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Implication of the Economic Stability on the Poverty-Agriculture Development Nexus in Tanzania

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Abstract

Economic growth has been stable and impressive since 2000, but poverty and agricultural development have been stagnant in the same period. This study sought to explore trends in, and relationships among, economic growth, poverty reduction, and agricultural development. The results show an insufficient connection between the three components and that there is a negative relationship between economic growth and agricultural growth. An economic shift from the agricultural sector to the service sector contributes to poverty and the deterioration of the livelihood of rural people. To improve the situation, we offer a few suggestions, including the establishment of a proper link between farmers and available opportunities in order to foster a proper connection between economic growth and the agricultural development-poverty nexus. There is also a need to sustain economic growth based on the four pillars of food security: food availability, food access, food stability, and food utilization.

Keywords: *economic growth, poverty, agriculture, Tanzania*

Introduction

It is difficult to explore the stability of the economic growth through the lens of poverty reduction and agricultural development due to the multifaceted, dynamic relationship among these factors. To understand the relationship, an understanding of the socio-cultural and economic background and phases of the economy is required. Tanzania has undergone distinct phases of socio-economic development since 1961 when they achieved independence. The independence of the nation, and the historical struggle for it, contributes greatly to the current economic situation. The first phase was from 1961-1980, during which time the country made deliberate efforts to build national unity. The second phase was from 1981 to 1995, during which time the main focus was on macroeconomic stability and quality of public financial management, policy development and implementation, reducing government expenditures, and minimizing domestic and non-concessional borrowing. In this phase there was an adoption of structure adjustment and reforms that were aimed at restoring stability and growth with no clear objective for socioeconomic transformation. The phase is characterized by rapid, but jobless, growth (Kilama & Wuyts, 2014) and low productivity within and between productive sectors in which agriculture absorbed all surplus labour within the economy. However, there was a degree of improvement in the environment of economic

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growth. The third phase was from 1996-2013. In this phase, the country undertook the implementation of more comprehensive economic and social policies with a focus on the development agenda. The focus on a higher level of investment in human capital and physical infrastructure, improvement of the business environment, and strengthening of government capacity (Utz, 2008) are the result of second phase efforts.

The country's focus is still on economic development in the context of improving the livelihood of farmers by strengthening its fiscal position through fiscal consolidation measures. The measures go hand in hand with different strategies that have been developed through the years. The focus of the current policy is spurring wide gains in the economy and making use of available opportunities that engender economic development in rural areas. Such a policy can quickly trigger significant increases in productivity and investment in the manufacturing sector but only if inclusive agriculture is a major driver of the economic development.

This paper assesses the trends of the economic growth, stability in relation to poverty reduction, and agricultural development. In this paper, consideration has been given to Tanzania's goal to reduce poverty by half by the year 2015 (Millennium Development Goal one target). The paper also explores the implication of economic growth trends on the components that affect people residing in rural area more than those residing in urban areas. In view of the stability of the growth rate since 2000, Tanzania is expected to reduce its poverty in line with the MKUKUTA targets and MDG goal one.

Research Methodology

The Conceptual Model

The conceptual framework is based on research contributions by data gathered from the surveys carried out by National Bureau of Statistics (NBS) such as the agriculture sample census 2007/08, National Panel Survey 2010/11, household budget survey 2011/12, and National census 2011/12. The model is composed of one dependent variable, poverty reduction. To be more specific, the study took into account one important measurement of poverty reduction as development of agriculture, which leads to economic growth. The study also used strategies/programmes developed as one of the moderating variables.

Research Design, Data Sources and Analysis Techniques

The study adopted a case study design with a quantitative research approach. The study was exploratory, explanatory, and descriptive, based on observations of Gross Domestic Product (GDP) growth over the period 1990 to 2013. The study used secondary data from public sources, such as survey data from NBS and their publications for the period 1990-2013. The nature of the data was different based on surveys and censuses since 1990. Other sources of information were fact and figures reports and economic reports from the World Bank (WB), Bank of Tanzania (BOT), Ministry of Finance, Ministry of Livestock and Fisheries Development (MLFD), Ministry of Agriculture, Food Security and Cooperatives (MAFC), Oxford Poverty and Human Development Initiative (OPHI), and Tanzania Investment Reports. The rationale for collecting secondary data in this study was to try to use this information in triangulating the facts for the relationship between economic growth, agriculture, and poverty. Quantitative techniques were employed based on the relevant research reports and origin of the data, such as World Bank indicators, NBS statistic guideline, Food and Agriculture Organization of United Nations (FAO) and International Monetary Fund (IMF) suggestions. The study used statistical package for social sciences (SPSS) to run ordinary least squares (OLS).

Economic Growth and Macroeconomic Stability

Tanzania's economy has been resilient to shocks and has remained buoyant with a growth rate of 7% (African Economic outlook, 2012). The lowest was 6.8% in 2012 and highest was 7.1% in 2013, which is above the region average since 2000 (Figure 1). Despite that fact the economy has depended on agriculture in the past, the service sector has recently managed to surpass agriculture at a tremendous rate while the agriculture rate is still slow (Figure 1). The service sector accounts for about a half of GDP (while agriculture accounts for about a quarter of the GDP) with an average

growth rate of 8%. Other sectors with a slow growing rate (agriculture growth rate was below 4% in 2013) were left out. This paper found that the weight of the agriculture sector in total GDP decreased from almost 50 percent in 2000 to 24.7 percent in 2013 while the service sector maintained its growth with a slim increase from 47% to 48% in the same period (Figure 1). Comparing the Foreign Direct Investment, Tanzania is a top destination in East Africa (EA) (United Nations Conference on Trade and Development (UNCTAD) data of 2013) with (USD) 12.7 billion in foreign direct investment (FDI) stock while Kenya and Uganda have USD 3.4 billion and USD 8.8 billion, respectively. However, the stock of FDI for agriculture is very low notwithstanding the fact that agriculture is the primary source of income for three quarters of the Tanzanian population (Figure 2). Poor performance in agriculture has caused fluctuation in inflation and consequent increases in national debt that has been destabilizing the economy.

