Trapped in decline? Reassessing agrarian change and economic diversification on the Uluguru Mountains, Tanzania

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ABSTRACT

Analysing the dynamics of agrarian change and economic diversification is central for understanding the current transformation of African countries under market reforms. In this article, I examine the complex changes taking place in the densely-populated Uluguru Mountains of Tanzania. I also place the Uluguru case in the context of wider debates dealing with market liberalisation, economic diversification, poverty, and inequality. I argue that rural households are not ‘trapped in decline’ on the Uluguru Mountains, as depicted in previous literature. Under the harsh realities of farming in this area, households can improve their livelihoods in three ways—short of migrating and in addition to relying on remittances. These are to expand land cultivated in the surrounding plains, to experiment with alternative farming systems, and to increase non-farm income. Uluguru households are doing all of the above, with a certain degree of success. I suggest that economic diversification can play an important role in improving rural livelihoods in Tanzania and beyond. However, I also argue that this process is more likely to take place in locations with well-established economic ties and relatively good access to major markets.

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INTRODUCTION

The political economy of agrarian change and economic diversification in Africa has been the subject of intense debate and attentive scrutiny from various disciplines. This dialogue has become especially rich since policy reforms started to be implemented on the continent during the 1980s and 1990s. Economic reforms have dramatically transformed market structures, sets of incentives, and ideas about how governments and markets interact. Therefore, analysing the dynamics of changing rural livelihoods and the processes regulating access to capital, land, labour, and markets is central for understanding the current socio-economic transformation of the continent. This article discusses the nature and the consequences of agrarian change and economic diversification on the Uluguru Mountains of Tanzania under market liberalisation, and places the findings of the Uluguru case in the context of wider debates.

In the last decade, the topic of agrarian change on the Uluguru Mountains has drawn several contributions. On one side, van Donge (1992a) emphasises social and actor-oriented determinants of agrarian change, while playing down the importance of overall processes of economic restructuring as marginal. On the other side, Hadjivayannis (1993) conceives market penetration, the subordination of Uluguru society to the external world, and commoditisation as the factors shaping agrarian change, leaving farmers as passive recipients of structural change. Both approaches end up portraying a pessimistic picture of agrarian change on the Uluguru Mountains, either because of a process of agricultural involution (van Donge 1992a: 90, drawing from Geerts 1963), or because of a vicious cycle of subordination to market forces which undermines the reproduction of the peasantry (Hadjivayannis 1993). In both cases, population pressure, land scarcity, and the crisis of agriculture loom dauntingly over the future of rural
livelihoods. Other contributions are more optimistic on the future of farming on the Uluguru Mountains. Masawe (1992) and Paul (1988) and deal with specific technical, agronomic, and infrastructural factors. Lassalle and Mattee (1995) suggest that rural development in the area can be stimulated through participatory approaches and organisational improvements. However, none of these works has examined the impact of market liberalisation on Uluguru society.

In this article, I reassess the widely-accepted ideas of ‘crisis’ and ‘decline’ of agriculture and rural livelihoods in the Uluguru Mountains by examining recent developments in farming systems, agricultural marketing, migration, and non-farm activities in relation to market liberalisation. I argue that the impact of economic reforms on rural livelihoods has been relatively positive in the area, at least in Langali village — where the rise in non-farm incomes has compensated for the general fall in farm incomes. However, I also suggest, in sight of my findings from other areas of Tanzania and of evidence emerging in the literature, that rural households in more remote areas of the country have not succeeded in improving their livelihoods. Furthermore, my data indicates that income distribution appears to have become more unequal during market liberalisation, mainly because of processes of accumulation in the agricultural sector; non-farm activities seem to have played an equalising effect.

In the next section, I review the main features of agrarian change on the Uluguru Mountains during the last century. I follow this with an analysis of the various agricultural marketing regimes that operated in the area since the 1950s. In section four, I examine the recent evolution of local farming and land tenure systems. Then I discuss migration flows, economic diversification processes, and changes in selected indicators of quality of life. In the final section, I draw from other relevant literature on Tanzania to assess the wider significance of the
Uluguru case both geographically and in the context of the debates on the impact of market liberalisation on economic diversification, inequality and poverty. This is followed by a brief appendix on methodology.

A BRIEF HISTORY OF AGRARIAN CHANGE ON THE ULUGURU MOUNTAINS

According to Paul (1988: 4) and Young & Fosbrooke (1960: 21) the Uluguru Mountains were settled only at the end of the 16th century. At the end of the 19th century, the main farming systems in Mgeta were substantially the same as they had been three hundred years before. These systems were based on the cultivation of maize, sorghum, beans and (at lower altitudes) bananas, combined with some rearing of sheep, goats and poultry. Land fertility was maintained by a bush fallow following three years of cultivation; by the mid-19th century the fallow had become shorter due to population increase and the resulting pressure on cultivable land (Paul 1988: 54-7). However, the literature suggests that, before colonialism, the Waluguru had been self-sufficient in food production.

