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The multiple meanings of prosperity and poverty: a cross-site comparison from Tanzania

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ABSTRACT

Assets are important to local definitions of poverty and wealth in rural Africa. Yet their use in asset indices can miss locally valued change. We present data from 17 villages across Tanzania to explore differences in the meaning of wealth and poverty across the country. Despite limitations in our site selection we found considerable diversity that makes a single asset index difficult to compile. Current abbreviated asset indices risk counting assets that do not matter locally.

KEYWORDS




Assets; development data; Tanzania; poverty; wealth

Introduction

Many observers of social and economic change in African states try to find shared stories. They look for common experiences that affect many groups of people within the dynamics they witness. Such accounts, be they of the benefits of economic growth (Jayne, Chamberlin, and Benfica 2018; Young 2012), or of the sacrifices that growth has entailed because of land loss (Bergius, Benjaminsen, and Widgren 2018; Shivji 2017), have to be based on generalisable measures that capture locally valued meanings of wealth, poverty, dignity and well-being.

Too often, however, measures are used without a good empirical understanding of how they actually vary across space. Specifically, few studies have tried to explore how local meanings and definitions of wealth can vary within particular countries. This is explicitly recognised in the literature and there are recently published calls to examine how the meaning of wealth and poverty can vary at the national scale (Johnston and Abreu 2016). This paper addresses that call.

We present findings from a series of focus groups, conducted in 2016–2017 in 17 villages in Tanzania, to examine how definitions of wealth vary geographically and socially within and across communities. We focus particularly on assets because these are the attributes our informants were most keen to talk about. This in turn invites discussion of asset indices, as these are measures that researchers are keen to use. This contribution is

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important therefore not just for the geographical variation it examines, but also because it uses measures that can be neglected. These assets are not well counted by poverty line data and are thus relatively muted in debates about persistent peasant poverty based on them. We develop these points in two companion papers (Brockington 2019a; Brockington et al. 2019).

We argue it is possible to discern a cluster of attributes that broadly signify wealth across many parts of Tanzania. However, a universal list would be hard to construct because precisely how much, and what forms, of wealth any given variable signifies changes from place to place. It is also clear that, although assets are frequently used to construct asset indices, many aspects of life that do matter locally are not tracked by current indices.

We first outline recent debates on the role of assets in characterising wealth and poverty in poor rural societies, and the best means of using them. Then we explain the provenance of the data we have used to examine patterns in the meaning of wealth in different parts of Tanzania and their limitations. Next, we present the patterns in these data, focussing on the salient characteristics that emerge as important elements of wealth and poverty across different villages around the country. Finally we discuss these patterns, focussing on areas of commonality and difference and the implications of these findings for more general use of assets and asset indices.

Defining wealth and poverty

The dimensions of change experienced in many rural African societies are multiple. Consider this summary of the consequences of land alienation from a number of senior observers:

Past studies identify multiple impacts includ[ing] widespread changes in rural social and class relations; the creation of new 'middle farmer' classes at the centre of new schemes; processes of differential accumulation and dispossession, resulting in the eviction of some and land size increase of others; highly gendered patterns of labour participation and wage levels, with women systematically disadvantaged; patterns of income increase but simultaneously declines in human development, including higher morbidity and lower nutrition due to lack of services; and broader processes of social dislocation from the places where people have historically come from. (White et al. 2012, 636)

Generalising across such diversity is difficult. It will require an agreed set of methods and indices. If we cannot generalise then we may end up presenting lists of unsorted and unordered facts, whose meaning and relevance to other cases in other places will be uncertain. And, at the same time, any generalisation must use locally meaningful measures that capture changes that matter to the people involved.

One response to this challenge is not to try to simplify or reduce the experience of change to a few key indicators, but rather to ensure that many dimensions and aspects of poverty and prosperity are recorded as fully as possible (Narayan 2000). Given that the experience of poverty is multi-dimensional so too should be the data we collect on it (Alkire and Foster 2011). However in data-poor environments reliable information on multiple dimensions of poverty may be hard to acquire, and this risk compounds when comparing across multiple data-poor sites.

The temptation to use single proxy measures grows in these circumstances. However, single proxies quickly present problems. Data on nutrition, mortality and morbidity are readily available, and provide comparable quantitative measures. They are, however, unsatisfactory as a measure of prosperity – they record (bare) lives alone and not the attributes that provide meaning and satisfaction.

The most commonly used measure of all is consumption data, which are derived from household budget surveys and used to construct poverty lines. But, as we explore in a companion paper (Brockington 2019a), expenditure counted in poverty lines does not include production costs and therefore features that matter a great deal to peasant life. The advantage of consumption data is that they provide a base for national and international comparison over space and time. But even that is suspect. The problems of converting those data into internationally comparable numbers are well known (Ravallion 2010; Reddy and Pogge 2010). Moreover, surprisingly few countries (only 27 of 48 in Africa) have conducted two or more comparable surveys since 1990 that can be used to track trends in such monetary poverty (Beegle et al. 2016, 31).

There has been considerable interest in the use of assets as proxies for poverty and prosperity (following Filmer and Pritchett 2001; Howe et al. 2012; for reviews see Howe et al. 2009). One of the most common means entails constructing asset indices in which differences in household wealth are imputed from the different bundles of assets owned. The bundles are weighted according to principal component analyses (or factor or multiple correspondence analysis), which looks for structures and patterns in the asset ownership data.

The advantage of such indices is that their data are easily collected, for few variables are required. Indeed recent attempts try to use as few variables as possible. For example Chakraborty et al. (2016, 152) developed simplified asset indices which could use as few as 6 questions (Table 1). Blumenstock and colleagues (2015) found that an asset index comprising just six assets (ownership of a fridge, bicycle, TV, motorbike/scooter, radio and electricity in the house) could be used to test measures of wealth in Rwanda.

Asset indices can be used to group populations (quintiles, quartiles, etc.) and make comparisons between these groups. Asset indices are also used to check the accuracy

Table 1. Simplified and minimised asset indices.

Bangladesh	Benin	Tanzania
Does your household have:	Does your household have:	Does your household have:
– electricity,	– electricity,	– a television?
– a TV,	– a TV,	– a radio?
– an electric fan,	– a VCR or DVD player?	– an iron?
– an almirah/wardrobe,	What is the main material used in your house walls?	What is the main material of the floor of your dwelling?
– a refrigerator	What is the main fuel you use for cooking?	What is the main material of the exterior walls of your dwelling?
What is the main material used in your house walls?	What type of toilet do members of your household use?	What is the main material of the roof of your dwelling?
What is the main material used for your house floor?		What type of fuel does your household mainly use for cooking?
Does any member of this household have a bank account?		What is the main source of energy for lighting in the household?
		Does any member of this household have a bank account?

