

Examining the Influence of Strategic Land Rehabilitation on Sustainable Entrepreneurship & Economic Development (A Case of Kilome – Kenyaland Reclamation)

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Abstract

This study sought to examine the influence of land rehabilitation on sustainable economic development in Kilome, specifically studying how entrepreneurial attributes, entrepreneurial value of Kilome area resources, potential entrepreneurial initiatives and entrepreneurial systems influence sustainable economic development. Existing local empirical studies did not establish this role. Four hypotheses were investigated using a census survey of data obtained from ten (10) Community Based Organizations in “Kilome” Kenya each with a sample of ten representatives. There was 90% response rate. Regression models were used to analyze data. The findings reveal that entrepreneurial attributes, entrepreneurial value of Kilome area resources, potential entrepreneurial initiatives and entrepreneurial systems influence sustainable economic development. The implication of the study for management and entrepreneurs is to integrate different strategies to achieve better sustainable economic development.

Key words: Sustainable Economic Development, entrepreneurial attributes entrepreneurial systems and resources

Background of the Study

During the UNCED in Rio de Janeiro in 1992, Kenya endorsed and adopted Agenda 21, which provided the world with potential practical solutions to the ever-pressing problems of the environment and development. Kenya has ratified most of the international agreements, treaties, conventions, and protocols resulting from the first Rio conference, that are considered to be in harmony with the country's plans for sustainable development. The most significant outcome was that member countries joined three international treaty, the United Nations Framework Convention on Climate Change (UNFCCC), to cooperatively consider actions to limit average global temperature increases and the resulting climate change, and to cope with whatever impacts were, by then, inevitable; the United Nations Convention on Biological Diversity (UNCBD) and the UN Convention to Combat Desertification (UNCCD) UNDP (2012). Kenya's Poverty Reduction Strategy Paper (PRSP) was launched in 2001 as a short-term strategy for meeting the long-term vision outlined in the National Poverty Eradication Plan (NPEP) of 1999 which had a 15-year timeframe to alleviate poverty based on the first United Nations' Millennium Development Goal (MDG) of halving poverty by 2015. The PRSP had multiple objectives directed towards the goal of reducing poverty and increasing economic growth in the country by providing crucial links

between national public actions, donor support, and the development outcomes needed to meet the MDGs. By then (2000) Kenya's GDP growth rate was between 0 to 0.2% and about 60% of Kenyans were living below the poverty line GoK, 2003)

Rain-fed agriculture is the most important economic activity in Kenya, contributing about a quarter of the country's GDP even though only less than 20% of the land surface area is suitable for crop and feed production. The sector also accounts for 60% of the national employment mainly in rural areas, 60% of the export earning, and about 45% of the government revenue. The agriculture sector thus plays a critical role in addressing the national goals of poverty eradication, increasing rural incomes, creating employment and guaranteeing food security (RoK, 2004).

Kabubo-Mariara and Karanja (2006) states that only 12% of Kenya's land surface area is classified as high potential (adequate rainfall) agricultural land and about 8% is medium potential land. The rest of the land is arid or semi-arid of the high potential land only 60% is devoted for crop farming and intensive livestock production while the rest is used for food and cash crop production, leaving the rest for grazing and as protected forests. Kenyan agriculture is typically small scale, employing little modern technology. This however accounts for about 75% of total production

Between 2009 and 2010 the Government of Kenya developed the National Climate Change Response Strategy (NCCRS). The NCCRS has wide ranging recommendations towards making Kenyan agriculture climate-resilient, including provision of downscaled weather information and farm inputs; water harvesting e.g. building of sand dams for irrigation; protection of natural resource base (soil and water conservation techniques); and research and dissemination of superior (drought tolerant, salt-tolerant, pest and disease resistant) crops (GoK, 2010)

