

The Role of Indigenous Knowledge in Attaining Kenya's Vision 2030: A Literature Review

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Abstract

Rationale of Study – Indigenous knowledge (IK) is the traditional knowledge that is exclusive to a culture or society. In the knowledge-based economy, there is need for policy makers to innovatively use indigenous knowledge to realise their development targets. Unfortunately, IK has been abandoned, defamed and suppressed by most people due to either them being ignorant or arrogant. Thus, the role of indigenous knowledge in socioeconomic development remains unexplored. It is not strange, therefore, that the role of indigenous knowledge in the realisation of Kenya's Vision 2030 is unclear. This study analysed the potential role that IK can play in the realisation of the social and economic pillars of Kenya's Vision 2030.

Methodology – The study was designed as exploratory research. Data was collected through content analysis of the Vision 2030 and the documents of the projects implemented under it.

Findings – The findings indicate that IK has been integrated to projects in agriculture, education and tourism. However, the integration of IK in environmental conservation, health, cottage industry, reconciliation and values was inadequate. The challenges inhibiting the adequate integration of IK in these sectors included IK property rights, national policies, role of ICTs, controversial aspects of IK, and the tacit nature of IK.

Implications – The government of Kenya and other stakeholders can use the findings of this study to leverage on indigenous knowledge on socio-economic development.

Originality – Although this paper relies on existing literature, it nonetheless provides new perspectives to the topic. Hence it is original in terms of context, scope and application.

Keywords

Indigenous knowledge, Vision 2030, Kenya, socioeconomic development

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1 Introduction

Kenya's Vision 2030 was developed to assist the country to become a middle-income nation by the year 2030. This status would help the country to be globally competitive and at the same time ensure a high quality of life for the citizens. The vision was developed as a follow-up to the Economic Recovery Strategy for Wealth and Employment Creation (ERSWEC) which had been implemented between 2003 and 2007 (Baloglu, 2004). The ERSWEC was meant to improve the socioeconomic gains by Kenyans through poverty eradication.

Kenya's Vision 2030 is based on three pillars. These are economic, social and political pillars. The economic pillar aims to improve Kenya through economic development by achieving an economic growth of 10 percent per year up to 2030. This is supposed to be achieved by improving the tourism, agriculture, livestock, wholesale, retail, manufacturing, business process outsourcing and financial services sectors (Rambo, 2013). The social pillar aims to encourage fair, steady and impartial growth in a clean and safe setting. It articulates the need for equity amongst all members of the society. It also aims to eradicate poverty and hopelessness in the society. The goals under this pillar are supposed to be achieved by giving special attention to marginalised areas, enhancing environmental conservation in line with the Millennium Development Goals (MDGs), and improving access to affordable housing in line with the population growth. The sectors in the social pillar are education and training, health, water and sanitation, the environment, housing and urbanisation, gender, youth and vulnerable groups, equity and poverty elimination, and reconciliation (Mwenzwa & Misati, 2014). The political pillar seeks to recognise the concept of grounded, community-based, outcome-oriented and accountable democratic systems. Vision 2030 envisages a country with a self-governing system reflecting the goals and prospects of its people. It envisions a country in which parity is deep-rooted regardless of one's race, ethnicity, religion and gender (Bolo & Nkirete, 2012; Kwanya, 2014a).

In Kenya, strategic planning and implementation is a constitutional requirement for state organisations. The Ministry of State for Planning, National Development and Vision 2030 and especially the Vision 2030 Delivery Secretariat has to make sure that the policy is well articulated. This is by making sure that all the national objectives are aligned to achieving the policy by increasing the Gross Domestic Product (GDP). According to David (2011), strategy execution is a difficult but crucial process. Some of the formulated

strategies may not work if the execution process is not successfully and professionally done (Steiner, 2010). This means the nation needs to plan well before implementing any policy. Good planning can be achieved by ensuring that there is adequate funding; taking care of the interests of the stakeholders and community by involving them adequately in the process; and creating a proactive team to lead the process. Johnson, et al. (2008) asserted that effective strategy implementation is influenced by the national structure, resource allocation, and change management. All these aspects - strategy planning and implementation - are necessary for the realisation of Kenya's Vision 2030. This is because through implementation, the ideas and concepts are translated to functional and operational goals. Turning strategy into action involves ensuring that the strategies are working in practice.

