UNLOCKING THE DENIED POTENTIAL FOR RESOURCE-POOR FARMERS

What if resource-poor farmers' own ideas and innovations, and improvements to their natural resource base, were supported by adequate access to public and private sector investments

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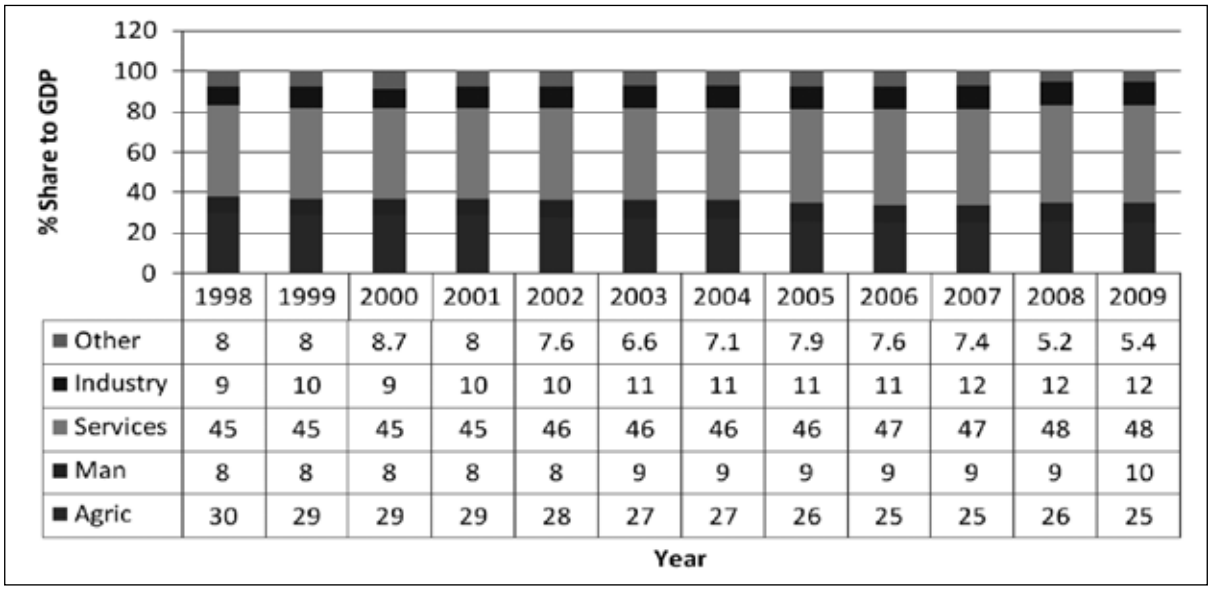
1.0 INTRODUCTION

A conventional definition of Agriculture in Tanzania includes crops, livestock, hunting and gathering, fisheries and forestry (URT 2010b). This discussion paper focuses largely on crops and on how farmers can be empowered through innovative ideas. Agricultural sector is among the four most important sectors in Tanzania in terms of its contribution to employment, export earnings and its potential to improve the livelihoods of the people through poverty reduction (BoT 2010, URT 2010c, URT 2011). Other important sectors are the Services, Industry and Manufacturing (See Figure 1.1).

Figure 1.1: Sector Contribution to Real GDP in Percentage



	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Other	8	8	8.7	8	7.6	6.6	7.1	7.9	7.6	7.4	5.2	5.4
Industry	9	10	9	10	10	11	11	11	11	12	12	12
Services	45	45	45	45	46	46	46	46	47	47	48	48
Man	8	8	8	8	8	9	9	9	9	9	9	10
Agric	30	29	29	29	28	27	27	26	25	25	26	25

Source: Bank of Tanzania (BoT) 2010

The highest growth has been recorded in sectors with a marginal contribution to gross domestic product (GDP), employment and poverty reduction, such as mining, industry and manufacturing with agriculture which is pro-poor and potential in terms of poverty reduction recording a persistently lower growth rate compared to industry and services over the specified period (See Figure 1.1). Average growth in agriculture over the past ten years has been approximately 4 per cent, consistently lower than is required to make a significant poverty reduction in Tanzania. This has been the case due to many various reasons; major being the budget allocated to agriculture for the past 10 years has been very low (less than 10%) to make significant changes as per Maputo declaration.

