

# **Research on Poverty Alleviation**

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# Strategic Research on the Extent to which Tanzania has Transformed its Rural Sector for Economic Growth and Poverty Reduction

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#### Section 1: Introduction

The wisdom to transform and diversify the economy is not new in Tanzania. It can be recalled that right from her independence, Tanzania declared war against three enemies being poverty; ignorance and disease. Following this various extensive programmes in pursuit of eradicating poverty and transforming structure of the economy have been initiated.

These efforts have had different entry points of foci. There were those that have taken a macro or nationwide coverage while others taking meso down to micro level focus. Examples of the macro level attempts include the early designed rural transformation and modernisation programmes as well as the Ujamaa villagization and industrialization attempts of the 1970s which included, inter alia, programmes to increase access to education, health care services and water supply and improvement of physical infrastructure supportive for rural, agriculture and industrial development. In all these programmes more emphasis was given on the improvement of farmers' productivity, food security and stabilization of farm income and markets. In this light, a number of agricultural supportive institutions and infrastructure were developed. Hitherto, the country has about 50 agricultural research institutions, a bulk of agriculturists and extension officers are present at all levels. A special bank for rural and agriculture support was established.

At the meso and micro levels, the initiatives which were taken include provision of rural roads, water master plans, regional integrated development plans, universal primary education and provision of adult education. Other includes rural electrification programmes; establishment of a number of industrial estates; industrial research, and development institutions throughout the country. The focus was to promote and ensure adaptability of rural friendly technologies. Regional cooperative unions and crop marketing authorities were also instituted so as to allow farmers with easy access to credits and export markets.

One of the most striking paradoxes is that of rural poverty: Overall, the proportion of Tanzanian households below the basic needs poverty line fell from 35.7% to 33.6%. Given that the incidence of poverty declined only slightly, while the population continued to grow, the estimated number of Tanzanians living in poverty increased to 12.9 million in 2007. Poverty remains an overwhelmingly rural and basically an agricultural phenomenon, and particularly among households whose major source of income is from crop production. The majority of Tanzanians are still smallholder farmers, but agriculture is the least remunerative sector in the economy. The household poverty rate in rural areas is 38%, compared with 24% in other urban areas and 16% in Dar es Salaam. The large proportion of the population engaged in agriculture and high rural poverty rates combine to explain why three-quarters of the poor are dependent on agriculture. The challenge remains to link poor rural households, particularly smallholder farming households, to the national growth story by enhancing their capabilities and accessibility to inputs and technological improvements for increased productivity.

The rate of economic growth per annum has risen strongly over the last decade from 4.1% in 1998 to 7.4% in 2008 and down to 7.0% in 2010, which is historically high for Tanzania and comparable to the fastest growing economies in sub-Saharan Africa. Analysis of growth rates by sector, based on the revised series of national accounts produced in 2007, indicates continuing but modest structural change. The services sector has become a dynamic component of the national economy with annual growth rates of 7.5% since 2000. The share of mining in GDP is still small even though it accounts for a significant share of total export earnings. Relative to the country's stock of mineral resources, the mining industry is inadequately developed, with low national technological capacity; it is heavily dependent on imported inputs and has weak linkages with other domestic sectors. Further, activities/income from small scale mining is not adequately captured in GDP data. Communications is the fastest growing services sub-

sector, averaging 14% per annum over this period. Services now make up 48% of total GDP. The manufacturing sector has also grown strongly – at around 8% per annum since 2003 – and accounted for 9.4% of total GDP in 2008. In comparison, the agriculture sector has performed less well, averaging 4.4% growth since 2000, well below MKUKUTA's target of 10% by 2010. The sector's contribution to GDP has declined to 24% in 2008.

The fact that agriculture continues to employ a large proportion of the total labour force (about 74%) indicates that poverty may have been intensified among the agricultural labour force. Even though the services sector dominates, its share in total GDP slightly declined from 45.5% in 2001 to 43.9% in 2010.

The bottom line is that the rural poverty situation has changed little for the good in Tanzania. It is manifestly clear that Tanzania will not be successful in meeting its overall poverty reduction objective unless it helps reduce rural poverty quickly. Moreover, given the prevalent deprivations in rural health, education, and social services generally, approaching the broader Millennium Development Goals will not be possible without a significant increase in rural income and employment opportunities. Hence much more needs to be done to address the challenge of agricultural and rural transformation as a precondition for effectively addressing poverty in the rural areas. Given that the majority of Tanzanian's live in rural areas and that the majority of the poor are also located in rural areas, transforming the rural sector becomes subservient if the country has to achieve significant broader economic growth and poverty reduction.

The purpose of this work is thus to research on the extent to which Tanzania has transformed its rural sector and its impact on economic growth and poverty reduction. The research work has two main phases. One is to critically review Tanzania's policies and strategic frameworks geared towards achieving rural transformation; this is what is covered in this paper. The second phase will then use findings from this phase to assess the actual achievements or otherwise of rural transformation and make specific recommendations in terms of what needs to be done to transform rural areas in order to eradicate poverty.

This paper is divided in two parts: Section 2 is a conceptual presentation of rural transformation, setting a stage for a critical analysis of Tanzania's efforts towards rural transformation, which is covered in section 3. Section 4 takes stock of rural transformation experiences in other countries and is intended to generate lessons for Tanzania. The last section will draw conclusions and make recommendations for the way forward with a focus on suggested future policy research work.

### Section 2: The Rural Transformation concept

# 2.1 Definition of the Rural Areas

Rural areas are defined as geographical areas in which primary production takes place and where populations are found in varying densities. These areas are characterised by activities related to primary and secondary processing, township enterprises, marketing and services that serve rural and urban populations. Therefore, rural areas include a wide range of farm and non-farm activities and they include small towns and the district centers (RDS, 2001). Generally, rural areas experience variety of social, economic, political and moral problems such as lower per capita income, lower educational level, fewer employment opportunities, limited educational and cultural facilities, out-migration, less developed health and transport services, fewer commercial facilities, declining small towns, and less confidence in the future prospects (Navaratnam, 1986).

#### 2.2 Definition of the Rural Transformation

Rural Transformation is a synchronized, complex, four-fold transition of economy, politics, administration and society. Rural Transformation promotes opportunity for synergy in decision making and practice, requires adequate understanding or appreciation of the rural conditions and meets the vision for rural development. Rural development is a process of social and economic change; it is a complex phenomenon and is defined as the outcome of a series of qualitative and quantitative intervention measures occurring in a rural area for the purpose of raising the standard of living and improving livelihoods amid favourable changes in the way of life of the majority of population residing in rural areas. Rural development must be sustainable and be self-sustaining. Rural development is invariably linked to development in other parts of the economy as well as regionally and globally. Intervention measures arising from a comprehensive and clear rural transformation strategy will have spill over effects on urban development, in terms of increased supply of food and other materials and reduced pressure in urban areas (RDP-Concept paper, 2000)

In many countries including Tanzania, however, rural development and transformation has been planned and implemented by focusing on sectoral approach, with little connection among sectors; hence missing the opportunity for synergy in decision-making and practice. In many cases, such sectoral approach fails to resolve tensions and trade-offs between sectors and stakeholders. Such an approach is also indifferent to the rural sector's multiple roles and is inattentive to larger development themes. Moreover, such an approach lacks adequate understanding or appreciation of the rural condition and short of any expectation or vision for its (rural) future.

In Malaysia rural development is seen as a process of change carried out deliberately for the betterment of rural people. The process of change is continuous, and is essentially interventionist whose aims are to achieve certain goals or to solve problems of the rural areas. As a process of induced change led by the state, rural development activities covered elements such as planning, implementation, monitoring and involved multi-disciplinary actors, such as state agencies, the private sector, NGO's and the general public. Due to the nature of rural development activities with overriding state interventions, rural development in Malaysia tended to be viewed as synonymous with the state rural development strategies and programmes aimed at solving problems facing rural sectors such as poverty, low productivity, low income, lack of proper and adequate rural infrastructures and the rural-urban disparity that existed prior to independence.

Rural transformation as conceptualized above has substantial implications for how rural development programmes are designed and implemented. Improving the living standard of the rural population involves mobilization and allocation of resources to meet the social welfare and productive services of the rural population. It also implies increased mass participation and paying attention to vulnerable members of the community. Finally, it means making the rural development process sustainable and self-sustaining. This requires development of appropriate skills and implementing capacity, and creation of

institutions at the local, regional, and national levels to ensure effective use of resources. It also requires devolution of powers to local governments.

The achievement of these aims will depend on the interaction of a variety of specific issues, which have impact on the design, and performance of individual programmes. These issues include putting in place national policies and strategies. It also implies establishment of administrative systems, i.e., a level of centralization and decentralization in the government structure as well as scope for institutional pluralism i.e., distribution of responsibility among various stakeholders - government, civil society, NGOs, private sector traditional institutions and international partners (RDP-Concept paper, 2000).

As the concept of rural transformation entails, the key strategic areas for rural transformation include rapid infrastructure and energy sector development, sustainable natural resources development, sustainable information and communications technology to achieve regional integration and economic development, education/human resources development to facilitate the growth of the culture of education for job-creation and self-employment through increased availability of opportunities for vocational and training, agriculture and rural development since agriculture has played a key role in enhancing economic growth and reducing poverty and hunger in many developing countries. Most of the countries that have failed to launch an agricultural revolution remain trapped in poverty, hunger and economic stagnation. For sustainable rural transformation, reforms are critically needed to achieve sustainable rural development and agriculture transformation with special attention to the value addition which could trigger agricultural reform in Africa.