The Germans colonised the area in the 1890s in order to exploit its mineral resources (especially mica). Soon thereafter, a few German settlers moved to Mgeta. Some of them started to cultivate coffee, but coffee farming remained limited because the rough terrain inhibited the development of large plantations. The Waluguru were forced to work as labourers in mines and plantations. Subsequently, the traditional labour system based on group labour in rotation and on beer parties started to break down (Paul 1988: 66-70). In 1907, the railway reached Morogoro town, thus opening new commercial agricultural possibilities in the region. New settlers moved to the plains close to town and established sisal plantations. The settlers in
the plains created new demand for horticultural products. As a result, Mgeta settlers started to cultivate vegetables for commercial purposes (Hadjivayannis 1993: 103).

With the onset of British colonialism, German settlers were replaced by British and South African settlers who obtained a monopoly on horticultural production. Waluguru farmers had to restrict their agricultural production to maize and beans. This avoided repeated famines, but also discouraged the production of specialised crops for sale such as coffee. This situation was compounded by the policy of the British colonial government which—until the 1950s—encouraged each farmer to grow enough food to meet the needs of his/her family and to plant a certain acreage of a famine reserve crop such as cassava (Young & Fosbrooke 1960: 30-1).

However, increasing sales of maize and beans to African workers in the sisal plantations started to tilt this delicate balance. Also, increasing population pressure on land was leading farmers to shorten the fallow periods and to open forest reserves and steep land for cultivation. This evolution led to higher land degradation and lower yields. Therefore, food self-sufficiency started to decline.

After World War II, in order to address the problem of land degradation on the Uluguru Mountains, the British colonial government decided to promote the use of bench terraces and other forms of environmental conservation in the area. For these purposes, the government created the Uluguru Land Usage Scheme (ULUS). Under ULUS, trash burning and fires for field clearing were forbidden, and bench terracing became mandatory. Local people were forced to work on terrace building three days per week (Maack 1996: 153-8; Young & Fosbrooke 1960: 141). On the eastern side of the mountains resistance to the project spread quickly, leading to the riots of 1955. On the western side of the mountains, where Mgeta Division is located, the use of bench terracing was easily adopted.
Due to the spread of new farming techniques and the departure of white settlers in the 1950s, Mgeta experienced what Paul (1988: 61-4) terms ‘an agrarian revolution’. In thirty years, Mgeta farmers passed from a slash and burn type of agriculture to intensive vegetable cultivation. In the 1950s, they started cultivating cabbage, peas, Irish potatoes, tomatoes and—at higher altitudes—temperate fruit trees. In the 1950s and 1960s, they adopted irrigation and they integrated pig rearing in the farming system for the provision of manure. In the 1970s, they started to use some chemical fertiliser and agro-chemicals. According to Hadjivayannis (1993: 284-6), by the early 1990s, almost all households had started cultivating vegetable plots.

THE EVOLUTION OF AGRICULTURAL MARKETING

Before their departure in 1952, white settlers had controlled the agricultural trade between Mgeta, the Morogoro plains and Dar es Salaam. In addition to using their own vehicles, they also hired the services of Asian transporters to insure a quick delivery of their production to Dar es Salaam. After the departure of white settlers, and with the development of smallholder horticultural production, Asian businesspeople continued to be involved in crop trading (Paul 1988: 70-1).

In 1952, under the influence of ULUS, a cooperative was established with the support of the colonial government and with the main purpose of organising vegetable sales. This cooperative was controlled by wealthier farmers, who were also small-scale traders (Hadjivayannis 1993: 128). After purchasing a lorry and opening a warehouse in Dar es Salaam, the cooperative started to compete directly with Asian businesspeople—who had previously held the monopoly on transport (Ibid.: 130). This situation continued in the period between independence (1961) and the ‘Arusha Declaration’ (1967), after which Asian businesspeople started to leave the
country. In 1967, the ruling party Tanganyika African National Union (TANU) also published ‘Socialism and Rural Development’, a document spelling out the specific role of cooperatives in implementing the policy of socialism (McHenry 1994: 108). TANU also indicated that the cooperatives needed to be freed from the perceived domination of petty capitalist farmers, and that they were to evolve into a new form of cooperation, the *Ujamaa* village.

In the transition period between 1967 and the formal abolition of cooperatives in 1975/76, government officials progressively replaced wealthy farmers in positions of authority within cooperatives. According to Hadjivayannis (1993: 136), between 1967 and 1970, the Mgeta cooperative managed to purchase most of the crops marketed in the area. Wealthier growers/traders were been marginalised or ejected from the cooperative, and multiplied their acts of sabotage to make the transport of crops by the increasingly state-controlled cooperative more dangerous and costly. These acts led, in 1970, to a strike organised by farmers and private traders. Farmers refused to sell their products to the cooperative due to the low prices they were receiving for their crops. Only the intervention of the police brought the situation to normal, but these events largely undermined the political power of the cooperative. As a result, private traders started to regain some control of crop trading (Ibid.: 136-7).

