

RAPID URBANIZATION AND SUSTAINABLE FOOD SECURITY: AFRICA'S DILEMMA

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Abstract

Africa is basically an agrarian state, with over 65 percent of its populace engaged in one form of farming or animal husbandry. Predominately, Africa's agriculture is human-labour dependent, with near absence of mechanization in most production practices as well as being rural based. In most rural areas cropping is basically achieved through the use of simple tools such as hoes and cutlasses. Rural set-ups in most African states often lack basic amenities for comfortable life, with resultant effect on human migration from rural areas to urban centers. Rural-urban migrations result in loss of young individuals (who form the back bone for the work force on farms) seeking better city life. Unless there is deliberate policy measures by Africa's policy makers to sustain agricultural production in the face of rapid urbanization, the process of urbanization may produce negative consequences in the agricultural sector, leading to food shortages with its attendant consequences: availability, price increases, hunger, and etcetera. There is the likelihood that as labour exit from rural areas, labour cost will tend to increase as competition for available labour become intense. There is also the possibility that farmers who may not be able to afford increase labour cost, access machineries, or adopt labour saving technologies will cut down on land under cultivation with negative implications on production. The paper stresses possible conflicts between urbanization and agricultural production. Considering that a large percentage of Africans are into agricultural production drawing their livelihood from the enterprise either as primary crop producers or as adding values to the chain of food production, or engage in agro input enterprises, among others, there is therefore the need to address possible areas of conflicts between rapid urbanization and food security.

Keywords: urbanization, rural-urban migration, food production, rural areas, labor, land

INTRODUCTION

Most African economies are driven by agriculture which in Africa, particularly is climate dependent. In addition, African agriculture is basically subsistence, with family survival rather than profit (market) as the main focus. Thus capital and technology deployment are relatively low. These factors affect their responses to change and their ability to cope with production stresses. This is further compounded by the fact that African subsistence farmers are mostly poor, which has negative implications on innovation, coping and response to climate change (Anselm and Taofeeq, 2010; Ayoade, 2004).

Before Nigeria attained independence, agriculture was the most important sector of the economy, and accounted for more than 50% of GDP and more than 75% of export earnings. Consequently, with the rapid expansion of the petroleum industry, agricultural development was neglected, and the sector entered a relative decline. Thus, between the mid-nineteen-sixties and the mid-nineteen-eighties, Nigeria moved from a position of self-sufficiency in basic foodstuffs to one of heavy dependence on imports. Under-investment, a steady drift away from the land to urban areas (cities), increased consumer preference for imported foodstuffs (particularly rice and wheat) and outdated farming techniques continued to keep the level of food production well behind the rate of population growth (Eroarome, 2005).

It is predicted that most of the world's population growth in coming decades prior to 2050 would be in the cities of developing countries, particularly Africa (Matuschke, 2009). Such city growths should be expected to be driven by rural urbanization (the transformation of rural areas into urban centers, with its attendant capacity for population in-flow) as well as rural-urban migrations (with the tendency to obliterate some rural areas as its population moves out). Urbanization / population drift will have strong implications for Africa's rural economy which often is hinged on subsistence agriculture.

Urbanization is in itself a positive development to any people, increasing market size and most often attracting basic amenities, but where rapid urbanization do not take into account sustaining food production, this could produce catastrophic consequences in the long run.

Two basic developmental components that are key to urban development as well as Africa's agriculture are land and labour. Land for infrastructural development in cities and labour to fuel such development. On the other hand Africa's agriculture is still basically human driven where increase production is still basically a product of increasing land area under cultivation, rather than inducing increase in crop yield through crop improvement, technology application, *etcetera*, thus there is competition for these two factors of development – land and labour. Most often urban developers do have the upper hand in attracting both land and labour compared to most African farmers with their merger resources and bargaining power. As these farmers loss out in the game of attracting land and labour, the capacity of the state to meet its food requirements actually diminish. Policy makers and urban developers must consciously build-in agricultural components into urbanization process to avoid implosion.

Agriculture is the nerve center of Africa's rural economy, providing employment opportunities for over 60 percent of the populace and contributing significantly to the GDP of African States, as well as providing the basis for food security. A characteristic of Africa's rural agriculture is subsistence which is hinged on human labour often provided by family members. Rural-urban migration often result in loss of such young individuals who form the back bone for the work force on farms. While rural urbanization takes farm lands away from farming as lands are sold for other developmental processes: building projects, infrastructural development, recreational centers etc., thus available farm lands shrink; there is also labour movement from farming, usually seen as un-rewarding into other opportunities offered by developing cities; as these offer quicker monetary gains less drudgery, with enhanced reputation.

The paper examines impacts of rapid urbanization on sustainable food production stressing the dilemma for Africans between rapid urbanization and agricultural production, considering that a huge percentage of Africans are into agricultural production drawing their livelihood from the enterprise either as primary crop producers or as adding values to the chain of food production, or engage in agro input enterprises, among others.

RAPID URBANIZATION AND AGRICULTURE, ANY CONFLICT OF INTEREST?