Kenya's Vision 2030 is being implemented in sequential five-year phases. The first phase covered the years 2008 to 2012 while the second phase covered 2013 to 2017. The third phase has been implemented since 2018 and will be concluded in 2022. The success of each phase is assessed through the medium-term evaluations after which the goals are changed to attain the anticipated outcomes.

2 Literature Review

According to Johnson (1998) indigenous knowledge (IK) is the knowledge created by a group of people living in a specific locale. Kwanya (2020) explains that IK is local in nature and is specifically adapted to the needs and context of the local community. Semali and Kincheloe (2002) asserted that indigenous knowledge is usually associated with the wild and nature. Chepchirchir et al. (2018) explain that in regard to sustainable development, indigenous knowledge is used to describe concepts like indigenous technical knowledge, traditional environmental knowledge, rural knowledge, local knowledge and farmers' or pastoralists' knowledge. Matowanyika (1994) and Langhill (1999) asserted that in the African context, the definition of indigenous knowledge encompasses:

- Local systems that have been in use for a long time and are based on local languages.
- Systems that balance with the local environment, for example, traditional milk fermentation.
- Knowledge which is prejudiced by novelties developing from within the community, not from the national and international communities.

- The definition of indigenous people as those communities who inhabited the country by the time of colonisation or establishment of state boundaries. These communities retain their social, economic, cultural and political institutions.

Local knowledge can play a vital role in improving the development of developing countries (Briggs, 2005; Chepchirchir et al., 2018). World Bank (1998) asserts that IK provides the foundation for solving the problems in the local communities. This is because the knowledge is easily accessible and can be applied daily in the society. It is the knowledge that the community can resonate with. Kwanya (2019) explains that IK grows and is perpetuated orally in specific societies from one generation to another.

Kamara (2005) observed that in Africa, local communities have that local knowledge that helps them in environmental management and coping with different environmental changes. This means that the local people's knowledge can be integrated in the aspects of sustainable development. For example, IK can be used to facilitate disaster prevention, food security and health management. Kwanya (2015, 2019) asserted that IK plays a great socioeconomic role for the local communities. For example, in Kenya the biggest economic sector in line with IK is tourism and agriculture. IK plays a vital role in the development and management of a community because it acts as the base of their decision making in political arena, agriculture, health and education (Kwanya, 2015). Panikarova (2005) argued that IK have the following potential for a national economy and society:

- Tool for development of tourism and connected branches;
- Way of increasing agricultural production and wildlife management;
- Resource for the development of alternative medicine;
- Creating jobs for indigenous people and migrants;
- Saving of energy;
- Serving as the promoter of intercultural dialogue;
- Promoting sustainability;
- Forging local and regional identity;
- Contributing to social cohesion; and
- Enhancing the quality of life for indigenous people and migrants.

3 Challenges in the realisation of Vision 2030

For any vision to be realised, several factors need to be in place. Some of these factors include financial solidity, reforms in the government, reduction of poverty, feasible infrastructure as well as improvement of science and technology (Mwenzwa, 2014). Some of the challenges holding back the realisation of Kenya's Vision 2030 include:

Negative ethnicity and ethnic conflicts

According to Reynal-Querol (2002), ethnicity creates political instabilities which in return bring about civil wars in a country. For example, the Economic Recovery Strategy for Wealth and Employment Creation (ERSWEC) that was adopted in Kenya in 2004 brought a lot of change in the country. However, in 2007/2008 post-election violence in Kenya, most of its economic progression was held back due to destruction of property and loss of lives.

Health care system and reliance on donor

Mwenzwa (2014) asserted that the health system in Kenya has been strained for a long time. This brought about a toll on personnel in the country with diseases like HIV/AIDS and malaria amongst other diseases affecting many people in the country. To deal with diseases, the country mostly relies on donors and partners but currently there have been limited projects in the health sector thereby triggering a devastating impact on access to health care services. The situation has been exacerbated by the social and health consequences of Corona virus.