1.2 Statement of the Problem

Finding a right balance between environmental, social, and economic objectives when taking on new opportunities (EC, 2003a) has become a growing challenge for all kinds of entrepreneurs in recent times. This entailed an emergency of a new form of entrepreneurship - ecopreneurship - and its further enlargement to sustainability-driven entrepreneurship,

incorporating into the usual meaning a new principle of sustainable development. Some particular features of ecopreneurship have been traced by Schaper (2005), such as, firstly, entrepreneurial nature of the activity, secondly, positive influence on the natural environment along with sustainable future vision, and, thirdly, intentionality, that is, particular purposefulness of the business activity aimed at more sustainable equilibrium

Studies in 1997 showed that 64 per cent of Kenya's land area was potentially subject to moderate desertification and about 23 per cent were vulnerable to severe to very severe desertification. In the early 2000s, approximately 30 per cent of Kenya was affected by very severe to severe land degradation (UNEP 2002) and an estimated 12 million people, or a third of the Kenya's population, depended directly on land that is being degraded (Bai et al 2008). The droughts of 1970-2000 accelerated soil degradation and reduced per-capita food production as well as entrepreneurial activity (GoK 2002).

In 2004, ten CBOs (Community Based Organizations) in Kilome Division got together under the umbrella of Kenya Initiative for Development (KID) a Non-Governmental Organization to undertake a series of small projects aimed at halting land degradation and restoring heavily degraded sections within an area of 40 square kilometers in Kilome Division in Mukaa (formally Makueni)District. This became one of the UNDP/GEF/SGP supported cluster projects. The rehabilitation strategies included digging cutoff trenches, building check and earth dams, planting trees and sisal, developing a community assembly centre and a tree nursery, beekeeping and capacity building for the CBOs. The above strategies have created a conducive environment for ecopreneurship and therefore this study is aimed at identify the entrepreneurial developmental initiatives at the target beneficiary level that have occurred as a result of the land reclamation initiatives at Kilome.

1.3 General objective of the Study

To examine the influence of strategic land rehabilitation on unsustainable entrepreneurship and economic development in Kilome - Kenya.

1.4 Specific Objectives of the Study

1. Assess influence of entrepreneurial attributes on sustainable entrepreneurship and economic development in Kilome– Kenya
2. Evaluate the entrepreneurial value of Kilome area resources on sustainable entrepreneurship and economic development in Kilome– Kenya
3. Assess role of potential entrepreneurial initiatives on sustainable entrepreneurship and economic development in Kilome - Kenya
4. To investigate the role of Entrepreneurial System on sustainable entrepreneurship and economic development in Kilome - Kenya

1.5 Justification of the Study

The findings of the study will assist in proposing a framework for evaluation of sustainability-driving capacity of the recipient Rural Entrepreneurship System and its potential for transformation as well as Recommend strategies that encourage entrepreneurship development at the target communities

LITERATURE REVIEW

2.1 Land Rehabilitation

Land degradation is defined as the long-term loss of ecosystem function and productivity caused by disturbances from which the land cannot recover unaided (Bai et al 2008). Land degradation occurs slowly and cumulatively and has long lasting impacts on rural people who become increasing vulnerable (Muchena 2008). The UN Convention to Combat Desertification (CCD), of which Kenya is a signatory, recognizes land degradation as a global development and environment issue. Desertification is the most severe form of land degradation. The CCD defines desertification as land degradation in arid, semi-arid, and dry sub-humid areas (also referred to as drylands) resulting from various factors, including climatic variations and human activities.

Unsustainable human activities that take place in already fragile areas and that are aggravated by natural disturbance such as drought or flooding lead to land degradation and desertification. Kenya's 2002 National Action Programme on desertification reported the following: "The existing ecological conditions in drylands are harsh and fragile. These conditions are exacerbated by frequent drought and the influx of people from the high potential areas into the drylands. Overgrazing and subdivision of land into uneconomic land parcel sizes have further worsened these circumstances, drylands are getting more and more vulnerable to desertification in Kenya" (GoK, 2002).

