

FROM PYRAMID TO POINTED EGG? A 20-YEAR PERSPECTIVE ON POVERTY, PROSPERITY, AND RURAL TRANSFORMATION IN TANZANIA

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ABSTRACT

This article analyses the patterns of poverty, prosperity, and rural transformation in Tanzania through longitudinal research examining livelihoods and asset change in a 20-year period. We argue that some current measures of rural transformation are inadequate for capturing forms of change that matter to rural Africans. We consider in detail some of the processes that lie behind such change in selected locations in Morogoro region, noting the importance of improvements that are taking place through smallholder agriculture. In conclusion, the article discusses the implications of these findings for agricultural policy while also cautioning about the blindness of our methods to other forms of poverty.

Poverty distributions along wealth gradients in many communities in low-income African countries, including Tanzania, have long been pyramid shaped: the wealthy are few, there is only a small middle group and most people are poor. Most land holdings are small (2 ha or less). Most people are young-children or young adults. Most people have no herds, and of those that do, most herd sizes are small (fewer than five animals). Most people live in poor-quality houses, few in fine dwellings. Most people only complete primary school, not secondary school; formal employment is rare and so on. The importance of explaining these distributions is one of the

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most persistent challenges of economic and social research. But our ability to understand what is changing and why has been hampered by poor data, especially in African contexts.¹

The prevalence of rural poverty and domination of pyramidal distributions of wealth invoke contrasting responses. For more mainstream analysts and policymakers, rural change requires transforming the organization of rural production.² The constraints of asset ownership (small farm sizes, few livestock, and limited access to capital to fund farm investment) mean that most people lack the wherewithal to raise productivity. Radical transformation is required in the form of large-scale farms, or contract farming and agribusinesses that can cultivate an appetite for inputs to drive a new 'green revolution'.³ Off-farm activities and rural-to-urban migration are the main vehicles of rural transformation.⁴ Simply put, the poor are poor because they are trapped in unproductive work. Economies cannot grow, and the poor become richer until they move into more productive economic sectors.⁵

But others insist that rural poverty is the product of decades of subordination and domination by capital.⁶ There is growing alarm among observers that state economic strategies champion the needs of capital, particularly its need for land, over the livelihoods of the rural poor.⁷ In Tanzania, large tracts of land are earmarked for overseas capital as part

1. Morten Jerven, *Poor numbers: How we are misled by African development statistics and what to do about it* (Cambridge University Press, Cambridge, 2013); Ian Scoones, Ruth Hall, Saturnino M. Borrás, Ben White and Wendy Wolford, 'The politics of evidence: Methodologies for understanding the global land rush', *Journal of Peasant Studies* 40, 3 (2013), pp. 469–483.

2. Thom Jayne, Jordan Chamberlin and Rui Benfica, 'Africa's unfolding economic transformation', *Journal of Development Studies* 54, 5 (2018), pp. 777–787; Christopher S. Adam, Paul Collier and Benno Ndulu, *Tanzania: The path to prosperity* (Oxford University Press, Oxford, 2017).

3. Sara J. Scherr, Jeffrey C. Milder, Louise E. Buck, Abigail K. Hart and Seth A. Shames, 'A vision for agriculture green growth in the Southern Agricultural Growth Corridor of Tanzania' (SAGCOT), Overview' (SAGCOT Centre and EcoAgriculture Partners, Dar es Salaam and Washington DC, 2013).

4. Kathleen Beegle, Joachim de Weerd and Stefan Dercon, 'Migration and economic mobility in Tanzania: Evidence from a tracking survey', *The Review of Economics and Statistics* 93, 3 (2011), pp. 1010–1033.

5. Paul Collier and Stefan Dercon, 'African agriculture in 50 years: Smallholders in a rapidly changing world?', *World Development* 63 (2014), pp. 92–101; Stefan Dercon and Douglas Gollin, 'Agriculture in African development: Theories and strategies', *Annual Review of Resource Economics* 6 (2014), pp. 471–492.

6. Issa G. Shivji, 'The concept of working people', *Agrarian South: Journal of Political Economy* 6, 1 (2017), pp. 1–13.

7. Ruth Hall, 'Land grabbing in Southern Africa: the many faces of the investor rush', *Review of African Political Economy* 38, 128 (2011), pp. 193–214; An Ansoms and Thea Hilhorst, *Losing your land: Dispossession in the Great Lakes* (James Currey, Boydell and Brewer, Woodbridge, 2014); Ruth Hall, Ian Scoones and Dzodzi Tsikata, *Africa's land rush: Rural livelihoods and agrarian change* (James Currey, Boydell and Brewer, Woodbridge, 2015).

of putative agricultural investment corridors.⁸ ‘Green grabs’ for forestry (including REDD+) and wildlife conservation show no sign of abating.⁹ These constellations of alienation occupy alarmingly broad swathes of the country and portend, these observers contend, new rounds of eviction and displacement.¹⁰

Yet it is also plain that both accounts of positive transformation and despoliation by capital may be overextended. The tendency of neoliberal policymakers to overlook the dislocation they cause is well known. Equally, the totalizing tendencies of some critics can puzzle their colleagues. As Henry Bernstein complained, when confronting theories of persistent peasant poverty, accounts of generalized persistent rural poverty cannot cope with social differentiation and its dynamics.¹¹

Understanding rural change is complicated by the lack of data. There are simply few good longitudinal data sets that cover the key periods of economic change. This difficulty is compounded by the many different possible aspects of poverty and prosperity that could be covered: migration patterns, income, expenditure, morbidity data, employment conditions, food security, asset indices, well-being, and so on. There are some exceptions to these gaps in Tanzania. Matteo Rizzo has used a longitudinal study of an association of informal transport labourers to understand how they have coped, and failed to cope, with the demands of precarious urban life and employment in Dar es Salaam.¹² Elisa Greco has shown that incipient landlord classes emerging in Tanzania are contesting resources with both poorer peasant communities and transnational capital.¹³ Bernd Mueller examines, in the absence of external investment, how class relations in

8. Mikael Bergius, Tor A. Benjaminsen and Mats Widgren, ‘Green economy, Scandinavian investments and agricultural modernization in Tanzania’, *The Journal of Peasant Studies* 45, 4 (2018), pp. 825–852; Jill Tove Buseth ‘The green economy in Tanzania: From global discourses to institutionalization’, *Geoforum* 86 (2017), pp. 42–52.

9. James Fairhead, Melissa Leach and Ian Scoones, ‘Green grabbing: a new appropriation of nature?’, *The Journal of Peasant Studies* 39, 2 (2012), pp. 237–261; Christine Noe, ‘The Berlin Curse in Tanzania: (Re)making the Selous world heritage property’, *South African Geographical Journal* 101, 3 (2019), pp. 379–398; Tor A. Benjaminsen and Ian Bryceson, ‘Conservation, green/blue grabbing and accumulation by dispossession in Tanzania’, *Journal of Peasant Studies* 39, 2 (2012), pp. 335–355.

