Information Poverty: An Examination of Policies Related to Achieving Kenya’s 2030 Vision

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Abstract

This research paper is a literature review conducted on the government of Kenya and their officials who are currently embarking on Vision 2030 --- a plan that “aims to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment” (Kenya Vision 2030, 2008). This paper focuses on defining the terms of information poverty and knowledge-based society. It speaks to the responsibility and importance of the role of information policy in resolving Kenya’s challenge.

The African Leaders in ICT (ALICT) offers a conceptual framework useful in categorizing the needful political considerations that Kenya is implementing as they transition from the status of information poverty into a knowledge-based society. Value adherence related to the government’s responsibility towards stepping up to the challenge is briefly addressed. Overall, this study examines the current status and continual need for policy implementation as Kenya continues to move from the status of information poverty unto becoming a global marketplace involving ICT (Information, Communication & Technology), Education, and STI (Science, Technology, and Innovation).

**Keywords:** information poverty, knowledge-based society, Kenya, ICT, STI
Introduction

In Kenya and throughout the world, information poverty (IP) is an issue that affects public astuteness on many different levels. Whether individually, societally, nationally, or globally, literacy assessment measures are always in use to define one’s potential for learning, opportunity, and success. Today, countries are concerned that being situated in an information desert inhibits their ability as a nation to compete in today’s economy. As such, the role of information policy plays a big part in resolving global challenges.

Britz (2004) defines information poverty (IP) as those within a given circumstance which “do not have the requisite skills, abilities or material means to obtain efficient access to information, interpret it and apply it appropriately” (Britz, 2004, p. 194). What this definition suggests is that, although communities may possess the literal capacity to read comprehensive materials associated with practicing government policy, IP complexities can run deep. Such can involve the collective inability to create economic wealth, mainly when residing amid turbulent and corrupt environments. This scenario describes a knowledge barrier that hinders one’s achievement towards economic stability. One way to macro-counter the effects of IP is by creating a government-led policy towards the development or improvement of a knowledge-based society.

According to the Organization of American States (2009), a knowledge-based society is the “type of society that is needed to compete and succeed in the changing economic and political dynamics of the modern world” (Organization of American States, 2009). It involves a government that places a priority on developing a high standard of education that produces citizens who are capable of “driving the innovation, entrepreneurship, and dynamism of that society’s economy” (Organization of American States, 2009). Since 2008, the country of Kenya has been active in their pursuit of implementing such policies to minimize IP from their nation’s system. Their aim by the year 2030 is to transform Kenya into “a newly-industrializing, middle-
income country providing a high quality of life to all its citizens in a clean and secure environment” (Kenya Vision 2030, 2008).

Policies must be created in a systematic order to reduce chaos while creating societal organization. Furthermore, ethical reform is a crucial sustainability factor when it comes to addressing policy issues. Moreover, government officials must be ethically strong when creating policies for the development of building knowledge communities.

Rationale

Information policy sets the tone for allowing or inhibiting one’s retrieval to information (Weiner, 2013). Currently, there is a gap in the literature explaining how one systematically transitions from a status of information poverty to becoming a knowledge-rich community. Effective policies must be governmentally created and applied to rid one’s environment from undue suffrage related to the scarcity of information flow. Refusal to embrace the benefit or detriment associated with combatting IP within one’s environment places a need for one’s government to create or reexamine one’s policy, value system, ethical practice and overall stance related to systematic corruption.

Population

Kenya is located in East Africa. According to World O’ Meter (2019), they have a total of 51,905,236 citizens, which equals to 0.68% of the entire world’s population. Kenya comes in at number 27 when measured among nations by population. 27.1 % of the citizens live in the urban community (14,149,974 people in 2019), and the average age of Kenyans is 19.2 years. Moreover, large majorities of “Kenyans are under the age of 15 because of sustained high fertility, early marriage and childbearing, and an unmet need for family planning” (African Leadership in ICT (ALICT), 2017, p. 14).
Five years ago, Kenya was classified as “a lower-middle-income country because its per capita GDP crossed a World Bank threshold” (African Leadership in ICT (ALICT), 2017, p. 14). Although Kenya has an increasing “entrepreneurial middle class,” its sustainability is fragile due to “weak governance and corruption” (African Leadership in ICT (ALICT), 2017, p. 14).

