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## **Urban and Rural Linkages; Exploring the Effects, Challenges and Opportunities for Rural Development in Uganda**

By Gershom Atukunda

### **Abstract**

Rapid urbanization brings opportunities to new urban developments. But urbanization also comes with serious loss of arable land, degradation of ecosystems as well as social and environmental changes to the urban populations. The current urbanization process in developing countries is indicative of a process that needs considerable attention not only as a basis for transformation of societies in the developing countries but also for sustainable development. As cities grow and expand it is expected that economic growth and development will progress and act as a drive for social transformation and improvement of not only in urban areas but the greater rural hinterland served by the urbanized region. Experiences in developing countries like Uganda show a disjuncture between urbanization and the envisaged socio-economic transformation. Increased and persistent urban poverty, environmental sanitation issues, urban food issues, housing, transportation and pollution problems are prevalent in cities of developing countries with the most vulnerable being areas of recent urban expansion and settlements of the urban poor. This article analyzes how the changing nature of population mobility flows into and within two frontier; rural-urban and urban-rural and how they have shaped rural development in Uganda. In this article, thoughts to the many features and characteristics of urban expansion in developing countries focusing on the local processes underlying urbanization in districts of Uganda are put down. The article also endeavors to highlight how such features such as driving forces of urbanization in Uganda, effects of urbanization and rural linkages, challenges and opportunities for rural development in Uganda and the conclusion which contains summarizing the main contrasting features of urban expansion in Uganda.

**Key words:** Urban and Rural Linkages; Rural Development; Uganda

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## **Urban and Rural Linkages; Exploring the Effects, Challenges and Opportunities for Rural Development in Uganda**

By Gershom Atukunda

### **Introduction**

Urbanisation is one of the oldest and most persuasive process of change that has helped to shape societies around the world. It is a dynamic set of process, responding to changing values and perceptions of the intrinsic characteristics of rural versus urban areas. It can be defined as increasing concentration of population in urban areas both relatively and absolutely. Urbanization occurs when people move from rural to urban areas so that the proportion of people living in cities increases while the proportion of people living in the country diminishes (Atukunda 2012).

### **Background of the Study**

A majority of the population in North America and Europe have lived in cities since the early twentieth century, a majority in Latin America since the 1960s and a majority of people in West Asia since 1980. People in Asia and Africa remain predominantly rural but that situation is changing rapidly. Asian cities are growing at an average rate of 3 per cent per year, compared to overall population growth of 1.4 per cent, while the population of African cities is growing at a rate of 4 per cent per year compared to overall growth of 2.6 per cent (Pumain, 2004). In both regions the majority of the population will live in urban areas by 2020. By 2025, approximately 60 per cent of the world's population will live in urban areas (Ravallion and Sangraula, 2007).

In numbers, this translates into 4.7 billion people living in urban areas by 2025, an increase of 2.2 billion from 1995. That increase is almost all accounted for by developing countries, where an increase of over 2 billion people is estimated (Hugo and Champion, 2008). In contrast, the world's rural population is projected to increase by only 190 million. The rural population in developing countries is projected to increase by 270 million, while that of developed countries is to decline by 80 million (Ingram, 2008). Urbanization has been linked with the development of rural areas. During the latter half of the twentieth century, urbanization fuelled the expansion of employment in peri-rural areas neighboring major towns globally. Urbanization came with change in production process which contributed to development of industrial production facilities in rural areas (Ingram, 2008).

The other side of the coin, however, has been the observation of decline and stagnation in many resources in rural areas. Rural areas have been associated with perceived inadequacies in terms of services and quality of life, including access to a wide range of employment opportunities. The economic activities that evolved in these rural regions, such as Canada's northern areas, the western agricultural regions of North America and the remote rural regions in much of Europe have been impacted by the ongoing technological change that has permitted the substitution of capital for labour, thus reducing employment needs in those same regions (Hugo and Champion, 2008).