10. Jevgeniy Bluwstein, Jens Friis Lund, Kelly Askew, Howard Stein, Christine Noe, Rie Odgaard, Faustin Maganga and Linda Engström, ‘Between dependence and deprivation: The interlocking nature of land alienation in Tanzania’, *Journal of Agrarian Change* 18 (2018), pp. 806–830.

11. Henry Bernstein, ‘Agriculture/Industry, Rural/Urban, Peasants/Workers’: Some reflections on poverty, persistence and change’, in Julio Boltvinik and Susan Archer Mann (eds), *Peasant poverty and persistence in the 21st Century. Theories, debates, realities and policies* (Zed Books, London, 2016), pp. 171–205.

12. Matteo Rizzo, ‘Life is war: Informal transport workers and neoliberalism in Tanzania 1998–2009’, *Development and Change* 42, 5 (2011), pp. 1179–1205.

13. Elisa Greco, ‘Landlords in the making: Class dynamics of the land grab in Mbarali, Tanzania’, *Review of African Political Economy* 42, 144 (2015), pp. 225–244.

urban areas extend into rural areas, resulting in significant levels of informal employment.¹⁴

Using a different conceptual frame, the ‘Kagera panel’ has been used to explore the impact of migration.¹⁵ This panel surveyed 3,500 households in 2004 arising from a panel of 912 households surveyed in the early 1990s. Kathleen Beegle and colleague’s research found that only 49 percent of the families traced had remained in their original villages, with 32 percent travelling to distant locations. Lack of access to agricultural assets appeared to drive migration, but they also found that migration, and particularly migration to distant areas, was associated with higher increases in income than remaining in rural areas.¹⁶

In this article, we explore changes that have taken place in Tanzania in the past two decades, drawing on the insights from a longitudinal study (1996–2016) of sites in Morogoro region. We consider how we can see and understand the nature of social differentiation that is taking place in rural settings. We do not seek to determine what sorts of data provide the ‘best’ way of seeing rural societies. We eschew blunt proxies. Rather, we highlight an often overlooked aspect of rural life that matters a good deal to rural people—the question of change in assets—and how these can be used to understand patterns of rural differentiation.

We make three novel contributions in this article. First, we argue that the role of small-scale agriculture in driving rural transformation in Tanzania is not adequately recognized. As a corollary, we highlight that past predictions that Africa was on the path of de-agrarianization have not materialized, although diversification remains important.¹⁷ Second, we show that a substantial rural ‘middle’ is emerging, which is skewing the classic distribution of wealth away from a pyramid shape towards a pointed egg shape: with a small base, a larger middle, and small top. Third, we observe that in places where agricultural productivity is hard to improve because of agroecological and demographic factors, this has not necessarily translated into a socio-economic implosion that was once feared.¹⁸ Our argument, and the purpose of this article, is that different empirical perspectives based on

14. Bernd E.T. Mueller, ‘The agrarian question in Tanzania: Using new evidence to reconcile an old debate’, *Review of African Political Economy* 38, 127 (2011), pp. 23–42.

15. Beegle *et al.* ‘Migration and economic mobility in Tanzania’; Joachim de Weerd, ‘Moving out of poverty in Tanzania: Evidence from Kagera’, *The Journal of Development Studies* 46, 2 (2010), pp. 331–349.

16. Beegle *et al.* ‘Migration and economic mobility in Tanzania’

17. Deborah Bryceson, ‘African rural labour, income diversification & livelihood approaches: A long-term development perspective’, *Review of African Political Economy* 26, 80 (1999), pp. 171–189; Sarah Aloba Loison, ‘Rural livelihood diversification in Sub-Saharan Africa: A literature review’, *The Journal of Development Studies* 51, 9 (2015), pp. 1125–1138.

18. Jan Kees van Donge, ‘Agricultural decline in Tanzania: The case of the Uluguru mountains’ *African Affairs* 91 (1992), pp. 73–94.

new data sources provide important new insights into processes of rural differentiation.

Research design and methods

Our research attempts to fill the gap in our understanding of rural economies in the 1990s and 2000s in Tanzania. These years are significant because they were a time of substantial and prolonged economic growth but little change in levels of rural poverty.¹⁹ However, the form of poverty which is thought to have persisted is poverty of *consumption*. Consumption data measure weekly expenditure on needs such as food, clothing, water, and so on. Measurements of consumption give us an idea of how many people are living off less than US\$2 per day. But they cannot track forms of poverty and prosperity denoted by changes in asset ownership.

Assets commonly refer to things like houses, land, or livestock, with some analyses also including education. For economists, assets are ‘the state/stock variables used to generate income, including future income against which one might borrow’.²⁰ For reasons we have described elsewhere in more detail, assets matter greatly in rural Tanzanian societies.²¹ They are often vital elements of villagers’ own definitions of wealth and poverty.²² They are a common form of investment for rural people who are getting richer. Assets provide a relatively secure means of using productively agricultural income, which can all come in at harvest time.

Arguments about poverty lines and consumption data are silent about change in assets. This is because the collection of consumption data deliberately excludes investment in productive assets.²³ The purchase of land, oxen, ploughs, fertilizer, and seeds is omitted. So are large expensive outliers, which may reflect the profitable consequence of months of

19. Oswald Mashindano, Kim Kayunze, Lucia da Corta and Festo Maro, ‘Growth without poverty reduction in Tanzania—reasons for the mismatch’ in Flora Kessy, Oswald Mashindano, Andrew Shepherd and Lucy Scott (eds), *Translating growth into poverty reduction. Beyond the numbers* (Mkuki na Nyota, Dar es Salaam, 2013), pp 121–142; Sebastian Edwards, *Toxic aid. Economic collapse and recovery in Tanzania* (Oxford University Press, Oxford, 2014); Channing Arndt, Vincent Leyaro, Kristin Mahrt and Fin Tarp, ‘Growth and Poverty. A Pragmatic Assessment and Future Prospects’, in Christopher S. Adam, Paul Collier and Benno Ndulu (eds), *Tanzania: The path to prosperity* (Oxford University Press, Oxford, 2017).

20. Christopher Barrett, Teevrat Garg and Linden McBride, ‘Well-being dynamics and poverty traps’ Centre for Climate Change Economics and Policy Working Paper No. 250 (2016) p. 5.

21. Dan Brockington, Ernestina Coast, Olivia Howland, Anna Mdee and Sara Randall, ‘Assets and domestic units: Methodological challenges for longitudinal studies of poverty dynamics’, *Journal of Peasant Studies*, doi: [10.1080/03066150.2019.1658079](https://doi.org/10.1080/03066150.2019.1658079) (2019).