That, there is a growing urbanization in both developed and developing countries is a visible reality. Cities and rural populations grew tremendously in the last decades, as information and means of transportation became readily available and affordable to huge percentage of the populace. Therefore proportion of the world's urban population is expected to increase by about 10 per cent from 47 per cent in 2000 to 57 percent in 2050, with more than 90 per cent of this future growth expected in large cities in developing countries (Matuschke, 2009).

Urbanization has multiple impacts on Africa's rural economy which is hinged on agriculture, including influencing what is grown, how it is grown and the sustainability of production systems, as well as draw away the much needed farm labour, farm land, compete for available water, among other impacts. It is however, not always that urbanization has negative effects on rural agriculture, as it could push up production of certain crops, thus increasing earnings on that crop. On a general term, to prevent cities from developing into slums, basic requirements, such as decent housing, water, and other basic social amenities need to be put in place, maintain and run. These urban requirements require labour and land; which are also fundamental to Africa's agricultural production. Hence, agricultural production in Africa is challenged by urban thirst for agricultural produce, agricultural lands for development processes, agricultural labour, providing cheap labour to fuel growth and water for domestic uses within cities.

While major world cities have seemingly managed (consciously or unconsciously) the conflict for resource by cities and agriculture, by out-sourcing, the danger of an unresolved conflict still loom;

particularly as it pertains to land issues. In most African cities available lands for agriculture have shrunk as land developers take over lands previous engaged in agricultural activities. Pushed to city corners, agricultural practitioner have to content with 'destructive' cropping of available lands to meet food demands, within shortened or non-existing fallow periods. Shrinking farm lands have also increased conflicts between herds' men and farmers, as these two are brought into regular contact. Shortened or non-existing fallow period, means land will have to be frequently cropped, thus requiring addition of inputs such as fertilizers and pesticides often with detrimental effects on land, water and humans.

While marketing opportunities in urban centers have the potential to contribute to the expansion of land areas under cultivation in rural areas, the thirst for urban life by rural settlers is drawing labour away from agricultural production. Mechanization of agricultural operations in rural areas which would have remedy labour drain due to urbanization is not moving fast enough. Hence, as labour exit from rural areas, farm sizes shrink regardless of urbanization demands for farm produce; as available hands are either too few or old to meet demands. As demands far outweigh production, this triggers increase in prices for agricultural produce.

Increasing food supplies to meet urban demands require increasing rural production capacity to intensify agricultural cultivation or complimenting rural production with urban agriculture. Unless there is deliberate policy measures by Africa's policy makers to ensure agricultural production keep pace with urbanization, the process of urbanization may produce negative consequences leading to an implosion, as absence of basic required resources become limiting to further development (Matuschke, 2009).

AFRICA'S DILEMMA?

Historically civilizations have collapsed under siege, as their means of sustenance which were out-sourced outside the city walls were cut off. Often, such cities have depended on out-sourcing certain basic needs at the expense of security. A critical aspect of such basic need was food and water. Africa's dilemma is compounded by the fact that a huge percentage of the populace is engaged in agriculture at subsistence level of production. Over 65 percent of Africans are directly or indirectly engaged in agriculture either as primary or secondary occupation, and most may not possess the requisite qualifications for public or private employment except in farming or other menial jobs. The question that is begging for answer is, will the current farming systems in most African states survive rapid urbanization? The dilemma is how to successfully 'midwife' urbanization while ensuring continuous food production, availability and affordability considering the method of crop production which relies on simple tools and low grade inputs. There may be the temptation to out-source food requirements as land and labour are lost to urban development. The danger of out-sourcing food production, is that it does not guarantee food security, as it puts control in the hands of the suppliers; secondly, quality of produce may be difficult to determine or assured; thirdly, the further away the source, the more the cost of production, putting into consideration transportation cost. Knowing as we do, cost of production will either be borne by consumers, else farming becomes non profitable. Higher food prices may also lead to system collapse in cities, considering cost of housing, transportation, and other basic amenities that will push up cost of living in cities.

MIDWIFING SUSTAINABLE URBANIZATION AND AGRICULTURE

While it may be easy to reach a consensus on the term urbanization, notwithstanding the different degrees or levels of urban development, the term sustainability may be more in contention. The contention is compounded when used in conjunction with urbanization, such that it produces a lexicon – sustainable urbanization. To capture the meaning of this word may require deep thinking on the intention of an urban developer or urban policy maker while developing an urban center. If these goals are met, and continuously sustained or maintained, can it be said to amount to sustainable urbanization? How may we know the goals of an urban developer, as most urban centers do not

necessarily develop out of conscious and deliberate programme of an individual, an organization or even policy makers? This obvious reality is witnessed in most Nigeria's growing urban centers: Ibadan, Kano, Kaduna, Umuahia, Lokoja, Jalingo, Sokoto, Gusau, Makurdi, Enugu, Abeokuta, Oshogbo, among many others, with no deliberate arrangements, or predetermined objectives for the city growth.

Sustainable development of urban areas require integration and coordination of investments and resources to tackle among others issues, land, labour, basic amenities and food security, observing that a State is only as secure as its food security. Importantly, the issue at hand is that of land and labour. An important issue for urban developers to address is how to manage land and labour use without detrimental effect on agricultural operations.