Also most of investors tend to shy away in investing in agriculture basing on the reason that is a risk business due to having unpredictable challenges such as weather and climate change. Others being inefficient in storage and control of post harvest loss as well as marketing problems. Thus agriculture in Tanzania is associated with neither growth nor poverty reduction largely because growth takes place in non pro-poor sectors. In other

words, the overall economic growth which has occurred in Tanzania has not 'trickled down' adequately to the poor (URT 2011; Mashindano 2012) largely because growth does not take place in agriculture where poverty is prevailing. While overall economic growth has increased from 1.9 percent in 1992 to 7 percent in 2007, poverty has declined by 2.9 percent over the same period (URT 2011).

Agriculture is among the future priority sectors which have been identified by the government (URT 2010c) in terms of resource allocation and contribution towards economic growth and therefore poverty reduction. It is therefore an important sector in the future economic transformation.

2.0 CHALLENGES OF AGRICULTURE IN TANZANIA

Agriculture therefore remains the largest sector in Tanzania, in terms of employment as well as the potential to influence improved livelihoods through poverty reduction (See for example URT 2011). It also contributes nearly 26 per cent of GDP and an average of nearly 24 per cent of the country's export earnings per annum (URT 2010a). In addition, about 80 per cent of poor people live in rural areas and 75 per cent of rural income is earned from agricultural activities (employment generation). The sector's significance is amplified further through its backward and forward linkages to most sectors of the economy such as manufacturing (processing industry) and tourism.

It is clear from literature that problems in production as well as marketing of agricultural crops are both holding back economic growth and reducing the impact of growth on poverty[1]. Agriculture in Tanzania and therefore the resource poor farmers are faced with limited investment in the appropriate productivity enhancing factors as well as in agricultural market infrastructure[2]. Domination of resource-poor smallholder farmers and dependence on rains are among the major challenges facing agricultural production in the country. Resource or investment limitations deny them from practising irrigation farming. Agriculture in Tanzania is therefore a very low capital intensity undertaking with limited productivity due to limited utilization of productivity enhancing factors such as fertilizers and improved seeds. Hand hoe is the most ubiquitous farm implement in agriculture. As noted earlier, access to such resources is constrained by inadequate sector investments.

The sector is thus dominated by low productivity smallholder farms. Large scale farming occupies about 15 percent of the cultivated land or 3.4 percent of the cultivable area. An examination of the status of productivity enhancing factors (the major ones) has been presented by Msambichaka et al (2010). It better explains why productivity is as it is today. For example, Tanzanian farmers use very little fertilizer other than farm yard manure or composite. Available data indicate that Tanzania uses only 9kg/ha of fertilizer when the average for SADC countries is 16kg/ha, Malawi 27kg/ha, China 279kg/ha and Vietnam 365kg/ha. Compared to Vietnam a country that was for many years under war, Tanzania's fertilizer use is an insignificant 2.5 percent. In addition, it is reported that the country's total requirement of improved seeds is about 120,000 tons annually. However, annual supply averages around 10,000 tons or 8 percent of total requirement. Here it is an issue of supply constraint. In reality the problem is much deeper and wider especially when the demand and supply are both on the decrease at the height of CAADP and *"Kilimo Kwanza"* initiatives. The country need to take concrete measures to improve resource accessibility by small holder farmers by scaling up public as well as private investments in the sector.

Other productivity enhancing factors which have tended to disrupt the pace of agricultural transformation in Tanzania include the limited use of mechanical inputs; shortage of water

1 *See for example Msambichaka et al (2010), URT (2010a), URT (2011) and Msambichaka et al (2012)*

2 *Agriculture in Tanzania is primarily smallholding farming by small holders who are responding rationally to market signals. However, they are seriously constrained by capital deficiency.*

for irrigation; insufficient extension agents; limited research and development; lack of education or training centers; and limited resources allocated for the sector. In terms of the infrastructure in general and the market related infrastructure in particular, the following types of infrastructure are crucial for supporting agricultural value chain. Infrastructure that supports on farm production such as irrigation (agricultural water management), energy, transportation and post harvest losses; infrastructure to support trade and exchange, particularly telecommunication and physical markets; the infrastructure that adds value to agricultural produce including agro-processing and packaging facilities and; the infrastructure that enables agricultural produce to move rapidly from fragmented production areas and thin markets to processing facilities and wholesale and retail markets; these would include transportation for assembly, bulk storage as well as cold chain, particularly for perishable commodities. These are the requisite investment requirements which are required to enable resource poor farmers improve and access the natural resource base.