22. Olivia Howland, Christine Noe and Dan Brockington, ‘The multiple meanings of prosperity and poverty: A cross-site comparison from Tanzania’, *Journal of Peasant Studies*, doi: [10.1080/03066150.2019.1658080](https://doi.org/10.1080/03066150.2019.1658080) (2019).

23. This point is explained in more detail in Dan Brockington, ‘Persistent peasant poverty and assets: Exploring dynamics of new forms of wealth and poverty in Tanzania 1999–2018’ *Journal of Peasant Studies*, doi: [10.1080/03066150.2019.1658081](https://doi.org/10.1080/03066150.2019.1658081) (2019).

saving.²⁴ This omission is a problem because we cannot use consumption data to track investment in the very things—the assets—that rural Tanzanian societies deem central to their own ideals of prosperity.

Our research therefore focused on assets. We have undertaken a series of longitudinal studies, revisiting previously surveyed families and villages in order to explore changes in asset ownership. To undertake the revisits, we first identified surveys and researchers whose work had been undertaken in the 1990s (sometimes as early as the 1980s) and who still had the lists of originally surveyed households. We identified suitable people through snowballing in our own networks and literature searches.

This process revealed almost 60 villages that could be surveyed (Figure 1). As we have discussed elsewhere, this collection of sites creates blind spots.²⁵ It omits the poorest regions in the south-east of Tanzania (Lindi, Mtwara) as well as the far west. It shows a preference for sites near main roads leading to Dar es Salaam. There are no fishing communities or pastoralist villages (both relatively marginalized within the country). This limits the generalizability of the findings. Nevertheless, we were able to cover a fair amount of variety, working across 12 regions.

To explore changes in assets, we then arranged for a series of revisits preferably with the original researcher also accompanying the team. In some instances we joined restudies that were already in process. We covered 37 villages through these means (see Figure 2). For each visit we used a mixture of focus groups to discuss the meaning of wealth and its changes over time. We met with key informants to talk about the changing history of the village. Wherever possible we used ranking exercises to explore the distribution of wealth in each village. This entailed examining lists of village residents and asked focus groups of village leaders to assign families to the different categories of wealth that other focus groups had identified. We then revisited all the households that we could find from the original surveys (the highest attrition rate was 40 percent; 10–20 percent was more normal). We conducted short quantitative surveys and discussed life and asset histories. Finally, wherever possible, we returned to the villages after our work to discuss findings with them. We have also reported these findings back to stakeholders twice in Dar es Salaam in 2017 and 2018. The researchers involved in this project have also met twice to discuss findings, once in 2017 and once in 2018. The work we present below is the product of decades of experience and comparative engagement by numerous researchers over time, some of whom have been living and

24. Dan Brockington, Olivia Howland, Vesa-Mati Loiske, Moses Mnzava and Christine Noe, 'Economic growth, rural assets and prosperity: Exploring the implications of a twenty year record of asset growth in Tanzania', *Journal of Modern African Studies* 56, 2 (2018), pp. 217–243.

25. Howland et al. 'The multiple meanings of prosperity and poverty'.

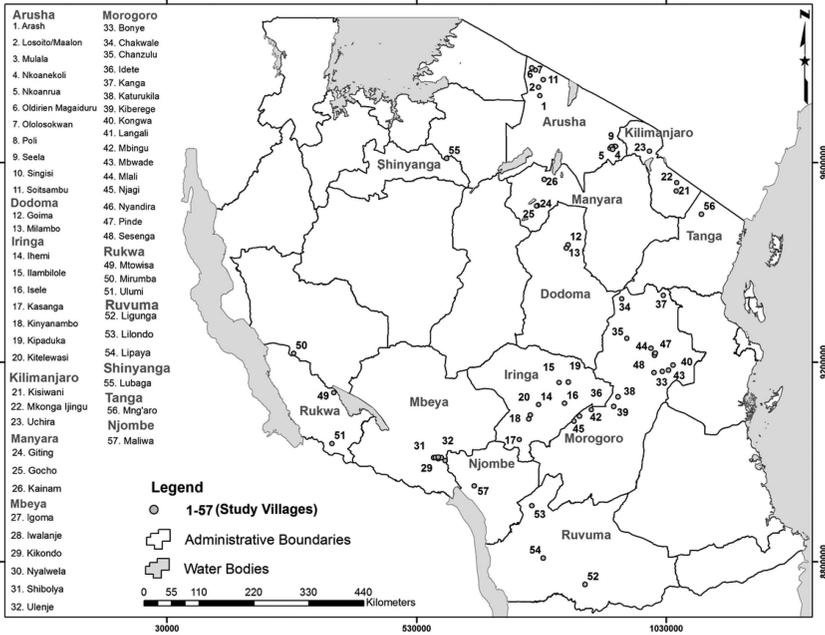


Figure 1 Sites identified for possible re-visits (source: Authors' data).

working in Tanzania all their lives, others all their professional lives and many of whom have enjoyed lasting relationships with the places they have studied.

We must recognize the limits of our methods. This form of survey is not good at capturing the experience or consequences of migration. Poor migrant labourers cannot be seen in sampling frameworks which are based on household lists of residents.²⁶ Nor will our methods necessarily capture changing intra-household dynamics or labour relations. For this we depend on the insights of the individual researcher and their understanding of such interactions.

The specific findings on which we concentrate in the last part of the article come from three villages in Morogoro region, which we have selected for more discussion here because it is closest to Stefano Ponte's experience and because of the number of surveys conducted here. One of these villages is Mlali (first surveyed by Stefano Ponte in 1996 and by Frank Ellis and Ntengua Mdoe in 1999), a lowland village with relatively good land and favourable conditions for tomato cultivation. We resurveyed 32

26. Brockington et al. 'Economic growth, rural assets and prosperity'.

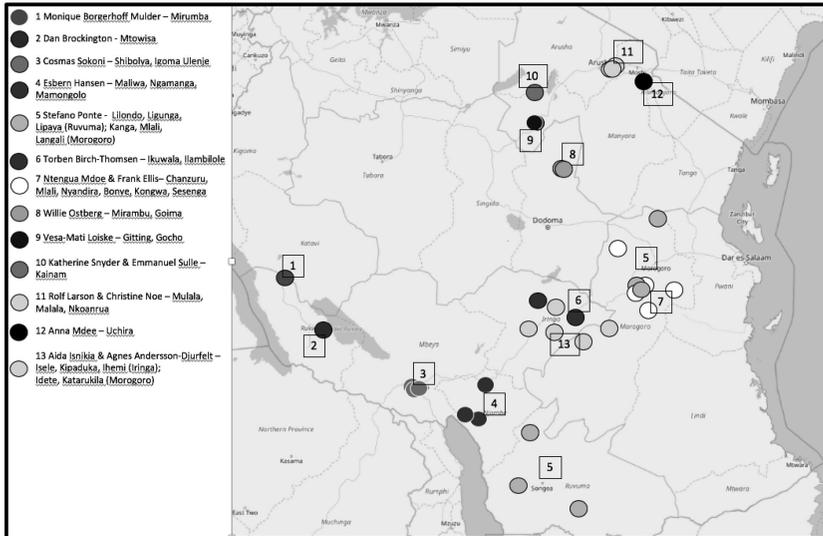


Figure 2 Revisited villages and the researchers who led the studies (source: Authors' data).