In 1975, the Villages and *Ujamaa* Villages Act banned the existing primary cooperative societies from operating within the jurisdiction of their own villages. The villages acted as multi-purpose cooperatives and took formal control of many local-level economic activities. Through loans from the banks, the villages purchased vehicles and opened restaurants and shops. Village committees were formed to administer the vehicles, but embezzlement, poor administration, and lack of spare parts soon caused serious problems. Crops were collected by the village, and then sold to the Crop Marketing Authorities. However, the government did not
formally regulate vegetable trading, and private operators retained the control of the market because of their better knowledge of trade networks and their local social status (Paul 1988).

In the 1970s and early 1980s, maize, beans and coffee trading remained officially confined to state-controlled marketing institutions, except for food crop sales at the local market. Long-distance trade of these crops was officially banned or limited to low quantities. However, state-controlled marketing institutions faced fierce competition from parallel market traders (especially in the case of beans), who operated mostly at night and with the conniving of government officials. Also, during this time marketing of local maize remained feeble because production was not great enough for self-sufficiency.

From the mid-1980s, with food market liberalisation, the de facto dominance of private traders in the beans market was legalised. The local state-controlled cooperative, which was re-established in the wake of the Cooperative Societies Act of 1982, decided to focus on coffee purchases. Since the early 1990, however, the financial troubles of the Morogoro Region Cooperative Union (MRCU) caused a major drop in coffee procurement. Although coffee purchasing at the farmer’s level was liberalised in 1993, no private trader requested a license to operate in Morogoro until the 1995/96 season. Even at that time, however, the licensed company did not buy any coffee. The union bought a mere 10 tons, with most of the production of Mgeta Division being purchased by an unlicensed operator. Ironically, the accused operator was a parastatal company that claimed to have received permission to buy coffee from the Ministry of Agriculture. The real losers in this story are Mgeta’s coffee farmers, who are abandoning coffee cultivation.

This brief history of agricultural marketing in Mgeta suggests that public intervention has not benefited the bulk of local farming households. However, unregulated vegetable trading and the
apparently thriving parallel market provided farmers with alternative marketing channels. Currently, an independent cooperative called *Twikinde Malimbichi* (‘let’s cooperate’ in Kiluguru) is attempting to fill the gap left by the state-controlled cooperative. *Twikinde Malimbichi*, set up through the donor-supported Uluguru Mountains Agricultural Development Project (UMADEP), operates mainly in Tchenzema Ward (Upper Mgeta) (see Lassalle & Mattee 1995). In 1996, the cooperative owned a warehouse, an agricultural inputs shop, a market building, and a lorry for transporting vegetables, beans and temperate fruit to Dar es Salaam. The project is also involved in extension work, in organising savings and credit societies, and in improving the Langali-Nyandira road.

**RECENT CHANGES IN FARMING SYSTEMS AND LAND TENURE**

Currently, the main farming systems in Mgeta are characterised by a combination of ‘traditional’ maize, beans and banana cultivation, and ‘modern’ intensive horticulture (and temperate fruit tree cultivation at higher altitudes). Maize is still the main food staple for the Waluguru. However, because of the decline in maize cultivation, most households now have to purchase it at some point during the agricultural year. The use of fertiliser and/or manure on maize/beans plots used to be rare. Soil degradation and the resulting need for increasing the use of fertiliser is well-recognised by farmers, who lament that ‘the land has become tired’ (*ardhi imechoka*). The results of my Farming Household Survey (FHS) suggest that in Langali village over half (53 per cent) of the interviewed farming households applied some chemical fertiliser on maize in 1986/87. By 1990/91, the share had increased to 74 per cent. In 1994/95, even after a sharp increase of fertiliser prices, 75 per cent of farming households still applied it.
Hiring farm labour is a common practice in Langali village, especially amongst wealthier farmers. According to my FHS data, 85 per cent of the interviewed households employed some form of hired farm labour in 1994/95. Labourers are mostly employed for land preparation, and for harvesting and transporting cabbage and Irish potatoes. Labourers are usually local farmers who seek cash to buy inputs for their own cabbage and potato cultivation. Few farmers still organise exchange labour groups, but beer labour parties have completely disappeared.

Irrigation is commonly practised, but almost exclusively for horticulture.