Education

Education plays a vital role in the growth of any country and results in improving the wellbeing of its people (Onsongo, 2009). Kenya faces a lot of disparities relating to gender as well as regional and socio-economic issues (GOK, 1999). For example, the informal settlements and the less privileged communities face inequalities in terms of access to education and viable infrastructure. The lack of good infrastructure hinders the delivery of quality education to the marginalised communities.

Insecurity

Insecurity is the feeling of inadequate protection for one's life or property. Kenya so far has not accomplished the full state of peace. In the last two eras, there have been constant conflict and civil wars among its neighbours such as Somalia, South Sudan and Ethiopia (Omosa & Ludeki, 2007). Therefore, the country hosts many refugees from these countries. In some cases, refugees and army camps have also been attacked by

militias further straining the state of insecurity. This has immensely affected the country's development because no one wants to invest in an uncertain environment.

Realistic planning and agenda setting

Planning is a key element in achieving goals and purposes set for projects. Well planned projects achieve a wider scope of its objectives and in turn yields better return on investment. In Kenya, some of the development plans and targets are extremely ambitious and impractical. An example of an ambitious project executed by the Kenya government is the poverty eradication in 1999-2015. This was ambitious because even the developed countries have not yet completely eradicated poverty among their citizens.

Climate change and natural hazards

Climate change is the variation of weather patterns in a place (Kwanya, 2014b). Mostly, the change is caused by human activities that release gases into the atmosphere. In Kenya, the arid and semi-arid areas experience recurrent droughts which in turn lead to starvation by the communities living in those areas. This also makes a lot of people not to meet their basic needs.

Corruption

Kenya been known to be among the most corrupt countries in Africa. According to Mulei (2000), corruption has been the greatest hindrance to development and wellbeing of Kenyans. Kenya has lost huge development resources through corruption. Most investors who could invest in education, health, security and social work usually pull out after noticing that other projects have not met the goals they were set for due to corruption and financial misuse.

4 Theoretical framework

The article used knowledge worldview model by Fler (1999). According to Chepchirchir and Kwanya (2019), knowledge worldviews are intellectual orientations that are encompassed in an individual or society knowledge and point of view. They are used by the society to understand their social life and are developed through social integrations. Knowledge worldview has two propositions, namely, indigenous and scientific knowledge (Fler, 1999). While indigenous knowledge is based on local knowledge and traditional view of ideas, scientific knowledge seeks power over people. The researcher adopted this model because it clearly highlights how IK can be used for the benefit of the society. It can also be examined, authenticated and documented to produce scientific

knowledge that can be used by a country for development purposes. The model was used in explaining the possible use of indigenous knowledge in socio-economic development.

5 Rationale and methodology of study

From the foregoing, it is clear that indigenous knowledge can play a significant role in enhancing the chances of Kenya realising the social and economic pillars of its Vision 2030. However, the extent to which IK is currently integrated in the implementation of Kenya's Vision 2030 is unclear. However, anecdotal evidence indicates that the institutions implementing the Vision 2030 have not adequately mainstreamed indigenous knowledge effectively in their programmes. This may lead to the Vision 1) taking longer to realise or not being realised altogether; 2) costing more resources to realise; or 3) not being relevant to indigenous communities. In fact, several studies (Bolo and Nkirote, 2012; Mwenzwa, 2014; Omosa and Ludeki, 2007 & Onsongo, 2009) on the progress in the realisation of the Vision indicate that most of the key targets have been missed. Therefore, the country risks not realising the Vision within the stipulated timeframe (Mwenzwa, 2014). According to Bolo and Nkirote (2012), one of the key recommendations to keep Vision 2030 on track is increased engagement of stakeholders, especially communities, in its social, economic and political programmes. One way of involving the communities is by integrating their indigenous knowledge in the Vision 2030 projects. No study, known to the author, has been conducted to assess the extent or impact of mainstreaming of indigenous knowledge in the implementation of the Kenya's Vision 2030. This study seeks to shed light on the role indigenous knowledge can play in the realisation of Kenya's Vision 2030. The specific objectives of the study were to 1) explore the indigenous knowledge which can enhance the realisation of the social and economic pillars of the vision; 2) examine the extent to which they have been integrated in the vision's projects; 3) assess the impact of indigenous knowledge on the success or failure of Vision 2030 projects; and 4) analyse the challenges hampering the effective use of indigenous knowledge and propose how they can be mitigated as a means of leveraging the efforts towards the realisation of the Vision.