Defining Information Poverty and Its Impact

Information poverty is defined as “not having the requisite skills, abilities or material means to obtain efficient access to information, interpret it and apply it appropriately” (Britz, 2004, p. 194). According to Thompson (2007), defining information poverty requires one to consider components related to information literacy as well. That is, to understand IP phenomenon, the writers must also understand the antithesis of that phenomenon. As defined in Information Literacy Standards for Student Learning, the information literate must be capable of determining when information is required and have the potential to “locate, evaluate, and use” the needed information effectively (American Library Association & Association for Educational Communications and Technology, 1998, pp. 2-3).

Knowledge-Based Society

“The term Knowledge Society generally refers to a society where knowledge is the primary production resource instead of capital and labor” (Neil Butcher and Associates, n.d., p. 3). A country’s desire to collaborate with world markets along with their consideration of cost fluctuation is what often motivates countries toward establishing knowledge societies to remain competitive or afloat. Nations, however, need knowledge-based improvement not only for economic reasons, but to competently enter a global world of opportunity. Socially, knowledge-based countries tend to have more access to world knowledge and culture through their participation than others. Such participation allows citizens the ability to gain opportunity while involved in the improvement of their locale. “A knowledge society is one where growth,
development, and innovation are driven by optimal use of information and information products” (Neil Butcher and Associates, n.d., p. 4).

According to Neil Butcher and Associates (2011), a knowledge society encompasses individuals who have reached extraordinary levels of education when measured against other societies, and when an increasing amount of those individuals are employed in fields of information (researchers, scientists, information specialists, knowledge managers, and related workers). As these professionals form the basis of society, expertise is then demonstrated in all sectors of civilian life.

Information Policy

“It is critical to embrace knowledge and innovation-related policies to spur competitiveness, growth, and improvements in welfare” (African Leadership in ICT (ALICT), 2017, p. 8). Officials in Kenya should expect many different changes to the way they currently operate among various sectors due to the level of transition and evolution involved in policy changes. Proper accountability requires that leaders are educated to ensure that they are equipped with the ability to create informed policy and properly invest “to support socio-economic development effectively” (African Leadership in ICT (ALICT), 2017, p. 10).

Coherence to policy is also essential. “Policy coherence is the development and implementation of conjointly supportive policy actions across all sectors of the economy and society and, more specifically across government departments and agencies” (African Leadership in ICT (ALICT), 2017, p. 11). Some of the most common actions between governments involve the development of issues related to lack of agreement between “different types of public policies, between different levels of government, between different stakeholders, and at an international level” (African Leadership in ICT (ALICT), 2017, p. 11). When it comes to supporting sustainable development goals (SDG), “the implementation and the success of the
SDGs depends on a countries’ sustainable development policies, plans, and programmes” (African Leadership in ICT (ALICT), 2017, p. 12).

Weiner (2013) writes that information policy addresses three types of global information challenges. They include matters related to “1) information infrastructure (the technologies that allow for access to information), 2) information resources (the knowledge content; its accessibility through open access; and its legal and ethical use), and 3) information literacy (the skills and competencies of individuals to effectively and efficiently find, use, manage, and communicate information for specific purposes)” (Weiner, 2013, p. 2). According to her, it is arguable as to whether any policy has the potential to “facilitate the development of solutions” and that there are advantages and disadvantages to using information policy as a way to address global challenges (Weiner, 2013, p. 2).