households from this village (out of 50 from the original samples). Nyandira and Langali are neighbouring mountain villages in Mgeta ward, a 90-minute drive up the road from Mlali. The former was surveyed by Frank Ellis and Ntengua Mdoe in 1999, the latter by Stefano Ponte in 1996.²⁷ Cumulatively, we revisited 43 households in Mgeta (out of 50 from the original sample). Although these sample sizes are not large, they compare favourably with the standard sample size of 30 households which are routinely used in large-scale surveys,²⁸ and with the 18 households per community used to compile regionally representative pictures in large-scale health surveys.²⁹

Trends in prosperity distributions

One of the more striking patterns to emerge from this collection of studies is that the prevalent domination of the poorest farmers that characterized Tanzanian villages for so many decades is beginning to shift. But the nature

27. Stefano Ponte, *Farmers and markets in Tanzania* (James Currey, London, 2002).

28. Frank Ellis and Ntengua Mdoe, 'Livelihoods and rural poverty reduction in Tanzania', *World Development* 31, 8 (2003), pp. 1367–1384; Goran Djurfeldt, Ernest Aryeetey and Aida C. Isinika, *African smallholders: Food crops, markets and policy* (CABI, Wallingford, 2011).

29. Sharon Pailler, Robin Naidoo, Neil D. Burgess, Olivia E. Freeman and Brendan Fisher, 'Impacts of community-based natural resource management on wealth, food security and child health in Tanzania.', *PLoS ONE* 10, 7 (2015), pp. e0133252.

of that shift, its universality, and its causes resist singular interpretation. In just over half of the locations (11 out of 18) where we could assess asset distribution during our revisits from 2016 to 2018, the predominance of the poor in a classic pyramid distribution has changed.³⁰ It has been replaced by a ‘pointed egg’ distribution, with the largest segment constituted by ‘middle’ or ‘average’ farming households. This pattern is shown in the black graphs in [Figure 3](#).

We have to be careful about generalizing this claim. First, a substantial minority (39 percent) of sites for which we have data do not conform to this pattern. There, poverty predominates. Second, our sites are not drawn from a representative or random sample. They derive from surveys of places which had been visited by researchers in the past. Third, even if there are fewer people in the poorest groups, this does not necessarily mean that a new era of prosperity has been unleashed in these villages. Not being ‘poor’, as locally defined, does not raise the bar very high. The poorest people are characterized by their basic dwellings, their lack of basic daily provisions, and the dependence on precarious labour. Access to slightly better housing, less dependence on daily wage labour, and better daily provisioning hardly denote wealth.

Nonetheless, this apparent uptick in one aspect of prosperity in some locations differs from the general narrative that rural economies have not shared the benefits of national economic growth. It differs from the general trend published in the most recent poverty statistics of only slowly declining levels rural poverty, despite persistent economic growth.³¹ These rural societies seem to have seen a switch in the distribution of asset-based wealth.

The findings should not be a complete surprise. They resonate with other published findings. The ‘Kagera panel’ found that in poor rural communities afflicted by the coffee crisis, the mean consumption growth was 18 percent.³² It was higher still (29–104 percent) for people who moved

30. The predominantly poor distributions are evident in Vesa-Matti Loiske, *The village that vanished: The roots of erosion in a Tanzanian village* (University of Stockholm, Stockholm University, 1995). It is also clear in the more extensive work of Ellis and Mdoe ‘Livelihoods and rural poverty reduction in Tanzania’.

31. Nationally poverty has declined from 34.4 percent to 26.4 percent nationally between 2007 and 2018, and extreme poverty (food poverty) declined from 11.3 percent to 8 percent in the same period. However, this trend is driven primarily by declining urban poverty. The proportion of people living in urban areas who were poor has declined from 24.1 percent in 2007 to 15.8 percent in 2017/2018. In contrast, the decline in rural areas is smaller in absolute and proportional terms: 37.6 percent–31.3 percent. The respective declines in extreme poverty are 12.9 percent–4.4 percent for urban areas and 18.4 percent–9.7 percent for rural areas. United Republic of Tanzania, ‘Tanzania mainland. Key indicators report. 2017–2018 Household Budget Survey’ (National Bureau of Statistics, Ministry of Finance and Planning, Dodoma, 2019); United Republic of Tanzania, ‘Household Budget Survey 2007 main report’ (Dar es Salaam, National Bureau of Statistics, 2009); World Bank, ‘Tanzania mainland poverty assessment’ (Washington DC, World Bank, 2015).

32. Beegle *et al.* ‘Migration and economic mobility in Tanzania’.

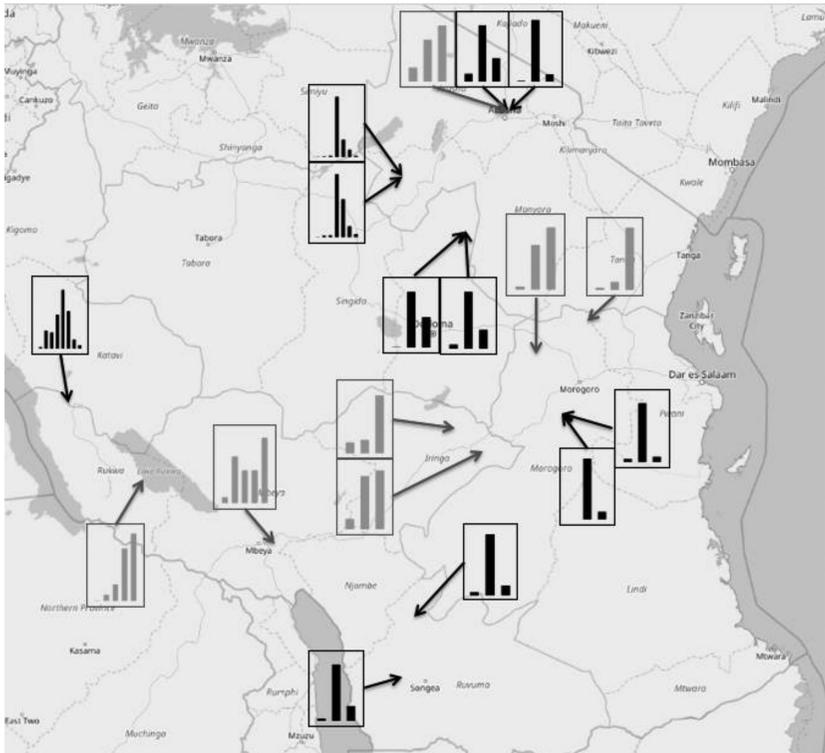


Figure 3 Different distributions of wealth and poverty by local definitions across Tanzania in 2016–2018. *Note:* The bar charts show locally determined distribution of village populations according to local definitions of wealth. The number of categories shown along the x-axis reflects the number of locally determined categories of wealth; there are between three and eight categories in each village. Poorer groups are on the left, richer on the right. Black columns indicate middle categories predominate; grey columns indicate poorer groups are more numerous. The findings come from the 18 villages where we were able to conduct wealth rankings (*source:* Authors' data).

