communication and improves the availability of information, enabling companies to access foreign markets more easily and become more competitive. In a study of 27 developed and 66 developing nations, Clarke and Wallsten (2006) found that a 1 percentage point increase in the number of Internet users is correlated with a boost in exports of 4.3 percentage points and an increase in exports from low-income to high-income countries of 3.8 percentage points. Qiang et al. (2009) suggest although this study was not broadband specific, it is safe to infer that broadband would have an even bigger positive impact.

In developed nations, broadband penetration level often rises above critical mass (25 percent) while in many developing nations, the high cost of high-speed Internet access makes broadband access out of reach of many citizens and businesses. Due to less broadband penetration in developing nations such as those in Sub-Saharan Africa, few studies have been done to determine their economic and social impact. However, early research suggests that broadband diffusion creates numerous benefits in developing nations, including supporting growth in part by improving global competitiveness and attracting foreign investors. Although such improvements are difficult to measure, one study (Abramovsky & Griffith, 2006) found that developing countries with better ICT infrastructure attract significantly more business from offshoring, outsourcing and foreign investments. Reporting on the World Summit on the Information Society Stocktaking, the International Telecommunication Union (ITU) (2007) stated that in 2007, the global broadband penetration was 5 percent, but fixed broadband penetration was just 1 percent in Africa, compared to 10 percent across the Americas and in Europe. Additionally, although Africa has a share of around 14 percent of the world's population, it accounted for little over two percent of the world's Gross Domestic Product (GDP) in 2006. Considering the relatively low income in African countries, widespread diffusion of broadband in these nations could prove very beneficial.

In October 2007, the Connect Africa Summit was organized by the ITU, the African Union and the World Bank, along with a number of UN agencies and other intergovernmental agencies in the Rwandan capital of Kigali. The goal of the summit was to interconnect African capitals and major cities with broadband infrastructure, to connect African villages to broadband services, to adopt regulatory measures that will facilitate promotion of affordable and widespread access to broadband services, to support the development of ICT skills and to adopt national e-Strategies. It is expected

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