The study was designed as an exploratory research. This is because Kenya's Vision 2030 is fairly recent and cannot be studied conclusively. In fact, the vision is still being implemented thereby making conclusive studies on it unrealistic. Data on the pillars of the Vision was collected through content analysis of the Vision 2030. Data on its implementation in terms of the progress made and the challenges experienced was

collected through an analysis of project reports. Information on the potential of indigenous knowledge on the realisation of the Vision was collected from scholarly materials such as books, journals, blogs and social media. These information materials were identified and accessed from Google Scholar by using Harzing's Publish or Perish software.

6 The extent to which IK has been integrated in the vision's projects

According to Njiraine et al. (2010), IK can be used in agriculture, culture, education, environment, health and laws. These aspects can be used to enhance the realisation of Kenya's Vision 2030 by supporting the social and economic pillars. This section highlights some of the Vision 2030 projects which have integrated indigenous knowledge in their programmes.

Agriculture

Kenya aims to promote advanced and commercially-oriented agricultural sector. This can be achieved by transforming key agricultural research institutes; cumulative output of crops and livestock; developing land use policies; and developing more irrigable regions in arid and semi-arid areas (Amissah-Arthur, 2003). Indigenous knowledge has been integrated in projects through continuous promotion of traditional foods and training farmers to use traditional methods of farming. One of the Vision 2030 flagship projects which has integrated IK is the Arid and Semi-Arid Lands (ASAL) Development Project. This project was initially implemented in the Tana and Athi River basins to bring between 600,000 and 1,000,000 hectares under irrigation. Other than irrigation, the project encourages the use of rain-fed agriculture to cultivate high value drought tolerant crops such as jatropha, melia, indigenous fruits, medicinal species, gum Arabic and resins. This project is aimed to enhance the use of IK in increasing agricultural production thereby enhancing food security and income from farming.

The government has also invested in research which highlights the value of IK in farming and food production. The Agriculture, Fisheries and Food Authority (AFFA) as well as the Kenya Agricultural and Livestock Research Organisation (KALRO) have increased their focus on indigenous crops such as sorghum, millet and pigeon peas. The institutes have also promoted the husbandry of indigenous free-range animal species as a means of increasing sustainable productivity. Behnke and Muthami (2011) reported that these efforts have resulted in increased production of indigenous chicken thereby yielding income worth billions of Kenya Shillings. They particularly reported that of the

28 million birds raised in Kenya, 76 percent now consist of indigenous chicken which adapt better to the local climatic conditions and more resistant to diseases.

The government has also developed a comprehensive agricultural information system through which farmers, and the citizens in general, are educated on the benefits of indigenous crops and livestock. This system encompasses the agricultural information centre, agricultural shows, field days, open forums and other resource centres which disseminate agricultural knowledge, information and technology. Besides being used for general education, this information programme is also used to promote husbandry of indigenous animals and plants, organic farming and uptake of advanced bio-technology.

Tourism

In tourism, the government also has surveyed, gazetted and rehabilitated several national monuments and historical sites to diversify tourist attraction circuits. Some of these include the gazetting of the *Kaya forests* and rehabilitation of the Nairobi National Museum to provide high quality services to tourists (Njoroge, 2014). The government has also developed exhibition facilities and new museums in various parts of the country. Examples of these include the Wajir and Garissa museums in the northern frontier districts. Significantly, the government has also encouraged cultural tourism. According to Kwanya et al. (2015), Kenya has an extensive diversity of indigenous cultures which have not before been discovered for tourism purposes. As part of the vision, deliberate efforts are being made to promote authentic cultural tourism experiences.

Education

The social pillar developed a project on the revision of education and curricula. The projects were mainly to improve the education systems through utilisation of local resources to teach. Also, the trainers were advised to use life skills imparting methods to help the learners to be able to make choices in real life better. Through education, indigenous technology, which is part of Kenya's national heritage, will be mapped and exposed for economic growth. This project, among others, stimulated the development of legal frameworks such as the University of Nairobi Act that advocates for the promotion and development of national cultural heritage through academic programmes. Consequently, there has been a strong drive towards recognising and affirming the critical role of IK in educational curricula. Other universities have also incorporated IK concepts in their curricula. These universities include the Technical University of Kenya, Moi University and Kenyatta University. Through this, Kenya is able to develop

researchers who are interested in IK and who are able to help the country realise the benefits of IK in the socio-economic development (Kwanya & Kiplang'at, 2016).