3.0 ROLE OF RESOURCE-POOR SMALLHOLDER FARMERS

3.1 The Power of Resource Poor Farmers

Depending on how the country makes use of the opportunities prevalent in agriculture, dominance of resource-poor smallholder farmers in Tanzania could be an opportunity rather than an obstacle to agriculture transformation. Smallholder farmers and/or peasants are the key players in the dominant agriculture sector as managers of the natural environment. Agriculture in Tanzania is dominated by smallholder farmers. According to the Herlehy (2012) smallholder farmers make up 90 percent of the world's extremely poor. Understanding the economic theories governing peasant farmers is therefore necessary in order to understand their position and views over the proper way to use productive resources.

The celebrated hypothesis advanced by an American Economist T.W. Schultz states that, peasant farmers are 'rational, efficient but poor'. This hypothesis is based on the fact that farmers are economically efficient in that they can achieve both productive efficiency as well as allocative efficiency if the capital deficiency or resource deficiency problem they face is addressed (Okon et al 2010). Note that, already some empirical tests on peasant profit maximizing hypothesis have validated the Schultz hypothesis. The hypothesis was later on anchored by Tibaijuka in 1984 and Ellis in 1988. Ellis (1988) for example mentions Hopper (1965) in India and Norman (1974 and 1977) in Africa who reached the conclusion that confirms the hypothesis. Recently the findings by Okon et al (2010) have been consistent with "Schultz's – poor - but efficient hypothesis" that peasant farmers in traditional agriculture are efficient in their resource allocation and utilization.

Note that, productive efficiency is realized when desirable agricultural products (and services) are produced in the least costly ways. In other words, this is achieved when farmers produce crops at the lowest achievable unit cost. It means farmers are spending the smallest amount of resources to produce crops and therefore making available the largest amount of resources for production of other desirable goods and services. On the other hand allocative efficiency occurs when resources are being devoted to that combination of goods and services most needed by the society. It is obtained when farmers produce the best or optimal output mix. The different empirical tests on Schultz hypothesis presented earlier portray that the Schultz hypothesis holds. Thus, given resource poor smallholders' rational behaviour, attainment of higher productivity levels in Tanzania is principally constrained by inadequate access to resources including appropriate agricultural support services such as extension services due to limited investment in agriculture.

Investment refers to the commitment of productive resources with the objective of producing output and obtaining the highest feasible net gains in the future. It entails the process of accelerating capital formation. Investment can be undertaken by public or private institutions. It is the most critical factor for growth process and hence improved welfare of the people (see World Bank 2004, Wangwe et al 2005, Ultz, 2007). One of the most important factors in the development miracles of the East Asian economies was rapid capital accumulation (Utz

R. J. (2007). Thus, development in the agricultural sector inevitably requires implementation of projects and programmes which must be financed. Additional investments in agriculture are therefore inevitable if the resource poor farmers are to make tangible contribution to the national economy through a sustainable agricultural transformation.

Both productive efficiency and allocative efficiency require a smooth access to agricultural support services such as adequate use of mechanical inputs, adequate water for irrigation, sufficient extension agents, research and development, education or training centers; and adequate resources allocation to the sector.

3.2 The Power of Farmer Based Organizations (FBOs)

Millions of smallholder farmers throughout the country are struggling to manage a living out of their small pieces of land in a blurred economic and political environment, severe weather patterns and limited access to technologies and markets. On top of that, most resource poor smallholders are not members of farmer owned organizations. According to Herlehy (2012), when farmers come together through such associations, they can pool their resources and maximize the value of their day to day work. Farmers' associations sometimes through private organizations, link farmers to markets, input suppliers, new technologies and sound farm management techniques. These organizations help farmers negotiate better prices for their goods and services through the power of aggregation. Since farmer based associations are beneficial, what prevents resource poor farmers from connecting to markets, especially by establishing or joining farmers' organizations?