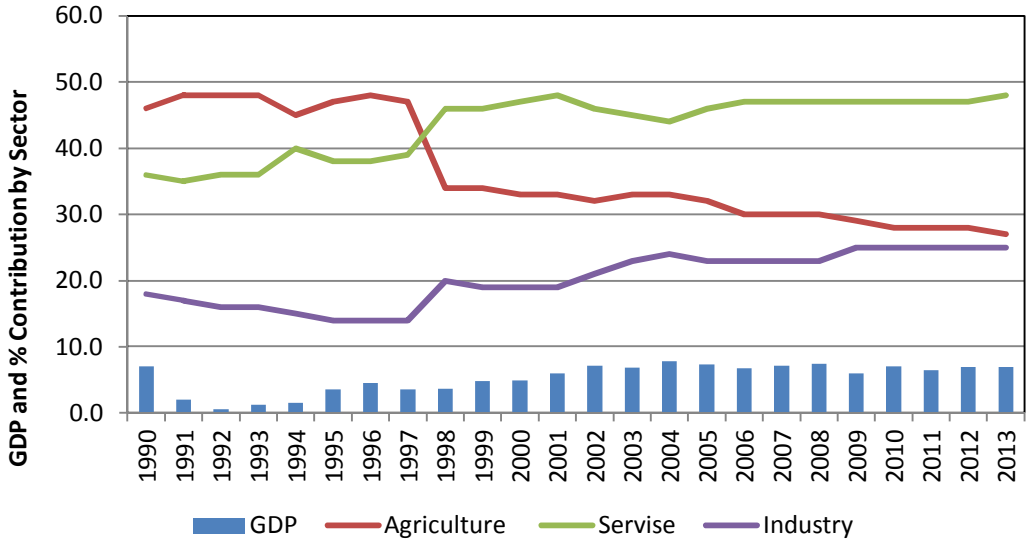

Figure 1: GDP and Sectorial Contribution to the GDP for 1990-2013 (% of GDP)
Data Source: NBS survey 2007/8 and Tanzania census 2012(authors' own calculations)

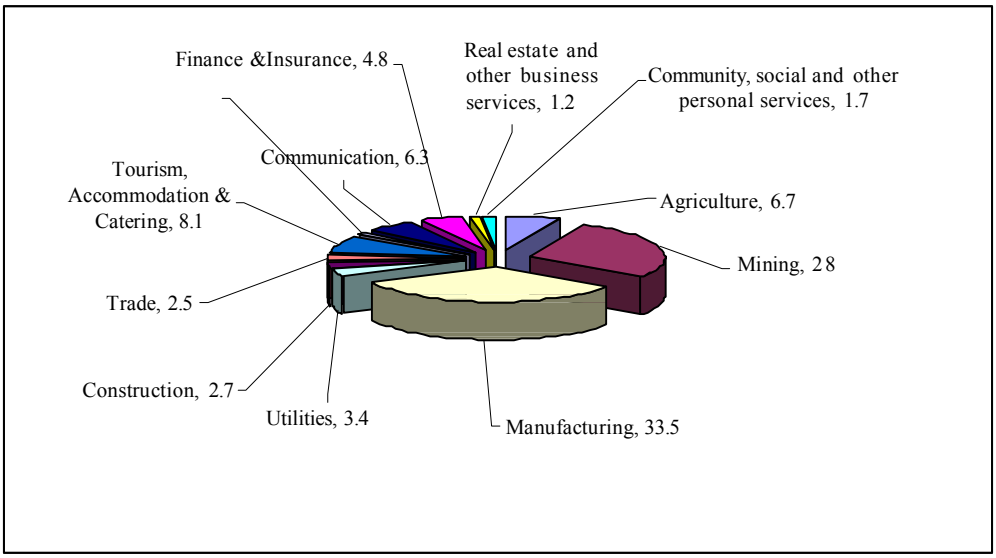

Figure 2: Sectoral Distribution of FDI Stock, 2001 (percent)
Source: Tanzania Investment Report, 2004