Urbanization in Uganda started with the expansion of Buganda Kingdom headquarters in 1900s to neighboring areas. From a small *Kibuga* (Buganda Kingdom headquarters) and a township established for administrative purposes, the city expanded from 170 acres gazetted

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in 1902, 3200 acres by 1929 and 195 sq km by 1968(Norstrand, 2004). The expansion was mainly through annexing adjacent townships and rural areas to the *kibuga* and Kampala Township. As the city boundaries were extended the population in Kampala also increased from 2,850 in 1912, 24,100 in 1948 to 458,503 by 1980, 774,241 in 1991 and 1,208,544 in 2002 at average annual growth rates ranging between 3.14 percent and 5.61 percent (UBOS, 2002). Spreading over an area of up to 839 sq km the Metropolitan Kampala has expanded engulfing the urban centers around the city and continuously converting the rural landscape (Nyakaana, Sengendo et al. 2004) into urban uses. Today many towns in Uganda continue to expand to extend their influence to the neighboring rural areas. For example towns such as Mbarara, Jinja, Mbale, Masaka, Mpigi, Mukono among others continue to expand and influence the neighboring rural areas economically, socially, culturally and politically (NEMA report, 2012).

Although there are some similar expansion processes of most urban centres in Uganda to those of developed countries, the process in Uganda are largely dissimilar due to the nature of and the product of the expansion. Whereas urban expansion in developed countries is driven by private development interests, globalization, deregulation and a tax system forcing municipalities into competition against each other for tax-paying residents and businesses (Wegener, 2010) - urban expansion of Uganda, is driven by demographic shifts in the form of rural-urban migration that has led to creation of unplanned settlements within the city and at its periphery (Wegener 2010; Lwasa 2009; Atukunda 2012). The expansion processes of urban centres in Uganda have created an imprint of unplanned settlements with inadequate services and infrastructure as well as environmental sanitation problems.

### **Contextual Framework**

The world's population has urbanized quickly. In 1900, just 13 percent of people lived in cities; by 1950, the proportion rose to 29 percent (Ingram, 2008). By 2030, the proportion could reach 60 percent, or nearly 5 billion people (Skeldon, 2010). As more and more people leave villages and farms to live in cities, urban growth results (Skeldon, 2010). The rapid growth of cities like Chicago in the late nineteenth century and Mumbai a century later can be attributed largely to rural-urban migration (Pumain, 2004). This kind of growth is especially commonplace in developing countries. Urbanization occurs naturally from individual and corporate efforts to reduce time and expense in commuting and transportation while improving opportunities for jobs, education, housing, entertainment, and transportation. Living in cities permits individuals and families to take advantage of the opportunities of proximity, diversity, and marketplace competition. Due to their high populations, urban areas can also have much more diverse social communities than rural areas, allowing others to find people like them.

Developing countries are urbanizing at rates similar to what developed countries experienced about a century ago. On average, today's developed countries increased their urban shares by 7.7 percentage points between 1880 and 1900; today's developing countries have seen urban share increases of 8 percentage points between 1985 and 2005(Skeldon, 2010). Similarly, urbanization is taking off in Uganda where urbanization is estimated at around 13 percent and urban growth rates are around 4.5 percent per year and projected to increase further. International evidence highlights that urbanization proceeds slowly at initial stages of economic development, accelerates (in the stage where countries classified as middle income) and slows down at high levels of income. In this context, Uganda's urban deluge is yet to

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come. Uganda's urban shares are still low relative to its neighbors, though there appears to be a consistent link between increasing incomes and changes in urban shares (UBOS, 2013).

Urbanization in Uganda is currently estimated at 12 percent of the population which proportion considers only the major urban areas in the country (UBOS, 2013). A number of trends regarding rural-urban linkages have been observed in the last decade in Uganda. Firstly, the implementation of structural adjustment policies, has forced many urban households to seek additional sources of food and income from rural agriculture. Increasingly, high and middle-income households are also engaging in urban agriculture to supplement declining incomes. Secondly, retrenchment and deepening of urban poverty occasioned by structural adjustment has triggered a process of 'return migration', with households returning to their rural homes in order to survive. Thirdly, urban-to-rural household remittances are declining, while the ability of poorer urban households to import food for their own consumption from their rural relatives is increasingly becoming common. Fourthly, globalization is creating new forms of linkages for small towns and rural areas, often called the 'metropolization of the world economy'. A web of horizontal and vertical networks among settlements is emerging, fuelled by recent technological advances in information and communication technologies. Basing on the above background this article therefore reflects on how urbanization has affected the rural development in Uganda; for example how urbanization in Uganda has changed the agricultural patterns, socio-economic, cultural, and religious living of people; the challenges that come up with the changes brought about by urbanization and the opportunities that are available for rural development.