Pig rearing is an important aspect of local farming systems. It is a relatively new practice in the area, since it was adopted only in the 1950s together with horticulture. According to Paul (1988: 32), in the late 1980s the expenditure on maize bran for feed for one year was higher than the price of sale of a pig. This was because adult pigs were usually sold just before the start of cabbage cultivation, when many farmers needed cash to purchase agricultural inputs, and in some cases to hire labour. Therefore, pig rearing was mainly carried out for manure production and savings mobilisation, not for commercial purposes (Hadjivayannis 1993: 247-8). However, the situation seems to have changed in the 1990s. In 1996, local informants claimed that pig sales have become a thriving business and that they take place throughout the year. Traders from Dar es Salaam started to hire local agents in 1994. Because of the new market interest, pig rearing has become a profitable venture. Another instance of rural households’ flexibility in adapting their farming systems to new environmental and market factors is the partial switch from cabbage to potato cultivation. In the 1990s, cabbage yields declined substantially because of a fungal disease. At the same time, the price of insecticide increased substantially. By cultivating potatoes instead of cabbage, farmers have been able to save on input application.
One of the most important factors shaping the main farming systems in Mgeta is land scarcity. Land among the Waluguru was traditionally inherited through the female line and held by the matrilineal clan (van Donge 1993b: 198).\textsuperscript{11} However, the matrilineal system had already started to crumble at the beginning of German colonialism (Paul 1988). The subsequent trend towards individualisation, market integration and the adoption of Catholicism in the area led to the decline of the matrilineal and clan system to the advantage of a patrilineal and familial system based on the European tradition. Therefore, the contemporary inheritance system in Mgeta is a hybrid of ‘traditional’ and ‘modern’ legal rules, which has allowed ‘the less scrupulous to get access to numerous plots by using one or the other legal system’ (Ibid.: 66-7). In general, women still continue to get access to land through the matrilineal system, while men get access to land through purchase (Hadjivayannis 1993: 198). As a result of population pressure on land and the hybrid nature of rules governing land tenure, land disputes are common (van Donge 1993a; 1993b).

In addition to the long-established coping strategies aimed at easing population pressure on land (migration and intensification of agriculture), villagers have been opening new land on the mountains in an area far away from the village. In this area, called Mlima Kidiwa, there is still land available, and plots are generally larger than in areas closer to the village. Many households have also been cultivating paddy plots in the surrounding plains since the 1950s. Finally, farmers have reported that commercial land transactions (both purchases and renting) have become increasingly important.\textsuperscript{12}

In this section, I have argued that farmers on the Uluguru Mountains have been adapting and transforming their farming practices to new circumstances. Some of these changes suggest a process of commoditisation of agriculture—such as the increasing importance of vegetable
cultivation, the recent evolution of pig rearing, the substitution of hired labour for exchange labour, and the commercialisation of land transactions. Other changes, however, suggest that food security is still a key factor influencing planting decisions and input allocations. Although market liberalisation has brought higher input prices, farming households are showing a degree of flexibility and innovation—demonstrated, for example, by the current switch from cabbage to potato cultivation. However, wealthier farmers are more likely to have benefited from these changes, as increasing amounts of capital are needed to ensure food security, get access to land, hire labourers, and engage in commercialised pig rearing. Poorer farmers, especially those relying exclusively on agriculture for their livelihoods, are more likely to have become marginalised. In the next section, I turn to the effects of migration and economic diversification in shaping rural livelihoods on the Uluguru Mountains.

MIGRATION AND ECONOMIC DIVERSIFICATION

Migration from the Uluguru Mountains is a commonly cited phenomenon among scholars, although there is no agreement on its extent, characteristics or historical pattern. According to Young & Fosbrooke’s (1960: 36-7) analysis of the 1957 population census, there was not much migration of Waluguru outside of Morogoro District at that time. Van Donge (1992a: 77-9), on the contrary, claims that the 1957 census shows a sizeable migration of men from the area, which is indicated by a low male-to-female ratio in Mgeta.

What these and other scholars agree on is that by the 1950s there was already serious population pressure on land in the mountains, and that many Waluguru had started moving down to the lower hills and the surrounding plains. According to Van Donge (1992a: 77-84), the historical trend of male migration from Mgeta Division continued in the 1970s and 1980s.
While this interpretation may correctly depict what was happening in Mgeta until the early 1980s, I argue the situation had changed dramatically by the end of the decade. The 1988 census indicates that relatively more men are remaining on the Uluguru Mountains than in the past, particularly within the younger generations. This trend is likely to be linked with the emergence of new income-generating opportunities in the area following market liberalisation.

The results of my FHS show that the proportion of farming households involved in non-farm activities has grown from 47 per cent in 1986/87 to 95 per cent in 1994/95, with brewing, cooked food sales and small-retailing businesses attracting an increasing number of farming households.

TABLE 1 ABOUT HERE

The FHS also shows that non-farm incomes in Langali increased by 50 per cent in real terms between 1986/87 and 1990/91, and then almost doubled between 1990/91 and 1994/95 (see Table 1). The proportion of rural income provided by non-farm activities increased from 30 per cent in 1986/87 to 61 per cent in 1994/85. Furthermore, the increase in non-farm income contributed to a 40 per cent increase in total real income in Langali between 1986/87 and 1990/91, and then allowed real income to remain stable between 1990/91 and 1994/95 despite the sharp drop of farm income due to lower cabbage yields and prices, and higher input prices.