out of agriculture and their communities. There has been a nationwide increase in secondary school enrolment (from 21.7 percent in 2000 to 59.5 percent in 2012).³³ Finally, specifically for Morogoro region, other comparative studies also found a substantial improvement in livelihoods

33. United Republic of Tanzania, Ministry of Education and Vocational Training, 'Education for all (EFA) report for Tanzania mainland' (Dar es Salaam, United Republic of Tanzania, 2014).

built on sustainable intensification.³⁴ Even historically poor communities have, in some locations in Tanzania, prospered because of new agricultural cash crops (sunflowers, sesame, potatoes).³⁵

Nonetheless, the distributions were not expected by the present authors. Further, if there are more incidences of relative prosperity among farmers, then they beg the questions of how they were able to prosper and what were the wealth creation mechanisms at work.³⁶ In all sites, prosperity seems to have been driven from different forms of small-scale agricultural activity. But the very possibility of rural prosperity in Tanzania from small-scale agriculture will be surprising to some observers. Small-scale agriculture and poverty are strongly associated, and that association can be misread as a permanent condition.³⁷

This misreading holds that it is hard to prosper in rural areas because smallholders practise ‘subsistence agriculture’. This is a particularly unhelpful misrecognition of their activities. It implies that farmers consume all that they produce, sell little (if anything), and purchase little food too. But this simply does not describe what we have seen or what decades of scholarship reports.³⁸ There are very few rural households who eschew markets entirely. Where farmers do consume their own produce and sell little, such activity is unstable. ‘Subsistence’ agriculture is but a paved road, or price fluctuation, away from becoming commercial agriculture. Alternatively, market incentives and infrastructure can remain unchanged, but families can begin to sell more produce because of changing norms and desires among their members. Subsistence-orientated farming can become much more commercial when ambitious sons inherit land from tired fathers. The need to send children to school and invest in mobile phones or simply the desire to control the proceeds of their labour may encourage more sales.

34. Anna Mdee, Alex Wostry, Andrew Coulson and Janet Maro, ‘A pathway to inclusive sustainable intensification in agriculture? Assessing evidence on the application of agroecology in Tanzania’, *Journal of Agroecology and Sustainable Food Systems* 43, 2 (2018), pp. 201–227.

35. Brockington et al. ‘Economic growth, rural assets and prosperity’; Willie Östberg, Olivia Howland, Joseph Mduma and Dan Brockington, ‘Tracing improving livelihoods in rural Africa using local measures of wealth: A case study from Central Tanzania, 1991–2016’, *Land* 7 (2018), pp.1–26; Esteve Corbera, Adrian Martin, Oliver Springate-Baginski and Adrián Villaseñor, ‘Sowing the seeds of sustainable rural livelihoods? An assessment of participatory forest management through REDD+ in Tanzania’, *Land Use Policy* (2017). <https://doi.org/10.1016/j.landusepol.2017.09.037>

36. Bernstein, ‘Agriculture/Industry, Rural/Urban, Peasants/Workers’.

37. For example World Bank reported in an analysis of the Household Budget Survey that ‘only households engaged in subsistence farming with low land holdings suffer from high levels of poverty’ World Bank, *Tanzania mainland poverty* pp. 25.

38. Mueller ‘The agrarian question in Tanzania’; Henry Bernstein and Philip Woodhouse, ‘Telling environmental change like it is? Reflections on a study in Sub-Saharan Africa’, *Journal of Agrarian Change* 1, 2 (2001), pp. 283–324; Henry Bernstein, *Class Dynamics of Agrarian Change* (Fernwood Publishing, Halifax and Winnipeg, 2010)

To put this slightly differently, it is not clear where the causality in this relationship lies. Are households poor because they practise ‘subsistence’ agriculture, or are they ‘subsistence’ farmers because they are poor? Could the dynamism, instability, and potentiality in smallholder agriculture actually contain within it the seeds of its own transformation?

We have found this to be the case in previously published studies drawn from the wider project. Improvements in farmer asset bases in Hanang district, Manyara region, occurred on the back of better prices for crops (potatoes, wheat, and beans).³⁹ In Chemba district, Dodoma region, greater prosperity has arisen from sunflower cultivation on larger farms cleared in once forested land (an ecologically problematic practice).⁴⁰ In Sumbawanga district, Rukwa region, we have found a mixture of new wealth in assets and new forms of poverty, based on landlessness in a once land-abundant village.⁴¹ In Arumeru district, Arusha region, growing vegetables for urban markets is now a lucrative activity that can be carried out in small parcels of land.⁴²

Exploring change in prosperity based on assets is valuable because it provides a different insight into rural change. It also highlights how varied the process of asset accumulation can be. The proximate driver of rural transformation, and its timing, has varied in “every” single location. In some instances (Sumbawanga), it arises from changes in sesame seed prices (in the late 2000s), combined with infrastructural improvements. In others (Hanang), it links to rising prices of potatoes and wheat relative to maize, without infrastructural change, and with decreasing inequality. In another (Chemba) the cash crop is sunflower seeds, and the growth in farming activity has been hastened by growing inequality in the form of entrepreneurs bringing in tractors. In Arumeru, the driver is market gardening for proximate urban markets which have enabled farmers to survive the collapse of coffee prices. Diversity reigns.

Case studies from Morogoro region

Mlali is located about 45 km from Morogoro town, on the plains below the Uluguru Mountains. Original fieldwork was carried out by one of the Stefano Ponte for several months in 1996,⁴³ our revisits and a resurvey were carried out in 2016. Mlali was, and still is, easily reachable via tarmac

39. Brockington et al. ‘Economic growth, rural assets and prosperity’.

40. Östberg et al. ‘Tracing improving livelihoods in rural Africa using local measures of wealth’.

41. Brockington ‘Persistent peasant poverty and assets’.

42. Olivia Howland, Dan Brockington and Christine Noe, ‘Women’s tears or coffee blight? Gender dynamics and livelihood strategies in contexts of agricultural transformation in Tanzania’, *Agrarian South: Journal of Political Economy* (Forthcoming).