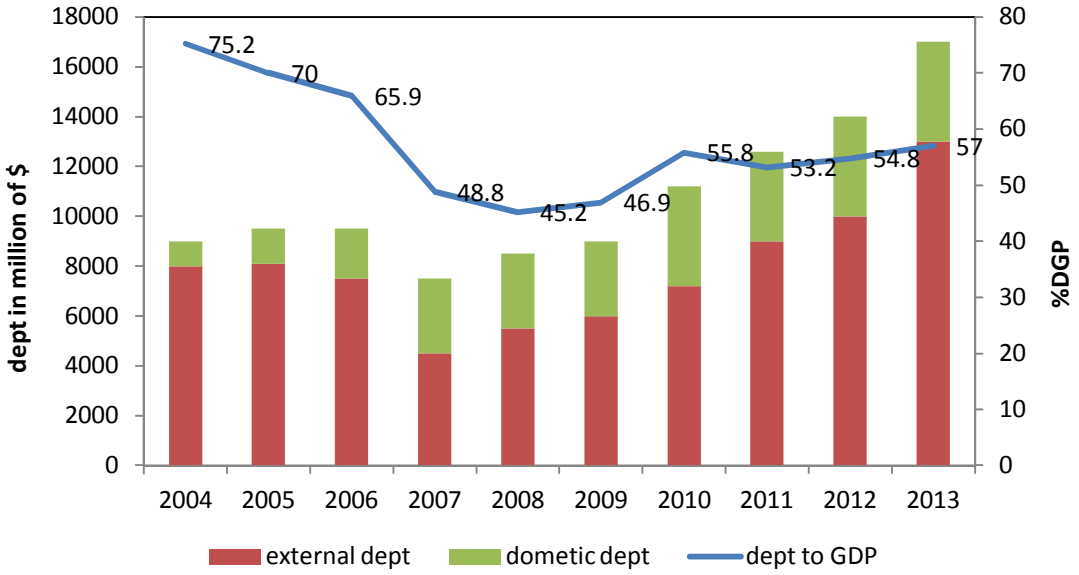

Figure 3: National Dept and Dept to GDP ratio
Source of Data: Bank of Tanzania (BOT), author's own calculations

The inflation rate dropped to less than 5 percent in the early 2000s and started to rise gradually in 2005, but it dropped in 2009 then rose to 19 percent in mid-2011 (MAFAP, 2013) before regaining single digit in 2012. Inflation rates may be acceptably low. Keeping these rates low implies that the economy is stable and is likely to remain so, as is stipulated by the East African Community (EAC) monetary convergence criteria of restricted long-term rates of inflation at the range of 8%.

Looking at Tanzania's debt stock, it was USD 17,690.5 million at the end of June 2013 (BoT, 2013a), which is an increase of 40.6 percent and 25.1 percent from the amount recorded at the end of the corresponding period in 2011 and 2012 (MoF, 2013). The increase in national debt relative to GDP indicates that the government will not have much flexibility to use its tax revenue to address domestic needs and will instead be worrying about repaying its foreign creditors (Figure 3). Sumila (2013) reported that Tanzania's external debt stock reached USD $12.5 billion at the end of July 2013, a difference of $500 million from that of the previous month (June, 2013), of which a large proportion of outstanding debt was reported to be utilized for the balance of payments and budget support followed by education, social welfare, transport, and telecommunication.

Agricultural Productivity and Competitiveness

The government's focus is on the development of a competitive and dynamic economy is aims to make the company a middle-income country by the year 2025. To ensure this, efforts to transform from a low-productivity agricultural economy to a semi-industrialized economy have been underway. However, agricultural productivity is interlinked with labour saving and land-augmenting technologies, the land tenure system, credit availability, institutional efficiency, and the availability of quality and quantity of research and development (Limbu, 1995). There is considerable arable land and fresh water flowing in most parts of the country that can be utilized for irrigation, which in turn may invigorate farmers' productivity. Conversely, the arable land and fresh water is underutilized in most parts of the country. For example, the existing irrigation infrastructure in Tanzania is still poor and inappropriate, causing the overall water use efficiency to be very low at an average of 15-20%, and the losses in the systems are enormous, amounting to 80 to 85% (Mwandosya, 2008). Leyaro & Morrissey (2013) argued that balanced growth is achieved if agriculture is commercialized to support the growth of the manufacturing sector. The manufacturing sector depends on agriculture through

processing and agri-business. Unfortunately, this has not happened in Tanzania, and the economy remains essentially based on traditional agriculture with low productivity (Leyaro & Morrissey, 2013). Consequently, there is a need for deliberate effort to revamp agricultural productivity so that the country can meet the targets set.

The analysis of factor input in this study suggests that an increase in total productivity reflects both increased capacity used in response to increase aggregate demand and economic efficiency gains in the wake of removal of economic distortions. Nonetheless, innovation and technological changes have a small contribution on the total factor productivity in Tanzania (Utz, 2008). Noteworthy, the structural reform has managed to increase competition in the private sector as evidenced by the number of firms exiting and entering the market, but the firms entering are more competitive than those exiting. This suggests an increase in total productivity registered at the aggregate level. This was also argued by Utz (2008).

The Trend of Agriculture Contribution to the GDP Compared to Other Sectors

The arithmetic of GDP growth decomposition to the agriculture, industry, and service sectors is necessary to understanding the growth of the economy in Tanzania. Assume GDP is represented by Y, and A as agricultural GDP, *I* as industrial GDP and *S* as service GDP. So:

$$Y = A + I + S \quad [1]$$

Differentiation of equation 1 divided by Y will be

$$\dot{Y} = \frac{\Delta Y}{Y} = \frac{\Delta A + \Delta I + \Delta S}{Y} = \frac{\Delta A}{A} \cdot \frac{A}{Y} + \frac{\Delta I}{I} \cdot \frac{I}{Y} + \frac{\Delta S}{S} \cdot \frac{S}{Y} \quad [2]$$

Let's take: $\alpha = \frac{A}{Y}; \beta = \frac{I}{Y}; \gamma = \frac{S}{Y}$ [3]

Where $\alpha, \beta, \gamma,$ are the shares of Agriculture, Industry and Services in GDP

But $\acute{A} = \frac{\Delta A}{A}$; $\acute{I} = \frac{\Delta I}{I}$ and $\acute{S} = \frac{\Delta S}{S}$ [4]

By substituting equations 3 and 4 in equation 2, we will get

$$\dot{Y} = (\alpha \cdot \acute{A}) + (\beta \cdot \acute{I}) + (\gamma \cdot \acute{S}) \quad [5]$$

Equation 5 states the growth in GDP is equal to the sum of the product of the share of each sector in GDP within the sector's growth rate.