# 2.3 Role of rural industrial and township enterprises in Rural Transformation

The concept of rural and agricultural transformation remains incomplete without considering the roles of rural industrial and township enterprises. Setting up rural industrial and township enterprises has been a very important development in some countries in that it has made great contributions to rural development, including helping to overcome poverty in rural areas.

Lessons from Chinese experience show that setting up industrial and township enterprises has been a very important development that has made great contributions to rural development. They do not only contribute to the GDP of the country, but also helping to overcome poverty in rural areas through employment and self employment. Industrial enterprises located in rural areas and run by farmers in China started in 1958. However, the expansion of township enterprises was constrained by the country's policy until 1978, when the policy of opening up and reform started being put into practice. For the period of 20 years from 1958 to 1978, the number of township enterprises set up was 1.52 million, employing 28.3 million of workers with a total output as 49.1 billion Yuan (RMB). In the period of 22 years from 1978 to 2000, the numbers of township enterprises set up was 19.3 million, employing 128.2 million workers, with a total output of 2715.6 billion Yuan (RMB).

The numbers of township enterprises set up during 1978-2000 was more than 12 times that during 1958-1978. The output of township enterprises for 2000 accounts for 31 per cent of GDP of the country. The township industry has become a major part of the country's economy. Township enterprises do not only contribute to the GDP of the country, they also assist large numbers of surplus rural labour force personnel to become workers in industrial and service trades, thus helping rural development. In 2000 there were about 120 million former farmers working in township enterprises, providing one more source of income for 120 million farmers whose incomes were totally coming from agriculture, before they became workers in township enterprises. According to statistics, the proportion of farmers' net income that comes from non-agricultural business was 44.7 per cent in 2001 and, in 1989; the proportion was only 23.7 per cent (Liu Jiantong).

#### 2.4 The role of education in Rural Transformation

Similarly, the concept of rural transformation would remain incomplete without considering the role of education in the transformation process. Education has a desirable controlling influence over development of the rural individual, family, community, and society, leading to reduced poverty, income equity, and controlled unemployment. More than half of the world's population, and more than 70 per cent of the world's poor are to be found in rural areas where hunger, literacy and low school achievement are common. Education for a large number of people in rural areas is crucial for achieving sustainable development. The direct contributions of education institutions and agriculture vocational schools to the growth of agriculture are very extensive. Providing information and consultancy for policy development, developing quality seeds, developing new skills for farming, promoting extension in agriculture and playing an exemplary role for farming are among the big contributions. Poverty education strategies are now placing emphasis on rural development and encompass all those who live in rural areas. Such strategies need to address the provision of education for many targeted groups; children, youth and adults, giving priority to gender imbalances. This complex and urgent challenge should be addressed systematically, through an intricate set of policy measures, at all levels of education systems (FAO/UNESCO, 2002).

Rapidly changing technologies and increasing globalization also suggest that better education and training have become essential for sustainable livelihoods and rural economy competitiveness. For many years, the approach followed by policy-makers and education specialists has been to focus on practical and occupational agricultural skill training provided mainly at the secondary and tertiary levels. In an environment increasingly shaped by non-farming activities, and in a policy context dominated by the poverty reduction agenda, education for rural development requires a holistic approach going beyond the narrow boundaries of the traditional agricultural education and training concept. Relevant and locally-controlled educational programs will play key roles in rural development (FAO/UNESCO, 2002).

The failure of trickle-down development and recognition of the importance of rural areas and rural people to the economic liberation of developing countries has given education a key role in rural systems of supply, production, marketing, personnel maintenance, education, health care, and governance. Functions of education include imparting social change, improving individual social position and standard of living, activating participation in rural and cultural development, increasing critical abilities of rural people to diagnose their needs, assert their rights, and take greater control of decisions affecting their lives, providing trained manpower in rural areas, linking rural and urban sectors, providing employment and income opportunities, increasing labor force productivity, market access and developing leadership. Education oriented to urban rather than rural needs may do more harm than good by accelerating rural to urban migration, generating youth unemployment, and leaving students ill-equipped to succeed in a rural environment. Education contributing to rural development must be locally controlled, practical, applied, problem-posing, and focused on functional specialization (Navaratnam, 1986).

In Tanzania and also in many developing countries, agricultural education and training have failed to adapt and respond to the realities of rural societies. The agricultural education is not oriented to the needs of an increasingly sophisticated commercial sector and increasingly level of technology. Curricula, teaching methods and tools that have been developed are not relevant to the development objectives of individual countries, to the needs of farmers and to the labour market in general. The education curricula fall short of relevant knowledge and skills to enable the majority of the graduates for self-employment and wage employment in rural areas. Gender bias has resulted in fewer educated and skilled female producers in rural areas and especially in non-farm activities. To maximize the contribution of education to rural development, the education curricula must first understand the scope of that process and analyze the educational needs of all the rural stakeholders. Environmental degradation, rapid changes in scientific and technical knowledge, the changing role of women in society and the increasing marginalization of agriculture and rural life all call for changes in agricultural education.

# 2.4.1 Education and training for food security

Food security exists when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their daily needs and food preferences for an active healthy life. The concept of food security involves four considerations, namely (i) availability, (ii) stability, (iii) accessibility, and (iv) affordability. Regardless of whether food supplies are scarce or abundant, it is essential that people know how best to use available resources to acquire and consume a variety of safe and good quality foods, this can be achieved through the provisional of education and trainings. Hunger impedes learning, chronically hungry people attending school must learn while fighting hunger. Children in rural areas often walk long distances to school on empty stomachs. Many cannot afford to bring food from home to eat during the day. Hunger also bears children from attending school as all the family resources available are mobilized to try to meet the most pressing needs. To overcome this problem, school feeding has been found to be extremely important programme. Through school feeding children are exposed to concepts of healthy food production and consumption - through participation in school gardens and education on nutrition (FAO/UNESCO, 2002).

Having recognized that consuming a nutritionally adequate diet is vital for a healthy and active life, when searching for improved education strategies for rural development, nutrition education should become an integral part of this. Education for food security has broader strategies, including the enhancement for training of whole households, courses for policy-makers, research grants to further the efforts in education for food security, awareness-creating modules, the training of women and the development of multimedia manuals.

#### 2.4.2 Gender issues in Education for Rural Development (ERD)

Gender barriers, whether against women and girls or men and boys, are multiplied in rural contexts, although the former are the more likely to be discriminated against. Amongst the factors creating these barriers using school attendance as an indicator of disparities are lack of infrastructure such as a safe means of getting to school, inappropriate school calendars which do not take note of local needs and conditions, irrelevant and/or biased curricula, the absence of female teachers who provide a safe school environment and appropriate role models, and the permeating influence of poverty, including monetary and food shortages (FAO/UNESCO, 2002).

Educated parents specifically mothers tend to invest more in children's schooling and health/nutrition. Ensuring women's access to education plays a key role in the transition from an investment in child quantity to an investment in child quality which will then bring about transformed societies. Due to the fact that women are the core producers of food crops in rural Tanzania, providing them with agricultural education and basic education in general will ensure food security as they will apply advanced agricultural practices in farming. If investment in education in general is so justified, investment in rural education is even more so. This is emphasized by the fact that countries have largely continued with the urban bias in the allocation of resources, rural areas have largely been lagged behind.

#### 2.4.3 Constraints on Education and Agriculture sectors working together

In fact education and the agriculture sectors largely work separately, so the first constraint is in *overall* sectoral structure. There is little collaboration between ministries of education and agriculture at central or local levels. Each has its own mandate and bureaucracy which is keen to protect. Likewise, vested interests may see more advantage in keeping the ministries apart. In considering content and curriculum development, a number of constraints are evident. In the first place, there is a mismatch in the learning of students and their experiences, and the competencies required in the agriculture sector. Curriculum reform to alleviate this constraint is clearly needed. But a new curriculum will require capacity and capability to implement it. In terms of the delivery of educational service, two main constraints are noted. First is the lack of national or local guidelines on the preparation of an integrated curriculum and on the delivery mechanisms to be used. Second, the present delivery methods comprise teachers teaching and

students listening - a sort of blotting paper approach. Therefore there is a need for teachers to be trained as facilitators of learning and to see that as their principle role (FAO/UNESCO, 2002).

A further restraint is the destination of teachers on the completion of their studies. Graduates prefer areas of employment which are much more attractive than agriculture. Also, they have no commitment to go back to rural communities to assist in rural development and transformation. There is a need for government direction in this matter. In Malaysia, a project was in place to encourage a 'return to the land' - with considerable success. The project involved a package programme which included incentives to graduates, in terms of land and training. For example, in Thailand, decentralization of the curriculum included allowing 40 per cent of curriculum content to be based on community and local needs, in China, there is a central government integrated mechanism for agriculture education, and science and technology for tertiary and upper secondary level curriculum development; and for Community Learning Centers (FAO-IIPE/UNESCO, 2006).

To break the obstacles between the two sectors, the main policy recommendation is that *guidelines* should be formulated in collaboration between the ministries of education and agriculture, local government and the community. The guidelines should provide the directives of who is doing what and when. A second policy suggestion is that institutional and legal frameworks on Education and Rural Development (ERD) should be formulated. Several suggestions related to tapping resources for teaching. Among the suggestions are that farmers could be used as teaching/resource persons; that extension workers could develop the competencies to handle agricultural subjects such as animal and crop production.

#### 2.4.4 The contribution of education to agricultural and rural development: Lessons from Asia.

Much as we appreciate the comprehensiveness of the RDP and RDS as crucial frameworks for rural development, they have both failed to articulate strategic role education can play and contribute to rural and agricultural transformation. Lessons from Asia show that education has a special role in agricultural and rural development. In particular, basic education (including literacy education), rural adult education, vocational education and higher education have made substantial in the transformation of agriculture and rural economy as a whole. We elaborate on this below.