43. Stefano Ponte, *Farmers and markets*.

road until Mzumbe University and then a short well-graded dirt road. The village is now served by many minibuses trawling back and forth from Morogoro town, while it was served by a few minibus lines in the mid-1990s. The centre of the village has Stefano Ponte boomed. There is a new market area and at least 50–60 shops of all kinds, including two dedicated shops for agricultural inputs and various food joints. In 1996, there were fewer than 10, much smaller, shops. One of the most obvious changes we observed is the ubiquitous presence of young men on their *pikipiki* (motorbikes), a swarm going back and forth along the main road and larger footpaths, or hanging around waiting for their next client. Many of the *pikipiki* in the village are owned by well-off farmers. They are operated by young men, who pay a daily rate until they can buy it from the owner (a form of lease). Twenty years ago, only the very rich government employees usually had a motorbike—totalling less than five in Mlali. We counted 8 out of 32 households who owned motorbikes in our sample. There are now also several private cars, parked in front of well-built houses with porches and electricity, and even a private truck. There were no private cars in the village in 1996.

Mlali was not a place where collective action was particularly strong even in 1996—by then the local primary cooperative society had already gone under, and the village farm had already been divided up and distributed to residents.⁴⁴ The local economy at that time was driven by tomato cultivation, which had been introduced already in the early 1980s. Twenty years later, tomato cultivation is an even stronger driver of rural livelihoods in Mlali (with over 11 acres cultivated by the households we revisited), at least for those who have enough resources to buy farm inputs, own land or can rent it, and can draw household labour, hire farm workers, or use tractor services for this intensively cultivated crop. This also includes labour to carry water for irrigating tomato plants (a few wealthy farmers have installed drip irrigation). While paddy and maize are still farmed in the village, sorghum (the traditional food crop in this area) is less so. Sorghum grows more slowly than maize, and is not ready to harvest early enough to free up plots for the main tomato cultivation season. Therefore, farmers prefer to plant maize and then tomatoes after the maize harvest. There is a vibrant land rental market in Mlali, with plots being rented twice a year, depending on the planting season and with rental prices linked to the type of crop planted (premium prices are charged for the main tomato season).

44. See Stefano Ponte, 'From social negotiation to contract: Shifting strategies of farm labor recruitment in Tanzania under market liberalization' *World Development* 28, 6 (2000), pp. 1017–1030; Stefano Ponte, 'Fast crops, fast cash: Market liberalization and rural livelihoods in Songea and Morogoro Rural districts, Tanzania' *Canadian Journal of African Studies* 33, 2 (1998), pp. 316–348.

Focus groups in Mlali said that a key indicator of wealth is the amount of land put under tomato cultivation, not merely the amount of owned land. Ownership is not as important as the ability to use land—in our recent survey 30 percent of land farmed to grow vegetables was rented. The key issue is thus access to capital or credit to rent land, buy inputs and employ workers, or, occasionally, use tractor services for cultivating tomatoes. The current use of tractors for land preparation (reported in 11 percent of plots in the survey) is particularly interesting, as there was no sign of this service 20 years earlier.

Households in the top two wealth layers, as defined in focus groups, seem to be able to use tractor services for all their cultivated land, with at least five tractors available in a radius of a few kilometres. But even those in the middle wealth ranks, who prepare land by hand, seem to fare relatively well (as indicated by the quality of housing), as long as they have either accumulated funds, can sell an asset or borrow from relatives or from their social network to buy inputs, and on occasion hire labour. Without fertilizer and agrochemicals, tomato yields are much lower, and those who cannot afford them tend to rent out their plots to others. These tend to inhabit the lower wealth ranks, followed by those who, for health or other reasons, cannot take care of themselves.

A second area we revisited in 2016 is Mgeta ward (Langali and Nyandira villages) in the Uluguru Mountains. The nature and the consequences of rural transformation here have been the subject of much debate since the late 1980s. Jan Kees van Donge emphasized social and actor-oriented determinants of agrarian change.⁴⁵ Georgios Hadjivayannis conceived market penetration, the subordination of Uluguru society to the external world, and commoditisation as the factors shaping agrarian change, making farmers passive recipients of structural change.⁴⁶ Both approaches portrayed a pessimistic picture of agrarian change on the Uluguru Mountains, either because of a process of agricultural involution, plagued by a loss of morale and faith in their own livelihood,⁴⁷ or because of a vicious cycle of subordination to market forces.⁴⁸ In both depictions, population pressure, land scarcity, and the crisis of agriculture loomed dauntingly.

Other contributions were more optimistic on the future of farming on the Uluguru Mountains.⁴⁹ On the basis of fieldwork carried out in 1996 and

45. van Donge, 'Agricultural decline in Tanzania'

46. Georgios Hadjivayannis, *Stratégies paysannes face à la crise: adoption des innovations, diversification des activités et différenciations sociales dans un village tanzanien: Mgeta, Morogoro*, (Université de Paris I. thèse de doctorat, 1993).

47. Clifford Geertz, *Agricultural Involvement: the process of ecological change in Indonesia* (University of California Press, Berkeley, 1963).

48. Hadjivayannis 'Stratégies paysannes face à la crise'.

49. Jean-Luc Paul, 'Farming systems in Upper Mgeta. Morogoro' (Sokoine University of Agriculture, Sokoine, 1988); Joseph Masawe, 'Farming systems and agricultural production among small farmers in the Uluguru Mountain Area, Morogoro Region, Tanzania', *African*

1997, Stefano Ponte challenged the widely accepted ideas of ‘crisis’ and ‘decline’ of agriculture and rural livelihoods on the Uluguru Mountains, arguing that the impact of market liberalization on rural livelihoods had been relatively positive in the area—where the rise in nonfarm incomes has compensated for the general fall in farm incomes.⁵⁰

Some of the changes observed at that time suggested an ongoing process of commercialization of agriculture—such as the increasing importance of vegetable cultivation, the growth of pig rearing, the substitution of hired labour for exchange labour, and an emerging market for land. Food security however was still a key factor influencing planting decisions and input allocation. Farming households showed a remarkable degree of flexibility and innovation—demonstrated, for example, by the emerging transition from cabbage to Irish potato cultivation. Wealthier farmers were benefiting from these changes, as increasing amounts of capital were needed to ensure food security, get access to land, hire labourers, and engage in commercialized pig rearing. Poorer farmers, especially those relying exclusively on agriculture for their livelihoods, were becoming more marginalized.