<table>
<thead>
<tr>
<th>Examination of Information Policy As a Way to Address Global Issues</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tr>
<td>Information policy can provide a consistent, coordinated, long-term strategic approach to issues of technological access by all; creation and support for freely available information resources; and training in how to effectively find, use, and communicate information.</td>
<td>Information policy is not usually an end in itself but supports other initiatives.</td>
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<tr>
<td>Information policy can be developed through a consensus process by involving all stakeholders, which will increase the likelihood of implementation and sustainability.</td>
<td>Government assistance can motivate success, but can hamper private investment or healthy competitiveness. Lending and subsidies can create dependencies on government funding and expectations of continued funding.</td>
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<td>Established goals for information policy can include realistic financial strategies.</td>
<td>There is the potential for corruption. Official corruption is more difficult when there is little or no engagement between the government and industry. There are conflicts of interest when governments are closely connected with IT companies.</td>
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<td>Information policy can include processes for accountability to ensure that goals are met.</td>
<td>Some governments do not favor unrestricted global information access and dissemination.</td>
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<td>Governments can use information policy for political ends, such as hindering communication and discussion of administrative actions, protecting private interests, and increasing public fear.</td>
<td>Partisanship can influence public opinion and acceptance of information policy.</td>
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<td>Changes in high-ranking government personnel can dramatically change information policies.</td>
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Policy Issues in Kenya

Kenya has many policy-related issues that require urgent consideration. Although governmental officials in Kenya has placed ICT adoption as being most critical to their success, Kenya faces many policy issues related to developing a knowledge-based infrastructure in ICT development, and both the education and STI (Science, Technology, Innovation) sector. “The Kenyan government has prioritized the development of ICT in Kenya---being a regional economic hub and also aiming to be an ICT hub in the region” (African Leadership in ICT (ALICT), 2017, p. 29). Kenya has done much to ensure that ICT infrastructure is undertaken, revealing their commitment to development (African Leadership in ICT (ALICT), 2017, p. 29). However, due to broadening the mobile telephone network and internet capabilities, “the sector’s growth slowed to 7.3% in 2015 after a robust expansion of 14.6% in 2014” (African Leadership in ICT (ALICT), 2017, p. 29).

Another challenge in Kenya is the involvement of women “in the field of technology” (African Leadership in ICT (ALICT), 2017, p. 30). It is trending that Kenya women are falling behind the ranks of men when it comes to technology use. In fact, “women only make up 15% of the ICT workforce in Kenya” (African Leadership in ICT (ALICT), 2017, p. 30). If policy begins now to address issues pertaining to access, usability, increased opportunity, the implementation of ICT could therefore, be used as a way to produce massive change “for political and social empowerment of women, and the promotion of gender equality” (African Leadership in ICT (ALICT), 2017, p. 30).

Financing technological endeavors is another challenge (African Leadership in ICT (ALICT), 2017, p. 30). “In order for Kenya’s Broadband strategy to be fully implemented, it
requires approximately US$ 3 billion” (African Leadership in ICT (ALICT), 2017, p. 30). In education, Kenya is dealing with problems related to “governance, management, and administration” which reveals itself as a sporadic problem when it comes to “service delivery, learning outcomes, teacher management, competence and performance levels hindering the meeting of education sector targets” (African Leadership in ICT (ALICT), 2017, p. 47).

Other issues that remain involve outcomes related to information poverty. This includes 1) the lack of sufficient tactics towards improving teacher development and management; 2) insufficient offerings of rounded infancy care; tutelage, and health; 3) unfair school options; 4) insufficient assessments of education outcomes and events; 4) deficient ties between knowledge and the economy resulting in low graduation retention between students of high school and college; 5) lack of ICT curriculum within the school sector; 6) deficient policies to increase engagement affecting learning outcomes related to poverty; 7) hunger; 8) unskilled at handling quarrels and crises; 9) lack of support for children with special needs (African Leadership in ICT (ALICT), 2017, p. 47). Due to the implementation of “free primary education (FPE) and free day secondary education (FDSE),” Kenya is experiencing an incline in “enrollment and number of institutions over time” (African Leadership in ICT (ALICT), 2017, pp. 47-48).