Looking at economic growth trends, the modest growth recorded since 2000 in the agriculture sector has been gauged using indicators such as changes in technology, infrastructure development, prices of certain cash crops, changes in volumes of outputs of certain crops and livestock and acreage under crops over time. This is despite the fact that it has not been translated into poverty reduction or livelihood improvement. The economic growth as seen in the above equation 5, the massive contribution has shifted from agriculture to the service sector, which makes it difficult for poverty reduction due to fact that poverty is concentrated in rural areas where agriculture is practiced most.

Figure 1 depicts the contribution of Agriculture[1] (in relation to other sectors) to the real GDP for the past two decades in the FDI stock. The average contribution for the year 1990-1997 was 47.12% followed by the other 10 years, which had huge drops due to an average of 32.18% in the year 1998-2008. The drop was accelerated to 26.8% in 2012 then to 24.7% in 2013. Since then (1998), it has not exceeded 4-5% per year (OECD, 2013), although it provides employment to over 70% of the Tanzanian population. The trend shows a decreasing factor with the gain of contribution in the service[2] sector, which has been stable since 1998 up to date with an average of 46.5%. Utz, 2008 explained the contribution of three major sectors in the overall GDP as 8.7%, 5.9%, and 4.8% in the period of 2000-2005 for the industry, service, and agriculture sectors consecutively. The analysis of sectoral contribution to the increase in the average GDP growth rate from 2.5 percent in period of 1990-1995 to 6 percent in the period of 2000-2005 confirms that growth was accelerated in all sectors with contributions of 1.4%, 1.3% and 0.8% for the service, industrial, and agriculture sectors, consecutively (Utz, 2008). This confirms that agricultural contribution is decreasing, that reduce the hope for poverty reduction. Nevertheless, economic growth changes over time, not only

[1] Agriculture includes forestry, hunting, and fishing, crops and livestock production.

[2] Service sector includes hotels and restaurants, transport, financial, professional, and personal services such as education, health care, and real estate services.

in terms of rate of expansion but also in terms of their structure and the evolution of relative productivities between and within the sectors. Thus, the economy does not just grow in size but also changes in appearance. Therefore, Figure 1 depicts the historical trajectory and short-run ups and downs in the rhythm of quantitative expansion of Tanzania's aggregate economic output and not the growth history of Tanzania, as it associated with the major process of institutional and structural changes with massive relative price changes that invariably take place in a growing economy as argued by Kilama & Wuyts (2014).

This paper found that the pattern depicted in Figure 1 gives useful background information on what happened after economic reform in 1980s, which lead to a period of market openness from the mid-1980s onward that trigger the high growth rates that started in late 1990s. The pattern clearly shows how the sectoral distribution of GDP has shifted away from agriculture towards industry and services. The share of agriculture in GDP has dropped drastically but the high share of employment is maintained. This means the agricultural labour remains "locked" because agricultural productivity is low. It was argued by Rune (2005) that labour productivity in agriculture remains persistently low because agriculture acts as a refuge sector of excess labour. However, Mpango (2013) postulated that "increased productivity" in agriculture will increase production and boost the country's economy with massive reduction in poverty.

Stability in Economic Growth versus Agricultural Growth

Agriculture has been leading in the contribution to the economic growth with the share that reached 46% (in 1990) with the higher labour force of 73.6% (2013). Unfortunately, in the period of 2010-2012, the share to the GDP decreased to 23.8%, giving a way to the service sector to lead with the contribution of 49.4% to the GDP in the same period (Table 1). This can be translated as a paradigm shift of the workforce from agriculture to the service. On the other hand, the mining sector, with a small share in the economic growth, is reported to have a large share in the export earnings than any other sector.

The country's decision to pursue a policy of macroeconomic stabilization resulted in accelerated economic growth and low inflation. This study found that the growth rate of the agriculture sector fluctuated from 0.8 percent in 1998 to 5.9 percent in 2004 while GDP growth fluctuated from 4.1 percent (1998) to 7.8 percent (2004) then declined to 3.1 % (2009). The agriculture sector has persistently registered a lower growth rate (4 percent) than the industry (8.3 percent) and service (7 percent) sectors in the period of 2009-2013.