Indigenous knowledge which can strengthen the social and economic pillars of the vision

This section presents the potential application of IK in environmental conservation, health, cottage industries, reconciliation and values.

Environment conservation

Kenya, like the other countries worldwide, is already experiencing severe consequences of climate change. The country can advocate for the utilisation of IK as a way of conserving the environment. For example, local knowledge on farming by use of terraces, traditional methods of livestock breeding, as well as traditional rainmaking among communities in Kenya can assist in response toward climate change. The government also can utilise the local governance systems such as *Njuri Ncheke* (Meru Community) and *Kaya* (Mijikenda) to assist in the control and exploitation of the natural resources. IK can also be used to preserve seeds and livestock species threatened with extinction by unfavourable changing climatic conditions (Fazey et al., 2006).

Health

Marmot (2007) asserts that Kenya aims at improving the health systems of her people. This has been done by even using the local herbs in the development of medical drugs. The government currently recognises the uses of some plants and animal products to produce drugs. According to the traditional medicine strategy of the World Health Organization (WHO), traditional medicine is widely used in a rapidly growing health system with economic importance (WHO, 2002). WHO (2002) also asserts that in Africa, up to 80% of the population uses traditional medicine to meet their healthcare needs. For instance, there are many plants in Kenya which are known to have anti-cancer agents. Some of these plants include the red stink wood (*Prunus Africana*) whose extracts are known to inhibit prostate cancer cells (Komakech *et al.*, 2017). Through these and many other plants, Kenya can develop pharmaceutical products that can be used to generate income. A good example of this is the *Mwarubaini* (*Azadirachta indica*) tree which can be used to produce medicines for several ailments.

Cottage industries

Indigenous knowledge can be used in the production of handicrafts which can create and support a thriving chain of cottage industries. Some of these handicrafts may include

soapstone and wood carving; cosmetics products; batiks, decorations and other textile products; beads, necklaces, bracelets and other ornaments; basketry; pottery and porcelain; paintings and furniture, among other products. Currently, Kenya's Vision 2030 does not have direct projects aimed at mainstreaming indigenous handicrafts towards the achievement of its social or economic pillars (Kibe, 2016).

Reconciliation

Traditional communities had systems and skills for reconciling warring communities or clans. Institutions such as clan elders and councils used elaborate legal and justice systems to resolve disputes so as to ensure peace and harmony in the society. These included traditional courts where conflicts were presented, discussed and adjudicated. At the moment, most disputes are resolved through the legal court system. This has led to backlogs and delays in the delivery of justice to the complainants and an escalation of hostilities. The application of traditional justice system can enhance the speed of adjudication of disputes and restoration of peace. A good example of a traditional court system which has worked well is the *gacaca* courts in Rwanda used to try the perpetrators of the 1994 genocide (Westberg, 2010). A significant feature of the traditional courts is their emphasis on truth, justice and reconciliation instead of custodial punishments. The same system can be used in Kenya to deal with historical injustices thereby facilitating healing, reconciliation and peaceful coexistence.

Values

To effectively deliver meaningful dividends of Kenya's Vision 2030, values such as integrity, respect, impartiality, team spirit, social responsibility, professionalism, commitment and hard work are essential. Traditional communities encouraged the formation and perpetuation of these values. This was done through customs, folklore and discipline. Indigenous communities had well established moral standards which promoted good values (Spangler, 2009). Kenya is currently at the crossroads and the society is characterised by rapid erosion of national values. The use of indigenous value development and perpetuation approaches can inculcate values which can result in appropriate work ethics in implementing Vision 2030 projects.