Although enrollments are increasing, Kenya faces several issues related to improving school efficiency, including “the cost of infrastructure, electricity, teachers’ skills and leadership” (African Leadership in ICT (ALICT), 2017, p. 48). Even post-secondary schools are being affected with problems associated with “poor and limited facilities,” which directly affects whether students will continue “to tertiary and higher education” (African Leadership in ICT (ALICT), 2017, p. 48). Moreover, these factors cause pressure on promoting education amid the inability to market its “relevance, quality and equity for Kenya’s education sector” (African...
Leadership in ICT (ALICT), 2017, p. 48). Although there are valuable jobs for highly educated individuals, “a percentage as high as 50 percent in Kenya, for instance --- are reported to be unemployed” (African Leadership in ICT (ALICT), 2017, p. 48). This outcome suggests that there is a disconnect “between higher education programmes and the skills needed in the productive sector” (African Leadership in ICT (ALICT), 2017, p. 48).

When it comes to implementing Science, Technology, and Innovation, which is a significant part of the education sector, there exist various related problems. “Challenges hindering adoption of STI as a key driver for economic growth still exist” (African Leadership in ICT (ALICT), 2017, p. 59). In the earlier part of the plan, research and development was budgeted and was “prioritized as a basis for achieving Vision 2030” (African Leadership in ICT (ALICT), 2017, p. 59). Due to the government and citizens of Kenya being unable to raise awareness on the need to emphasize innovation as part of the “greater economic expansion,” efforts related to such has dwindled (African Leadership in ICT (ALICT), 2017, p. 59).

As it relates to the area of research and development, policies related to its implementation are divided due to “a lack both of central coordination of R&D and advocacy for multidisciplinary research” (African Leadership in ICT (ALICT), 2017, p. 59). Government’s approach is to handle research “largely in silos,” resulting in lack of implementation (African Leadership in ICT (ALICT), 2017, p. 59). Research and development funding in Kenya are often unstable. Due to lack of research endeavors, these funds are now redirecting to pay for “recurrent expenditures” (African Leadership in ICT (ALICT), 2017, p. 59). Although research and development have the means to create new marketable products for Kenya, without support, Kenya will not operate sustainably in sectors of Science, Technology, and Innovation (African Leadership in ICT (ALICT), 2017, p. 59).
As long as there is a divide between the business and educational sector, policymaking will always “undermine STI” (African Leadership in ICT (ALICT), 2017, p. 59). On one side, “industry complains that graduates from local universities are not ready for industry,” and on the other side, “universities complain that they are not getting enough feedback from industry” (African Leadership in ICT (ALICT), 2017, p. 59).

Methodology


![Knowledge Society](http://gesci.org/fileadmin/user_upload/Assessment_of_Knowledge_Society_Development_in_Kenya.pdf)

The model above describes the various pillars associated with the conceptual framework of how a knowledge society is created. First, the pillar of education is viewed “as a requirement to keep pace with constantly changing global job markets and technologies” (Neil Butcher and Associates, n.d., p. 5). Secondly, the Science and Technology pillar requires capacity building not only in science and technology, but also in “discipline-specific skills, research, and development” (Neil Butcher and Associates, n.d., p. 6). Thirdly, the pillar of Information, Communication, and Technology (ICT) are “considered a critical tool in preparing and educating students with the required skills for the global workplace” (Neil Butcher and Associates, n.d.,
Next is the pillar of Innovation and “is seen as the means of support for the development and economic functioning” (Neil Butcher and Associates, n.d., p. 6). All of this results in the creation of Knowledge society, which “includes a dimension of social, cultural, economic, political, and institutional transformation, and a more pluralistic and developmental perspective” (Neil Butcher and Associates, n.d., p. 6).