Table 1
Share in GDP in Percent (3 year average)

Years	2001-03	2004-06	2007-09	2010-12
Agriculture and Fishing	29.9	27.7	25.5	23.8
Crops	20.9	19.6	18.2	16.9
Industry and construction	18.5	20.1	21.2	21.7
Mining and quarrying	1.9	2.5	2.6	2.3
Manufacturing	8.4	8.9	9.4	9.7
Construction	5.5	6.2	6.7	7.1
Services	45.8	46.4	47.8	49.4
Trade and repairs	13.2	13.3	14.1	14.7
Transport & Communications	6.6	6.9	7.5	8.5
Real estate and business services	10.3	10.2	10.2	10.2
Public administration	7.2	7.9	7.9	7.8

Source: NBS and BoT, 2013a, authors own calculations

Slow agricultural growth has led to a gradual structural shift to services, construction, and manufacturing sectors (Figure 1). A possible reason for the shift is migration as stipulated in the NBS 2012 census results, which show at the national level urban households increased from 26 percent in 2002 to 33 percent in 2012 while those in rural areas decreased from 74 percent in 2002 to 67 percent in 2012. This demonstrates a shift in the youth workforce from the agriculture to the service sector. This shift may be instigated by multiple factors, including poor access to credit, land, inputs, water for irrigation, and/or market of their produce. Another major issue is that youth would like credit, but financial providers do not offer credit without collateral in the form of assets or property owned by borrowers (youth do not own any assets). Some observers note that the principles of acquiring credit in agriculture require ownership of assets; however, land (with no proper title deed) used for any form of agriculture is not respected and does not help poor farmers overcome barriers to obtaining loans (Chachage, 2010; Hakiardhi, 2009). Since 2013, the government has been asking financial institutions in Tanzania to accept traditional land title certificates as collateral in loan acquisitions because they are legal documents. In spite of this, nothing substantial has been done to change the prerequisites of issuing loans. The attempt was made in 2004 when a government policy on economic empowerment was issued to allow farmers to use their land as collateral to acquire loans from various financial institutions. There is no law or prepared bill to protect indigenous land ownership in rural areas, which still relies on the village land Act No 5 of 1999 to uphold the rights of Tanzanians living in rural areas. Financial providers in rural areas face particular problems in selling land that was taken as collateral. This paper found that people in rural areas acquire their land through inheritance, which affects its ability to be used as collateral. This finding is also supported by Proctor & Lucchesi (2012) who reported that 51 percent of households in sub-Saharan Africa (SSA) inherited land that is already under cultivation and that this was the most common means for young people to obtain land. This means, the land for youth can only be available when their parents retire from agriculture work or if they have decided to shift their activities to another sector or if they die. The fact is, youth cannot stand by, waiting to inherit land and will instead look for opportunities elsewhere. Since the service sector seems to be the most attractive, as it is full of new technology, then most youth shift their work to join the service sector.

Tanzanian Farmers' Wealth Status

Ownership of basic assets is an indicator of household socio-economic status which articulates farmer's wealth. The research findings shows that about seventy percent (70.4%) of households in Tanzania own land or a farm, of which rural area ownership is higher (85.8%) than urban area ownership (41%). The average per capita holdings is 0.12 ha, wherein smallholder farmers operate between 0.2 and 2.0 ha. On the other hand, the population that is engaged in agriculture is 65.6% (i.e. 85% are in rural and 15% in urban) with only 42% (86.7% rural and 13.3% urban) of farmers dealing with livestock. This finding is similar to that of NBS (2014). This paper found that the majority of Tanzanians are still engaged in agriculture in one form or another and that most of their earnings depend solely on agriculture. It is surprising that the basic assets ownership is slightly higher (21.4%) in rural areas than in urban area (20.9%); however, this is the effect of immigration from rural to urban areas. Youth who secure jobs in urban areas tend to invest back in the rural area they came from. Unfortunately, the increase in the cost of living has created tension among farmers and non-farmers, and a scenario in which most government employees are engaged in agriculture activities to supplement their low incomes is created. This scenario has increased the number of people in the country engaged in farming activities either as a primary or secondary source of income. It is interesting that the implicit cost that is associated with the investment in agriculture is affecting most farmers' income. Most farmers tend to calculate profit without considering hidden cost, specifically their time spent in such activities. When farmers realize they have spent more than what they have earned, they become frustrated and begin to see agriculture as an unfruitful business. It is true that agriculture is taken up as a means of subsistence or as a last resort after failing to get the opportunity to work in a non-agriculture sector elsewhere. However, commercial agriculture requires massive invest-

ment, such as infrastructure for irrigation, farming skills (acquired from the farmer field schools), and research and technology, not only for avoiding risk in agriculture but also to change farmers' income and improve rural livelihood.

The farmer field school trainings that have been conducted almost all over the country have shown some impact, such as farmers better understand concepts of commercial agriculture and have started to adapt to and focus on market opportunities and make choices that will lead to profit earning rather than subsistence farming. Farmers have started viewing agriculture as a business—even if one can only afford to produce one bag of sunflower, he/she can still access the market in the group. The farmers group collects produce from their members and sells it in a lump sum to attract higher prices due to their increased bargaining power. Above all, the importance of producing a high quality, consistent supply of produce and harvesting at the appropriate time has tremendously reduced post-harvest losses and increased the incomes of group members. Farmers have gained knowledge on marketing behavior, such as the knowledge that selling products as a collective unit can earn a farmer more than 50% of what individual sales can earn.