#### The contribution of basic education to rural development

#### (a) Developing basic education

The starting point for basic education development in China was at a very low level as 80 per cent of people were illiterate and the ratio in primary education was less than 20 per cent. The policy of basic education for the new China is to ensure that all school age children go to school. This was not easy for a country with more than 540 million in 1949 and a very low level of economic development. The per capita GDP in 1952, three years after the founding of the new China, was only 119 Yuan (RMB). However, with the concerted efforts of the whole society, under the strong leadership of the central government, more and more school age children were able to go school. The ratio of children in primary education in 1952 was 49.2 per cent and by 1965 the ratio of children in primary education had increased to 84.7 per cent (see *Table 11*). This was very important progress, which was made in the 15 years after the founding of new China, and laid a solid foundation for the further expansion of primary education. Even in 1965 the per capita GDP in China was only 240 Yuan (RMB). At such a level of per capita GDP, the majority of rural people could only lead a meager life style, but they managed to have their children attend primary schools.

<sup>1</sup> Institutions are defined, broadly, as rules and structures that determine (enable or limit) human interaction in economic, social and political spheres. An understanding of institutions needs to take into account their formal structures, the informal rules of the game and the ways these complexities become constituted through social interactions and mobilization.

Basic education in China includes primary education and junior secondary education. Based on the development of primary education, junior secondary education has also been well developed. Due to the small number of pupils finishing primary education in 1952, the ratio of primary education finishers continuing onto junior secondary education was very high. As the ratio of primary education increased and enrolment in primary education expanded, the ratio of primary education finishers continuing on to junior secondary education was not as high as that of 1952.

However, the ratio of primary education finishers going on to junior secondary education was maintained at more than 80 per cent from 1965 to 1978. When in 1985 9-year compulsory education became the policy of government on education, the ratio of primary education finishers going on to secondary education kept increasing. By the year 2000, 94.9 per cent of primary education finishers went on to secondary education.

As a result of basic education development in China, education attainment among people aged 15 and above has improved gradually. In 1982 the illiteracy rate was 23.6 per cent. Almost one quarter of adults in China was illiterate and the rate of illiteracy for rural people would have been even higher than that. In 2000, the illiteracy rate was only 6.7 per cent. From 1982-2000, the number of those with primary education attainment in every ten thousand person did not change much. But the numbers of those with junior secondary education in 2000 was almost twice that of 1982.

The progress of basic education in China constitutes one of the major factors contributing to the development of township enterprises, migration of rural labour force and the growth of agriculture.

There is basically no unemployment for the rural labour force migrating into cities in China. Their education attainment ensures that they find jobs in cities and towns. The purpose of their migrating into cities and towns is to make money to add to the income of their families in rural areas. Some have gradually become urban citizens; hence, the completion of the process of migration into cities and towns by the rural labour force. It is expected that more migrant rural people will become urban citizens, because it is the policy of government to promote urbanization.

In the process of urbanization in China, the basic education of the migrant rural labour force is received in rural areas. The expense of basic education in rural areas is lower than that in cities. This is a considerable contribution by rural education to the modernization of the country.

# (b) The contribution of basic education to the growth of agriculture

Though the education attainment of farmers working in agriculture is generally lower than those working in township enterprises or migrating into cities and towns the education attainment for most farmers in the 1990s in China was at least at the level of primary education, and more than 50 per cent at an even higher level. This is the foundation for carrying out adult education in rural areas. Adult education is the key to the growth of agriculture, as new methods and skills in agriculture cultivation play a more and more important role for improving productivity in agriculture.

Farmers have been engaging in crop farming following the old traditions. However, it is not possible to raise the yield, if they refuse to use quality seed and new skills in farming. Learning new methods and skills in farming at present has become the essential condition for doing a good job in crop production.

Crop cultivation constitutes only part of agriculture in rural areas. Forestry, aquaculture, husbandry, vegetables, flowers and plants all need to be developed, along with agriculture development in rural areas. Farmers in rural areas are not familiar with all these areas that require more training for professional development. Therefore, training has become the key to their development and basic education is the foundation for carrying out this training.

# (c) The contributions of higher education and vocational education to rural development

Higher education and vocational education contribute to rural development in China, especially agriculture institutions of higher learning and agriculture schools at senior secondary level. The practice in China has shown that their contributions to rural development are also essential.

Developing higher education in agriculture and agriculture vocational education

As most of the people in China reside in rural areas, the Chinese Government has attached importance to agriculture higher education and agriculture vocational education.

There were only 18 institutions of higher learning in agriculture and forestry in 1947, before the founding of new China. In 1957 the number of institutions of higher learning in agriculture and forestry increased to 31, their enrolment was 441,000, that is almost three times that of 1947, accounting for 9.1 per cent of the total enrolments of all institutions of higher learning in 1957. Except for the year 1975 (which was in the period of the Cultural Revolution in China, when all institutions of higher learning were closed) the enrolments in agriculture and forestry have kept increasing. The total enrolments in agriculture and forestry in 2000 were already more than 12 times that of 1957 (see *Table 16*). Human resources in agriculture and forestry have staffed research institutions of agriculture all over the country, which have made important contributions to rural development, by developing goods and new skills for agriculture development and extending new skills to rural areas.

Agriculture secondary schools were set up in the early years of the new China. All of them have developed into agriculture secondary schools at senior secondary school level. The number of these schools increased greatly in the 1980s. Every province had about 10 such schools on average, showing the importance attached by local governments to agriculture development. The enrolments in these schools accounted for around 15 per cent of total enrolments of all secondary technical schools to 1980. After that enrolments in agriculture, as a percentage of the total, have decreased but the total enrolments in agriculture kept increasing, in general. The graduates from these schools have usually become technicians in agriculture, working in institutions serving rural development. Another contribution of these schools is to play an exemplary role in reform and experimentation in farming, because their location is more close to rural areas.

# (d) The contribution of higher education in agriculture and agriculture vocational education to the growth of agriculture

The direct contributions of higher education institutions and agriculture vocational schools to the growth of agriculture are very extensive. For instance:

- Developing new skills for farming;
- Developing quality seed:
- Promoting extension in agriculture;
- Providing information and consultancy for policy development and;
- Playing an exemplary role for farming

# (e) The contribution of adult education in rural areas to rural development

Given the situation that the majority of farmers have received basic education, adult education in rural areas can play a very important role in the growth of agriculture.

The most important feature of adult education in rural areas is closely related to agriculture production. For instance:

- adult training for using quality seed;
- adult training for using new skills for farming;
- Adult training as an integral part of projects implemented in rural areas.

The following are the mechanisms for providing adult training in rural areas

- projects sponsors including adult training as an integral part of projects;
- · agriculture institutions of higher learning;
- TV universities (network);
- · agriculture secondary schools;
- broadcasting and TV agriculture schools (network);
- vocational schools located in rural areas;
- · Adult schools located in villages.

# Section 3: A critical Analysis of efforts towards rural transformation in Tanzania: Historical perspective

It can be recalled that right from her independence, Tanzania declared war against three enemies, namely, poverty; ignorance and diseases. Following this various extensive programmes in pursuit of eradicating poverty and transforming structure of the economy have been initiated.

These efforts have had different entry points of foci. There were those that have taken a macro or nationwide coverage while others taking meso down to micro level focus. Examples of the macro level attempts include the early designed rural transformation and modernisation programmes. Others are the Ujamaa villagization and industrialization attempts of the 1970s, which included, *inter alia*, programmes to increase access to education, health care services and water supply and improvement of physical infrastructure supportive for rural, agriculture and industrial development. In all these programmes more emphasis was given to the improvement of farmers' productivity, food security and stabilization of markets and farm income. In this regard, a number of agricultural supportive institutions and infrastructure were developed. Hitherto, the country has about 50 agricultural research institutions, a bulk of agriculturists and extension officers are present at all levels. A special bank (the Tanzania Agriculture and Rural Development Bank-TRDB) for rural and agriculture support was established.

At the meso and micro levels, the initiatives taken include the provision of rural roads, preparation of rural water master plans, regional integrated development plans, universal primary education and provision of adult education. Others are rural electrification programmes; establishment of a number of industrial estates; industrial research, and development institutions throughout the country. The focus was to promote and ensure adaptability of rural friendly technologies. Regional cooperative unions and crop marketing authorities were also instituted so as to allow farmers access to credits and export markets.

# 3.1 Rural transformation and Development Initiatives in Tanzania

Tanzania has attempted to develop the rural sector, often with a focus on agricultural development, ever since it gained her independence in 1961. Numerous policies were put in place but they have not entirely been successful. Some of the notable policies include:

#### (i) Focal Point Approach

Over time, Tanzania has throughout taken various initiatives to transform and improve agricultural production. During the colonial period, the concern was to extend extension services to production of cash crops, most of them used as raw materials for expanding industrial sector in the metropolitan countries. In view of this, the agricultural extension services were thus created using a Focal Point Approach (FPA), which was an integral part of the administrative system. Its basic functions were agricultural inspection of law enforcement. In brief, the rural development strategy during the colonial period focused in increasing production for exports, in turn making Tanzanians producers of what they don't consume and consumers of what they were not producing.

Besides, rural transformation and development was patterned along the notion of modernisation (Kangero, 1991; Khalid, 1988). This notion called for complete transformation of the society and its economy from a traditional or backward status to a modern one, completely ignoring perceptions and values of people concerned. Consequently, people took it as a process initiated by the government or triggered by innovations developed by researchers and passed on to them by extension staff.