Source: (Chakraborty et al. 2016, 152) and <http://www.equitytool.org/tanzania/> accessed 16th February 2018.

of new proxies of poverty, such as mobile phone records (Blumenstock, Cadamuro, and On 2015) or remotely sensed images (Jean et al. 2016; Watmough et al. 2019). Thus one proxy of wealth (social media data, built infrastructure visible from space) are used to verify another (asset indices).

Asset indices can identify patterns that are statistically meaningful. But whether these correspond to locally recognised wealth is a different issue. Underpinning these lists is the assumption that ownership of those assets provides locally meaningful and sensitive markers of differences in wealth.

The problem is neatly captured in the debate over the ‘African Growth Miracle’ that Alwyn Young observed in Demographic and Health Survey data (Young 2012). Young found increases in asset ownership, education and employment across numerous African countries, as well as declines in morbidity and mortality. That research has aroused some controversy (Harttgen, Klasen, and Vollmer 2013, and see our discussion of this in paper Brockington et al. 2018). But, for the purposes of the present discussion, the most important criticism is that made by Johnston and Abreu (2016). They observe asset indices are built on a core *assumption* (not empirically derived observation) that assets correlate with wealth.

However, this core assumption is likely to be violated if indices are used to cover large geographical areas and long periods of time. This is because differences in infrastructure provision (determining the availability of electricity and building materials), and local values and cultural priorities as to what assets wealth should be invested in, are more likely to vary at these larger scales. Young’s claim to have identified a phenomenon that applied across continental scales can only hold if the assets chosen did reflect continentally valued forms of wealth.

Johnston and Abreu welcome some aspects of Young’s findings – there are more assets and better health in many parts of the continent – but argue his thesis is weak because its inference of greater prosperity is temporally and spatially over-extended. They therefore make three recommendations that need to be addressed before assets can be reliably used to make Young’s claims:

- (1) indices should be constructed and compared over limited geographic scales and time periods;
- (2) the choice of assets should be based on an understanding of what it means to be wealthy or poor in a particular place; and
- (3) that the choice of assets in an index should reflect the kind of well-being to be measured. (Johnston and Abreu 2016, 417–418)

We do not know of attempts to explore geographical variations in the meaning of wealth and poverty, and their relation to assets, that respond to this challenge.¹ Young’s work, and Johnston and Abreu’s critique, identify an important gap that this paper seeks to address. Using data from Tanzania we explore how local understandings of poverty and wealth vary geographically. If Johnston and Abreu’s first recommendation is to restrict geographic scales (and time periods), then how restricted must they be? Are national comparisons possible or simply ruled out by the differences we find?

¹There are a number of historical and longitudinal studies which have tracked change over time, and these we explore in a companion paper to this study (Brockington et al. 2019).

These questions could have considerable consequences for debates about the distribution of benefits of economic growth with which we began. If we find that, broadly, the same assets matter across the country, then it will be possible to use asset indices to explore poverty dynamics nationwide. Likewise, if we find that the assets used in abbreviated asset indices are also locally meaningful, then these abbreviated indices will provide robust means of tracking change. But if the meaning and value placed in assets vary across the country then these methods are limited. It may be possible to derive statistically robust relationships within asset indices, but they will not tell us much about locally important change. They will not provide a good lens for understanding wealth or poverty and changes to them.

Data sources

The data we present come from a project that is tracking changes in livelihood, poverty and prosperity in selected sites in rural Tanzania. We have revisited villages surveyed by researchers in the past (between the mid-1980s and early-2000s) and returned to the same families originally surveyed to explore changes in asset ownership and other aspects of livelihood and well-being. To do this we have identified a network of researchers who are either Tanzanian and have lived and worked in the country all their lives, or who are overseas researchers who have lived and worked in the country intermittently for at least two decades (and in some instances over forty years). Most enjoyed strong and enduring relationships with the study sites through repeated research engagements and/or from having been born and raised there.²

Through this network, we have identified over 60 previously surveyed villages. We have been able to revisit, or work with researchers who were already revisiting, 37 of these villages. The data presented here derive from a sub-sample of 17 villages from seven regions, with data collected in 2016 and 2017 (Table 2).

It is important to consider the nature and limitations of the variety that this selection of villages contains. The goal of our paper is to explore how local meanings of wealth change across Tanzania. We will need therefore to visit places which are reasonably different. However, our methods bind us to sites that have been previously visited, so we cannot systematically sample difference across the country.

There are some aspects of diversity across Tanzania that we have been able to capture. There is an environmental difference. We have mountainous regions characterised by limited land availability, good rainfall and good soils (Arusha, Mbeya), and similar sites where soils are poorer (Morogoro). We also have flatter regions, which are less well-watered and with a mixture of poor soils (Iringa, Shinyanga) and good soils (Rukwa). Across these environmental gradients we cover also a variety of ethnic groups from matrilineal Luguru societies in Morogoro to patriarchal societies of the Meru people in Arusha and Sukuma-Nyamwezi in Shinyanga, to Fipa societies not marked by strong gender differences in Rukwa.³

Across this social and environmental diversity there are also very different histories of development. Our sites in Morogoro, Arusha and Iringa are close to major towns and

²See Brockington (2019b) and the blog page of that website for more details of researcher's engagements with these sites.

³We did not collect data on ethnicity as part of our surveys, and do not know what ethnic groups our focus groups represented. The point we are making is that there are a variety of cultures and values which can be found across the regions in which our work has been conducted.

Table 2. The study sites covered in this paper.

Region	District	Villages	Selected characteristics
Arusha	Meru	2	Mountainous, limited land availability, good infrastructure, close to towns
Dodoma	Chemba	2	Remoter areas, good land availability, poor infrastructure
Iringa	Iringa Rural	2	Reasonably good infrastructure, mid-altitude plains, close to towns
		Kilolo	
Mbeya	Mbeya Rural	2	mountainous regions, limited land availability, infrastructure variable
Morogoro	Mvomero	4	Some lowland sites with good infrastructure and rainfall; some mountainous sites with limited land availability and poor soils
Rukwa	Sumbawanga Rural	1	Remoter areas, good land availability, poor infrastructure
Shinyanga	Kishapu	1	Peri-urban location; poor infrastructure

well-maintained roads. These are also sites which have benefitted from historical investment either from the state (when the Southern Highlands were the breadbasket of the country) or from farmers' associations (when Meru coffee farmers were making substantial investment in farms and crops.) In contrast sites in Rukwa, Dodoma and Shinyanga have only recently (within the last 10 years) enjoyed improved infrastructure and still remain distant from larger towns and markets. Historically they have suffered from lack of investment, poverty and emigration.