This picture clashed with the predominant depictions of the Uluguru Mountains being in a ‘multiform crisis’⁵¹ and to all farmers being ‘trapped in decline’.⁵² In Mgeta in the late 1990s, although agriculture was not going through an easy transition—especially for poorer farmers—new possibilities were being skilfully utilized. Land scarcity (especially for horticulture) was the main feature of agriculture; deforestation and soil erosion were problems; and inputs had become increasingly expensive. In these circumstances, the main ways households could improve their quality of life—short of leaving the area altogether and in addition to relying on remittances from outside—were to expand land cultivated in other locations, to experiment with alternative farming systems, and to increase nonfarm incomes. The inhabitants of Mgeta were doing all of the above, with a certain measure of success. Instead of being helplessly

Study Monographs 13, 3 (1992), pp. 171–183; Thierry Lassalle and Amon Mattee, ‘Towards sustainable rural development using the participatory approach: the case of Mgeta Farmers, Morogoro Rural district’, in Peter G. Forster and Sam Maghimbi (eds), *The Tanzanian Peasantry: Further Studies* (Avebury, Aldershot, 1995), pp. 170–197; Sally Jones, ‘Discourses on land degradation in the Uluguru Mountains, Tanzania: Evolution and influences’, *Journal of Rural Studies* 12, 2 (1996), pp. 187–199; Sally Jones, ‘From meta-narratives to flexible frameworks: An actor level analysis of land degradation in highland Tanzania’, *Global Environmental Change* 9, 3 (1999), pp. 211–219.

50. Stefano Ponte, ‘Trapped in decline? Reassessing agrarian change and economic diversification on the Uluguru mountains, Tanzania’, *Journal of Modern African Studies* 39, 1 (2001), 81–100.

51. Hadjivayannis, ‘Stratégies paysannes face à la crise’.

52. Van Donge, ‘Agricultural decline in Tanzania’; Jan Kees van Donge, ‘Trading images? A comment on Ponte’s reassessment of agrarian change in the Uluguru mountains’, *Journal of Modern African Studies* 40, 2 (2002), pp. 303–311; Stefano Ponte, ‘Reply to van Donge’, *Journal of Modern African Studies* 40, 2 (2002), pp. 313–320.

caught in a poverty trap, rural dwellers were reacting to marketing changes, demographic pressure, and land degradation in multiple and innovative ways and, in a majority of cases managed to improve their quality of life.⁵³

Fast forward to 2016, some of these observations are still relevant. However, they need to be further qualified. While cabbage was the top cash crop in Mgeta in the past, it has now been almost entirely replaced by Irish potatoes. A variety of other vegetables (from carrots to cucumbers) are still cultivated. Due to different altitude and climatic conditions, tomatoes ripen later in Mgeta than in Mlali, so they do not compete in the same seasonal market, making them profitable even in the smaller plots and harder terrain of the Uluguru Mountains. Root diseases are affecting cabbage cultivation, and fertilizer needs to be applied to any crop (even maize) to obtain decent yields. In other words, reliance on farm inputs, although not new, has increased. Relatives who have moved down to the plains or in urban areas are key sources of cash or loans to purchase inputs. The other source is small livestock (pigs, goats, chicken, farmed fish) that can be sold according to need. If all else fails, households rent out their plots to those who have funds to prepare the land and buy inputs and work as farm labourers. Land preparation, given the terrain, is exclusively done by hand. Other researchers have found that, when combined with techniques of sustainable intensification, agriculture-based strategies can yield substantial improvements.⁵⁴

Elders and focus group participants did not report a massive outmigration flow, as portrayed in the 1990s literature, although they highlighted the lack of inward migration. In 2016, they also reported, surprisingly, that most households had access to land through inheritance and use rights from their clan, although plots have become increasingly fragmented in time. Also surprising (but supported by field observations) was their claim that land *per se* was actually available but mostly in locations far away from the village and where transport costs may not justify the effort after all. Focus group participants and interviews with elders suggested that the apparent availability of land can be explained as follows: (1) plots may lack enough natural fertility and need to be left fallow for a few years; (2) they may be too far away to be cultivated; (3) the household may not have the resources to prepare and tend for the land, including farm input purchases; and (4) even in this case, they may not want to rent it out for fear of not being paid at the end of the season.

Revisits to interview the households that were originally surveyed in 1996 suggest a more complex picture of livelihood trajectories than in Mlali. While there are examples of upper mobility that emerged in the past

53. Ponte, 'Trapped in decline?'

54. Mdee *et al.*, 'A pathway to inclusive sustainable intensification in agriculture?'

20 years, they are related to inheritance and a mixture of good management and good luck (lack of disease outbreaks in vegetable cultivation and favourable prices), at least in the first few years of cultivation after inheritance. These are accompanied by numerous instances of relative stagnation or decline, which are related to disease outbreaks, lack of resources to buy inputs, and only limited support from migrated household members. Housing conditions, even in these instances, have improved, and some of the children who have left and migrated elsewhere have found permanent employment or opened a business, thus sending remittances back to Mgeta. It is not easy to make a living on the Uluguru Mountains, but the people living here were not, and still are not, 'trapped in decline'.⁵⁵

A rising 'rural middle' and inequality

One of the challenges in tracking changes in poverty and prosperity using locally determined measures of wealth is that the meaning of wealth changes over time. People who were rich by the standards of 20 ago might be considered poor now.⁵⁶ The good and assets that people aspire to (education, phones, financial services) are all different. It is thus difficult to compare like with like.

Houses however have long been a marker of social difference.⁵⁷ It is useful to explore changes in house condition over time. This shows that mud walls and sunburnt bricks were quite common then, while now baked bricks are the norm. Cement floors, plastered walls and indoor sanitation were only for the very rich then; they now have spread to the upper-middle ranks as well. As [Table 1](#) shows, the clearest change is in roofing material, but also in the quality of walls (indicated in the highlighted cells).

In both Mlali and Mgeta housing condition suggests a rising group of middle wealth villagers, generally suggesting a movement from a pyramidal wealth structure in 1996 to more of a pointed egg structure nowadays.⁵⁸ Inequality between the top and bottom categories seems to have increased in the past two decades. At the same time, the size of the 'middle ranks' (in local terms) seems to have increased substantially.

These changes have considerable implications for levels of inequality in the villages we have worked in. The range of wealth has increased. The poor and destitute of today will share many of the characteristics of the poor

55. Ponte, 'Trapped in decline?'

56. Josphat Mushongah and Ian Scoones, 'Livelihood change in rural Zimbabwe over 20 years', *The Journal of Development Studies* 48, 9 (2012), pp. 1241–1257.

57. van Donge reported, based on fieldwork from 1985–1987 that 'housing is the most notable indicator of wealth' ('Trapped in decline', page 83).

58. Note that in one site, Nyandira, Ellis and Mdoe found a larger middle group in their research in this village in 2001. Nyandira was also reported to be relatively wealthy by van Donge ('Trading images').