The process of economic diversification in Langali has been facilitated by the already established strong links with Dar es Salaam through male Waluguru vegetable traders (see van Donge 1992b). These links have provided an advantage especially in the early stages of liberalisation. As a result, the number of shops and tea-rooms has increased dramatically, and the local market has become a venue for carrying out various small-scale businesses requiring...
different levels of capital investment. Non-farm activities are not necessarily carried out year-round, but do provide an element of flexibility and diversification that allows households to better distribute risk (Seppälä 1996; 1998). Interviewees have referred to an additional motivation behind starting a micro-enterprise as ‘kuzungusha pesa’. This means ‘to keep the money circulating’, even though a profit may not be realised. Because the closest bank is not easily accessible (it is located in Morogoro town), micro-enterprises in Mgeta also serve as key strategies for savings mobilisation—in addition to livestock keeping.

The results of my FHS also indicate that increasing non-farm income may have facilitated the improvement of some key indicators of quality of life in Langali. Farming households reported having cement floors in their houses in 40 per cent of the cases in 1995, up from 29 per cent who recalled having them in 1987. These households also indicated that they had plastered internal walls in 30 per cent of houses in 1995, up from only six per cent in 1987. Metal sheets were reported being the house roofing material in 70 per cent of cases in 1995, against 59 per cent of cases in 1987. Finally, between 1987 and 1995, the monetary value of assets held by farming households increased by almost 23 per cent in real terms.

One could argue that remittances sent by relatives who have migrated to urban areas have driven the improvements in non-farm income, assets, and housing characteristics in Langali. Although remittances have been historically important in the local economy, the FHS results suggest that their role may be changing. Remittances as a proportion of non-farm income increased from nine per cent in 1986/87 to 26 per cent in 1990/91, but they subsequently declined to 18 per cent in 1994/95. This suggests that in the late 1980s remittances may have played the role of engine in the local economy, but also that the further growth witnessed in the first half of the 1990s was likely to be more locally-generated than in the past.
In sum, even though it is not clear whether migration has increased in recent times in Langali,\textsuperscript{19} census data suggest that a higher proportion of young men have remained in the village in the 1980s—as liberalisation progressed—than in the 1970s. My survey results show that in the late 1980s and early 1990s non-farm activities have provided an increasing proportion of total incomes and that they have allowed a majority of farming households to mobilise savings, hedge risk, and improve their quality of life. They also indicate that in the 1990s the local economy has become less dependent on remittances from relatives living in urban areas. However, as we will see in the next section, these observations do not necessarily imply that all villages in Mgeta have experienced the same results, nor that the Uluguru case is representative of all Tanzania.

THE ULUGURU CASE IN A WIDER PERSPECTIVE

The case of the Uluguru Mountains contributes to a number of key debates on agrarian change and economic diversification under market liberalisation. In this section, I focus on the discussions concerned with economic diversification, inequality and poverty. I first examine the relevant literature on Tanzania;\textsuperscript{20} then I briefly assess more general arguments on the role of economic diversification in improving rural livelihoods.

A common feature emerging from the Tanzania literature, and confirmed by the Uluguru case study, is that market reforms have facilitated an increasing diversification into non-farm activities in rural areas of the country.\textsuperscript{21} On the contrary, there is wide disagreement on the impact of economic diversification on income distribution. National-level analyses that are based on the examination of the Gini index have not been able to provide clear indications on changing inequality in Tanzania because of methodological differences between the surveys used.
in their comparisons.\textsuperscript{22} One possible interpretation of the results of these studies is that income
distribution became more unequal between the mid-1980s and the early 1990s, and then more
equal during the rest of the 1990s. A more cautious claim is that not much has changed in the
level of inequality since the mid-1980s (Havnevik \& Hårsmar 1999), and that no reliable claims
on the effect of diversification on income inequality can be generalised at the national level.
Nevertheless, case studies on particular locations can provide some additional indications.

In his case study of Lindi District, Seppälä (1998a; 1998b) argues that di-
versification has
exacerbated village-level income distribution because the most profitable enterprises are usually
the ones with higher capital needs. Therefore, he concludes (along with Lugalla 1995) that
diversification in non-farm activities has led to increased social polarisation (Seppälä 1998a:
574). My survey data on Morogoro and Songea Rural Districts confirms that the distribution of
rural incomes (intended as the sum of net farm and non-farm incomes) has become more unequal
as market liberalisa-
tion progressed. However, this has been caused by a rising inequality of farm
income distribution, not by the process of economic diversification as such.\textsuperscript{23} In fact, in 1994/95
rural incomes were more equally distributed than farm incomes in the two districts, meaning that
non-farm activities played a positive role in rural income distribution. This equalising effect,
which I also found in the Uluguru case, is likely to be linked to the growing importance of
income raised by non-farm activities that require relatively low levels of capital investment—
such as brewing,\textsuperscript{24} cooking food for sale, tapping palm wine, and selling food at the retail level.