These differences are considerable but there are still others we missed. Our study sites were only rural. Our method (revisiting families surveyed long ago) did not bring up any urban surveys.⁴ We have missed (because few researchers went there) significant geographical regions such as the southeast and west of Tanzania.

Another notable omission is the general lack of pastoralist groups and fisherpeople. These groups are often marginalised in Tanzania. Their lives and livelihoods are considered unruly by a Tanzanian state long bent on their 'modernisation' (Benjaminson and Bryceson 2012; Homewood 2008). Their absence from this work limits our conclusions in some respects, and creates important tasks for any follow-up. However, as we will show in the discussion, that absence also strengthens our findings. Working with different agriculturalist groups makes it more likely to find constant notions of wealth and poverty across different sites. The differences we report therefore become more compelling.

The revisits used a mixture of quantitative questionnaires, oral and asset histories, and focus group discussions. Focus groups consisted of between 6 and 15 participants with men's and women's groups conducted separately. Most groups involved much vigorous debate and discussion. They were conducted in Kiswahili and led by Olivia Howland, Cathbert Mwanyika, as well as Dan Brockington and members of the research network who contributed the case studies.

The purposes of the groups were several. We discussed how participants defined the concepts of wealth and poverty using open-ended questions, then we had an in-depth discussion and often lively debate about how many wealth groups were present in the village, and what described them. We also discussed more generally what changes have happened in terms of 'development' (also locally defined) and specifically how these changes have affected gender roles and gender equality. It is from these focus group

⁴Our methods, or revisiting the same families, are unlikely to work well in areas of high mobility.

data that the present paper arises. We took a mixture of transcripts or notes according to the preferences of the groups. These transcripts were analysed to bring out the commonalities and differences that we describe below using Nvivo software.

In the following section, we summarise the main themes that emerge and illustrate with remarks from our groups in accompanying boxes. We have not listed everything that every focus group said. Rather we have chosen the most apposite phrases to illustrate what is meant by particular concepts. Separate lines denote separate focus groups and the origins of phrases from women's groups and men's groups are given by '(W)' and '(M)', respectively, after each statement.

Variations in wealth and poverty across and within study sites

The general pattern across these studies is that there are broad areas of agreement as to what wealth constitutes. The term we used in Swahili was *uwezo* which literally translates as 'ability' or 'means'. It refers to the wherewithal to get things done, to cope with the misfortunes and happenstance that can happen at any moment, while also being able to plan ahead and complete life projects.

One group went into considerable detail on the meaning of *uwezo*:

Uwezo is the ability to work, to have strength in your body to farm your land, and to have good health. It is the ability to do whatever you need to do, and to be able to farm without problems or issues. It could be someone who also runs a business without problems. It is being able to use your brain to solve issues. Someone who has a car has more *uwezo*, but this is a different type of *uwezo*. This is *uwezo* of money. But the other meaning is *uwezo* in your body. *Uwezo* to do your work well. It is about strength.

Good seeds, modern fertilizer and chemicals – these inputs are an indicator of *uwezo*, so if you have no *uwezo* you cannot use them. Cash crops and market access are also factors in *uwezo*. A man with *uwezo* will be a quick thinker. He does not have to be really educated but educated enough for his own job. Cars, shops, businesses, several houses, maybe he himself has not studied more than primary school but he invests in things which bring a return on money, things that bring in more money all the time. A house built with bricks and a metal roof is an indicator of *uwezo*. Schooling is more important than housing though. They might have left improving their home until all the children have been educated. *Uwezo* is about prioritizing what matters.

Uwezo is someone with good health but also if they get sick, they can afford to go to hospital, or they think to go to hospital. If you have no children then you have no *uwezo*, but if you have many children then this is not *uwezo* – however, if you can send them all to school and afford their healthcare, then you have *uwezo*. It is about supporting your family.

(Morogoro men's focus group)

From this and other groups, it was plain that wealth and poverty in rural Tanzania entailed a number of attributes (shown in [Box 1](#)). However, as we shall see, there are also important differences in the way that the elements of wealth are described, quantified and assembled from place to place. A wealthy family in one place may not have been considered wealthy in all respects elsewhere. In addition the list also differs, as we shall show in the discussion, in important ways from some of the existing literature.

Box 1. General Characteristics of Wealth and Poverty.**Wealth**

Good quality houses
 Ability to hire in labour
 Good access to farmland
 Use of modern inputs which increase agricultural productivity
 Control over businesses and undertaking business-orientated farming
 Livestock ownership
 Educated children
 Being a source of support and loans
 Ability to pay for medical needs (to remain mentally and physically healthy)

Poverty

Having to work for other people to secure basic needs
 Not being able to use land productively
 Dependence on others
 Inadequate food

Housing

One of the most salient features of wealth and poverty was house quality (Box 2). A good home had a (pitched) metal roof with cement or burnt bricks, cement rendering, a cement, or even tiled floor and good windows and doors. These were the most common features. Also mentioned was the fact that the best homes even had water and electricity (with solar power increasingly common). Some groups also stipulated that houses would be large, with enough rooms to sleep in and a living room.

Conversely the houses of poor people were in poor condition, with grass or leaf roofs, or old, tired metal sheets and without solar power. The walls would be made of wattle and daub, or if using bricks then they would be merely sun-dried, not burnt, and the walls would not be plastered. The houses would be small, with inadequate rooms, and would

Box 2. Rich Peoples' Houses.**Arusha:**

Housing – self contained (toilet, kitchen, water), sofa, South African roofing materials, tiles, grills and glass, television, electricity. (W)

Dodoma:

They live in a big house with eight rooms or more. The house has an iron sheet roof and has tiles inside. (M)

Iringa:

Their homes are built with burned bricks, iron sheet roof, glass in the windows, and modern inside toilets. (M)

They live in a modern house with electricity and water, a modern toilet, a pitched metal roof and burned bricks. (W)

Mbeya:

Wealth is someone with a modern house, burned bricks, plastered floor and a metal roof. Someone with a proper toilet and a house maybe with more than 4 big rooms. They would have a sitting room, modern toilet with a brick lined hole and a cement floor, a sink. (W)

Morogoro:

Has a good house: baked bricks, inside toilet, nice doors, electricity or solar panels. (M)

Rukwa:

Has a good house with a tiled floor and electricity (solar). Has water inside the house. (W)

Shinyanga:

They build their houses with bricks and roofing with iron sheets. (W)

be vulnerable to the weather, letting the rain in. The very poorest were those who had no home of their own but rented rooms in other peoples' houses.