Table 1 House improvement in the three study villages

Roof		2016/2017	
1996	Organic	Metal	
Organic	5	25	
Metal	4	38	
Total	9	63	
Walls		2016/2017	
1996	Mud	Brick	Cement
Mud	9	14	1
Brick	5	38	6
Cement		1	
Total	14	53	7

Note: The bricks can improve in quality if burnt rather than sundried bricks are used; however, the type of brick used in the earlier surveys was not always recorded. Grey cells indicate improved housing condition. So 14 homes which had mud walls in 1996 now have brick walls in 2016/2017. Twenty-five houses, which had organic roofing material (commonly thatch) in 1996 had metal roofs in 2016/2017. Most houses have maintained their condition (57 percent with respect to roofing, 63 percent with respect to walls), but 34 percent have improved their roofs and 28 percent their walls. A smaller minority have declined in quality, thus four houses had metal roofs in 1996 but organic roofing material in the revisit. *Source:* Authors' data.

and destitute of 20 ago. The forms of poverty from which they suffer (no assets, poor houses, clothing, diets and health) remain the same. However, at the upper end, the wealthy can now be much more wealthy, and in more ways, than they previously could. Their homes can be larger, with more amenities and finer finishing than what was common 20 ago. Their means of transport are more modern, they can have more forms of power (solar and mains electricity), their children can go to private schools, and they can earn more money from more diverse sources than a generation ago.

In both Mlali and Mgeta, many more nonfarm activities, businesses and transport services are available than two decades ago. And infrastructure (roads, marketplaces and electricity provision) has improved markedly. Does that imply a general improvement of all livelihoods? Our revisits to the original households in these Morogoro sites suggest four trajectories. The first, which is the most common, is *agriculture-based improvement* based on expansion and intensification of tomato/vegetable cultivation—translating into much improved housing quality, more assets (including means of transport), diversification into other economic activities, ready availability of funds to solve health problems, and some of the children having gone through secondary education (or even tertiary) and formal employment

in urban areas. This trajectory characterized 44 percent of households we revisited in the three Morogoro sites.

The second trajectory is *marginal improvement* or *'getting by'* in tomato/vegetable cultivation (less land, lower use of inputs) that suffices to: improve living conditions and types of assets; sometimes diversify in small business; access health services when needed (even if it entailed the sale of livestock or other small assets); and invest in some of the children's education (secondary school). In some cases at least one child landed a government job or set up a profitable business, sending remittances that further improved access to working capital for farming. This trajectory characterized 27 percent of households we revisited.

Third, trajectories of *stagnation and decline* occurred, where households could not get access to enough capital to purchase inputs, and thus limit their farming activities to food for partial self-sufficiency; members of these households tend to work in other people's fields as daily labourers; while their housing conditions may not have become worse, these households tend to send their children to primary school only, and to have little or no diversification into nonfarm activities; they also tend to struggle to find resources to take care of health problems. This trajectory described about 14 percent of households we revisited. Lastly, there were trajectories of *pauperism*, where people are not able or willing to take care of themselves, are not able to work for others, and rely on their household's help or other people's handouts. This is typical of ageing households and affected around 10 percent of households we revisited.⁵⁹

With all the provisos we highlighted earlier, what seems to be emerging is a process of rural transformation based on smallholder agriculture. This is more clearly the case in Mlali, where the mainstay cash crop has remained the same, but the intensity of its cultivation has increased. This seems to have provided enough resources for further investment in retail activities and transport services—at least for a substantial proportion of the population. In Mgeta, rural transformation is less clearly rooted in smallholder agriculture, although it is happening for a minority of households. Farming systems are fairly similar to those observed 20 years ago, but with a different mix of cash crops. Input use is increasing and now necessary to obtain sufficient yields even for food crops, thus increasing risk and vulnerability in view of recent crop disease outbreaks. On the Uluguru Mountains, rural transformation seems to be stemming from a more complex combination of economic diversification, remittances and marginal productivity gains for farmers who have enough access to capital to buy inputs. These processes are of course not universal, even within villages, but in general it seems fairly reasonable to suggest that wealth segmentation has switched from a

59. For the remaining 6 percent of households, we could not determine a clear trajectory.

pyramid structure to a 'pointed egg', with Mgeta having a larger base than Mlali.

Conclusion

Research into the long-term dynamics of rural transformation in Africa is handicapped by a lack of good longitudinal and panel data, which can reveal some of the poverty and prosperity dynamics.⁶⁰ This deficiency is particularly glaring in countries like Tanzania, which have enjoyed substantial economic growth in the past two decades or so. It is difficult to specify what consequences this growth has had in rural areas, particularly when data about rural economies are poor and these rural spaces and resources are heavily contested.

On the basis of in-depth case studies, as part of a broader set of longitudinal studies, we have shown that a diversity of processes and outcomes characterize different instances of rural transformation in Tanzania. At the same time, when improvements have occurred, they seem to have been fuelled by small-scale agriculture. These economic 'success stories' defy the predictions of the champions of large-scale agriculture and externally induced 'green revolutions'. They also challenge the more gloomy predictions that held Tanzanian smallholders as helpless prisoners of larger structural problems or problematic mindsets.

It would be premature to call this group a new 'middle class', as the differentiation between these households and those in lower echelons of village society is not that great. We are not making bold claims about changing class relations within Tanzanian villages. We are merely observing that a middle tier of village society is thickening.

Our data do not counter claims that land alienation is affecting poverty dynamics in some locations of Tanzania. None of the sites we revisited suffered recent land loss due to agricultural investment, conservation, or mining. But, if anything, this reinforces the arguments that land loss will be harmful, because losing land removes the driver of relative prosperity, that is, small-scale agriculture.

The trajectories also highlight the importance of state support and services. Education features prominently in trajectories of improvement and poor health in trajectories of declines.⁶¹ Smallholder farmers' enterprise needs to be accompanied with supportive social services.

60. Longitudinal research is a surprisingly niche and poorly populated field. It is particularly scarce, with some notable exceptions, in African contexts. There are more studies, although, still relatively few, in Asian contexts. See Brockington *et al.*, 'Assets and domestic units' for a summary.

61. See, for example, Anirudh Krishna, *One illness away: Why people become poor and how they escape poverty* (Oxford University Press, Oxford, 2010).

It is important to recall the limits of our methods. They have allowed us to cope with an important feature of rural life that is excluded by common measures such as poverty line data. But looking for change in assets is a poor way of understanding the changing fortunes of migrant or itinerant labour. It can make it hard to see changes within domestic units or between socio-economic groups and thus class dynamics. For that, the insights of the ethnographer which accompany the survey work, and the oral histories of change, are required.

With these provisos in mind, the main policy implication of our observations is that while there may be a role for large-scale commercial agriculture for rural transformation in Tanzania, it is not necessarily the only or best option in terms of poverty reduction at the village level. Even if there is land for it, it is not at all clear that large-scale commercial agriculture yields more benefits to rural households than those based on smallholder agriculture we reported here. The current focus on 'corridor investments' and large-scale commercial agriculture, such as that visible in Tanzania, with its deliberate renunciation of small-scale agriculture, may thus be misplaced.