A second point of contention in the Tanzania literature is the effect of economic
diversification on income levels and poverty.\textsuperscript{25} Even in this case, there is no clear agreement on
whether poverty has been alleviated or not during economic reforms. Even less is known about
the impact of non-farm activities on rural incomes and poverty. Sarris \& van den Brink (1993),
argue that there has not been much change in rural incomes and welfare during the first years of economic reform (between 1984-86 and 1987-89). On the contrary, the World Bank’s *Poverty Profile of Tanzania* (World Bank 1993) and Sarris & Tinios (1995) suggest that rural incomes have increased markedly between 1976/77 and 1991, and that poverty levels have decreased. A 1996 World Bank study, using recently released data from other two surveys, reports that the incidence of rural poverty based on expenditures increased between 1993 and 1995, resulting in a level slightly lower than in 1991 (World Bank 1996: 67). As concerns perceptions of poverty, the results of the 1995 Rural Participatory Poverty Assessment indicate that in rural areas a majority of people perceive themselves to be better off than in the mid-1980s. They also perceive that their condition improved in the second half of the 1980s, but then deteriorated in the 1990s. These results, however, are contradicted by a 1997 TADGREG study on social service delivery study, which shows that a majority of rural interviewees perceive themselves to be better off than in 1987 (TADREG 1998; see also Havnevik & Hårsmar 1999: 16).

The contradictory evidence presented so far cannot tell us whether rural poverty has become more or less severe in Tanzania in the 1990s, nor can it tell us about the specific role of non-farm activities in changing poverty levels. However, my survey can provide some further information in relation to Morogoro and Songea Rural Districts. First, it suggests that higher participation in non-farm activities (which was reported in both districts) does not necessarily translate into higher non-farm income. On the one hand, in Morogoro the level of non-farm income per household more than doubled between 1986/87 and 1994/95, and the proportion of rural incomes coming from non-farm activities increased from 41 to 66 per cent. On the other hand, in Songea non-farm incomes decreased steadily between 1986/87 and 1994/95, both in real terms and as proportion of total rural incomes (from 62 per cent in 1986/87 to 52 per cent in 1994/95).
Second, my research indicates that higher rural incomes were achieved only in locations where non-farm incomes increased. Farm incomes seem to have decreased across the board due to a combination of higher farm expenditures (especially on inputs and hired labour) and lower prices for some crops (see Ponte 1998; 2000b). If this raises doubts about the efficacy of market reforms in the agricultural sector (see Ponte 1999), it also means that rural households living in locations with well-established economic ties and relatively good access to major markets (such as the Uluguru Mountains) have been more likely to improve their incomes through economic diversification than more isolated ones—a finding also acknowledged by the World Bank (1996: 99).

The disagreement on the long-term implications of economic diversification is not limited to the Tanzania case. Ellis (1998: 7) finds that the literature on developing countries is divided along the lines of diversification as either a matter of choice and opportunity or as a matter of survival. Ellis is of the opinion that the ‘capability to diversify income sources signifies an improvement in the livelihood security and income-increasing capability of the rural household. Therefore policies that reduce constraints to diversification and widen its possibilities are in general desirable’ (Ibid.: 29). On the contrary, Bryceson (1997; 1999a; 1999b) portrays diversification in more critical terms, underlining the implications of ‘de-agrarianisation’ in terms of increasing rural differentiation, the breakdown of age and gender divisions of labour, and the commoditisation of previously reciprocal exchanges. The Uluguru case seems to provide evidence supporting Ellis’ view. Although a process of rural differentiation is taking place on the Uluguru Mountains, its culprit is agriculture rather than non-farm activities. The process of commoditisation described by Bryceson is also an important aspect of changing rural livelihoods, but the response to its adverse impact on poorer households does not lie in an
unlikely return to a ‘golden age’ of socially-based access to resources, nor in imposing direct or indirect constraints on economic diversification. It rather lies—as I have argued elsewhere (Ponte 2000a; 2000b)—in expanding the public provision of quality services in health, education and sanitation, in developing local-level small-scale enterprises for crop processing, in promoting the establishment of institutions (such as input trust funds) that can address market failures in agricultural input markets, and in facilitating the access to micro-credit, especially for women.

Previous work analysing agrarian change on the Uluguru Mountains referred to agriculture and rural livelihoods in the area being in a ‘multiform crisis’ (Hadjivayannis 1993) and to farmers being ‘trapped in decline’ (van Donge 1992a). While these depictions may apply to other areas of Tanzania, they are unduly pessimistic for the Uluguru Mountains—at least in relation to Langali village. Although agriculture is not going through an easy transition in the area—especially for poorer farmers—and some options are becoming more limited, others are being more skilfully utilised. On the Uluguru Mountains, land scarcity is the main feature of agriculture; deforestation and soil erosion are major problems; and inputs have become increasingly expensive. Under these circumstances, the main ways households can improve their quality of life—short of leaving the area altogether and in addition to relying on remittances from outside—are to expand land cultivated in other locations, to experiment with alternative farming systems, and to increase non-farm incomes. The inhabitants of Langali village are doing all the above, with a certain measure of success.
However, due to the limited agricultural carrying capacity of the area, non-farm activities offer the greatest income improvements for the future of rural livelihoods. Therefore, the fact that farming households are increasingly diversifying in non-farm activities (a finding corroborated by Hadjivayannis 1993: 356-7), with or without the help of remittances, should be seen favourably. More than being helplessly caught in a poverty trap, rural dwellers are reacting to marketing changes, demographic pressure, and land degradation in multiple and innovative ways, and in a majority of cases have managed to improve their quality of life.