Studies in 1997 showed that 64 per cent of Kenya's land area was potentially subject to moderate desertification and about 23 per cent were vulnerable to severe to very severe desertification. In the early 2000s, approximately 30 per cent of Kenya was affected by very severe to severe land degradation (UNEP 2002) and an estimated 12 million people, or a third of the Kenya's population, depended directly on land that is being degraded (Bai et al 2008). The droughts of 1970-2000 accelerated soil degradation and reduced per-capita food production (GoK 2002).

Globally, habitat loss is the greatest threat to biodiversity. Kenya's increasing population, poverty, and the drive for economic growth are the underlying pressures that contribute to habitat loss and fragmentation. Land degradation also threatens biodiversity. To some degree, all forest areas in Kenya are fragmented, while parts of grass- and shrub-lands are highly degraded (Duraiappah and Roy 2007). Gaps in vegetation cover caused by fragmentation can isolate populations of certain species and lead to their demise (Peltorinne 2004), while land and water degradation render habitats unhealthy thus threatening species survival.

Rural population constitutes approximately 70% of total Kenyan population, and the contribution of the agricultural sector in the national GDP is more than 3%. These are just several reasons why rural life and situation in rural areas should be under continuous focus of scientific investigation and policy action. Barret and Swallow (2006) assert that, diminishing soil productivity resulting from land degradation and poor marketing access limit productive investments in the rural areas. As poverty is endemic in the rural areas of Kenya, low income levels reduce the capacity of farmers to invest in entrepreneurship activities.

The Kenyan informal sector usually operates on small-scale, locally and at a subsistence level it is driven by the active youth population. Kenya's informal sector is large and dynamic. About 95 % of the countries' businesses and entrepreneurs are found here. In Kenya, the rate at which net jobs are created is not the same as the rate of labour force growth. This is evidenced by the fact that the informal sector has been growing at an average rate of 17.2% per annum compared to the formal sector which has been growing at an average of 2.23% per annum while the country's working age population increased by 24.5% between 1999 and 2006. This has resulted to high rates of unemployment especially among the youth (GoK,2003).

Biodiversity directly and indirectly affects human development. It is estimated that up to 40% of the global market of goods and services are sustained by biodiversity (Lusweti, 2011). Kenya's biodiversity is mostly exploited through primary industry including food, tourism and ecosystem services and supports many livelihoods by providing genetic reserves and sustaining ecosystems upon which these livelihoods and lifestyles depend. One of the climate change indicators that are easiest to measure is rainfall. Rain-fed agriculture is one of the main sectors of the country's economy. Weather-related hazards therefore present a serious threat to the socio-economic development of the country. Both instrumental and proxy records have shown significant variations in the space-time patterns of climate in Kenya (Birkett *et al.*, 1999).

Several authors have advanced different definitions of entrepreneurship depending on the context in which the term is to be applied. This study will adopt the definition proposed by Shane (2003) as 'an activity that involves the discovery, evaluation, and exploitation of opportunities to introduce new goods and services, ways of organising, markets, process, and raw materials through organising efforts that previously had not existed'. The study will be limited to the entrepreneurship activity connected to rural environment and natural resources. Evidence of an entrepreneurship possessing particular capabilities of driving economic development has been highlighted by several scholars, (Smallbone *et al.*, 2009; Karlsson *et al.*, 2009; Bosma and Levie, 2009)

Entrepreneurial economy not only shapes the number of dynamic entrepreneurs and encourage creation and development of indigenous businesses, but also gives local communities an opportunity to decrease the reliance on state subsidies and dependence on external help, or, at least, to make this support working effectively to ensure future self-sufficiency of these communities (Petrin, 1997).