### **Driving forces of Urbanization in Uganda**

Several drivers of urbanization are responsible for the fast growth of urban towns like Kampala, Jinja, Mbarara, and Mukono. In the first instance population dynamics manifested in urban population growth and rural to urban migration are by far the most significant driving forces of urban expansion of these urban towns (Atukunda 2012). Through natural increase (due to high fertility rate 7.1, decline in mortality, internal migration and international migration (Nyakaana, Sengendo et al. 2004) the population of Uganda has steadily grown in the last three decades faster than the pace at which urban services and housing are provided. Secondly policies for the economic transformation of Uganda which have mainly been pursued from and around the city through industrialization are also responsible for the urban expansion of urban towns.

But the unique feature of urbanization due to economic transformations is the informal sector proliferation which is dissimilar from developed countries and significant in employment generation within the city. Although the informal sector is considered an expression of the need and provider for employment in urban towns, it has also come with serious environmental and health implications in Kampala since many of the activities occur in residential neighborhoods. Associated with economic transformations are the market forces of *consumption* derived from the population. *Market forces* are influencing urbanization of the city in two distinctive ways. First the consumption by the urban population for products produced both within the city and in the country. In this respect the high consumption of urban towns' population is further driving the expansion of the city through establishment of numerous industrial establishments, commercial centers and general urban developments within the city (Lwasa and Nyakaana, 2004). Secondly through exchange of land for

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development in the city, which has intensified recently leading to commodification of land and informalization of the land acquisition processes.

The consequence of informalization and commodification has been the conversion of environmentally sensitive land to urban uses with serious social and health consequences mainly at the fringes of the city (Atukunda 2012). Due to these factors, the expansion in urban towns in Uganda is steadily advancing at fast pace leading to engulfing of adjacent rural landscape and urban center.

## **Effects of Urbanization and Rural Linkages**

### **Economic Effects**

#### **1. Positive Effects**

Urban-rural linkages have led to improvements in Agricultural production. Economically, rural and urban areas are linked by the reciprocal exchange of unprocessed and processed products, with both areas acting as mutually reinforcing markets. With development of urban towns like Mbarara and Kampala, there has been an increase in the accessibility of agricultural inputs for rural producers in rural areas such as Bwizibwera and Mityana respectively (Nyakaana and Sengendo, et al., 2004). Due to easy accessibility of major towns as a result of good roads, local farmers find it easy to access agricultural inputs like pesticides and seeds which have helped to improve on agricultural productivity in rural areas, while at the same time providing the necessary marketing infrastructure; especially bulk collection points. Urban towns like Kampala and Mbarara also provide the basic infrastructure for increasing rural farm and off-farm production in rural areas.

Also urban-rural remittances are one of the most important sources of investment capital in rural areas. Individuals returning from the cities following retirement or short-term employment bring savings, which are another major source of capital for agricultural investment. Remittances are important for the daily subsistence of some rural dwellers, such as many households headed by women. They are also important for acquiring durable non-investment goods and community social infrastructure.

The demand for agricultural products has also been on an increase due to urban-rural linkages. With development of urban centres such as Kampala, Mukono, Mbarara, Jinja among others, the demand for locally produced agricultural products such as matooke, cereals, fruits among others has been on an increase (Norstrand, 2004). This is because the process of urban expansion leads to more demand for food which cannot be produced in urban areas due to land scarcity but instead in rural areas. Therefore urbanization has been one of the most striking features of rural areas like Nyakayojo and Kashari that easily get market for their locally produced agricultural products as the result in expansion of Mbarara town. Areas such as Mubende, Mityana and Kayunga are also expanding because of their proximity to Kampala city that offers demand for the locally produced agricultural products. All these continue to transform hitherto rural areas into semi-urban towns. The underlying rationale behind this transformation is that at low levels of incomes, most of the labor force is employed in agriculture at subsistence levels. Trade between urban and rural areas is determined by demand for food by the small urban population and demand for urban goods by the rural population. At low incomes, large proportions of income are spent on food with limited demand for urban goods. As incomes rise – possibly due to technological changes in

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agriculture, the proportion of income spent on food declines and demand for other goods increases. This increases the demand for non food goods as well as demand for labor in urban areas (Lwasa, 2009).

Expanding urban areas has favored the diversification of economic activity away from farming in surrounding rural areas, which typically has a positive effect on income. For example rural people are now involved in others activities such as milling, transport, leisure and hospitality. This has been possible because of expansion on services such as water services, electricity, and good roads from urban towns to neighboring rural areas. Residents in rural areas such as Kayunga, Mpigi and Bombo neighboring Kampala city are now involved in a variety of activities alongside agricultural which has helped to increase on their levels of income (UBOS, 2012).