Most often the choice (either consciously or unconsciously) has been to transfer the burden of food production to 'some far' land, while also sourcing for labour outside or within the immediate environment. This however, is the 'devil's alternative', with detrimental future consequences. However, to ensure a viable urban center, there is the need for policy makers to build in a balancing mechanisms between ensuring city growth, meeting its labour requirements and land issues without detrimental effects on food production. It has been easy for policy makers and city developers to map out roads, recreational centers, housing units, etcetera, but cognizance is never taken of food production component of sustainable development. Painfully, presence of cropping in any form is often viewed as defacing the city landscape.

The question to address is, how can we achieve city growth without detrimentally drawing on rural labour, or agricultural lands? This has rarely been achieved, as most city developers and policy makers may see this as being counter development, entailing slowing down developmental growth of cities. To compound this, in-sourcing urban labour may be limited by city population as dictated by birth rate within such cities and the time interval it takes such young population to join the work force. Within these limiting factors, there is usually out sourcing of labour with detrimental effects on rural population and rural economy. This choice has served the purpose of most urban developers and policy makers for centuries. There is however, the need for policy makers to look at the complete picture – the cost of urbanization on surrounding rural areas and rural economy.

MECHANIZATION OF AGRICULTURE

Since rural areas play key role in meeting the food needs of most urban centers, to ensure sustainable food production as well as keep prices of food items moderately constant, there must be deliberate efforts at sustaining agricultural activities within rural areas; thus urbanization should become a catalyst for the commercialization of agriculture. This should be more so, considering the depletion of rural labour as able bodied or educated youths move to the cities for job opportunities. Commercialization and mechanization of agricultural operations must go hand in hand to fill the gap created by exodus of farm labour. For rural areas to continue to be relevant in the provision of urban food needs, there must be a change in rural farmers' paradigm from subsistence agriculture that is family focused to one that is urban focused - a demand-induced commodity shifts (Matuschke, 2009). This new paradigm will require a level of understanding and educational background that is yet lacking among Africa's rural farmers. With a change in paradigm from farming-family focused to demand induced agriculture, what implication will this likely have on the farming family? How will the farmer meet his needs, and what impact will commercialization have on him and possibly on prices of his agricultural produce?

MAKING CREDIT FACILITIES READILY AVAILABLE AND AFFORDABLE TO FARMERS

There is the likelihood that as labour exit from rural areas, labour cost will tend to increase as competition for available labour become intense, and if effort is made to manage labour cost by pegging it down, farm jobs will become unattractive to many, leading to further exit from the farm

labour market. There is also the possibility that if labour cost is allowed to be dictated by market forces, farmers who cannot afford high labour cost, or access machineries or invest on labour saving technologies will cut down on land under cultivation. Where such land reduction is not complemented by sowing improved seeds which are higher yielding, reduction in land area will lead to reduction in crop produced. To ensure agricultural production in the face of urbanization, credit facilities should be made readily available and accessible to farmers, so that production is not hampered by either labour or by inability to employ machinery.

DESIGNATING AGRICULTURAL LANDS / TOWNS

As renewable sector of the economy with endless capacity, governments and policy makers must address the workings of the agricultural sector holistically to ensure profitability in the face of urbanization. Production of agricultural produce must keep pace with anticipated population, as shortfalls will induce price increases. There may be need to designate agricultural lands or agricultural towns, with basic facilities for comfortable life provided, particularly where it involves agricultural towns. To ensure that these designated lands or towns attract occupants, policy makers should address agricultural operations holistically, from improved seed procurement, land preparation, through to storage and marketing of agricultural produce.

Sowing Improved Seeds

Considering anticipated shrinking of land areas under cultivation, as agricultural production gives way to infrastructural development, there may be the need to encourage Africa's farmers to grow improved seeds with better outputs, noting that the possibility of increasing land areas under cultivation to ensure increase crop production may have been hampered by land reduction.

Ensuring Profitability

Ensuring profitability of agricultural production and good returns on investment will keep farmers on farming as well as attract others into farming even with the growth of cities with its attendant temptation to seek other appointments away from agricultural enterprises.

Labour Cost

Cost of hiring should be as attractive as possible to attract farm labour. It should be profitable for labour to work on farms.

Ensuring Profitable Cropping Systems

In the face of shrinking land, sole cropping may be disadvantaged against multiple cropping systems.

Encouraging Food Fortification

Fortification of food and feed with essential minerals should be encouraged.

CONCLUSION

The paper examines impacts of urbanization on sustainable food production. It stresses the dilemma between urbanization and agricultural production, considering that a huge percentage of Africans are into agricultural production drawing their livelihood from the enterprise either as primary crop producers or as adding values to the chain of food production, or engage in agro input enterprises. It highlights fundamental steps in managing urbanization without losing grips on food security, stating that unless there is deliberate policy measures by Africa's policy makers to sustain agricultural production in the face of rapid urbanization, the process of urbanization may produce negative consequences in the agricultural sector, leading to food shortages with its attendant consequences: availability, prices increases, and hunger.

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