The Emerging Market of Sub-Saharan Africa and Technology Adoption: 
Features Users Desire in Mobile Phones

Alice S. Etim, Winston-Salem State University, USA

ABSTRACT

In the United States, Organization for Economic Co-operation and Development (OECD) countries and several emerging economies in Asia, mobile technologies have become ubiquitous and core to everyday lives. The same cannot be said for many countries in Sub-Saharan Africa (SSA). The availability, affordability and use information and communication technology (ICT) continue to pose a major challenge to the progress of this important emerging economy and their participation in a networked and “flat world.” Writers (Bishop et al., 1999; ADB, 2003; Fisher et al., 2004; Elijah & Ogunlade, 2006; Etim, 2009; Ssewanyana, 2007) argue for the use of ICT to enable the SSA population in the area of economic and personal development. This paper examines the emerging economy of SSA adoption of mobile technologies in comparison to the U.S.A and reports a study on the features that SSA students desire in mobile phones. The key finding was that study participants desired Internet access via mobile phones.

Keywords: Bottom of the Pyramid (BOP), Extreme Poverty, Features in Mobile Phones, Information Communication and Technology (ICT), Internet, Mobile Web, Sub-Saharan Africa, Technology Adoption

INTRODUCTION

In the United States, Organization for Economic Co-operation and Development (OECD) countries and several emerging economies in Asia, mobile technologies have become ubiquitous and core to everyday lives. In a PEW Internet Study (2010), those surveyed were of the opinion that mobile technologies are taking over our lives and by 2020, most of us will be working remotely by connecting to cyberspace-based apps (“in the cloud”) via our smartphones and other mobile devices. It is in the technology, access and affordability that the U.S. significantly differs from SSA. While a large percentage of mobile phone users in the U.S. are using third and fourth generation phones (3G and 4G) with data and Internet access capabilities along with a long list of apps or other features like camera, music, games, etc., mobile phone users in SSA are only able to get basic 2G GSM (global system for mobile) phones that are predominantly used for voice calling and

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texting (Short Message Service or SMS text). PEW Research (2010a) found that nearly 90% of U.S. teens have mobile phones and they send and receive on the average 50 texts per day. Few teens in SSA can boast of basic mobile phones. The mobile Web is growing in the U.S., but this great technology is a mirage to the people of SSA and such ICT lack contributes significantly to extreme poverty. There is also very little literature that has been done to attempt to understand ICT and mobile phone adoption or the use of the mobile Web in SSA. The aim of this ICT study therefore was to investigate the features in mobile phones that students in an important emerging economy in SSA desire to have for their ICT needs. Specifically, the following research questions were answered:

(1) What percentage of the participants in the study owned mobile phones or SIM (Subscriber Identification Module) card?

(2) What factors contributed to mobile phone purchase decisions given the fact that some of the people are faced with extreme economic or information poverty?

(3) What are the features that the people desire in their mobile phones that are lacking in the brands that they currently own?

LITERATURE REVIEW

Kroski (2008) defines the mobile Web as the World Wide Web accessed through a mobile device that ranges from a cellular phone to an iPod Touch. Such mobile devices and handsets (a familiar name in SSA for all kinds of mobile phones) have enabled Web capabilities that go beyond making calls, checking e-mail and downloading ringtones to a range of apps such as viewing weather forecast, retrieving traffic information, checking airlines schedules, accessing various banking systems to conducting secure transactions, and checking out e-books/journals from local libraries. These phones are smart enough to allow the convergence of a computer, phone, camera, media player into a single handheld device. Kroski (2008) asserts that this evolution of handheld devices provides the most complete experience for the user because they are combined with the new high speed wireless data network access to the Internet.

As at 2007, Golvin (2007) reports that 73% of all U.S. residents owned mobile phones; for those between ages 18-27, it was 83%. As at 2008, about 16% of American mobile phone owners regularly browsed the mobile Web (Kroski, 2008). According to Khan (2008), in the same year, 42% of those responding to a U.S. adult consumer survey said they use mobile devices to send or receive text messages, 24% indicated they use mobile devices to send or receive picture messages, 15% to send or receive email and 10% for instant messaging. Nine percent of these mobile device users who were surveyed at the time searched for information using a form of browser or text message; eight percent for looking up directions or maps, and five percent for researching products’ information. Towards the end of 2008, there was a revolution in smartphones ownership in the U.S., OECD and many Asian economies. The Economist (“The battle for the smart-phone soul,” 2008) argues that what appeared to be a lack of growth in the demand for smartphones in the early and mid-2000s was ending. A paradigm shift had occurred because of two key players in the market place: Apple Inc. and Google.

Prior to the smart phone era introduced by the Apple iPhone, 2G mobile phones dominated U.S. and world markets. Similar to personal computers (PCs), the type of mobile phones that dominated world markets had proprietary operating systems. A consumer not only purchased the hardware (the physical phone), but would purchase add-on software or programs that the hardware needed to function with. Each manufacturer of mobile technologies – Nokia, Samsung, Sony, Research in Motion (RIM), Symbian, and others developed proprietary operating systems to work with their cellular devices. Nokia for example, is the market leader in SSA and its cellular devices had Symbian operating system.
Shifting Focus from Access to Impact: Can Computers Alleviate Poverty?
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