## **2. Negative Effects**

Urbanization has reduced on land for agricultural and increased land conflicts in rural areas in Uganda. Increasing densities of economic activities is one of the key features of successful urbanization, enabled by reusing the same piece of land for higher value activities over time. Policies that assign property rights and encourage trade of land can enhance economic efficiency and allow settlements to respond to changing needs of the market. Fluid land markets help the transition out of agriculture, where rural land can be sold and/or rented for urban uses, and rural residents can seek more rewarding opportunities in non -farm activities in urban areas. Though international evidence identifies positive impacts of tenure security on investment and productivity (Hugo and Champion, 2008), in Uganda, the lack of clear property rights has removed a large proportion of land from the market and continues to leave the rural people landless. In fact, only 18 percent of private land is registered and titled (Lwasa, 2004). While land registration is not a necessary condition for land tenure security, there is considerable international evidence that it enhances land tenure security by defining the nature and content of land rights, availing all information on land ownership in a public record (the land registry) for inspection and having its correctness assured by the state.

In addition, unclear property rights and land-related conflicts in Uganda reduce agricultural output by about 8 percent (UBOS, 2012). Data from the UNHS 2010 show that 37 percent of land could not be sold, 34 percent could not be rented, and 44 percent of land could not be used as security for a loan. This is partly attributed to the predominance of the *mailo* land tenure system, which is beset by overlapping land rights between those who are registered owners and the lawful or bona fide occupants, as per the Uganda Land Act of 1998. Overlapping property rights on *mailo* land have created investment disincentives and reduced productivity by up to 25 percent. On the other hand, in western, eastern, and northern regions, customary land tenure systems restricts the sale of land to outsiders to the community.

## **Socio-cultural Effects**

### **Positive effects**

Urbanization in Uganda is not simply the growth of populations living within legal-administrative boundaries of towns and cities like Mbarara, Jinja and Kampala. It also transforms both urban and rural lifestyles. There has been technological improvements, initially in transport but more recently in information and telecommunication, have allowed people in rural villages to become urbanized without necessarily migrating to towns and cities. For example rural people can easily now have access to mobile phones because of

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many telecommunication companies that have been established in Uganda such as MTN, Airtel, Orange and Uganda Telecommunication. Therefore as their access to modern infrastructure and services normally associated with urban areas increases, rural people in Uganda are increasingly becoming less dependent on towns and cities for meeting their economic and social needs.

Urban-rural linkages can be viewed in line with improvement in infrastructure network. Due to urbanization, major highways have been constructed or rehabilitated to connect major urban centres to rural areas for example Kampala-Mbarara high way, the Mbarara-Kisoro highway. In the simulation, improving roads has had many effects. First, it increases access to markets, and second it increases the spatial extent of agglomeration economies as firms can effectively be closer to a larger number of firms in their industry and roads have helped to improve on market for agricultural products in rural areas. For example in the Northern district of Gulu the share of national food and beverage establishments increased from 1.7 percent to 2 percent; in Lira, it moves from 1.9 to 2.3percent as the result of construction of Kampala-Gulu highway. In comparison in Iganga district that adjoins Kampala, transport improvements have increased the share of establishments that would locate in the district from 5.8 percent to 10.5 percent (Lwasa, 2011).

As a result of urbanization, there have been improvements in leisure and hospitality industry in rural areas in Uganda. The expansion of towns has led to construction of resorts, hotels and leisure parks in rural areas adjacent to major towns. For example due to expansion of Kampala town, beaches and hotels have been constructed in Wakiso district on shores Lake Victoria which used to be bushy before the expansion of Kampala city. The establishment of the leisure and hospitality industry has helped to create employment opportunities for rural people for example those directly involved in constructing the hotels and those who sell their products such as crafts to tourists hence improving incomes. Improves in leisure and hospitality industry has also seen changes in culture of Ugandans, young men now spend their weekend holidays on beaches which was not the case before the urbanization of Kampala city and the surrounding environs.

