Community Broadband Networks and the Opportunity for E-Government Services

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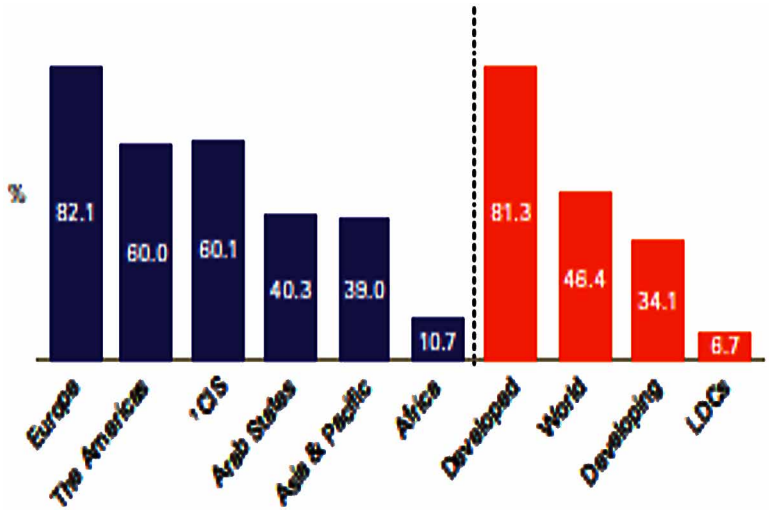
INTRODUCTION

This paper discusses how communities in underserved areas in developed and developing countries can develop Broadband connectivity in order to access e-government services. Community Based Broadband Mobilization (CBNM) models developed by Williams (2015) are used as explanatory tools for the discussion. In this article, a community refers to a social unit bound by a common purpose or characteristics. Communities include villages, suburban areas, academic groups, professional organizations, neighborhoods, non-profit organizations, etc., In this article, the context of "the community" is rural areas. Communities have developed fixed and wireless Broadband networks in developed and developing countries (see (Salemink & Bosworth, 2014; Williams, 2015)). They do so by forming Community Broadband Networks (CBN). The CBNs are communities that facilitate the development of Broadband networks in their communities.

The existence of CBNs presents an opportunity for facilitating Broadband connectivity in underserved (rural) areas. It also provides the opportunity to facilitate e-government services in underserved areas. This is because, the existence of Broadband network connectivity presents the possibility for the delivery of the e-government services in such areas (Zambrano & Seward, 2013). Hence, CBNs provided the boost for the implementation of e-government infrastructure and services in rural areas in many countries. They aid in reducing e-government network infrastructure deficiency in many countries. This deficiency exists (ITU, 2015; Zambrano & Seward, 2013;

Figure 1. Percentage of households with internet access
ITU, 2015.



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Wachira & Arlikatti, 2010; UN, 2014). The ITU version of the Internet Infrastructure deficiency is represented in the figure below. Countries in developing countries suffer more from the infrastructure deficiency than those in the developed countries.

However, it is not every community that has the desire to facilitate CBNs. Residents of rural communities are inundated with competing economic and social needs. These needs eclipse their desire to facilitate Broadband infrastructure. The question now is, how can the public sector mobilize communities to facilitate Broadband infrastructure for the purpose of e-government service delivery?

To answer this question, this article adopts the CBNM models by Williams (2015). These models explain why communities facilitate CBNs. It presents an idea of the conducive conditions that should exist before communities in developed and developing countries can facilitate CBNs. In both models, the priority is placed on the level of usefulness of the service to the community. If the proposed service has the potential to enhance an important aspect of their lives, then - for them - it is a service worth having. Based on the premise of these models, this article explains that e-government services are services worth having access to. Hence, if people in communities are made to understand their need for e-government services, the desire to facilitate a cost effective Broadband service will be prompted among them. These explanations are accompanied by simulated examples.

Based on this exercise, this article reveals that CBNs are important but ignored players in the facilitation of e-government infrastructure and service delivery. Hence, efforts should be made to see how CBNs can be incorporated to deliver network infrastructure needed for e-government services, to underserved areas. In the upcoming sections, the concept of e-government will be discussed. Here the connectivity problem will be highlighted. This will followed by a discussion on the concept of CBNs. A link will be created between two concepts using the CBNM model by hypothetically simulating the relationship between e-government services and CBN.

BACKGROUND

In this section, the concept of e-Government and how the connectivity factors impede e-Government service delivery will be discussed. The major themes in this section are: what is E-government and why it is necessary? How is e-government facilitated and what is the connectivity problem?

What Is E-Government and Why Is It Necessary?

E-government is the delivery of government services to citizens via the Internet (Kettani & Moulin, 2014). National governments globally are keen on facilitating an information society via e-government (UN, 2014). The primary beneficiaries of the information society are citizens and businesses. E-government enhances Government-Citizen and Government-Business relationships. The success of these relationships is hinged on "efficiency" and "trust" resulting from the level of transparency in the delivery of government services. The quest to achieve efficiency and transparency in the delivery of government service makes e-government necessary.

Previously transparency, in the delivery of government services, was enhanced by the use of old media. Such media platforms included television, radio, newspapers, notice boards at government offices and local community information outposts. The disadvantage of the old media platforms was the difficulty in creating efficient accesible archives to citizens. Retrieving vital data from the archives was a challenge. The advent of the mainframe computer, minicomputer and later Personal Computers (PCs) in the 20th century provided an efficient way of archiving information for government agencies (Campbell-Kelly & Aspray, 1996; Norris & Kraemer, 1996). This