# (ii) Improvement Approach

This was the first rural development attempt by the government. It was introduced in the country in 1964. It was really "an expansion of assistance and guidance through the agricultural extension workers, and community development workers working together" (Field man, 1970). This approach did not last longer because it relied much on farmers contacting with extension workers who were few and inadequately trained. Provision of services proved to be difficult as farmers lived in scattered villages or holdings not easily accessible by extension workers. And many extension recommendations were found to be incompatible with farmers' socio-cultural and economic ambiance and therefore were not easily accepted by farmers.

# (iii) Transformation Approach

This involved moving some of the farmers from their traditional villages to new villages or settlement schemes. About 60 village schemes were established in various parts of the country. The approach assumed that farmers were poor due to lack of capital and technology. In that context, the approach became fairly capital intensive. Within no time the scheme proved failure. (According to Omari 1974) the scheme failed due to over-mechanization and use of advanced technologies far beyond the general skills of peasants. The scheme also faced mismanagement and lacked involvement of farmers in planning and decision-making.

## (iv) Ujamaa or Villagization approach

Since 1967, Tanzania declared to pursue the policy of Ujamaa and Self-reliance. Among other things the policy aimed at ensuring that major means of the economy were under the state. In 1975 villagization started in which all the people were moved into villages. The government undertook broad initiative to provide social services to the people in the villages; however, villagization had little impact on increasing production. Several approaches were also tried within this framework. The Regional Integrated Development Plans (RIDEPs) were one of them. Every region was allocated to a donor to support in rural development. Lack of co-ordination, different focus and approaches, too much donor dependence, excessive political interference and misuse of resources contributed to the failure of this approach. More so, the RIDEPs failed because they excluded the communities in the process of decision-making and communities perceived the programmes as owned by donors.

By the mid 1980s, the RIDEPs were a complete failure and the country was in a major economic crisis. Attempts to redress the economic problem included the implementation of several macro-economic policy reforms (variously known as Structural Adjustment Programmes - SAPs). These SAPs did not specially address the issue of rural development. Although the macro-economic policy reforms started in 1986 have had major impact in the economy, they have had no major impact on the rural communities apart from enabling few rich farmers improve their livelihood. Most of the rural people have continued to remain poor and agriculture, the mainstay of the rural economy, has not been adequately addressed by the macro-economic reforms. Indeed markets were liberalised but infrastructure and institutional problems inhibit the success of the reforms in the agriculture sector.

Beside the macro-economic policy reform, the government was carrying out specific policy changes, which have direct implication on rural development. These include;

- The re-establishment of the Local Government Authorities;
- Re-establishment of the Ministry of Regional Administration, Co-operative Marketing and Housing, in 1985;
- Re-establishment of the ministry of regional Administration and Local Government in 1998;
- Restructuring the regional Administration in 1996;
- Establishment of the Local Government Reform Programme in 1996; and,

These policy changes were expected to increase the involvement of local communities in the management of their affairs and improvement of their livelihood. These changes were however still isolated and often uncoordinated. There was still need for holistic, people centred Rural Development strategies in order to increase productivity, eradicate poverty, and improve rural livelihood in sustainable ways.

**Turning point:** At the end of 1990s Tanzania proclaimed its long-term development perspective, going by the name of "The Tanzania Development Vision 2025". The prime objectives of the vision are to attune the society so that it stands in consonance with development qualities envisaged to prevail in the world of the 21<sup>st</sup> Century. The century is posed to be characterised by intense social and economic competition. And as the vision itself predicts "it will be a century dominated by societies with advanced technological capacity, high productivity, modern and efficient social and economic infrastructure and above all a high skilled manpower imbued with initiatives and creativity".

The Vision recognised that Tanzania society fell short of these pre-requisites, meaning that they have to be created. In this light, the vision is supposed to awaken, mobilize, coordinate and direct people's efforts, minds, aspirations and resources pertaining into the society more towards creating the missing ingredients necessary to propel faster development and build capacities for the country to compete more effectively.

# Rural development Policy and Strategy:

In early 2000's the Government developed three frameworks intended to guide its efforts towards fighting against poverty. The first was the Poverty Reduction Strategy (PRS), followed by the Rural Development Policy (RDP) and the Rural Development Strategy (RDS). In the case of the latter two frameworks, the government's new strategy was to refocus the rural development process to concentrate on improving the well-being of rural people and reducing rural poverty in the widest possible sense. The frameworks outlined the following strategic priorities.

*First was to address the entire rural space:* While past approaches identified most pieces of the rural puzzle, they failed to put them together in a way that attained the country's poverty reduction objectives. The RDS address the entire rural space—all of rural society and both the farm and non-farm aspects of the economy. The government's development priorities are now geared to accelerate poverty reduction in rural areas by:

- Fostering broad-based rural economic growth:
- Improving social well-being and managing and mitigating risk and vulnerability; and
- Enhancing the sustainability of natural resource management.

This required managing diverse portfolios of support to the management and accumulation of social, economic, and natural assets—by relying on the market in most cases, and also by strengthening institutions at all levels, including those that can help solve problems of collective action, for example, land and water management. Addressing rural space in its entirety naturally draws on the principles underlying the Comprehensive Development Framework. The rural strategy must emphasize and utilize the linkages and coherence between all sectors operating to meet the needs of the rural poor and rural communities, such as Health, Education, Transport, Infrastructure and Communications, Agriculture, Public Sector Reform, Private Sector Development, and Social Protection. As such it recognizes and draws upon the many sectoral strategies including the **links between urban and rural strategies**.

#### Second was to Foster Broad-Based Growth:

Recognition was given to the existence of barriers faced by the rural poor in terms of accessing economic opportunities, whether they occur within the labour markets, farming, and provision of services or enterprise development. Such barriers need to be understood and addressed. It was also recognised that given diversity of rural areas in terms of their agro-ecological, natural resources and different levels of socio-economic development, **decentralization**, including regional equity concerns, provide a particular opportunity to address these issues at both the local and national levels. Many of the policy reforms require, for their successful implementation, parallel institutional reforms and, in particular, greater decentralization of government functions, better coordination of the multitude of rural activities at the local level, improved governance in rural settings where a tradition of top-down and non-transparent procedures is common, and capacity building for rural public stakeholders. Accordingly, rural institutional development and capacity building, together with the support of decentralization, are an essential component of the rural development agenda. This is also an opportunity for the government to better coordinate rural and urban activities and to increase attention to "peri-urban areas" where many rural poor congregate.

In fostering broad-based growth in rural space the RDS focuses on the following four major objectives, which would at a later stage looked into to assess the extent to which they have been met following the implementation, if any, of the RDS.

# (i) Improving Agricultural Productivity and Competitiveness

Agricultural development plays a central role in poverty reduction as increased agricultural productivity, driven by technology and investment, has a powerful dynamic general equilibrium effect which benefits the poor. The direct relationship between agricultural growth and rural poverty reduction has been proven by international experiences as shown below:

- One percent increase in agricultural GDP per capita led to a 1.6% gain in the per capita incomes of the lowest income fifth of the population in 35 countries analyzed (Timmer, 1997)
- A 10% increase in crop yields leads to a reduction between 6% and 10% of people living on less than \$1 a day, according to a study (Irz, et al., 2001). For African countries, a 10% increase in yields leads to a 9 % decrease in the percentage of those living on less than \$1 a day

However, it was recognised that business as usual would not produce expected results in this regard. The rapid and dynamic changes influencing agricultural production, diversification, and competitiveness require new approaches to support effectively tomorrow's agriculture. Hence the RDS's strategy for agriculture is to;

- Differentiate strategies to fit various farm types
  - Small-scale family farms
  - Subsistence oriented farms
  - Commercial farms
- Strengthen farmer to market linkages
- Support to diversifying agriculture and boosting the share of high-value products
- Encourage in part through demand-driven extension services more efficient use of farm inputs and reduced post harvest losses
- Renew commitments to science and technology as key to sustainable productivity growth in agriculture
  - Integrated land, water, and pest management systems
  - Biotechnology and related bio-safety
  - ICT for agriculture
- Enhance food safety

The RDS recognised that the income-earning capacity of poor farmers can be improved through better technology and better access to inputs, services such as extension and product markets. But they do this in different ways, depending on farm types, production systems, and market opportunities. Future productivity increases thus require technologies tailored to specific groups of farmers in more narrowly defined production environments. Accordingly, a different strategy for each of the major farm types must be employed.

### (ii) Expanding Rural Non-Farm Economic Activity

Growth in agriculture is an essential requirement for poverty reduction in developing countries. However, without growth in non-farm rural income producing activities, rural poverty reduction efforts will not meet with success. Many non-farm activities, often with upstream and downstream linkages to agriculture and natural resources, have important multiplier effects. Others, in manufacturing, services, commerce, are similar to those in urban settings. Developing effective support to the rural non-farm economy is an essential part of the rural strategy. Government and other stakeholders' interventions should strengthen existing opportunities, seek new ones, and address the removal of barriers to entry by rural people to diversified employment and enterprise activity. The interventions will address the institutional support necessary to foster a diversified rural economy at the national and sectoral levels as well as at subnational, local and community levels. The government should also promote rural enterprise development through support for business development services, and the provision of efficient services for SMEs, such as rural infrastructure.

#### (iii) Promoting the Policy and Institutional Environment to Improve the Investment Climate

Beyond the several individual interventions for agricultural and non-farm economic activities, the overall policy framework must be conducive to investment. The acceleration of widely-shared growth requires the deepening of policy and institutional reforms so as to improve the investment climate for both farmers and non-farm private-sector entrepreneurs and other off-farm activities.

The Rural Agenda in Light of Private Sector Strategy

- Conduct pilot operations in rural areas with market solutions (for example, output-based aid assistance) for delivery of agricultural, infrastructure and social services, and promote mainstreaming where intervention is proven effective.
- Promote better access to markets for the poor.
- Enhance expansion of privately operated financial services to rural areas, especially where poverty is prevalent, while maintaining the discipline in on-lending.