2.2 Kilome Land Degradation

The Kilome land degradation projects are located at the newly created Makueni County which is one of the Kenya's dryland areas. The projects spreads over 40.8 km² area in the hilly Kilome Division. Although the project area is one continuous ecosystem, it can be treated as a three sub-ecosystems, namely; the Kilome –Kaketa riverine, Usi-Unene dry river bed with plenty of sand beds and the Kavuko hills slopes and lowland area. These three sub-ecosystems are largely linked but display a very different land degradation indicators, for example , the Kilome –Kaketa is a river that has ceased to be permanent ,running

through an agricultural area where land productivity has significantly declined. The Kavuko area and Usi-Unene dry river bed have all the symptoms of desertification. The Kilome Division cluster projects consists of eleven projects being implemented by ten community based organizations and one NGO. These projects are being implemented by the following Community Based Organisations (CBOs); WEMA self help group, WasyawaTuvilani women group, Ndaatai community based organization, Kavuko youth group, Kyundu pollen youth group, Meko ma Kwanduuka women group, ThomewaKimaself help group, Aimi ma Kavukoself help group and Kiumoni E.R Project. These projects were initiated by the Kenya Initiative for Development (KID) and were aimed at land degradation interventions for the mitigation of climate change and biodiversity loss at Kilome , Makueni county. This initiative was as a result of the highly degraded Kavuko hills with gullies running a total length of 6.2 km with some being over ten meters deep most of which have been formed within the last 40 years. The gullies were a threat to many families as a result of reduced land productivity. The above facts coupled with the erosion resulting from Usi-Unene River which carries a lot of soil and silt due to flush floods during the rain season, it is estimated that the area has so far lost an estimated nine hectares of productive land. The Kilome land reclamation projects are located at the newly created Makueni County which is one of the Kenya's dry land areas about 70 Km from Nairobi. It lies between latitude 37°14' and 37°19' East and longitude 1°47' and 1°64' South. The projects spreads over 40.8 km² area in the hilly Kilome Division and ran between 2004 and 2008. Although the project area was one continuous ecosystem, it could be treated as a three sub-ecosystems, namely; the Kilome –Kaketa riverine, Usi-Unene dry river bed with plenty of sand beds and the Kavuko hills slopes and lowland area. These three sub-ecosystems are largely linked but displayed a very different land degradation indicators, for example , the Kilome –Kaketa is a river that had ceased to be permanent ,running through an agricultural area where land productivity had significantly declined. It's upon the above background that Kenya Initiatives for Development (KID) a leading Non Governmental Organisation (NGO) was awarded a grant from UNDP Global Environment Facility/Small Grant Programme (GEF/SGP) a funding facility for NGOs and Community Based Organizations (CBOs) to address land degradation in the category referred to as prevention of desertification. The project was based in the dry lands of Kilome/Mukaa District of Makueni County and its overall objective was poverty eradication through land reclamation initiatives.

2.3 Entrepreneurship and Economic Development or Sustainability

Wealth creation is among the most essential goals of any community. In this regard, all efforts toward strategic management and entrepreneurship endeavor to ensure that this goal is fully realized. According to Rumelt *et al.*, (2004) decisions related to strategic management play an important role in heterogeneity in regard to a community's sustainable economic development and creation of more value. The other essential note is that entrepreneurship serves as an important channel for the creation of new wealth (Hisrich and Peters, 2004).

In the same respect, strategic land rehabilitation and entrepreneurship is key to effective economic development, and wealth enhancement. Research indicates the gap in literature between the link between strategic land rehabilitation and sustainable entrepreneurship and economic development. Entrepreneurship has many definitions depending on the lens through which it is observed. This study utilizes the definition proposed by Shane (2003) as an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, way of organizing markets, processes and raw materials through organizing efforts that previously had not existed. According to Smallbone et al., 2009 evidence of an entrepreneurship possessing particular capabilities of driving economic development has turned it to be one of the leading contributor to enhancing rural resilience and sustainable entrepreneurial economic development with a view of ensuring creation of an instrument for revitalization of rural areas.