![Knowledge Society Diagram](image)


Noted from this model, ICT can be used as a foundation that produces an interrelationship between education, innovation, and development, with knowledge society as the produced outcome. According to this framework, by providing policy related to providing information, communication, and technology, a country “has potential to widen access to educational resources, improve the quality of learning, and improve management efficiencies of the educational system” (Neil Butcher and Associates, n.d., p. 8)

This model’s conception is interspersed in the discussion section below. Through the use of categorization, this model provides the reader with an organizational framework of how knowledge societies are created as a basis for analyzing the literature. Secondly, this model
offers a framework to categorize the policies and considerations related to achieving Kenya’s 2030 vision.

**Discussion**

**Information and Communications Technology**

Kenya has many national ICT policies and plans (African Leadership in ICT (ALICT), 2017, p. 19). "The key policy framework for ICT in Kenya is the Kenya National ICT Masterplan 2013/2014-2016/2017” (African Leadership in ICT (ALICT), 2017, p. 19). Kenyan authorities understand that choosing to invest in ICT can have a beneficial influence on financial systems and citizen achievement (African Leadership in ICT (ALICT), 2017, p. 3). The price for administering knowledge “is relatively low once an ICT infrastructure is in place” (Weiner, 2013, p. 4). ICT is considered as a system for development, and a means for vitality, which supports academic change and socio-economic development (Weiner, 2013, p. 9). Rundle et al. (2007) have defined ICT as “forms of technology that are used to transmit, process, store, create, display, the share or exchange information by electronic means.” This general description of ICT takes into account the technologies of today, including “radio, television, video, DVD, telephone (both fixed-line and mobile phones), satellite systems, and computer and network hardware and software,” along with providing products and services (African Leadership in ICT (ALICT), 2017, p. 9). ICT is crucial among the needs of educated students towards participation in the global workplace (African Leadership in ICT (ALICT), 2017, p. 9). Thus, incorporating technology in the curriculum is necessary for the reorganization of education systems (African Leadership in ICT (ALICT), 2017, p. 9).

The objective of ICT implementation aligns itself with ALICT’s methodology, which states that creating an ICT foundation is essential as “enabler for both innovation and education, for without, a knowledge society cannot be realized, supported or further developed” (Neil Butcher and Associates, n.d., p. 7). In the initial MTP and national ICT strategy (2008-
2012), the focus was on promoting offerings based on equality and affordable service. (African Leadership in ICT (ALICT), 2017, p. 22). This strategy was the basis for creating “the foundation for digital content, ICT hardware, ICT software, connectivity and BPO” (African Leadership in ICT (ALICT), 2017, p. 22). The government urged the implementation of ICT to increase sectors involving “agriculture, tourism, e-Government, health, education and training, production, wholesale and retail among other” (African Leadership in ICT (ALICT), 2017, p.22). One of the main strategies included the creation of ICT set-up to ensure that all its citizens had optimal connectivity (African Leadership in ICT (ALICT), 2017, p. 23). “Another flagship project under Vision 2030 was the development of the National Broadband Strategy” (African Leadership in ICT (ALICT), 2017, p. 23). The biggest goal of this objective is to provide excellent internet services everyone (African Leadership in ICT (ALICT), 2017, p.23). Later, the tactic involved the inclusion of “the National Optical Fibre Backbone Infrastructure (NOFBI)” (African Leadership in ICT (ALICT), 2017, p. 23).

Overall, many projects were implemented to jumpstart Kenya’s progression towards ICT infrastructure. This includes 1) the Presidential Digital Talent Programme - aimed at growing ICT through leadership and increase the relevance of ICT in business principles in management and public service delivery, 2) Constituency Digital Innovation Hubs – aimed to support entrepreneurs and access to free Wi-Fi in all the 290 constituencies countrywide, 3) Business Process Outsourcing (BPO)/IT Enabled Services - focused on global business process outsourcing as a way of generating jobs for young people and generating wealth for local entrepreneurs and investors, 4) Konza City - aims to set up a technology park at Konza, 5) Pasha Centres (Digital Villages) – aimed at diffusing ICT know-how to the rural and marginalized areas to address regional disparities) and 6) the Tandaa Digital Content Grant – aimed at developing services and products to reach millions of Kenyans through new media (African Leadership in ICT (ALICT), 2017, p. 24-27).