Urbanization leads to welfare enhancing in rural areas of Uganda. A simulation exercise based on econometric analysis of UNHS data for 2005/06 shows that similar households (size, composition, education) do better when they migrate to urban areas, and generally intra-district migrant households to do better than inter-district households in the receiving district(UBOS, 2012). One reasonable explanation for this finding is that households that move, but stay within their district of origin, will know the customs, practices, languages, and perhaps even the job market better than the immigrants from a neighboring district. Furthermore, intra-district migrant households may have closer ties (for example a larger network at their destination) than inter-district migrant households because they are more likely to have family or kin living within the same district.

Urban-rural linkages are related to improvements in education and health service provision. Expansion of major towns in Uganda such as Kampala, Jinja, Mbarara and Masaka has led to establishment of educational institutions in rural areas adjacent these urban towns to accommodate the ever increasing educational demands. For example educational institutions such as St. Lawrence schools and University have been established in the rural Wakiso district which is a semi-rural area neighbouring Kampala city. Urbanization in Uganda has also come

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with the decentralization policy where local people have power in service delivery. As towns expand, health centres are being contrasted in rural areas. As Urbanization comes with improvements in infrastructure network such as roads construction which makes it possible for rural areas to access medical supplies from urban towns.

### **Negative Effects**

Rural areas neighbouring urban areas such as Kampala have undergone environmental and social changes caused by the extension and urban uses in hitherto rural landscapes. In Kampala these areas have characteristics of spontaneous developments, reliance on largely 'rural based' livelihoods, activated land markets that are converting environmentally sensitive areas to urban uses as well as emergence of social safety nets that connect peri-urban people with both people in rural areas and the core urban areas. Through land speculation, land markets have significantly contributed to the environmental and social changes in Kampala. For example the environmental costs of land speculation especially in peri-urban areas of Kampala are far reaching (Lwasa, 2004). Rather than develop existing vacant land within the city land developers have found it more profitable and perhaps convenient to develop vacant land along transport arteries at the periphery, often by converting agricultural land or land earmarked as environmentally fragile. This type of development has in the end put greater pressure on natural resources, particularly wetlands and forests that line the boundaries of the administrative Kampala (Nyakaana, Sengendo et al. 2004). It has also increased the costs of waste disposal since settlements have developed expanding towards the current landfill. Because of greater commuting distances and lack of an adequate transport infrastructure has also increased air pollution in rural areas neighboring Kampala such as Kayunga (Lwasa, 2004).

Urban-rural linkages have changed the social networks of the rural people. This feature gives an explanation of the social implications of urban expansion on the persistence of 'urbanized poverty' in peri-urban areas of Kampala and Mbarara. By maintaining rural linkages, peri-urban people persistently reproduce rural life which is 'urbanized'. Examples of urbanized rural life is manifest in the nature of urban farming and other natural resource based forms of livelihood such as brick making and quarry mining. The consequence has been increased vulnerability to shocks that emanate from urban life driven forces such as inflation, limited jobs due to retrenchment and public policy for housing (Lwasa, 2002). To provide mechanisms of absorbing the shocks of urban life, sets of linkages between individuals and families have emerged in form of social networks. These social networks have become significant for the urban people in the quest to improve their livelihoods.

Urban-rural linkages are related to destruction of environment in rural areas. For example the expansion of towns such as Kampala and Entebbe is occurring at the expense of the environment in rural areas around those towns. For example Kampala city is surrounded by a ribbon of wide green valleys with swamps and low land forests extending into the rural hinterland of the city. However the green environment with associated natural resource components is under threat from the fast expanding city. Threat for the environment is manifest in destruction of vital environmental components such as wetlands, forests, water resources and the natural landscape of Kampala (NEMA 2012). Proliferation of informal settlements has taken a toll on the wetlands and low land forests in and around the city. For example an analysis of land use cover change in Kampala reveals that agriculture in rural areas neighbouring Kampala city decreased from 62percent to 45percent of total land area



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mainly to housing and industrial establishments. Low land forests also changed from 7.6 percent to 0.4 percent of the total land area. This change implies loss of swamp forests to land uses including industrial and residential developments (Nyakaana, Sengendo et al. 2004). Similarly swamps which are mainly covered by papyrus also reduced over the period of 11 years from 20.6percent to 1.9percent occupancy of the land area. Change rates indicate that industrial land use and built up cover changed at annual estimates of 8.9percent and 15.7percent respectively. This speed of change shows the environmental degradation driven by urban expansion which raises concerns for the environmental conservation and restoration.