- Include the private sector in rural areas on improving investment climates.
- Promote private associations (founded on the rules of inclusiveness and equal access), such as
  producer organizations, trade associations and business chambers, and public-private cooperation,
  e.g. advisory councils and co-financing of technology and infrastructure, that can help in solving
  market failures and in reducing high transaction costs.

# (iv) Supporting the Development of Rural Finance and Physical Infrastructure Services.

Despite widespread recognition of the potential impact of rural infrastructure investments, the availability of transport, energy, water supply, sanitation, and telecommunications services in rural areas remains limited. Suitable rural and micro finance services can substantially accelerate the adoption of modern production patterns and improve the ability of the rural poor to produce a marketable surplus as well as meet subsistence needs

Government should enhance its support in developing viable credit institutions in rural areas to serve households, farms, and non-farm enterprises, including SMEs, observing sound market approaches and discipline in financial intermediation. The emphasis will be on improving the policy, legal, and regulatory environment and on building the capacity to deliver appropriate credit, savings, insurance, and payment services. Also enhance support to clients in their efforts to improve rural physical infrastructure and ensure that the basic physical infrastructure for rural economic growth is in place.

## Third, Developing Social Assets through education, health, nutrition and managing risk

To promote the development of social assets in rural areas, Tanzania should more sharply focus its activities on health and nutrition, on improving the availability and quality of rural education, and on reducing food insecurity and other risks faced by the rural poor.

In health and nutrition, Tanzania should emphasize strongly the need to ensure that government resources for health reach the rural poor.

In rural education, the top priority will be to achieve universal primary education, advocating gender equality and improving quality.

An effective strategy for reducing poverty also needs to enhance security by reducing the risk of natural, financial, and health shocks—and by enabling households to mitigate their consequences.

#### Fourth, sustaining Natural Assets—for Richer Livelihoods and Continuing Growth:

To promote the maintenance and restoration of natural assets in rural areas, there is need to implement strategies related to environment, forestry, and water management and give overall guidelines for approaching rural natural resource management issues.

#### Fifth, the RDP and RDS emphasized Self-Reliance and Self-Sustaining:

While working for the plans to realise their aspirations people have to face the reality that donations are increasingly becoming scarce and smaller. At the same time government resources are fast shrinking. Along these premises, the role of individual initiatives becomes of paramount importance and that it has to be given support by the society at large. For Tanzania this goes beyond the provision of only an enabling and facilitating institutional structures and processes necessary to facilitate implementation, but also requires deliberate efforts towards changing the people's mindset and previous ways that used to guide rural development and business operations. The past thirty years of reliance on government as a sole provider of development were so damaging and suppressed private initiatives and self-esteem.

Indeed it is the obligations of the society to make the private sector triumph to realise its newly entrusted role of best serving the society. In this context the rural development policy and strategy take a dimension of providing a framework of stimulating private sector growth and development by streamlining procedures and lowering transaction costs relating to doing business in rural areas.

# Sixth, need for an Enabling and Peoples Empowering Environment

The present paradigm in the national policy recognises the wisdom that for any initiatives to realise human development and alleviate poverty in a more consistent and sustainable manner should involve and combine efforts and resources of the people concerned. This is taken with the understanding that only those community members: individuals; households; firms; organization and associations are best positioned to know well their social, political and economic problems and needs, as well as their environmental, cultural and spiritual aspirations. Thus, future rural development strategy should cause to provide an enabling environment and effective institutional framework that puts people of all gender before their development policy agenda. People should be empowered to guide the development process and influence it towards the direction and speed they perceive it to be in tandem with their future development aspirations.

#### Seventh, forging broad Alliances to serve the rural poor

On paper, the RDP and RDS are flexible, action-oriented, and client-driven. The goal is to transform rural development activities from compartments of sector departments and divisions into a coherent, multi-sectoral effort, supported by internal budgetary and planning frameworks conducive to more efficient implementation.

In this regard, the policy and the strategy were supposed to be based on: Raising the profile of rural development in national policy. There were urgent need for rural strategies and institutions that articulate and advocate the needs of rural inhabitants, and specifically the rural poor. To have an impact, such rural strategies and related institutions must be aligned with other national development strategy processes and supported by high-quality and focused analytical work. The main thrust in such efforts should be to strengthen the voice of the rural poor in national processes for strategy formulation. Research institutions should provide analytical work that would provide a foundation for better decision making on resource allocation, implementation and monitoring as well as more effective advocacy by rural representatives.

# Eighth, need for an effective institutional framework for overseeing rural transformation

One of the greatest challenges is to ensure that rural poverty is truly reflected in national programmes and operations in the way and form that would ensure effective coordination, implementation and monitoring of rural development strategies. Each level of the government decision-making structure must become an integrated part of the implementation process. This will entail new and innovative relations between all MDAs active in rural areas. The implementation of this strategy also requires that operations in rural space are designed in a multi-sectoral fashion and that self-standing sectoral operations are coordinated by an overall strategy for any given rural space.

It calls for an institutional framework that would improve coordination of activities in the rural space and to achieve the strategy's objectives. Such an institutional framework would:

- Provide a foundation to coordinate activities in rural areas;
- Act as an advocate for the rural poor and, consequently, for rural development in general.
- Facilitate and monitor implementation of rural strategies to assure that the rural poor and rural development get adequate attention in national programmes and other national processes.

 Interact with other stakeholders, particularly the private sector, DPs and sectors active in rural areas.

## 3.2 Accounting on the Poverty reduction Initiatives

We confine this discussion on recent outcomes of economic policies/strategies generally and of rural development activities more specifically.

Although some improvements can be cited here and there, in general there has not been major structural transformation of the economy and definitely not in rural areas. The structure of Tanzania's economy has changed gradually over the last decade, with agriculture being outpaced by services, manufacturing and construction. Structural transformation and economic diversification have been limited. The share of agriculture in total output and employment as well as the share of primary exports in total remain dominant. However the share of food expenditure in household income expenditure is now 47, down from around 70 in the 1970's, rendering one of the lowest saving ratios in the continent. The share of investment to GDP has only risen marginally from 12 percent in the 1960's to around 24 in 2007. Nevertheless, the growth of investment seems to escape the rural and agricultural sectors. Consequently, most of the farmers in the country are still using hand hoe and traditional seeds. Their income is low and unpredictable due to fluctuations in production caused by changes in rainfall and/or producer prices.

There is low diversification from agriculture to non-farm activities. According to PHDR 2009, rural households are diversifying out of agriculture seeking to improve their well-being. Indeed, diversification of income-generating activities is occurring across all wealth quintiles. At national level, a slightly higher percent of female headed households are involved in off farm income generating activities compared to male headed households (24.8% and 20.6% respectively).

However, the success of households in diversification, as reflected in the amount earned from non-farm activities, varies markedly across quintiles. The least poor households earn approximately eleven times more in self-employment than do the poorest households. It would appear that the least poor households diversify to exploit opportunities, while the poorest households diversify out of desperation and for survival. Given that the majority of Tanzanians will continue to reside in rural areas and derive livelihood from agriculture, it is imperative to prioritise interventions that raise agricultural productivity and identify and implement non-farm income-generating activities by nurturing and sustaining household capabilities for successful diversification.

According to the 2009 PHDR, about 37.6% of rural households live below the basic needs poverty line, compared with 24% of households in other urban areas and 16.4% in Dar es Salaam. Given the large proportion of Tanzanian households that rely on farming for their livelihoods and the high rate of rural poverty, the overwhelmingly majority (74%) of poor Tanzanians are primarily dependent on agriculture. On the other hand about 18.4 of the rural population live below the food poverty line compared to 12.9 percent in other urban areas and 7.4 percent in Dar-es Salaam. This confirms that the fight against poverty should be intensified particularly in rural sectors where most of the poor are located

To create these ingredients is not an easy task. It means to increase production beyond the current poverty and subsistence levels. For Tanzania to free herself from poverty, noting that about 34 percent of her population are poor (lying below the basic needs poverty) and the proportion is higher, 37.6% in rural areas, needs to sustain growth of the economy at a rate of over 8 percent per annum at least for the next

thirteen years.<sup>2</sup> This is indeed a great challenge particularly when the main source of the country's economic growth continues to be agricultural sector which is very prone to exogenous factors, such as weather condition and world market prices, of which the country has no control.

Hitherto, more than 50 percent of GDP is accrued from rural and agricultural activities. The same activities account for 15-21% of the value of total exports, but remain the main stay for bulk of the population, as more about 74 percent of the people are making their lives through rural and agricultural activities. Despite being referred to as the back bone of the economy, people engaged in the sector constitute the majority of the poor. In this context, poverty in Tanzania is more seen to be a rural and agricultural related phenomenon. Why is this case? About 75% of the population (mainly in rural area) depends on under-developed smallholder primary agricultural production for their livelihood. The smallholder agriculture is characterised by the use of hand tools and reliance upon traditional rain-fed cropping methods and animal husbandry. In this view, poverty in Tanzania is anchored in the widespread reliance on small-scale agriculture.

It follows, therefore that, for Tanzania to really withstand development dictates of the 21 century and in order to sustain its war against poverty, a radical transformation and diversification of her sources of economic growth from being dependent on low productivity subsistence agriculture to a modern and industrialised economy is inevitable.<sup>3</sup> How could this be done? What is missing in the current Policy and Strategic frameworks for rural development, both in terms of their appropriateness and implementation? The paper now addresses itself to these issues.

#### Macroeconomic trends that influence poverty reduction

There has been a debate on the relationship between aggregate growth and poverty, internationally, it is now widely recognized that growth is an important, but not a sufficient condition for poverty reduction. International experience has shown that the impact of growth on poverty reduction depends not only on the rate of growth, but also on the composition of growth, and on structural aspects of the economy that determine whether, and how, growth reaches the poor.