Labour

The rich were defined as those who could pay other people to work for them (Box 3). This indicated that such families had both the means and liquidity to hire in labour (often in cash-poor times of the year, before harvests). But this also denoted wealth because of the lifestyle that went with, being, effectively, a farm manager (or a 'veranda farmer'), rather than a farmworker.

Conversely the poor were those who had to work for other people for daily needs, and often at a cost to their own longer term plans (Box 4). It is important to note that it is not the condition of working for others *per se* that denotes poverty. When villagers drew up wealth groups for their villages there was often a group (or groups) in the middle who were less able to hire in labour, and who might, in order to build up capital or invest in

Box 3. 'Veranda' farmers pay others to farm for them.

Dodoma:

They do not do day labouring themselves. They employ day labourers on their farm. (M)

They are veranda farmers – they can sit on the veranda and instruct other people to do the work. They might also have livestock but they are herding not themselves. (W)

Iringa:

They are using day labourers on the farm. (M)

Mbeya:

They plough with hired labour and cows, use chemicals and hired labour to spray crops. They are not doing any of this themselves. (W)

Morogoro:

Hires labour not only for farming but also to help in other jobs. Does not farm him/herself. (M)

Rukwa:

Pays for hired labour work to do his/her weeding. (M)

Box 4. Poor people have to work for their basic needs.

Dodoma:

Poor people have to do day labouring as there is no other way to get money. (W)

Iringa:

Most of their time they have to spend doing day labour for others. They must work for others to get money for food, or are paid in food. (M)

They cannot cultivate their farm. They must work for others, but then they cannot farm their own land because there is not enough time. (W)

Mbeya:

The poor have to do daily labour work to buy soap. This is only surviving, doing daily labour work and renting out their own farm because they need the money and cannot farm it themselves. (M)

Morogoro:

They do not have enough food to last them in a year so they work to the rich people as labour so as to get food. (M)

Rukwa:

The poorest people do lots of casual work. (M)

assets, perform labour for other people. Rather it is *why* people work for others that matters. Having to work for others for daily food or soap was a sign of poverty. But working to raise capital to invest in your own projects was not.

Land

Land was frequently mentioned as a condition of wealth, although the quantity varied. In some villages it would be 100 acres, in others 12, 20 or 50. But in mountainous crowded areas smaller farm sizes were mentioned (3–7 acres). Importantly this need not be owned land, but rather land that wealthy people could access through rental or sharecropping arrangements.

Poverty, on the other hand was not necessarily marked by landlessness. The poorest groups identified could have neither land nor a home, or they could have particularly small plots (less than 1 acre in crowded villages). However, a far more common feature of poverty than mention of land was the inability of poor families to make their land productive (Box 5). This could be because they did not have the capital to purchase the inputs (pesticide, fertiliser, ploughing services) required. It was particularly apparent in places where poor soil fertility made extra inputs essential for decent returns. Another common reason that made farms unproductive was that they had to invest their labour into other people's farms rather than on their own projects. Alternatively, the lands had to be hired out to other people to bring in money for daily needs.

Inputs

If land without inputs made people poor, then being able to use inputs on land was a clear sign of wealth (Box 6). This came up frequently. In part, it referred to land preparation and was signified by owning tractors (the most wealthy) but more frequently being able to access ploughing services, renting in tractors, and owning, or renting oxen. Poverty in contrast was marked by having to prepare fields for planting, using hand hoes. In part it referred to what was put on the fields – it meant being able to use the modern seed varieties which could be high yielding, and the corresponding chemicals required (fertiliser, pesticide).

Box 5. Poor people's insufficiently used land.

Dodoma:

They are renting out their land to others because they cannot use it all. (M)

They have a small farm but are unable to farm it properly because they have to keep going to look for work, for money, for food for the family, and this means there is no time for farming their own land. (W)

Iringa:

They have 3–10 acres of land but their farms are poorly managed. They don't use fertilisers and other agrochemicals because they can't afford to buy them and so they plant without tilling the land. They rent their farms to other people. (M)

Mbeya:

Everyone has a farm but some cannot afford any inputs so they harvest very little. (W)

Morogoro:

They have farms but they are unable to cultivate and so they rent their farms to other people. (M)

Box 6. Wealthy people's agricultural inputs.

Dodoma:

Wealthy people are able to use inputs: buying improved seeds, fertilizer, pesticides. (W)

Iringa:

They are able to grow any type of crop that they want because they have enough capital to run their farming projects. (M)

Using manure as well as chemical fertiliser. They can farm 10 acres of tomatoes and all types of inputs that they might need. They use a tractor (either their own, or they rent) or they use oxen to plough. (W)

Mbeya:

The difference is not the crops but how much land they have combined with how well they can farm it. They plough with hired labour and cows, use chemicals and hired labour to spray crops. (W)

The wealthy are able to buy inputs of all types, at the time they need them. They invest in things. The biggest thing making people poor is lack of inputs, and so those who can afford them have more wealth. (M)

Morogoro:

The wealthy have at least 5–8 acres of farming and use tractors for land preparation. They use chemical fertiliser and other agrochemicals. (M)

Businesses

Wealthy people were not just industrious farmers, they were multi-tasking entrepreneurs who were able to generate funds from diverse sources (Box 7). Their farming was commercial, which meant growing cash crops and selling them far afield. If they had the resources they could even invest in vehicles which would allow them to sell directly in towns and bypass the middlemen, thus improving their farm gate returns. Wealthy people also frequently had other business interests. Shops were mentioned in many places, or milling machines, and owning houses to rent to others also mattered (Box 8).

Box 7. Rich people's ventures.

Arusha:

A wealthy man should have more than three projects e.g. shops, chickens, farm. (M)

Dodoma:

They own a milling machine; they have shops; they have a business selling crops. They send their harvests to Arusha, Moshi, and Dodoma to market. These are the higher value crops. (W)

Iringa:

They own small businesses, like small grocery shops. Often they have more than one house, because they are renting houses out to other people. (W)

Mbeya:

Someone who has a small business has wealth: selling clothes, rice, cooking oil, sodas and vouchers. They have their own shops. (W)

Someone with a milling machine and / or a shop. If someone has a house in the centre of the village, they can rent it out. (M)

Morogoro:

A rich person has one or more motorbikes, some also rented out to young men to drive. (M)

Shinyanga:

Renting out houses means wealth because each time the owner receives money. (W)

Box 8. Variations in Livestock and wealth.