## **Challenges and Opportunities for Rural Development**

### **Challenges for Rural Development**

Agricultural Technology Delivery and Adoption has been a challenge to Agricultural development in rural areas yet agricultural forms basis for survival of most rural people. Producing new technologies is one thing but having them adopted by farmers is another. This is the challenge for agricultural advisory services in Uganda. Indeed, over the last ten years, there has been much debate about the appropriate approach, coverage and performance of the extension system; of ways to improve its quality and impact; of how to improve its linkage with research; and how to support rural people to be more effective in exerting demand on the service providers. This debate has taken place within the evolving context of the National Agricultural Advisory Services (NAADS) programme, For example inadequate numbers and technical capacity of service providers in local governments especially acute in marketing and value chain development have hindered the implementation of some programmes under PMA.

Policy failures continue to be barriers to rural development. Probably the biggest barrier to progress is dealing with the complexity of issues around land tenure and access to land. Land tenure systems in Uganda are complex, reflecting changes in land ownership and land use over the last hundred years (Atukunda 2012). In the past, much of the cattle corridor districts were under customary ownership, largely by cattle keepers, many of whom were mobile. Over the years, however, land has been parceled out to individuals and institutions; there has been immigration by cultivators from high density areas; and an increasing proportion of pastoralists have adopted some land for sedentarisation. *Mailo* owners, who are mainly absentee landlords, live outside the districts and their main interest in the land is income from renting. Thus, they lack motivation to conserve the fertility of their land while the tenants (the actual users) do not feel secure enough to make any long term investment (tree planting, soil conservation etc). The result is the mining of the land including rampant tree cutting without replanting.

Degradation of Land Resources is also a challenge to the rural development. Land degradation in Uganda is widespread, varying from one part of the country to another, depending on farming practices, population pressure, vulnerability of the soil to denudation and local relief (Atukunda 2012). In 1991, studies estimated that soil erosion alone accounted for over 80 percent of the annual cost of environmental degradation representing as much as USD 300 million per year (NEMA, 2012). Land degradation is most pronounced in the dry lands of the cattle corridor areas such as Karamoja, Nyabushozi among others where sustainable land management is threatened by overgrazing by local and mobile pastoralist herds, deforestation by excessive use of fuel wood resources and poor and inappropriate agriculture on marginal land.

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Structural barriers make it impossible for rural people to utilize services that come with urban-rural linkages. With limited or no income, poor people have little chance to broaden their investment and consumption choices. With little capacity to invest in small and medium off farm enterprises, they continue to till the land or graze their livestock as their main economic occupation. Without new technologies, the land and fodder become exhausted not least because of excess carrying capacity. Even the opportunities that come with urbanization, limited income makes it impossible for rural people to afford the fees of services such as rural electricity, health services, leisure and hospitality services.

Financial constraints are more pervasive in agriculture and related activities than in many other sectors, reflecting both the nature of agricultural activity and the average size of firms. Financial contracts in rural areas involve higher transaction costs and risks than those in urban settings because of the greater dispersion of production, lower population densities, the poor quality of infrastructure, and the seasonality of rural production activities. So banks and other traditional for-profit financial intermediaries tend to limit their activities to urban areas and to more densely populated, affluent, commercial areas of the rural economy. Operating costs in these areas are lower, loan sizes large enough to cover fixed transaction costs, and legal contracts are more easily enforced. There is thus a tremendous need for financial innovations that can place smallholder farmers on a ladder of ascending financial market access as well as for innovations that can complement financial services by managing the systemic risks that undercut their supply.

There are also factors associated with lack of accountability, poor transparency and corruption in procurement, especially at lower implementation levels. This has impacted negatively on the public perception of agricultural development programmes like NAADS. For example it is claimed that there is favoritism in delivery of facilities to farmers in villages basing on tribalism and in most cases the already rich and affluent framers are favored at the expense of poor farmers who need the advisory services.

Pest, Vector and Disease Control are also challenges to the farmers. Pests, vectors and diseases are perhaps the main cause of losses in the agriculture sector. Improved pest and disease control could therefore be a major contributor to increasing agricultural production and productivity. It will certainly be a pre-requisite to accessing international markets for virtually all commodities and products. While Uganda is famously gifted by nature, it is host to the most dangerous and epidemic diseases of the world such as Ebola, Marburg, Tuberculosis, Rift Valley Fever and Anthrax; and neighbours the vast Congo- Sudan-Uganda Albertine ecosystem which is the world's largest reservoir of known and unknown viruses.