In China's case, growth in agriculture, growth in township enterprises, the increase in the migration of the rural labour force into the cities, and the increase in the funding by government for poverty reduction have all made essential contributions to poverty reduction in rural areas.

**Agricultural transformation:** It is well established that agriculture's role changes with the economic transformation of a country, particularly as per capita incomes rise. This transformation has several important implications for agriculture and the rural economy:

- Agriculture's shares in national income and employment fall as countries grow richer and
  diversify, even though agricultural output and employment typically keep growing until quite late in
  the development process. This means that agriculture becomes progressively less important for
  national economic growth.
- As per capita incomes rise, labor becomes more expensive relative to land and capital and small farms begin to get squeezed out by larger and more capitalized farms. This also leads to an exodus of agricultural workers.

<sup>&</sup>lt;sup>2</sup> Sustenance of growth of the economy at that level is a must.

<sup>&</sup>lt;sup>3</sup> With minor modification of the dimension and trust of the Vision 2025

As per capita incomes rise, consumers diversify their diets and demand higher value livestock
products, fruits and vegetables and relatively less food staples. They also demand higher quality
products, and more processed and pre-cooked foods. Urbanization accentuates these patterns,
and also places a high premium on market access, especially for perishable products.

As a result of these changes, farms become larger, more commercial and more specialized in higher value products. Many small farms disappear, while others adapt either by specializing in high value niches in which they can compete, or by becoming part time farmers. Fortunately, opportunities for small farms and agricultural workers to leave agriculture also increase with economic growth. These changes are a normal part of the economic transformation and are not new. However, part of the global change we are seeing today arises because this transformation is happening on an unprecedented scale. Today there are over 3 billion people, mostly in Asia, living in developing countries whose national incomes are growing at 5-10% per year. This is leading to unprecedented pressure for tens of millions of small farms to adapt and/or find exit strategies. Europe is still struggling to solve the remnants of its own small farm problem after several decades of highly expensive interventions, yet the scale of Europe's total problem was tiny compared to what countries like China and India face today. Rain-fed

But this is only part of the change that we are seeing today. New driving forces, particularly globalization, seismic shifts in development policy paradigms, and HIV/AIDS, are fundamentally changing the economic landscape within which the agricultural transformation must take place in developing countries. We are now seeing a situation in which small farms in all kinds of countries are threatened, even in countries where the normal economic transformation is not very advanced. Even larger and more commercialized farms must become nimble and well informed entrepreneurs if they are to remain competitive in today's changing and fickle markets. Today we face the prospect of a mass exodus of workers from agriculture in all kinds of countries.

#### **Tanzania's Growth in Agricultural**

The report of the 2007/2008 of the National Sample Census of Agriculture has revealed that

- Agriculture in Tanzania is smallholder based with almost 60 percent of households having farms
  of less than 2 hectares, and another 20 percent falling in the 2-3 hectares category.
- Livestock are a common asset among agricultural households, with about 40 percent of them partly depending on livestock for their livelihoods. About 99 percent of livestock keeping households are mixed crop-livestock farmers, with the remaining 1 percent comprising both "livestock only" and "pastoralist" household.
- Despite the largest majority of livestock keeping households being mixed crop-livestock farmers, only a minority of them seem to make use of the variety of services which livestock may provide to increase productivity. About 23 percent of farmers make use of ox-ploughs, about 0.2 percent use ox-planters and only about 4 percent apply some organic fertilizer, including livestock dung, to increase crop productivity.

These constitute the majority of the poor in rural areas. Hence such a rural economy, poverty reduction in the short term has to come from agricultural growth. Agricultural productivity has to increase substantially, even when agricultural output as a percentage of GDP declines. As pointed out earlier on, the agriculture sector has performed less well, averaging 4.4% growth since 2000, well below

MKUKUTA's target of 10% by 2010. The sector's contribution to GDP has declined to 24% in 2008, but not largely due to transformation of the sector through diversification and productivity increase; rather due to changes in the computation of GDP, which included the taxation of agriculture. Why has the transformation of agriculture not happened?

We now turn to some more important strategic issues for transforming the rural sector and small farms in the contemporary situation.

# Increasing production and productivity of food

While much of the focus in agriculture today is on high value market chains and the challenges of linking (small) farmers to those market chains, it would be wrong to overlook the importance of markets for food staples and their own particular needs for public support.

Given the country's past and recent experiences with food insecurity and related high food inflation, it is not only important to recognize that food staples still have a key role to play in the economy more generally and in rural areas more specifically, but also to recognize that the markets for food staples are inherently different from markets for many high value products; the former needs greater public attention. Many producer markets for high value products have been and can easily be successfully privatized and this is in part because of their higher profit margins and greater integration into export and retail markets. However, hardly any credible evidence exists to suggest that the private sector can successfully take over the producer market chains for staple foods during the early stages of agricultural development. As farmers struggle with low productivity and high subsistence needs, low input use, low incomes, poor infrastructure, high risks, and the like, the amount of profit to be made in market chains for food staples remains low and unattractive for much private investment. There is also a growing body of studies showing that important institutional and market failures are to be expected at low level of agricultural development (Dorward, et al. 1998). In this regard, the role of the public sector for supporting the growth in production and productivity of food staples on the one hand, and on developing their markets on the other.

This argument is well supported by the Asian experience. In Asia, the public sector played a key role in food staple market chains during the early years of the Green Revolution. This role went far beyond the kind of facilitating role envisaged today and actually provided most key services itself, including research and development, extension, fertilizer, improved seeds, storage, credit, and marketing. Research on India shows these interventions played a key role in launching the Green Revolution They also helped ensure that small farmers were able to participate, and that contributed greatly to the levels of poverty reduction achieved (Dorward et al. 2004, chapter 3).

The international development community seems sufficiently concerned with Asia's post-Green Revolution problems that it is totally discouraging countries like Tanzania to launch their own agricultural revolution without these kinds of public interventions; instead these countries are asked to rely almost exclusively on the private sector and producer organizations, even though there are no successful examples of this approach working for food staples markets in the early stages of agricultural and economic development. This is not to advocate a return to costly and inefficient parastatals or to poorly targeted subsidies. Nor is it an argument against a strong role for the private sector where this can work,

What is really needed is a much better understanding of those aspects of public intervention that really worked in Asia and why. Then we can draw the right lessons for developing new institutional innovations to bring those essential ingredients to Tanzania. Even most Asian countries still remain cautious about moving too rapidly towards fully privatized markets for food staples.

# Diversification into higher value agricultural products

Small farms with a commercial orientation can benefit enormously from diversification into higher value foods (fruits, vegetables, oils, fish, livestock products, etc.) and processed foods. Demands for these types of food are growing rapidly with rising incomes and urbanization.

A challenge for this "new" high value agriculture is to make it more pro-poor. Left to market forces alone, the major beneficiaries of the new high value agriculture will mostly be the larger and commercially oriented farms, and farms that are well connected to roads and markets. Many small farms are likely to get left behind unless marketing arrangements can be developed that link them to the new market chains.

#### Organizing small farmers for marketing

Small farms have always been at a disadvantage in the market place. They only trade in small volumes, sell sub-standard quality products, lack market information and have few links with buyers in the marketing chain. The problem has been exacerbated by market liberalization and globalization. Not only has the state been removed from providing many direct marketing and service functions to small farms, leaving a vacuum that the private sector has yet to fill in many countries, but small farmers must now also compete in integrated and consumer driven markets where quality and price are everything. In this regard, small farmers will need to organize themselves to overcome these problems and to exploit the new opportunities that these new markets offer; otherwise they risk losing market access.

Voluntary producer organizations of various types will have important roles to play in filling this void and in linking small farmers to food processors, manufacturers, traders, supermarkets and other food outlets (Kindness and Gordon, 2002). Such organizations can help serve businesses by providing an efficient conduit to reach small-scale producers (e.g. by negotiating contract arrangements on behalf of a producer group), and help improve the quality and timeliness of small farmers' production and their access to agricultural research and extension, input supplies and agricultural credit.

#### Provision of agricultural services

Small volumes and high transactions costs mean that small farmers are also disadvantaged in obtaining key inputs. Although privatization policies have opened up new opportunities for the private sector, they have inadvertently left many small farmers without adequate levels of support. Public investments to improve rural infrastructure and transport systems are an important part of the longer term solution to this problem. Formation of effective producer organizations for marketing purposes can also help give small farmers the buying power they need to obtain key inputs at competitive prices.

But as with markets for food staples, market failures often require direct state interventions in the early stages of development. Agricultural research and extension is a prime example. Much of the agricultural R&D needed to help small farmers increase the productivity of their food staples and to improve natural resource management must either be undertaken or funded by the public sector. Similarly, left to the

private sector alone, there will be insufficient investment in the control of contagious animal and plant diseases.

Small farmers face a range of weather, disease, pest and market related risks that discourage them from investing more in major land improvements and from adopting more profitable technologies and crop and livestock activities. In order to cope with these risks, farmers and rural societies have developed a range of risk management measures (Walker and Jodha, 1986) but these measures offer only limited protection against catastrophic weather events like droughts or market collapses. Governments can help by providing safety net programmes, and by facilitating the development of credit and insurance arrangements that provide cash in times of need.

### Nonfarm opportunities and migration

Rural nonfarm income, such as nonfarm wage or self employment earnings, is already an important component of the livelihood strategies of rural people, sometimes accounting for about 40 percent of their income. Its importance is also growing with urbanization and greater spatial integration of markets (Ellis and Harris, 2004). But opportunities for farmers and agricultural workers to reduce their dependence on agriculture are constrained by the paucity of their human, financial and physical assets and the economic context of the geographical area in which they live.