Stability of Economic Growth in Relation to Poverty Reduction in Agriculture Perspectives

Wattles (2006) famous book on "*Science of Getting Rich*" says, "*...It is true that existing governments keep the masses in poverty, but this is because the masses do not think and act in the certain way. If the masses move forward, all systems must be modified to accommodate the forward movement".* This statement has elements of reality about the situation in Tanzania where the rate of increase in the GDP is steady with an average of 7% for 14 years. However this growth has not translated well to the lives of people. The average growth rate of 3.5% in the 1990s has made an impressive jump to an average of 6.9% between 2001 and 2010 (URT, 2011), but poverty is still pervasive even though the proportion of people living below the basic needs and food poverty lines has fallen. The reason behind this is the rate of increase in population of 2.7% (2013). The rate of increase in population is higher than the rate of poverty reduction, which has rendered the poverty reduction rate unnoticeable (NBS, 2001, 2007). From an analytical point of view, the pattern of economic growth suggests the main reasons for the steady economic growth rate in Tanzania has not been relieving poverty in rural areas. The growth rate in the agriculture sector has been a bit slower than in other sectors. Therefore, it does not substantially influence GDP growth, as it did in the 1970s and 1980s when it contributed about 50 percent of total GDP (MAFAP, 2013). The increase in the poverty head country ratio and population in a basic need poverty line is portrayed in Table 2. It indicates clearly that the rate of poverty reduction has been very small compared to the rate of increase in the population. It is also evident that the tremendous increase in the number of assets owned by the people has had slightly or no change on the livelihood of the people.

The income or consumption distribution in the country is represented by a slightly low Gini coefficient 0.34 (2012) compared to the Gini within the region. This means that the distribution within the country has no significant difference between rural and urban areas. However, Dar es Salaam showed significant difference in inequality. This study found that poor households in rural areas distribute their wealth more equally than people in urban areas where the inequality increase was more modest. However, if the equality is compared with past 20 years, the results shows no significant different in the average, but if it is compared with past five years in 2007 where Gini coefficient was 0.37, it shows significant different. This means that the income has not changed much between poor and rich, but rural areas show significant differences from previous years by recording Gini of 0.29 while disparities have increased in urban area and slightly in Dar es Salaam (Table 2). There is no doubt that the poor areas (rural) have tried to share their income equally while other areas have been shifting their income to the rich. Using the Theil[3] index to measure output concentration, the study found that the economy is more diversified than the regional economy (East African community and sub-Saharan Africa), with low value of the Theil index (Table 2).

[3] The Theil index is calculated as $T = \frac{1}{n}\sum_{k=1}^{n} \frac{x_k}{X} ln\left(\frac{x_k}{X}\right)$, where $X = \frac{1}{n}\sum_{k=1}^{n} x_k$ and x_k are the share of the stock K in the total output.

Table 2

Poverty Indexes for 1991-2012 (basic need poverty line)

Item	Population share			Headcount			Poverty gap		
Location	1991/92	2000/01	2011/12	1991/92	2000/01	2011/12	1991/92	2000/01	2011/12
Tanzania	100	100	100	38.6	35.3	28.2	11.8	10.4	6.7
Rural	82.1	79	84.1	40.8	38.6	33.3	12.7	11.5	7.8
Other urban	12.6	13.6	14.4	28.7	25.9	21.7	8	7.7	5.5
Dar es Salaam	5.3	**7.4**	1.5	28.1	**17.6**	4.2	7.5	**4.1**	**0.8**

Item	Poverty gap Squared			Gini Coefficient			Theil Index	
Location	1991/92	2000/01	2011/12	1991/92	2000/01	2011/12	1991/92	2000/01
Tanzania	5.3	4.4	**2.3**	0.34	0.35	0.34	0.185	0.199
Rural	5.8	4.9	**2.7**	0.33	0.32	**0.29**	0.184	0.177
Other urban	3.2	3.4	**2.1**	0.34	0.35	**0.37**	0.201	0.214
Dar es Salaam	3	1.6	**0.3**	0.30	0.34	0.35	0.152	0.208

Source: Household Budget Surveys of 1991/92, 2001/01 and 2011/12(authors' own calculations)

Table 3

Poor Population/Household Percentage by Area, based on Food and Basic Need Deprivation in 2012

	Population in Dar es salaam	Other Urban	Rural	Household in Dar es salaam	Other Urban	Rural
Deprive of Food	1.0	16.7	82.3	1.2	16.9	81.9
Deprive of Basic Needs	1.5	14.4	84.1	1.5	15	83.4

Source: Data from NBS (Household Budget Survey 2011/12), Authors own calculations

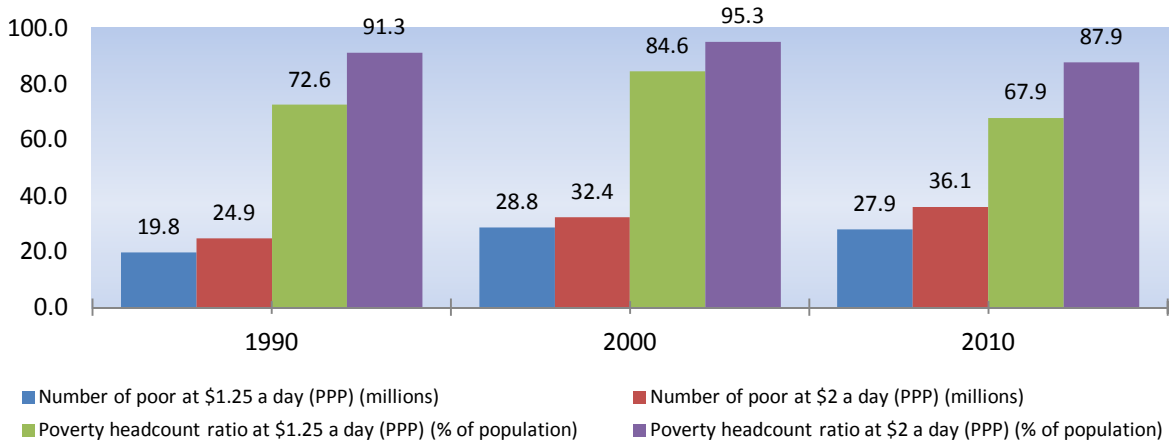

Figure 4: Number of Poor and Poverty Headcount Ratio at $1.25 and $2
Source: World Bank, NBS, MAFC, MLFD and BoT (authors' own calculations)

Figure 4 shows the number of poor people decreased for poverty lines, 1.25 and 2 dollars a day. At one extreme, Dar es Salaam is substantially better off (1.5% poor population) than the rest of the country, as expected rural households (84.1% population) were much poorer than those in urban areas. But it is not surprising that the population in urban areas is deprived of food and basic needs unlike the rural areas and Dar es Salaam (Table 3).