This article suggests that non-farm activities can play an important role in improving rural livelihoods especially in areas that have objective limitations on raising agricultural productivity and that are placed in a relatively advantageous position in relation to main markets. It also indicates that non-farm activities may act as a mitigating factor in income distribution, although they do not necessarily lead to higher incomes. Far from resolving these debates, the Uluguru case, together with other in-depth local-level case studies, can contribute to a more nuanced view of the effects of economic reforms in Tanzania. It can also contribute to a better understanding of the conditions that facilitate improvements in rural livelihoods, with potential implications for similar areas inside and outside of the country.

APPENDIX: METHODOLOGY

The material presented in this article draws from a wider research project on agrarian change and rural livelihoods under market liberalisation in Tanzania. During eighteen months of fieldwork in 1995/96, I carried out research at the national and local levels, using a comparative case study of Songea and Morogoro Rural Districts. In each district, I worked in three villages selected in different agro-ecological zones and for their varying degrees of access to the area’s
main urban centre. All research was conducted by the author in Swahili, and local research assistants were used to help in understanding highly technical or sensitive topics. Two Rapid Rural Appraisals (RRAs) were carried out in each village (one with women and one with men). RRAs were conducted along the guidelines promoted by Richard Chambers as ‘Participatory Rural Appraisals’. However, I term this method RRA in recognition of the limited scope of ‘participation’ that is possible in the context of development research involving class, race, gender and other status inequalities. All RRAs were mediated by one or more local facilitators.

The quantitative research instrument at the village level was a Farming Household Survey (FHS), consisting of semi-structured interviews with adult members of 120 farming households (20 in each village) drawn by random sample. In each household, I collected recall data for three agricultural seasons with average rainfall (1986/87, 1990/91, and 1994/95). The 1994/95 season was the most recent one I could examine in its entirety; the 1986/87 season was chosen as a proxy for the pre-liberalisation period; the 1990/91 season provided a mid-point of examination. Collecting recall data on the 1990/91 and 1986/87 seasons was challenging. To obtain the most reliable data, I used techniques such as devising ‘marking events’ (or ‘key events’), cross-checking information in separate interviews with household members, cross-checking of data with other sources (such as cooperative society records and information obtained during the RRAs).

NOTES

1 In this article, I focus in particular on Langali village, which is located about 45 km from Morogoro town, on the western side of the Uluguru Mountains at 1,400 meters of altitude. Langali is the capital of Mgeta Division and holds a lively market twice a week. The village has
a temperate tropical climate, with an average annual precipitation of 1,020 mm (Paul 1988: 4). Mgeta Division is one of the major suppliers of cabbage, vegetables, and temperate fruit to the main city market of Kariakoo. The inhabitants of the mountains, the Waluguru, are experienced traders of vegetables and dominate this kind of commerce in Dar es Salaam (see van Donge 1992b). The road from the Morogoro plains to Langali is extremely steep, narrow and rocky, making transport difficult especially during the rainy season. However, four-wheel drive vehicles and small trucks shuttle from Morogoro to Langali almost daily. The trip can take as long as four hours.

Another source, however, claims that the Waluguru moved from areas of south-western Tanzania to the Uluguru Mountains in the 1830s to escape Wangoni raids (Chiteji 1980).

Iliffe (1979: 312) states that the Waluguru became the main supplier of vegetables to Dar es Salaam after the railway reached Morogoro.

On the eastern side of the mountains land fertility is lower than on the western side, and the conditions for vegetable cultivation are not optimal. In this area, farmers did not see the benefits of the hard work they had to provide, since the topsoil is too thin for bench terracing.

On the western side of the mountains, tie-ridging had already been practised on steep hills for maize and beans cultivation. Also, Mgeta farmers were already familiar with bench terraces, having built them for white settlers who cultivated vegetables (Maack 1996: 159).

The NMC Act of 1975 stipulated that individuals could sell up to 30 kilograms of grains in local markets, and that transport of grain by individuals for household use was restricted to 100 kilograms (Bryceson 1993: 76). This limitation was lifted to 500 kilograms in 1983 (Ibid.: 100).
Coffee purchases in Morogoro District ranged between 130 and 270 tons from the early 1980s to 1991/92 (source: Coffee Authority of Tanzania and MRCU). Thereafter, they fell dramatically. Historically, most of the coffee marketed in the district comes from the Uluguru Mountains, although some coffee is also cultivated on the Nguru Mountains in the north-east of the district (Mvomero and Turiani Divisions).

As explained in the previous section, some coffee is also farmed in the area, but its production has been declining due to marketing problems.

In 1996, a pig raised for one year consumed on average maize bran worth TSh 28,000; it could be sold for TSh 60-80,000.