Arusha:

Three or four cows regularly milking, each producing around 10 litres per day. Goats for milking each producing around five litres a day. Local variety chickens selling eggs getting around 20 eggs a day. (M)

Dodoma:

More than 50 cattle means somebody is wealthy but they still might have a poor house and might not eat three times a day. Some people might have no cows but a modern house. ... You might own a lot of cattle but not know how best to use them. Therefore it does not matter how many cattle you own, more how you care for them and their uses. Somebody might not have a good place to sleep, but he looks after his cows well. It depends on each person. For some the house is important, for others livestock is important. (M)

Iringa:

They have cows starting from 300 and more, 100–200 goats, 100 pigs and 50 chickens for eggs. (W)

Mbeya:

Someone with cows also is a sign of wealth: 4 pigs, more than 15 chickens kept inside, goats, guard dogs, 20 grazing cows. (W)

Morogoro:

They have more than 1000 cows. (W)

Rukwa:

60 cows as well as goats and some pigs. (M)

Shinyanga:

Cows means wealth because people with cows are not much affected with hunger as they just sell their cows and get money to buy food. (W)

Livestock

Owning cattle, goats, sheep pigs and chickens was often considered an attribute of wealth. But the number of livestock required to make people wealthy varied considerably from place to place (from less than 10–1000 or more). It was also recognised that livestock ownership could correlate in different ways with wealth. In some cases, it might be the form of wealth and was not used to purchase other forms. In other instances, it provided liquidity (as for the Shinyanga group). Being poor meant not having cattle, or sometimes neither cattle or smallstock and just having a few chickens. In places where geographical constraints make ownership of larger livestock difficult, it is not the number of large livestock which is important, but the variety, and whether they are improved stock or not, as we see in the mountainous Meru villages, or the higher altitude Morogoro villages in the study.

Supporting others and being supported

One of the most marked and frequently mentioned aspects of poverty was being reliant on others (Box 9). Deeper poverty was experienced when people did not have the normal networks (children and other relatives) needed to support them when they got old and sick. Alternatively, poverty could also be marked by not being reliable enough to be considered for loans. Poor families would need to borrow money, for example, to invest in their farms at particular times of the year or to meet health or educational expenses, but their reputation or circumstances made them too risky a prospect for local money lenders. In contrast, wealth was marked by the ability to give loans and provide support. This is both a mark of esteem (helping others) and also a business venture (money lending at high local interest rates).

Box 9. Support and Dependence.***Wealthy people support and lend to others***

Dodoma:

You can ask wealthy people for loans for small businesses. In return, you give them a small percentage of your business, and repay your loan. (M)

Iringa:

Someone who has ability is somebody who can help others. (M)

Shinyanga:

Wealthier persons are also lending money to others to help them solve their problems such as buying food. However, the interest rate is high as it is 100% per year ... So wealthy men give loans with interests, poor people cannot access this money. (W)

Being rich means for the men that they are approached to give loans and requests to help others. (M)

Poor people have to ask for support.

Dodoma:

The people right at the bottom cannot farm, can barely eat, and rely on others to feed them. (M)

Children might have to sleep elsewhere with neighbours or extended family. (W)

Those in the lowest group depend on others because they are disabled or old or completely unable to work. They live in someone else's house and cannot look after themselves. (W)

Iringa:

If they have health problems they have to ask neighbours to help. (W)

Morogoro:

They depend on getting assistance from their relatives, neighbours and TASAF. (W)

Education

The wealthy educated their children and educated them well, to higher levels (University) and in good institutions (private schools). The poor could only manage primary school, if that (Box 10). At the time of the research, education in secondary school was free in terms of school fees up to form four. However, there were other costs (uniform, textbooks, and lost family labour) which meant that going to school beyond primary was difficult for poor families. Education is a relatively new aspect of wealth in that many groups pointed out that wealthy people were often themselves unschooled.

Food, possessions and clothes

Finally, wealth and poverty were also about day-to-day conditions – about having enough to eat (three meals a day for the rich), and not enough to last the year, or to have more than one or two meals per day for the poor. Being rich meant having good clothes. It was also indicated in good transport arrangements: cars for the most wealthy, motorbikes for well off families (and especially in mountainous areas). Being poor meant simply not having much stuff at all – few possessions, nor furniture.

Discussion***What counts and what does not: are abbreviated asset indices counting the right thing?***

Expected aspects of poverty such as poor diet and lack of possessions are clearly present here. These in turn are likely to be driven by low levels of daily and weekly expenditure,

Box 10. Contrasting educational experiences.**Wealthy Families**

Arusha:

Children go to international schools and reach the University. (W)

Dodoma:

They send their children to private schools, and up to university. (W)

Iringa:

Their children go to school here in the village for primary school, but by the time they go to secondary school they are sent to private school or the expensive school. (W)

Mbeya:

They send all their children to school if they are wealthy. It doesn't matter if they themselves have not been to school, but they send their children up to University. (W)

Poor families

Dodoma:

Children are not able to go to school, they have no clothes for school, there is no food at home. (W)

Iringa:

Their children are only able to attend primary school. (M)

Mbeya:

They might be able to educate their kids up to form 4 but mostly only finish primary school. (W)

Rukwa:

Children only go to primary school not secondary school – although free secondary schooling now makes that easier. (M)

which is the standard measure used to construct poverty lines. But, for most focus groups, consumption was but one aspect of wealth and poverty. Often they were not the most important thing which animated them. The more important aspects were land use, live-stock and farming activities. Food, clothing and possessions were consequences of deeper causes of poverty (cf. Brockington et al. 2018; Östberg et al. 2018).

Similarly, income was rarely mentioned. Only in Meru – a peri-urban area on the edge of Arusha town, was monthly income (over 1 million shillings) stipulated as one of the conditions of wealth. In almost every other focus group it was simply not mentioned. The ability to access money mattered to make farms productive, run businesses, pay for labour and make loans. But this was not thought of in terms of 'income'.

Instead, prominent in the discussions of our focus groups are the factors that make agriculture productive – land, labour, livestock, inputs as well as the liquidity to run businesses. Many of these attributes would be called assets, according to economists' definition (Barrett, Garg, and McBride 2016, 5). This finding has two important consequences for current research and writings about poverty levels in Tanzania. First, these assets are not well captured in official figures built on poverty lines. As we have described elsewhere, the methods used to compile poverty line data deliberately and necessarily exclude purchases of productive assets (United Republic of Tanzania 2009). We will explore the significance of this in more detail in a companion paper in this issue (Brockington 2019a).