Lack of human and financial assets confines many of the poor to low-productivity, low-growth market segments from which there are few pathways out of poverty, and simply remain a means of bare survival. In this case the policy challenge becomes one of equipping poor households to move from these "refuge" nonfarm jobs to more remunerative ones. But to do this, they require a variety of private assets such as education, public assets such as roads and electricity and information about how to access dynamic market segments, as well as start-up funds. It is also agreed that gender and social status can restrict access by the poor to the most lucrative nonfarm activities in some settings.

However, diversification is demand driven and follows rising per capita incomes; it is not a primary engine of growth in its own right. Given that nonfarm activities produce goods and services (e.g. many retailing and personal services, highly perishable agricultural products, and the processing of local agricultural outputs) that are consumed almost entirely within the location in which they are produced, supply side interventions alone are not enough to promote nonfarm activities. This is because much expansion of these activities is constrained by growth in local demand, which in turn depends on growth in regional income and in the volume of goods produced that need to be processed and traded. Without local agricultural growth or access to new markets (e.g. from tourism, mining or government jobs), incomes and the demand for non-farm goods and services remain low, and rapid expansion of non-farm activities can quickly depress local prices and wages, making them more a refuge occupation than a productive alternative to agriculture. Opportunities to migrate to productive jobs in urban areas are also conditioned by the state of the national economy and growth of the agricultural sector.

While the non-agricultural incomes for farmers constitute an important part of the income of farmers, it will not become the major source of income for farmers in the short term. Agricultural transformation is crucial for poverty reduction and rural transformation. Experience of China for example show that while the economy was increasing at a high rate (average of 9% annually between 1978 and 2008) agriculture also kept pace with the overall growth of the economy. High and sustained growth in agricultural output will certainly increase farmers' income, hence contributing to poverty reduction.

# **International Competitiveness**

The globalisation and fast progress, which have been attained in terms of technology and its application, have altered profoundly the direction and patterns of world production and trade. The introduction of new technology especially in the fields of information, biotechnology, material sciences and renewable energies, has played an important role in shifting competitive advantages across regions and nations. This in turn, restructured international trade and investment patterns sometimes contrary to the traditional determining factors such as availability of raw materials, proximity to markets, sources of cheap labour and climate.

The impacts of these have taken various forms but two are of much relevant to the rural development in Tanzania. Firstly, in some places, technological innovations have eroded the competitive advantage, even the well-established countries and firms such as tropical farms in Africa, propping up others to the front and permitted emergence of new competitors. Secondly, the new technologies have increased technological options available for production, widening the alternatives available to meet consumer needs and reduce the costs of moving goods and services across countries. In some cases, this has been associated either with reduction in use of materials or allowed use of alternative materials, therefore, reducing world demand for primary commodities.

In context of the above, rural development strategy for Tanzania would mean to transform and to diversity the rural production mix more towards the prevailing pattern of demand in the world trade. Along this light, the framework for the Tanzania rural development strategy may focus to strengthen capacities to investigate and identify investment potentials existing in rural areas and build absorption capacities. The absorption capacities in this context should be defined to include the provision of necessary legal, regulatory and administrative procedures in safeguarding property rights and facilitating business to take place in a more liberalised and competitive economic environment.

# The role of tradables

Agriculture products, services (like tourism and IT), manufacturing, and overseas migration (remittances) — which can be sold, usually abroad, into deep markets are the major engines of growth in low income countries like Tanzania. These contrast with nontradables, such as services that cater largely to national markets whose size and capacity to grow critically depend on local income levels, which in turn depend on tradables output. When one or more tradable engines of growth are doing their job, the income increases they generate lead to rapid growth in demand for local nontradables, with important spillover opportunities for rural income diversification (see, for example, Haggblade, Hammer, and Hazell, 1991). In this situation, rural-urban migration and rural income diversification are indicators of economic growth and structural transformation and a sign that workers are typically being "pulled" out of agriculture into higher-paying occupations. But when the major engines of growth are stalled, as in Tanzania, migration and income diversification are more typically distress phenomena, with workers seeking to augment already low and declining per capita incomes by increasing production of low-productivity nontradables for sale into saturated local markets.

### Targeting the vulnerable

Tanzania's agricultural growth is centered on small farms and hence makes deep inroads into poverty and hunger in rural areas. But even if successful this would not be enough to eliminate poverty and vulnerability to production and market shocks. There is also need for effective safety net programmes in times of crisis and for helping afflicted households and communities cope with chronic disease problems like HIV/AIDS.

But safety net programmes should not be seen as a substitute for policy support for agricultural development. While this is conceivably a viable strategy in countries with important sources of mineral or manufacturing income that can pay for extensive safety net programmes, Tanzania cannot afford large welfare programmes. This calls for more strategic efforts to develop the agricultural sector and nonfarm activities in rural areas.

### 3.3 Way forward

In Tanzania, as in many poor countries with large size of smallholder farms, small farm development offers a viable and pro-poor option for agricultural development. However, small farms are seriously challenged today in ways that make their future precarious.

If most small farmers are to have a viable future, then there is need for a concerted effort by governments, NGOs and the private sector to create a more equitable and enabling economic environment for their development. This must include assistance in forming effective marketing organizations, targeted agricultural research and extension, revamping financial systems to meet small farm credit needs, improved risk management policies, better education and training for nonfarm jobs and where all else fails, targeted safety net programs. These interventions are possible and could unleash significant benefits in the form of pro-poor agricultural growth. Many of the associated public investments could also more than pay for themselves in terms of their economic and social returns (Fan et al., 2000, 2004).

The alternative is a dramatic increase in rural poverty and waves of migrants to urban areas that could overwhelm available job opportunities, urban infrastructure and support services.

Support to agriculture and small farms would require concerted efforts to integrate various needs and approaches into holistic packages of intervention. For example, if small farms are to exploit growth opportunities in food staples, then they not only need access to markets but also access to key inputs and technologies to increase their productivity and to meet required quality standards. Interventions that seek to help farm households as farmers also need to be integrated with interventions that seek to enhance their nonfarm employment opportunities or to protect them in emergency situations. Different interventions can have positive cross-impacts on each other.

It follows therefore that realization of rural transformation along the context of the country's development vision 2025 largely depends on how and at what speed the agricultural sector and mindset by the rural society as well as the prevailing institutional framework will be changed towards the desired pattern.

#### **REFERENCES**

- Kreangkrai Chaimuangdee (et al.), Director. The Life Skills Development Foundation. Northern Thailand, Chiang Mai, "Improving education practices and strengthening mult-sectoral efforts to enhance the responses to HIV/AIDS"
- 2. Owen Wrigley, HIV/AIDS Consultant, Yangon, Myanmar, "Preventive education and multi-sectoral partnerships in rural areas: an introduction"
- 3. Samuel T. Mancebo, President Asia Pacific Association of Educators in Agriculture and Environment (APEAN), "Responding to the transformation of rural labor markets: implications for education and training."
- 4. Dato' Sofian Mohd. Salleh, Director, Human Resource Development Division, Department of Agriculture, Malaysia "Community and farmer participation for agricultural development in Malaysia -some issues on education"
- 5. Santiago M. Yabut Jr., Deputy Director General, Technical Education and Skills Development Authority (TESDA), Philippines, "Re-engineering institutions of higher and vocational education: approaches to institutional change."
- 6. Safuan Tingal, Director, Centre for Agricultural Education Development Agency for Agriculture Human Resources Development, Ministry of Agriculture, Indonesia, "Re-engineering institutions of higher and vocational education to enhance development of agribusiness and agricultural human resources Indonesian case study."
- 7. Liu Jiantong, Director, Comprehensive Division, Department of Vocational and Adult Education, Ministry of Education, PR China, "Servicing rural development: an important function of education China's experiences."
- 8. David Atchoarena, HEP and Lavinia Gasperini FAO, "Education for rural development: main findings of the FAO/IIEP study"
- Ouam Sengchandavong, Deputy Director-General, Department of Planning and Cooperation, Ministry of Education, Lao PDR, "Education for Rural Development in Asia: Experiences and policy lessons: EFA: Rural challenges in Lao PD
- 10. FAO/UNESCO Seminar Bangkok, Thailand, 5-7 November 2002, "Education for rural development in Asia: experiences and policy lessons," Published by: International Institute for Educational Planning/UNESCO 7 9 rue Eugene-Delacroix, 751 16 Paris Working document © UNESCO 2002.
- Peter Hazell, "Transformations in agriculture and their implications for rural Development," in electronic Journal of Agricultural and Development Economics, (ESA) FA Vol. 4, No. 1, 2007, pp. 47-65
- 12. Diao, X., and P. Hazell. 2004. *Exploring Market Opportunities for African Smallholders*. 2020, Africa Conference Brief No. 6, International Food Policy Research Institute, Washington, D.C.