The basic question one can ask is what can be done to stop poverty? The analysis of this study shows the number of poor people is increasing. For example, in the period of 2001-2007, the number of poor increased by 1.3 million (i.e., the number of poor people were 11.5 million in 2001 and 12.8 million in 2007) (Policy Forum, 2010). The reason behind this is a population increase (from 25.5 million in 1990 to 34 million in 2000 to 45 million in 2012) that has led to an increase in demand. Nevertheless, there are larger regional differences in poverty reduction in the period of 2000-2013 within Tanzania with similar findings reported by Utz, 2008. This indicates that poverty reduction can be maximized by focusing on agricultural development, which is the sector that employs the majority of Tanzanians, most of whom are poor.

Utz, 2008 suggested that there is the potential for poverty reduction in agriculture if proper measures to foster growth are taken to increase farmers' income. However, the study showed that poverty was reduced through shifting from agriculture to other sources of income and by migration from rural to urban areas. The analysis shows that the shift from agriculture to nonagriculture activities in rural areas has been an important contributor to poverty reduction in urban areas. Similar results were also reported by Utz (2008). This is clearly revealed by household budget survey data of 2007/2008, which shows that poverty dropped from 28.1% to 17.6% for Dar es Salaam, 28.7% to 26% for other urban areas, and a slim drop from 40.8% to 38.7% in rural areas. This means a huge drop in urban areas is due to a labour force shift from rural to urban. Dar es Salaam had a huge drop, as it accounts for 50% of the FDI stock and flows (Utz, 2008). Therefore, this might not be a good example for a poverty reduction strategy in the country.

This paper used a multidimensional poverty index (MPI) to analyse poverty using the survey data from 2011/12 on three dimensions (education, health and living standards) and for each indicator in every dimension. Education indicators are year of schooling and school attendance; health indicators are child mortality and nutrition; and living standards indicators are sanitation, electricity, cooking furl, drinking water, floor, and assets. The principle for MPI is that a person is declared poor if he or she is deprived of at least one third of the weighed indicators within the dimension. However, the results show that MPI is 0.332 (Table 4), meaning at least one third of the Tanzanian population is deprived on at least one of the dimensions.

Inclusive Growth for Agriculture Development

Numerous strategies have been developed in Tanzania since independence, although most were based on solving certain problems. The strategies, such as *MKUKUTA (2005)*, *Kilimo kwanza (2009)*, Southern Agricultural Growth Corridor of Tanzania (SAGCOT) (2010), Tanzania Agriculture and Food Security Investment Plan (TAFSIP) (2011), and *Big Results Now* (2013), were developed to replace other strategies that were ineffective. The implementation of the strategies was replaced by the new one. Impressive documents were developed during the implementation process filled with reports, but actual work done on the ground seemed to be minimal or non-existent. The National Development Vision 2025 envisioned the economy to be transformed from a low productivity agricultural economy to a semi-industrialized economy through modernization and highly productive agricultural activities that are integrated with industrial and service activities in urban and rural areas. To realize the vision, the process of transformation must include education and skills development, infrastructure and agriculture investment, information and technology improvement, proper supply of inputs, access to a reliable market for produce, and availability of extension services as the main areas of focus. If all these are inclusive, then the economic growth will be attainable.

Table 4

Multidimensional Poverty in Tanzania by Region in 2012

Region	Multidimensional Poverty Index (MPI = H×A)	Poor People(H)	Average Intensity Across the Poor (A)	Population Vulnerable to Poverty	Population in Severe Poverty
Tanzania	0.332	65.60%	50.70%	21%	33.4%
Arusha	0.278	58.40%	47.60%	26.00%	28.90%
Dar es Salaam	0.117	*26.70%*	43.70%	21.20%	*8.30%*
Dodoma	0.476	87.40%	54.40%	10.70%	58.20%
Iringa	0.284	62.10%	45.80%	19.40%	21.30%
Kagera	0.371	72.60%	51.10%	20.50%	39.40%
Kigoma	0.389	76.70%	50.70%	19.30%	37.70%
Kilimanjaro	0.133	32.40%	41.10%	35.00%	5.30%
Lindi	0.451	83.90%	53.80%	14.80%	51.10%
Manyara	0.354	67.50%	52.50%	24.70%	39.60%
Mara	0.382	75.30%	50.70%	18.60%	40.70%
Mbeya	0.307	64.40%	47.70%	25.20%	26.70%
Morogoro	0.31	62.60%	49.50%	22.70%	31.00%
Mtwara	0.348	70.30%	49.40%	20.80%	34.10%
Mwanza	0.375	71.60%	52.40%	18.70%	35.30%
Pemba 1	0.321	61.90%	51.90%	23.10%	32.60%
Pemba 2	0.277	57.50%	48.30%	25.80%	25.20%
Pwani	0.295	58.40%	50.40%	26.40%	26.80%
Rukwa	0.381	73.70%	51.70%	19.50%	43.20%
Ruvuma	0.27	57.60%	46.80%	27.10%	24.00%
Shinyanga	0.414	77.10%	53.70%	15.60%	46.00%
Singida	0.365	70.30%	51.90%	24.30%	39.40%
Tabora	0.417	76.30%	54.60%	18.50%	43.40%
Tanga	0.321	64.20%	50.00%	19.00%	32.20%
Unguja 1	0.281	57.60%	48.90%	24.20%	26.30%
Unguja 2	0.144	*34.50%*	41.90%	28.80%	*6.60%*
Unguja 3	0.082	*19.60%*	41.70%	34.80%	*3.90%*