2.4 Sustainability Economic Development

Sustainable entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society (Shepherd, D. A. and Patzelt, H., 2011). Finding a right balance between environmental, social, and economic objectives when taking on new opportunities (EC, 2003a) has become a growing challenge for all kinds of entrepreneurs in recent times. This entailed an emergency of a new form of entrepreneurship - ecopreneurship - and its further enlargement to sustainability-driven entrepreneurship, incorporating into the usual meaning a new principle of sustainable development. Some particular features of ecopreneurship have been traced by Schaper (2005), such as, firstly, entrepreneurial nature of the activity, secondly, positive influence on the natural environment along with sustainable future vision, and, thirdly, intentionality, that is, particular purposefulness of the business activity aimed at more sustainable equilibrium. An ability to identify opportunities from what initially may be seen as an obstacle is found to be one of the key features of ecopreneurship (Tandoh-Offin, 2010). They have proofed to be capable of effectively transforming environmental wrongs into productive 'green' goods (Bowen, 2000).

METHODOLOGY

3.1 Data Collection Instruments

To obtain the data that was required for analysis, questionnaires were used as data collection instrument.

3.1.1 Questionnaire

The measurement tool that was developed to collect data for this study was questionnaire. The tool was designed not only to accomplish unique objectives but also to ensure achievement of comprehensive data collection and robust analyses.

3.2 Data analysis

Performance indicators are one of many tools to help answer the questions sustainable entrepreneurship and economic development. This is the numerical measure of the degree to which the

objective is being achieved. The analysed data was presented in qualitatively and quantitatively. Regression models were used to analyse to data.

3.3 Findings

Assess influence of entrepreneurial attributes on sustainable entrepreneurship and economic development in Kilome – Kenya

Findings revealed that the coefficient of determination of entrepreneurial attributes on sustainable entrepreneurship and economic development was 0.239. It means that 23.9 percent of sustainable entrepreneurship and economic development was explained by entrepreneurial attributes and the remaining 76.1 percent was explained by other factors not considered in the model.

Evaluate the entrepreneurial value of Kilome area resources on sustainable entrepreneurship and economic development in Kilome – Kenya

Findings showed that the coefficient of determination of entrepreneurial value of resources of Kilome and sustainable entrepreneurship and economic development was 0.185, which means that 18.5 percent of the sustainable entrepreneurship and economic development was explained by entrepreneurial value of resources. The remaining 81.5 percent was explained by other factors not considered in the model.

Assess role of potential entrepreneurial initiatives on sustainable entrepreneurship and economic development in Kilome - Kenya

Analysed data revealed that R^2 of entrepreneurial initiatives and sustainable entrepreneurship and economic development was 0.378 and this means that 37.8 percent of the variation in sustainable entrepreneurship and economic development was explained by entrepreneurial initiatives. The remaining 62.2 percent was explained by other factors not considered in the model.

To investigate the role of Entrepreneurial System on sustainable entrepreneurship and economic development in Kilome - Kenya

Findings showed that the coefficient of determination for the relationship between entrepreneurial system and sustainable entrepreneurship and economic development was 0.231 and this means that 23.1 percent of sustainable entrepreneurship and economic development was explained by entrepreneurial system. The remaining 76.9 percent was explained by other factors not considered in the model.

3.4 Discussion of Findings

This study reported mixed findings on the relationship between land rehabilitation and sustainable entrepreneurship and

economic development. A possible explanation of the mixed findings has been attributed to other factors which moderate or intervene on the relationship.

3.5 Conclusions and Recommendations

The research findings indicate that land rehabilitation approaches are important as they enhance sustainable entrepreneurship and economic development. Findings have revealed that indeed land rehabilitation is a much more complex issue than what has often been held both as a theoretical construct and empirical phenomenon. Future studies could focus on the moderated relationships between land rehabilitation and sustainable entrepreneurship and economic development. Possible moderators could be cultural practices, land policy in Kenya and Government incentives.

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