Second, where assets are used in constructing abbreviated asset indices then *they appear to be using the wrong assets from the perspective of rural Tanzanians*. Televisions, irons and fridges do not feature much in rural Tanzanian focus groups. The list of assets reported for abbreviated asset indices in Table 1 does not match well with the assets reported by our groups. The fault lines in rural Tanzanian society are defined differently.

This means that the abbreviated asset indices, while they might report patterns in particularly large samples, and especially when comparing urban to rural societies, simply do not mean much when applied to rural Tanzanian society. They do not monitor aspects of life which matter to many rural Tanzanians. They cannot give sensitive understandings of differences in wealth and poverty.

Instead the assets that matter (subject to the caveats below) are house quality (particularly a combination of good attributes), livestock (although the quantity varies considerably), land worked (note not land owned), modern agricultural inputs, vehicles and businesses. These assets matter because they are (in the main) productive, they yield income streams, or in the case of houses, substantial benefits to the well-being of those who enjoy them.

There are also a series of attributes which (following Bebbington 1999) are better described as forms of social capital rather than assets *per se*. These include the ability to educate children, being respected, and being a source of loans and support. Similarly, a prominent theme in the condition of poverty was dependence on others.

This view of assets should come as little surprise to economists who have explored how assets can be the focus of investment strategies for poor people, who will save to accumulate them, and reduce consumption to avoid selling them (Barrett and Carter 2013; Carter and Barrett 2006; Carter and Lybbert 2012; Liverpool-Tasiea and Winter-Nelson 2011; Scott 2010). Asset ownership becomes one of the means by which we can distinguish between 'shallow' and 'deep' poverty (cf. Wuyts 2006). The latter refers to those in poverty, the former those who are vulnerable to it, should they lose their assets.

Nonetheless, it is surprising how discussions about class formation and social distinction in writings about Tanzanian peasantry so rarely cover all these dimensions of wealth and poverty. Land worked is a pre-eminent concern and labour is similarly mentioned (Mueller 2011). But the other attributes that were so important in our focus groups are not so frequently covered. We return to this point in a companion paper (Brockington 2019a).

Variation in the meaning of assets

We found some diversity in the meaning of assets within study sites. In particular men and women tended to talk about assets in different ways in that women were much more detailed and specific when discussing the assets that mattered, particularly with respect to homes, than were men (Table 3). The meaning that assets have to particular social groups and communities will vary according to the labour expended on those assets, and the control over the benefit streams resulting.

Across study sites some assets that people mentioned signified different things in different places. A metal roof, we were told in Mbeya, meant little these days as they were so common. A good house must be good in all its aspects if it is to signify wealth. The level of wealth indicated by house type varies in different parts of the country as the price of basic inputs (cement, glass and metal sheeting) vary. Tanzania is still characterised by weak infrastructural links that can substantially raise the costs of provisions and asset purchase in remote rural areas.

Livestock present obvious problems for measuring wealth. The availability of cattle in some parts of the country (such as the southeast) has been historically restricted

Table 3. Gender Difference in the Salience of Attributes of Wealth.

Gender Group	Things mentioned by men not women/ women not men	Things mentioned by most men and a few women/ most women and a few men	Things mentioned in common by both men and women
Women	Painted house TV Donkeys Flowers in the garden Gated compound Forward planning Life without problems Access to a vet	Private health care Private education Solar Electricity Water Enough food Children educated to University Ploughing with oxen Ability to work Selling milk Milling machine Ability to farm land Renting extra land Growing potatoes/tomatoes	A good house Electricity Metal roof Glass windows Modern toilet Burned brick walls Plastered walls Using paid labour Farm size Improved livestock varieties Ploughed fields Modern inputs in farms Commercial tree crops
Men	Bank account Livestock well cared for Land well managed	<i>We could not populate this cell with any attributes.</i>	External crop market Business owner Property investments Cows Sheep/goats Fowl Pigs Car Tractor Motorbike Eat three times per day Educate children to form IV + Sofa set Social networks Salaried job Fewer children

because of tsetse fly and other diseases. Pigs are rare in predominantly Muslim areas. But even where cattle are present and welcome then, even within a single village, these animals can be both a correlate of wealth, and its ultimate measure. Some respondents noted that people could be wealthy in livestock, but not use that wealth to invest in houses or education (Box 8). Livestock (cattle) were wealth for such respondents. For others, they were a means of providing liquidity when the need arose.

Livestock are also interesting because the numbers entailed could vary so much from place to place. In Meru a really wealthy family might send their children to international school, work overseas *and* have as many as 5 cattle. In Morogoro the wealthy numbered their herds in the thousands. Clearly, livestock would be difficult to operationalise in any nationally comparative asset index.

Land signifies wealth and poverty in somewhat surprising ways. According to our informants, ownership *per se* does not signify wealth. Owning small areas of land was not a problem if rich people could access other peoples' farms through rental agreements or sharecropping. Likewise a common characterisation of poverty was not landlessness, but rather the inability to use land assets properly for productive gains. However, these aspects of land ownership are not well covered in all surveys. Demographic and Health Surveys ask only about land ownership, not about land use. This is a poor proxy for wealth given that land owned may not be used, and land that is rented can be such a strong contribution to wealth.

More generally, while similar things appear in the meaning of wealth and poverty across the country, it is difficult to put together a list of assets that has *the same meaning* across the country. We have, therefore, a response to Johnston and Abreu's challenge posed at the beginning of the paper. They insisted that asset 'indices should be constructed and compared over limited geographic scales and time periods; [and that] the choice of assets should be based on an understanding of what it means to be wealthy or poor in a particular place' (2016, 417–418).

Our results clearly show that, for many of the questions for which assets could be useful, the national scale is too large a canvas for the limited geographic scales Johnston and Abreu call for. This means that where we have comparative data that crosses several sites within one country then we must presume that any asset index constructed from these data cannot be generalised beyond particularly similar places (villages or neighbouring villages). Instead, a meaningful asset index will have to be built up from the ground up – starting with localised asset indices derived from the smallest scale, and generalising to include other areas only if there is significant similarity.

It follows too that where we have studies of change as observed through assets then these too need to be localised studies. As we have tried to show in the accompanying papers, we need to build up a multitude of different case studies in order to understand how different societies respond to new economic opportunities and constraints in terms of adjusting their asset portfolios.