There has been a notable achievement in Arusha and Kilimanjaro regions horticulture industry in terms of enabling resource poor farmers to access markets for horticulture products; access agricultural inputs; improve storage facilities and extension services. A few private organizations such as York Limited and especially Home-Veg based in Arusha have introduced a Marketing or Business Model which performs relatively well in the two regions because the model addresses the major obstacles faced by resource-poor farmers. This model is a vehicle towards enabling resource-poor smallholder farmers to easily access the required agricultural support services.

The structure and operations of the model is different from other marketing models in the country. The key players include Private Organizations like Home Veg, resource poor stallholder farmers (farmer based organizations or associations), Transporters, Exporters (like Home Veg in this case), Airport Authorities, and the buyer (in the export market). This marketing model operates through *contract farming* where private organizations like Home Veg enter into contract with farmers association or groups created through Home Veg initiatives. Through contract farming Home Veg promotes and help small scale producers to form groups where group members are initially trained systematically on group dynamics, farming techniques, preliminary processing, extension services and storage. In addition Home Veg supports these groups in terms of input supplies (on credit), extension services, cold storage facilities as well as input storage rooms, credit, markets for their products, transportation, international market standards and food safety requirements etc. In turn all producers under the contract sell their products to HomVeg at a given price.

Also important to mention is the fact that, the model has helped farmers in terms of Global

Gap Certification requirements, whereby Home Veg trains and provides guidance to farmers on the requisite standards and requirements at the world market to enable their horticulture products penetrate the world market. Prior to receiving a team of Global Gap Certification assessors Home Veg visits the farmers groups and their farms and train those on how to refurbish and prepare the farms to ensure the entire global certification requirement are fulfilled. A number of storage facilities are being constructed by Home Veg for all the farmers' groups. The plan is to also furnish the groups with cold rooms. Extension services are provided in good time whenever farmers report to Home Veg about the related problems or requirements. Productivity and therefore area under cultivation has since then been increasing, and most of the farms are healthy with increasing productivity.

So far the model has been widely acknowledged. The new system has been helpful to farmers and other players along the market value chain compared to the old marketing system. Previous marketing system was more exploitative as it encouraged inefficient and unreliable players in between (middlemen) who used to suppress producer prices and temper with weights and measures in their favour. A part from creating 8 farmers groups with farmers between 100 and 150 members each since its inception, Home-Veg has built the capacity of the groups to enable them use irrigation and subsequently grow 3 seasons (cycles) a year and harvest after 8 to 10 weeks after planting. Each group members is required to have at least 0.2 ha of land for the project. Such organizations need to be strengthened and promoted in good numbers to be able to cover a wider spectrum of resource poor farmers in Tanzania.

4.0 CONCLUSION AND RECOMMENDATIONS

Smallholder and resource-poor farmers are the true managers of small agricultural projects and the natural resources. They therefore have the relevant agricultural knowledge some of which are indigenous which have not been tapped and/or utilized adequately due to limited investments and lack of the requisite support services. Under certain conditions, the response of farmers has been significantly high where such support is available and accessible. Evidence is not scanty to testify that productivity and household incomes have been improving overtime where there is adequate access to public and private sector investments. Adequate agricultural investments and specific support services are therefore inevitable if the resource poor farmers are to make their contribution tangible and therefore enable agriculture in Tanzania to be transformed thus attaining the targets and goals of the national medium term and long term plans.

Tanzania needs to empower resource-poor farmers through strengthening and promotion of private organizations serving farmers genuinely, farmer based organizations as well as farmers groups like CSOs engaging in agricultural thematic group. Investment in agriculture must therefore follow this channel for a successful transformation of the sector.

Preparation of contracts served to most farmer groups under contract farming has not been participatory. In many cases farmers are not involved. These contracts are prepared by private organizations and therefore the bias and unfairness in favour of such organizations is likely. The government should therefore come up with a standard and balanced sample contract (a template) and ensure all practitioners adopt it.

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