**EDUCATION**

Vital to any knowledge-based society is the ability to lodge teachers and educators who are leading innovators in the field of education. Weiner (2013) states concern over the fact that many education systems do not have policies relating to using information that ensure that educators are well prepared for teaching to the needs and challenges of the 21st century. In Kenya, knowledge attainment “plays a critical role in facilitating the process of inculcating knowledge, attitudes, and skills necessary for catapulting Kenya to a globally competitive country” (African Leadership in ICT (ALICT), 2017, p. 31). Such facilitation involves systematically “acquiring new knowledge to improve products and processes...the sector, therefore, has a major responsibility of facilitating the process of developing workforce necessary for transforming Kenya into a globally competitive country” (African Leadership in ICT (ALICT), 2017, p. 31). As a result, Kenya’s government is stepping up to meet this challenge.
Kamau et al. (2016) write that to accomplish goals aimed at ending poverty, Kenya’s government must not do it alone, but by re-engineering libraries. Libraries are of great importance in the development of a knowledge-based society. Having access to current and historical information is vital. Health and sustenance require that provisions of physical or digital materials be made available to the public on subjects related to “food security, health, education, gender equality, water management and sanitation, democracy, environmental conversation” to say the least (Kamau & Owano, 2016, p. 95). The role that public libraries play in today’s society involves 1) assessment of one’s community, 2) housing adequate resources, 3) offering needful services and 4) support coordination with outside organizations (Kamau & Owano, 2016, p. 95).

**SCIENCE, TECHNOLOGY, INNOVATION (STI)**

Arguably, innovation in Kenya was occurring before the onset of the official innovation policy (African Leadership in ICT (ALICT), 2017, p. 58). New policies were made after some sectors had already begun substantial innovation efforts and are thus ‘catching up’ to what is already a pending project (African Leadership in ICT (ALICT), 2017, p. 58). Research institutions, such as Kenya Agricultural Research Institute, the Kenya Industrial Research and Development Institute and the Kenya Medical Research Institute, have an exceptionally long history of research and development (African Leadership in ICT (ALICT), 2017, p. 58). Still, the government policy and strategies regarding STI provide a positive framework to develop STI and propel Kenya towards a more literate society (African Leadership in ICT (ALICT), 2017, p. 58).

Though there are a significant number of policy goals, implementation appears to still be in its early days, and it is unclear how these goals will be put into motion (African Leadership in ICT (ALICT), 2017, p. 58). One significant gap in these policies is the lack of an effective intellectual property rights system, which is an essential motivation for innovation (African
Leadership in ICT (ALICT), 2017, p. 58). “There is now, however, a policy initiative to create a TIVET Authority and build new institutions” (African Leadership in ICT (ALICT), 2017, p. 59). Moreover, Kenya is making good progress towards overcoming its barriers through its precise and targeted policy mediations (African Leadership in ICT (ALICT), 2017, p. 59).

**Conclusions And Future Study**

The country of Kenya offers insight into the policies and political considerations needed towards advancing from a state of information poverty unto becoming a knowledge-based society. Access to information, however, is not a society cure-all. Weiner (2013) states that “access to information is not ubiquitous and access alone does not ensure that people can effectively find and use information. According to Gwang-Jo Kim in *Information policies in Asia: development of indicators* (2019), determining how well an individual, an organization, and an entire society can harness, access, share, and make use of available information is what will ultimately decide their ability to generate economic growth.” Although the information poor may always be with us, effective policy creation can offer societal assurance that government is equipped to help citizens cope while solutions evolve to eradicate related outcomes ("Bible Gateway passage: Matthew 26:11 - King James Version," n.d.).