This point is reinforced if we consider the limitations of our site selection. All the societies we visited were mainly agricultural. They were not herders, not fisherpeople, and not running small businesses in towns. Were we to include these other groups then the differences we found are likely to grow. Agriculturalists might be expected to share more similarities. The fact that they do not emphasises the difficulties of finding common measures of locally meaningful wealth and poverty.

Can locally meaningful measures be legible to policymakers?

If Tanzanians were to become wealthier in their own terms then would their government recognise that fact? Oddly it is possible that it would not. This is because the measures of wealth and poverty that the government is interested in revolve around income and expenditure, not the bundles of asset access and ownership that we have documented, time and again, as being important in the different village sites that made up this project.

This emphasis can be seen repeatedly in numerous policy documents. The Community Development Policy of Tanzania (1996) refers to those measures that enable people to recognise their own ability to use the available resources to earn and increase their income (United Republic of Tanzania 1996). To eradicate poverty the policy put more emphasis on the need for communities to increase income, which will enable them to build a better life. Specifically, this entails enabling the majority to enter into an economic system of exchanging their assets for money in order to be able to pay for goods and services that count in measuring standards of living. The policy takes an example of livestock that should be utilised and converted into income. The Rural Development Strategy (2001), which arose from the unsatisfactory performance of the agricultural sector, recognises poverty in the rural areas as a condition that can only be reduced through increased income growth. It is also implied that rural incomes can only grow by improving access to

irrigation, energy, market-related information, transportation and communication (United Republic of Tanzania 1996).

Income and expenditure are important. They matter in and of themselves as important aspects of poverty, from the point of view of economic theory (cf. Ravallion 2012), and because they allow international comparisons. But they are not necessarily the only aspects of poverty (or wealth) that need to be tracked. It is not so obvious why the assets that we have reported are not used in other indices of development and change in different parts of Tanzania. Indeed the Sustainable Development Goals explicitly acknowledge that nationally appropriate indices will have to be found. It is possible that they may yet become more useful in policy discourse. That will depend upon developing ways of either overcoming, or better still recognising, the considerable diversity in understandings of wealth that we have found in these focus groups.

Conclusion

We have examined variations in the local meaning of wealth and poverty for men and women in 17 rural locations from seven different regions in Tanzania. Our data come from a variety of social, economic and environmental settings, all of them rural, but all primarily agricultural (not pastoral or fishing communities). We undertook this work in order to explore the recommendations made by Johnston and Abreu (2016) as to the geographical limits of asset indices and the need for asset indices that reflected local understandings of wealth.

We found that, across Tanzania, assets feature prominently in local definitions of wealth and poverty for rural Tanzanians who were pursuing agricultural livelihoods. This poses three challenges. First, if we are to follow asset ownership over time then with what social units do we track assets? Assets are rarely owned solely by individuals. The benefit streams they afford, the work done on them, are shared (unequally) by families. Tracking assets over time requires tracking these domestic units over time too – and this presents significant methodological issues. We tackle this problem in a companion paper in this issue (Brockington et al. 2019). Second, given that assets feature so prominently in our focus groups, do they also feature in academic debates about prosperity and poverty in peasant societies? This issue we examine in the second companion paper (Brockington 2019a).

The third challenge is that while assets are good indicators of local level change, it is difficult to use change in assets to generalise across cases studies and different regions. There are signs that, across rural Tanzania, quality of housing and access to electricity and electrical goods are generic indicators of wealth. However, the value of these elements in distinguishing families will vary from place to place. A fine house with electricity may be relatively common in peri-urban areas; it will be a mark of some distinction in the remoter areas we visited. It is possible also that measures related to farm inputs and livestock can be used across large areas. But again this will depend on the environmental circumstances. Some dryland areas may be more suited to livestock than agriculture; some soils and some crops will require more inputs than others. There are also differing cultural values that surround particular types of livestock that vary regionally.

We have also found that, in rural areas, current commonly used asset indices do not well reflect local interpretations of wealth or poverty. The Demographic and Health

Surveys (used by Young among others) count land ownership, instead of land use. Conversely, asset indices may count things (irons, televisions or fridges) that were simply not mentioned in our focus group discussions. Asset indices plainly capture statistically significant difference. But these statistical patterns are not good proxies of the changes that rural Tanzanians want to see most immediately.

To summarise as briefly as possible, we have found it difficult to compile effective asset indices that will work across Tanzania. There is too much variety. This is true for our study sites, and the point is enhanced if we recall the limitations of our sources. Instead, we have to find ways of intelligently combining different indices from different places that produce comparable measures which are locally accurate.

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References

- Alkire, Sabina, and James Foster. 2011. "Understandings and Misunderstandings of Multidimensional Poverty Measurement." *Journal of Economic Inequality* 9 (2): 289–314.
- Barrett, Christopher B., and Michael R. Carter. 2013. "The Economics of Poverty Traps and Persistent Poverty: Empirical and Policy Implications." *Journal of Development Studies* 49 (7): 976–990.
- Barrett, C., T. Garg, and L. McBride. 2016. "Well-Being Dynamics and Poverty Traps." *Centre for Climate Change Economics and Policy Working Paper No. 250, Grantham Research Institute on Climate Change and the Environment Working Paper No. 222*. LSE, London.
- Bebbington, Anthony. 1999. "Capitals and Capabilities: A Framework for Analyzing Peasant Viability, Rural Livelihoods and Poverty." *World Development* 27 (12): 2021–2044.
- Beegle, Kathleen, Luc Christiaensen, Andrew Dabalen, and Isis Gaddis. 2016. *Poverty in a Rising Africa*. Washington, DC: World Bank.
- Benjaminsen, Tor A., and Ian Bryceson. 2012. "Conservation, Green/Blue Grabbing and Accumulation by Dispossession in Tanzania." *The Journal of Peasant Studies* 39 (2): 335–355. doi:10.1080/03066150.2012.667405.