- 13. Diao, X., P. Hazell, D. Resnick and J. Thurlow. 2006. The Role of Agriculture in Development; Implications for Sub-Saharan Africa. Discussion Paper No. 29, Development Strategy and Governance Division, International Food Policy Research Institute, Washington D.C.
- 14. Dorward, A., S. Fan, J. Kydd, H. Lofgren, J. Morrison, C. Poulton, N. Rao, L. Smith, H. Tchale, S. Thorat, I. Urey, and P. Wobst. 2004. "Institutions and Economic Policies for Pro-poor Agricultural Growth." Discussion Paper No. 15, Development Strategy and Governance Division, International Food Policy Research Institute, Washington D.C.
- 15. Dorward, A., J. Kydd, and C. Poulton. 1998. *Smallholder Cash Crop Production under Market Liberalization: A New Institutional Economics Perspective*. Wallingford and New York: CAB International.
- 16. Ellis, F., and N. Harris. 2004. "New Thinking about Urban and Rural Development." Keynote paper prepared for the U.K. Department for International Development Sustainable Development Retreat.
- 17. Fan, Shenggen, Peter Hazell and Sukhadeo Thorat. 2000. Government Spending, Growth and Poverty in Rural India. *American Journal of Agricultural Economics*, 82(4): 1038-1051.
- 18. Fan, S., Zhang, X., and Rao, N. 2004. "Public Expenditure, Growth and Poverty Reduction in Rural Uganda." Development Strategy and Governance Discussion Paper No.4, IFPRI: Washington, DC.
- 19. Haggblade, S., J. Hammer, and P. Hazell. 1991. "Modeling Agricultural Growth Multipliers." *American Journal of Agricultural Economics* 73 (2): 361-74.
- 20. Hazell, P. B. R. (1992). "The Appropriate Role of Agricultural Insurance in Developing Countries." Journal of International Development 4: 567-581. Hazell, P. B. R., C. Pomareda and A. Valdes. (1986). Crop Insurance for Agricultural Development: Issues and Experience. Baltimore: The Johns Hopkins University Press.
- 21. Kherallah, M., C. Delgado, E. Gabre-Madhin, N. Minot, and M. Johnson. 2002. *Reforming Agricultural Markets in Africa*. Baltimore: Johns Hopkins University Press.
- Kindness, H. and A. Gordon (2002) "Agricultural Marketing in Developing Countries: The Role of NGOs and CBOs". *Policy series No.13*, Social and Economic Development Department, Natural Resources Institute. University of Greenwich, London, UK.
- 23. Lipton, M. 2004. "Crop Science, Poverty, and the Family in a Globalising World." Plenary Session, Brisbane International Crop Science Conference. Maxwell, S., I. Urey, and C. Ashley. 2001. "Emerging Issues in Rural Development: An Issues Paper." Overseas Development Institute, London.
- 24. Rosegrant, M., S. Cline, L. Weibo, B. Sulser, and R. Valmonte-Santos. 2005. Africa Facing Alternative Futures: Prospects for and Paths to Food Security in Africa, 2020 Africa Conference Brief 17, IFPRI, Washington DC.

- 25. Reardon, T., C.P. Timmer, C. Barrett, and J. Berdegue. 2003. "The Rise of Supermarkets in Africa, Asia, and Latin America." *American Journal of Agricultural Economics* 85 (5): 114046.
- 26. Skees, J., P. Hazell, and M. Miranda. (1999). "New Approaches to Crop-Yield Insurance in Developing Countries." EPTD Discussion Paper 55, IFPRI, Washington DC. Walker, T., and N. S. Jodha. 1986. "How small farm households adapt to risk". In Hazell, P., Pomareda, C., and Valdes, A. (eds.), Crop Insurance for Agricultural Development: Issues and Experience. Baltimore: The Johns Hopkins University Press.
- 27. World Bank. 2002. "World Development Report 2002". Washington DC.
- 28. Balschweid, M.A.; Thompson, G.W. 2000. "Agriculture and science integration: a pre-service prescription for contextual learning". In: *Journal of Agricultural Education*, *41*(2), pp. 36-45.
- 29. Campbell, A., 1994. *Landcare: communities shaping the land and the future.* St Leonards, New South Wales: Allen and Unwin.
- 30. Catacutan, D.C; Colonia, G. 2000. "Landcare in school: the Lantapan experience. *Farmers of the Future Workshop*, 2-3 October 2000, Nairobi, Kenya. Nairobi: ICRAF.
- 31. Catacutan, D.C; Mercado, R.M. 2001. "Technical innovations and institution-building for sustainable upland development: Landcare in the Philippines". *International Conference on Sustaining Upland Development in Southeast Asia: Issues, Tools and Institutions for Local Natural Resource Management,* 27-30 May 2001, ACCEED, Makati City, Metro Manila, Philippines.
- 32. CGIAR. 2002. "The Philippines and CGIAR: partnership in action". *Consultative Group on International Agricultural Research (CGIAR), Annual General Meeting 2002*, 28 October 2002 1 November 2002, Makati City, Metro Manila, Philippines.
- 33. Coxhead, I.; Rola, A.; Kim, K. 2001. "Philippine development strategies, price policies and national markets: What are the linkages in Lantapan?". In: I. Coxhead and G. Buenavista (Eds.), "Seeking sustainability: challenges of agricultural development and environmental management in n PkiJinnivtf winturshe>rt "Tn« PiannsLT acmnn Philirvninp.s
- 34. Duit, 1991. "On the role of analogies and metaphors in learning science". In: *Science Education, 75,* pp. 649-672.
- 35. Garrity, D.P. *et al.* 1993. "The Philippines: Agricultural sustainability and the environment in the humid tropics". National Academy, Washington, DC, USA, pp. 549-624.
- Garrity, D.P. 2000. "The Farmer-Driven Landcare Movement: an institutional innovation with implications for extension and research". *International Landcare 2000 Conference and Exhibition*, 2-5 March 2000, Melbourne Conventional Center, Melbourne, Australia.
- 37. Garrity, D.P. et al. 2002. "Landcare on the poverty-protection interface in an Asian Watershed". Conservation Ecology, 6 (1): 12.

- 38. ICRAF, 1997. Annual report for 1996. Nairobi: *International Centre for Research in Agroforestry* (ICRAF). Koffa, S.N.; Garrity, D.P. 2001. "Grassroots empowerment and sustainability in the management of critical natural resources: the agroforestry Tree Seed Association of Lantapan". In: I. Coxhead and G. Buenavista (Eds.), "Seeking sustainability: challenges of agricultural development and environmental management in a Philippine watershed." Los Baiios, Laguna, Philippines.
- Mercado, A.R. et al. 2000. "Landcare in schools: building awareness and capacities of Farmers of the Future towards improving natural resource management". Farmers of the Future Workshop, 2-3 October 2000, Nairobi, Kenya. International Centre for Research in Agroforestry (ICRAF), Nairobi, Kenya.
- 40. Nelson, R.A. *et al.* 1998. "Erosion/Productivity modelling of maize farming in the Philippine uplands Part 3". In: *Economic Analysis of Alternative Farming Methods. Agricultural Systems, 58* (2), pp. 165-183.
- 41. Paunlagui, M.M.; Suminguit, V. 2001. "Demographic development of Lantapan." In: I. Coxhead and G. Buenavista (Eds.), "Seeking sustainability: challenges of agricultural development and environmental management in a Philippine watershed". Los Banos,
- 42. Porter, M.E. 1990. "The competitive advantage of Nations". London: Macmillan.
- 43. Rola, A.C.; Coxhead, I. 2001. "Soil conservation decisions and non-farm economic conditions: a study of the rural labour market in the Philippine Uplands of Bukidnon". In: I. Coxhead and G. Buenavista (Eds.), "Seeking sustainability: challenges of agricultural development and environmental management hi a Philippine watershed." Los Banos, Laguna, Philippines.
- 44. Suminguit, V.J., 1998. *Census of occupants of the Mt. Kitanglad Range Nature Park.* Cagayan de Oro City, Philippines: Research Institute for Mindanao Culture.
- 45. Taylor, P.; Mulhall, A. 1997. Contextualising teaching and learning in rural primary schools: using agricultural experience. London, UK: Department for International Development (DFID), Education Division.
- 46. Taylor, P.; Mulhall, A. 2001. "Linking learning environments through agricultural experience enhancing the learning process in rural primary schools". In: *International Journal of Educational Development 21*, pp. 135-148.
- 47. Wiggins, S.; Proctor, S. 1999. "Migration and the rural non-farm economy, literature review". Monograph. Reading, UK: University of Reading.
- 48. URT 2003. Rural development Policy.
- 49. URT 2002 Rural development Policy
- 50. URT. Education Sector Development Programme (ESDP).
- 51. Ministry of Health and Social Welfare [URT] (MoHSW). (2007). Primary Health Services
- 52. Development Programme, 2007 2017.

- 53. NBS. (2007a). Revised National Accounts for Tanzania Mainland, Base Year 2001. Dar es Salaam, July 2007.
- 54. URT, PMO-RALG, Local Government Reform Programme (LGRP). (2006). Report on the Bill on the Local Government Laws (Miscellaneous Amendments) Act 2006. Report prepared by Prof. I.Shivji, September 2006.
- 55. URT, PMO-RALG. (2007a). Local *Government Support Programme Mid-Term Review*. Report prepared by Dege Consult.
- 56. URT, PMO-RALG. (2007b). *Evaluation of Local Government Reform Programme*. Report prepared by Dege Consult.
- 57. URT, PMO-RALG & MoF. (2006a). Development of a Strategic Framework for the Financing of Local Governments in Tanzania. June 2006.
- 58. REPOA, Research and Analysis Working Group [URT] (RAWG). (2003). *Poverty and Human Development Report 2003*. Dar es Salaam: Mkuki na Nyota Publishers.
- 59. REPOA, RAWG. (2004). Vulnerability and resilience to poverty in Tanzania: Causes, consequences and policy implications. 2002/3 Tanzania Participatory Poverty Assessment Main Report. Dar es Salaam: Mkuki na Nyota Publishers.
  - REPOA, RAWG. (2005). *Poverty and Human Development Report 2005*. Dar es Salaam: Mkuki na Nyota Publishers.
- 60. REPOA, RAWG. (2007). Poverty and Human Development Report 2007. Dar es Salaam.
- 61. Tideland, P. & Msami, J. (forthcoming). Local government reforms and their impact on local governance and service delivery: Empirical evidence of trends in Tanzania Mainland 2000 2008.