The only input applied in potato cultivation on the Uluguru Mountains is chemical fertiliser. Cabbage cultivation also requires the application of manure, insecticide, and fungicide. In potato cultivation, fungicide is applied only if planting takes place during the rainy season—which happens in a minority of cases.

For other descriptions of the Uluguru matrilineal system, see also Hadjivayannis (1993), Paul (1988), and Young & Fosbrooke (1960).


See Hadjivayannis (1993: 105) and Young & Fosbrooke (1960: 37). According to Maack (1996: 155), severe land shortage was present already at the start of the century, and the Waluguru had already started moving down to the plains before World War I.

Van Donge offers two pieces of evidence to support his claim: (1) the 1957 census, which shows a male-to-female ratio of 0.7 for everyone 16 years and older; and (2) the 1978 census,
which shows a male-to-female ratio of 0.60 in the age group of 15-44 years, and a 0.72 ratio for the age group of 45 years and older. Because the ratio in the first age group is lower, van Donge also claims that men return to Mgeta after living most of their life in urban areas (van Donge 1992a: 77-9, 83-4).

The fact that relatively more men, especially young ones, have remained on the Uluguru Mountains in the 1980s than in the 1970s is shown by the changes in the male-to-female ratio. For the age group 15-44 years, the 1988 census reports for Mgeta Division a male-to-female ratio of 0.83, which is much higher than the 0.60 ratio reported in the 1978 census. The 1988 ratio for the age group of 45 years and older is 0.80, against a 0.72 ratio in 1978. This trend is even more marked for Langali village, which in 1988 shows a 0.89 ratio in the 15-44 age group and a 0.79 ratio in the 45 years and older group. Also, if we compare the male-to-female ratio for the age group of 15-34 years and the age group of 35 years and older in the 1988 census, we find that for Mgeta Division the ratio for the former group is as high as 0.86, while the ratio for the latter group is 0.77. The gap between these two age groups is even bigger than the gap between the groups of 15-44 years and 45 years and older. This further confirms that it is the younger generations in particular that are remaining in the area.


Bibiana (not her real name), for example, is a 23-year-old single mother of two children. She sells maandazi (doughnuts) in Langali on market days at basically no profit. Bibiana said that she is aware of the low earnings, but that she continues in order to keep the money circulating. She said that ‘you cannot sit on your cash when you have it. You have to put it into some use, not necessarily for profit’ (No. 010212, interview by the author, 5 May 1996). For an in-depth
anthropological examination of money movement and the power of food preparation in another part of the country, see Weiss (1996).

18 The average total value of assets (housing, livestock, common household items and furniture, agricultural implements, tools, and business infrastructure) per household in constant 1995 prices went from TSh 499,100 in 1987 to TSh 612,230 in 1995. Land and savings were not included because of problems of land valuation and unreliable reporting of savings.

19 In the absence of reliable data for the period after 1988 (which should be available with the results of the 2002 census) it is impossible to determine reliable estimates of population growth in Langali in the 1990s. Therefore, it is not possible to establish a precise picture of recent migration flows.


non-farm income as a proportion of total income (Sarris & van den Brink 1993) had already been increasing in rural areas of Tanzania before market liberalisation started.


23 For an explanation on the possible relationship between changing farm practices—especially the increasing use of hired labour—and increasing inequality, see Ponte (2000a).

24 For a detailed analysis of the effect of beer brewing on gender inequalities in Southern Tanzania, and the differences between ‘livelihood’ brewing and ‘investment’ brewing, see Green (1999).

25 Several possible indicators can be used for estimating trends in rural poverty. Income is one of the aspects of poverty, but by no means the only one. However, for the sake of brevity, I treat the two together in this section.

26 The two surveys are the Human Resource Development (HRD) Survey, which was carried out in October 1993 in 5 184 households in all Regions, and the Rural Participatory Poverty Assessment (PPA) Survey of March 1995, which covered 768 households in rural areas of Tanzania mainland.

27 A similar trend is also reported in Iringa District by Sano (1996: 21).

REFERENCES


TABLE 1
Farm and non-farm disposable income* per household in Langali village

<table>
<thead>
<tr>
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<th>1994-95</th>
<th>1990-91</th>
<th>1986-87</th>
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<tr>
<td>Mean non-farm income (TSh)</td>
<td>216,333</td>
<td>114,246</td>
<td>75,166</td>
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<td>Mean farm income (TSh)</td>
<td>138,041</td>
<td>240,534</td>
<td>177,530</td>
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<td>Mean total income (TSh)</td>
<td>354,373</td>
<td>354,779</td>
<td>252,696</td>
</tr>
<tr>
<td>Non-farm income (% of total income)</td>
<td>61</td>
<td>32</td>
<td>30</td>
</tr>
<tr>
<td>Farm income (% of total income)</td>
<td>39</td>
<td>68</td>
<td>70</td>
</tr>
</tbody>
</table>

Source: Farming Household Survey (FHS)
* Disposable income = gross income from sales minus expenditures (before tax)
Income expressed in 1994 constant prices (deflated by NCPI)