- Bergius, Mikael, Tor A. Benjaminsen, and Mats Widgren. 2018. "Green Economy, Scandinavian Investments and Agricultural Modernization in Tanzania." *The Journal of Peasant Studies* 45 (4): 825–852.
- Blumenstock, Joshua, Gabriel Cadamuro, and Robert On. 2015. "Predicting Poverty and Wealth From Mobile Phone Metadata." *Science* 350 (6264): 1073–1076.
- Brockington, Dan. 2019a. "Persistent Peasant Poverty and Assets. Exploring Dynamics of new Forms of Wealth and Poverty in Tanzania 1999-2018." *Journal of Peasant Studies* TBC. doi:10.1080/03066150.2019.1658081.
- Brockington, Dan. 2019b. <http://livelihoodchangeta.wixsite.com/tanzania/project-summary> viewed August 15th 2019.
- Brockington, Dan, Ernestina Coast, Olivia Howland, Anna Mdee, and Sara Randall. 2019. "Assets and Domestic Units: Methodological Challenges for Longitudinal Studies of Poverty Dynamics." *Journal of Peasant Studies* TBC. doi:10.1080/03066150.2019.1658079.
- Brockington, Dan, Olivia Howland, Vesa-Mati Loiske, Moses Mnzava, and Christine Noe. 2018. "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): 217–243.
- Carter, M. R., and C. B. Barrett. 2006. "The Economics of Poverty Traps and Persistent Poverty: an Asset-Based Approach." *Journal of Development Studies* 42 (2): 178–199.
- Carter, Michael R., and Travis J. Lybbert. 2012. "Consumption Versus Asset Smoothing: Testing the Implications of Poverty Trap Theory in Burkina Faso." *Journal of Development Economics* 99: 255–264.
- Chakraborty, Nirali M., Kenzo Fry, Rasika Behl, and Kim Longfield. 2016. "Simplified Asset Indices to Measure Wealth and Equity in Health Programs: A Reliability and Validity Analysis Using Survey Data From 16 Countries." *Global Health: Science and Practice* 4 (1): 141–154.
- Filmer, Deon, and Lance H. Pritchett. 2001. "Estimating Wealth Effects Without Expenditure Data – or Tears: An Application to Educational Enrollments in States of India." *Demography* 38 (1): 115–132.
- Harttgen, Kenneth, Stephen Klasen, and Sebastian Vollmer. 2013. "An African Growth Miracle? Or: What Do Asset Indices Tell Us About Trends In Economic Performance?" *Review of Income and Wealth* 59 (Special Issue, Oct 2013): s37–s61.
- Homewood, K. M. 2008. *Ecology of African Pastoralist Societies*. Athens, OH: Ohio University Press.
- Howe, Laura, Bruna Galobardes, Alicia Matijasevich, David Gordon, Deborah Johnston, Obinna Onwujekwe, Rita Patel, Elizabeth A. Webb, Debbie A. Lawlor, and James R. Hargreaves. 2012. "Measuring Socio-Economic Position for Epidemiological Studies in low-and Middle-Income Countries: A Methods of Measurement in Epidemiology Paper." *International Journal of Epidemiology* 41 (3): 871–886.
- Howe, Laura, James Hargreaves, Sabine Gabrysch, and Sharon Huttly. 2009. "Is the Wealth Index a Proxy for Consumption Expenditure? A Systematic Review." *Journal of Epidemiology and Community Health* 63 (11): 871–877.
- Jayne, T. S., Jordan Chamberlin, and Rui Benfica. 2018. "Africa's Unfolding Economic Transformation." *Journal of Development Studies* 54 (5): 777–787.
- Jean, Neal, Marshall Burke, Michael Xie, W. Matthew Davis, David B. Lobell, and Stefano Ermon. 2016. "Combining Satellite Imagery and Machine Learning to Predict Poverty." *Science* 353 (6301): 790–794.
- Johnston, D., and Alexandre Abreu. 2016. "The Asset Debates: How (Not) To Use Asset Indices To Measure Well-Being And The Middle Class In Africa." *African Affairs* 115 (460): 399–418.
- Liverpool-Tasiea, Lenis Saweda O., and Alex Winter-Nelson. 2011. "Asset Versus Consumption Poverty and Poverty Dynamics in Rural Ethiopia." *Agricultural Economics* 42: 221–233.
- Mueller, Bernd E.T. 2011. "The Agrarian Question in Tanzania: Using New Evidence to Reconcile an old Debate." *Review of African Political Economy* 38 (127): 23–42.
- Narayan, Deepa. 2000. *Voices of the Poor. Can Anyone Hear Us?* Washington, DC: World Bank.
- Östberg, W., O. Howland, J. Mduma, and D. Brockington. 2018. "Tracing Improving Livelihoods in Rural Africa Using Local Measures of Wealth: A Case Study from Central Tanzania, 1991–2016." *Land* 7 (44): 1–26.

- Ravallion, Martin. 2010. "How Not to Count the Poor? A Reply to Reddy and Pogge." In *Debates on the Measurement of Global Poverty*, edited by Sudhir Anand, Paul Segal, and Joseph E. Stiglitz, 86–101. Oxford: OUP.
- Ravallion, Martin. 2012. "Mashup Indices of Development." *The World Bank Research Observer* 27 (1): 1–32.
- Reddy, Sanjay G., and Thomas Pogge. 2010. "How Not to Count the Poor." In *Debates on the Measurement of Global Poverty*, edited by Sudhir Anand, Paul Segal, and Joseph E. Stiglitz, 42–85. Oxford: OUP.
- Scott, Lucy. 2010. *Giving Assets: An Effective Approach for Reducing Vulnerability and Building Livelihoods? The Case of the Chars Livelihoods Programme*. PhD Diss., The University of Manchester.
- Shivji, Issa G. 2017. "The Concept of 'Working People'." *Agrarian South: Journal of Political Economy* 6 (1): 1–13.
- United Republic of Tanzania. 1996. *Community Development Policy*. Dar es Salaam: Ministry of Community development, women affairs and children.
- United Republic of Tanzania. 2009. *Household Budget Survey 2007 Main Report*. Dar es Salaam: National Bureau of Statistics.
- Watmough, Gary R., Charlotte L. J. Marcinko, Clare Sullivan, Kevin Tschirhart, Patrick K. Mutuo, Cheryl A. Palm, and Jens-Christian Svenning. 2019. "Socioecologically informed use of remote sensing data to predict rural household poverty." *Proceedings of the National Academy of Sciences* www.pnas.org/cgi/doi/10.1073/pnas.1812969116.
- White, Ben, Saturnino M. Borras, Ruth Hall, Ian Scoones, and Wendy Wolford. 2012. "The new Enclosures: Critical Perspectives on Corporate Land Deals." *Journal of Peasant Studies* 39 (3–4): 619–647.
- Wuyts, Marc. 2006. *Developing Social Protection in Tanzania Within a Context of Generalised Insecurity*. Dar es Salaam: REPOA.
- Young, Alwyn. 2012. "The African Growth Miracle." *Journal of Political Economy* 120 (4): 696–739.

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