7 The challenges hampering the effective use of IK in socioeconomic development in Kenya

Some of the challenges which currently hamper the effective use of IK in socioeconomic development through Kenya Vision 2030 include:

- *Property rights of indigenous knowledge* – There is a challenge in identifying the true owners of the IK and how to guard their intellectual property rights. For example, one of the contentious issues is whether the traditional healers should be paid royalties once their products have been used to generate pharmaceutical products (Bodeker, 2003).
- *National policies in support of knowledge for development* – In Kenya, as the case is in most developing countries, knowledge has not been recognised as a tool for development. However, this is changing as nations endeavour to develop knowledge-based economies. Indigenous communities were anchored on elaborate indigenous knowledge systems. In a way, these were knowledge-based economies. Modern society can learn from these IK systems in their efforts to become knowledge economies. Hence, it is upon the nations to develop elaborative strategies in support of documenting and validating indigenous knowledge (Malhotra, 2001).
- *Role of information and communication technology (ICT)* – With the growing ubiquity of ICT adoption and use, people tend to isolate indigenous knowledge and practices. There is an urgent need to mainstream IK in the ICT revolution. This can be achieved partly by building local capacity for disseminating IK using ICTs. For example, IK can be shared or preserved through videos and radio broadcasts in local languages (especially in the rural areas) and social media networks (Sharma, 2014).
- *Provocative facets of IK* – people believe that IK is specific for a community and cannot be transferred from one community to another. This is based on the fact that some IK can be inappropriate and not usable in another community because of differences in orientation. IK outside its original cultural context, can be harmful and could lead to dis-empowerment of indigenous people (Dutfield, 2001).
- *Colonial impact and its post-colonial reverberations* – The colonial powers used brutal policies and devious methods to subjugate indigenous people. These policies and methods included consistent inferiorisation and stigmatisation of indigenous cultures. To date IK is considered by many, especially the young generation, as being backward, outdated and inferior to scientific or western knowledge. This attitude affects the use of IK in economic activities. There is concerted effort to

erase the existing systems of knowledge and their replacement with Western-driven belief and knowledge systems (Anwar, 2011). There is need to destigmatise and mainstream IK in day-to-day activities (Kwanya, 2020).

- *Tacit nature of IK* – traditional knowledge is usually shared through socialisation or what is termed as word of mouth from one generation to another. Most of the people who understand and are aware of IK are elderly people who are not able to transfer the same to the younger generations due to language barriers. If the older generation pass away, they disappear with the knowledge and hence it becomes extinct (Sen, 2005).
- *Globalisation* – Rapid change from imported economic, cultural and political development models through globalisation make it a challenge to use IK as a source of socioeconomic value (Shizha, 2008). IK is localised and does not thrive in globalised environments.

8 Conclusion

Kenya's Vision 2030 aims to transform the country into a middle-income economy with improved standards of living. Indigenous knowledge has been integrated in its projects dealing with agriculture, tourism and education sectors as a way of achieving the socioeconomic pillars of the Vision. However, inadequate integration of IK has been witnessed in areas such as environmental conservation, health, cottage industries, reconciliation and values. This can be attributed to challenges emanating from IK property rights, national policies in support of knowledge-based economies, role of ICTs and modernisation, controversial aspects of IK, colonial impact and post-colonial reverberation, tacit nature of IK, and globalisation.

9 Recommendations

The author recommends that:

1. The government should engage the IK stakeholders to develop a mechanism for managing the intellectual property rights relating to indigenous knowledge. This would increase access to and use of indigenous knowledge in socioeconomic development.
2. Indigenous knowledge should be recognised as the original knowledge of humanity. It should be mainstreamed in all national development policies alongside scientific knowledge.

3. Technology should not replace IK. Conversely, it should be used as a tool to enhance the value and uptake of IK. There is a common saying in Kenya in Kiswahili language that “*mwacha mila ni mtumwa*” which means that any person who forsakes his/her traditional knowledge and values is a slave. ICTs and other emerging technologies can only be used to complement, not to replace, indigenous knowledge.
4. Indigenous knowledge should be dynamic. This implies that it should be updated to address and conform to emerging issues and trends. Similarly, not all indigenous knowledge is good. The government should liaise with the owners of indigenous knowledge to update or discard valueless indigenous knowledge.
5. The government and other stakeholders should launch projects to identify, elicit, document, preserve and represent tacit indigenous knowledge using durable technologies and techniques.

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