### **Opportunities for rural development**

Uganda adopted the policy of Plan for Modernization of Agriculture. This helps in fighting and eradicating poverty in rural areas through changing the current subsistence agriculture to doing farming as a business. Subsistence agriculture is producing mainly for home consumption while doing farming as a business (commercial agriculture) is producing with the objective of selling produce to earn money. For example through modernizing agriculture, there is commercialising agriculture which results into many people being able to earn incomes to meet other needs, improve their lifestyle, create more jobs in rural areas, ensure food security and use natural resources sustainably.

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The government has also undertaken programs such as NAADS that emphasizes research to find needs of rural people so that their needs can be addressed. For example in Uganda, research and technology outputs have been disseminated through Agricultural research and development centers (ARDCs) located in each of the 12 agro-ecological zones of Uganda, namely: Abii (Arua), Kachwekano (Kabale), Mukono (Mukono), Mbarara Stock Farm (Mbarara), Nabuin (Moroto), Kyembogo (Kabarole), Serere (Soroti), and Ikulwe (Iganga). This decentralized client-oriented and participatory formulated research agenda has ensured that more relevant and responsive advice is formulated with all stakeholders including the local farmers. The main aim of Agricultural Research and Technology Development is to address the needs of subsistence farmers.

Uganda also implemented decentralization policy. Decentralization stimulates greater popular participation in local politics and the policy processes in a country. These in turn tend to enhance transparency and increase the flow of information between government and citizens in both directions. Transparency increases because many people than before can see how much money governments has to work with, and what is happening within the decentralized bodies. At the same time, the amount of information passing up to government from citizens through elected members of decentralized bodies grows- which empowers governments. Also information flows downwards from governments to citizens more effectively because elected representatives are better than bureaucrats at explaining the reasons for policies in terms that ordinary people cannot understand. Consequently, accountability of elected leaders to the citizens is enhanced.

The government of Uganda also continues to electrify rural areas through rural electrification policy. Rural electrification is a process of bringing electrical power to rural and remote areas. Electricity is used to not only for lighting and household purposes but it also allows for mechanization of many farming operations such as threshing, milk hoisting grain for storage among others.

The government also continues to promote rural finance through micro finance institutions such as SACCOs in rural areas. Through this rural financial Intermediaries have been promoted and strengthened for provision of rural financial services on a viable and sustainable manner. The public sector also provides a legal and regulatory framework as well as capacity building for private sector involvement in Micro-finance institutions (MFI). Here local farmers are now able to get loans to invest more in the Agricultural produce by purchasing the Agricultural inputs.

The government also continues to promote Agro-processing and marketing for farmers. The Government provides free inputs or market farmer produce to farmers. In Uganda the government no longer provides free inputs or market farmer produce as it did in the past but Instead, inputs distribution, agro-processing and marketing are carried out by the private sector, while the public sector sets policies, remove barriers and puts in place commercial laws as well as legal and regulatory framework. The Government is also responsible for providing supportive infrastructure, including rural electrification. All these avenues create market for the locally produced products.

The government continues to support policies such as UPE and adult literacy towards capacity building of Uganda. With such policies local people can be empowered to be part of any

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development process. This will help to improve the ability of communities to collectively make better decisions about the use of resources such as infrastructure, labour and knowledge. There is need for infrastructure development. The government should spend its money on the development of basic physical infrastructure that supports the efforts to modernise agriculture. These include: roads, rural electrification, communication infrastructure and energy development programmes.

### **Conclusion**

Urbanization brings opportunities to new rural developments in Uganda. But urbanization also comes with serious loss of arable land, degradation of ecosystems as well as social and environmental changes to both rural and urban populations. The current urbanization process in Uganda is indicative of a process that needs considerable attention not only as a basis for transformation of rural societies but also for sustainable development. Therefore rural-urban linkages need to be understood and addressed in the context of increasing global urbanization. The strength of these linkages will, to a large extent, determine the living conditions of people in both urban and rural areas. Towns, cities and villages are all experiencing significant socio-economic and spatial transformations that are likely to intensify during the first few decades of the new millennium. The impact of globalization on small towns and villages is an issue that needs to be analyzed - and appropriate policy responses formulated. It is already clear that policies encouraging both horizontal and vertical linkages with settlements at the regional (sub-national), national and international levels will be necessary to improve the competitiveness of small towns and rural regions. It is no longer a question of how they integrate into the national economy, but how they do so in the global economy as well.

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