*The bolded (except first row or Tanzania) are the first three regions with high incidence of poverty
*The italicized figures are the lowest three regions with incidence of poverty
Source: Oxford Poverty and Human Development Initiative (OPHI) 2013

The poor integration of rural areas in the economy, including poor access to the market and input, has significantly contributed to drawback effort of rural economic growth and poverty reduction. The analysis of the survey data of 2007/2008 and data from census of 2012 gave a clear indication that rural development and informal sector activities are direct drivers of poverty reduction. Inclusion of informal sectors in the economic growth proved to be an important transmission mechanism that allowed the poor to participate in economic growth opportunities originating in the rural development initiatives. The results of this paper support Utz's (2008) findings, which stipulated that although economic growth was significantly higher in urban areas than in rural areas in the period from 1990/01 to 2000/01, modest rural growth has clearly dominated the faster urban growth with respect to its effect on poverty reduction.

Future of Tanzania depend on Agriculture Development

Agriculture is still the backbone of Tanzania, as it provides employment to the majority of people in rural and urban areas. The sector has high potential in creating jobs by linking with agro-processing, consumption and export, not forgetting its provision of raw materials to industries. This gives rise to a market for manufactured agricultural goods. The livestock sector for example can be leveraged to contribute to employment creation and poverty reduction simply by improving methods of raising animals. The evidence shows that average annual

increases in the populations of cattle, sheep, and goats have been declining by an average of 1.4 and 1.2 percent for sheep and goats, respectively. These growth rates are less than half the human population (MAFAP, 2013). The reports of the Tanzania investment center (TIC) show that the interest generated by FDI in 2008-2011 for agriculture went to negative (-2.2 million USD) compared with other sectors, which were positive (BoT, 2013b). This is to say the issue of food security in Tanzania will be a source of continuing tension if immediate measures are not taken as soon as possible.

Rebuilding Economic Growth for Efficient Agriculture Development and Poverty Reduction

To improve rural development and the livelihood of the poor, Tanzania's economic growth has to show impact on the lives of the people. Growth that is not translating to poverty reduction is growth with no clear target. Policymakers should look at the indicators for growth that will have direct or indirect impacts on rural development. However, for the government to increase spending and expansion of land under cultivation requires an increase of productivity and private investment as a primary driver of growth. The political willingness to invest in agriculture, specifically on irrigation infrastructures, is necessary to replace the risk of farmer's relying on rainfed agriculture. Once farmers are assured of water for irrigation then the productivity will be automatically improved.

On the other hand, the positive economic growth–poverty nexus needs the following: an increase in incomes from the main source of livelihood of the poor, ensure new income generating opportunities for the poor, reduce vulnerability to shocks that affect the income of the poor, increase government revenue for pro-poor expenditures, and increase private transfer and strengthened social safety net. These things can be accomplished by enhancing agricultural productivity through focusing on agriculture and agriculture-related activities as the main driver to reduce poverty. Again, agriculture is the source of livelihood for almost three quarters of the population, of which more than 40 percent are poor. There is a deliberate need to help the poor to generate more income, to shift their production to more profitable agricultural products, and guide them to the proper shift to income-generating opportunities outside of agriculture in both rural and urban areas.

In order to mould the economy and provide available opportunities to everyone, strategies and policies should be designed to focus on inclusive growth to ensure agriculture, manufacturing, infrastructure, mining, tourism, services, and logistics are well integrated with each other to ensure smooth business. Strategies and programmes developed should have clear mandates to translate a broad framework into focused operational strategies and coordinated implementation.

It is equally important to ensure that institutional arrangements are in place that link farmers to the available opportunities, such as reliable road infrastructure, market access (local and international), input supply, irrigation infrastructures, and a reduction in nuisance taxes.

Conclusion and Recommendations

The trend of economic growth, which has been recorded as high for the past two decades, is a good sign for the stability of the economy in Tanzania. However, the key to sustaining economic growth is to ensure four pillars of food security—food availability, food access, food stability, and food utilization—are achieved and given priority as end goals for any strategy or programme developed and implemented. The study found an insufficient link between economic growth and agriculture development and poverty reduction. This has been negatively affected by fast growth of the population and migration of the labour force from rural to urban areas. The recent trend has created an uneven distribution of people, which caused deprivation of at least one dimension of the MPI to the population residing in rural and urban areas. Deliberate effort is needed to create proper links between farmers and available opportunities that will foster the proper connection between economic growth and the agriculture development-poverty nexus. To sustain economic growth, there is a need for the capacity of economic drivers to foster innovation and technological advancement in the agriculture sector and focus on investment in human resource development in the community infrastructure in rural areas to maximize productivity.

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