Land Consolidation, Canals and Apps – Reshaping Agriculture in Ethiopia

Atakilte Beyene
Policy note no 3:2019
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Over the last 15 years, Ethiopia has seen remarkable economic growth. The agricultural sector is part of this growth, but its proportional contribution to the overall economy has gone down. There is an urgent need to transform Ethiopian agriculture, not least when it comes to the inefficient land laws that impede young people from investing in farmland. This policy note identifies the structural problems that constrain such a transformation and gives recommendations on how they can be addressed.

By Atakilte Beyene

Despite persistent efforts over the last half century or more by various Ethiopian governments to transform the country from an agriculture-based economy into a manufacturing hub, agriculture remains the most important sector in terms of employment, income and food security. The sector, which is dominated by smallholder farmers, faces many challenges – technical, organisational, environmental and social. The general inability of the Ethiopian economy to radically change and diversify employment opportunities also represents a major structural problem for agriculture. With the country’s rapidly growing (and largely young) population, the pressure to escape from the intensifying environmental, social and economic trap is enormous.

One of the main reasons for the remarkable growth in Ethiopia’s agricultural sector is that economic policies and strategies have paid considerable attention to poverty reduction and growth. Over the last 15 years, Ethiopia has seen remarkable economic growth. The agricultural sector is part of this growth, but its proportional contribution to the overall economy has gone down. There is an urgent need to transform Ethiopian agriculture, not least when it comes to the inefficient land laws that impede young people from investing in farmland. This policy note identifies the structural problems that constrain such a transformation and gives recommendations on how they can be addressed.
ty reduction and rural development. Smallholders have benefited relatively much more than under previous policy approaches. A key factor behind the growth is that government policies have successively, over the past decade or two, started to recognise the importance of agriculture as a driver of development, on both the smallholder and the agro-industrial level (although the policies still place a heavy emphasis on expanding manufacturing). This has resulted in greater public investment in farmers’ education, research-based capacity building of farming practices, public health in rural areas, improved seeds, fertilisers and crop-protection chemicals, machinery, irrigation and knowledge.

Ethiopia is generally less urbanised than other African countries, but there is still a steady (albeit slow) rising trend towards a larger urban population. The expanding cities push up urban demand for major staple crops, which in turn raises the demand for greater production output from the agricultural sector, especially in peri-urban areas. The output of the agricultural sector can increase thanks to the expansion of cropland areas (which is already happening on quite a large scale) and through more people working on the land. But the greatest leaps in output growth would be achieved through structural transformation, which includes everything from land reforms and reorganisation to new technology, knowledge dissemination, capacity building, improved seeds and fertilisers, and other modern output use.

**Transformation – its reasons and constraints**

There are many reasons for transforming the agricultural sector – food security, rural employment, the need for raw materials for the industrial sector, and adjustments to environmental challenges and climate change. Generally speaking, agricultural transformation is understood as a shift from a more subsistence-oriented livelihood towards a more productive system, where rural households earn a decent income from their farming outputs. Related to this is the degree of market integration, which is described in terms of the extent to which households commercialise their agricultural products. Agricultural transformation can also be understood in terms of reduced vulnerability and improved sustainability of the agricultural system. Last, but not least, a crucial aspect of economic transformation is the shift of labour from agriculture to other productive economic sectors.

There is evidence that all these transformations are taking place – except the shift in agricultural labour, which is not (yet) on the horizon. Smallholder agriculture continues to be the main employment sector for rural labour, and improvements in agricultural labour productivity are confined to peri-urban agriculture and irrigation agriculture.
Agricultural irrigated land
(per cent of total agricultural land)
Agricultural irrigated land refers to agricultural areas purposely provided with water, including land irrigated by controlled flooding.

Data for Africa is only available for the 24 countries listed below. Years in brackets indicate when the latest available data was reported for each country.

Source: FAO, electronic files and web site.

More than 10 per cent
- Mauritius (2016) ..... 19.5%

5 to 10 per cent
- Seychelles (2003) ..... 5.0%

2.5 to 5 per cent
- Cabo Verde (2004) ..... 4.6%
- Morocco (2011) ..... 4.6%
- Tunisia (2013) ..... 3.9%
- Eswatini (2002) ..... 3.7%
- Algeria (2014) ..... 2.8%

1 to 2.5 per cent
- Sudan (2011) ..... 2.2%
- Madagascar (2009) ..... 2.2%
- South Africa (2011) ..... 1.7%

Less than 0.5 per cent
- Ethiopia (2011) ..... 0.45%

Arable Land

Arable Land includes land under crops, temporary meadows for mowing or pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Long-term vulnerability

Ethiopian agriculture is predominantly rain fed and is vulnerable to weather shocks, as well as to a variety of other factors, both internal and external. The impacts of global climate change and periodic droughts have led to massive crop failures in many parts of the country. Environmental degradation – mainly the loss of soil, water and biodiversity – has also exacerbated agricultural vulnerability in many parts of the highlands and mountainous areas.

Many of the smallholder farmers live only just above the poverty line; and so when a major shock occurs, all too easily they fall into a state of poverty and food insecurity. The 2015 El Nino heatwave caused weak and erratic summer rains that negatively affected farmers. Within just one year, the number of food-insecure people needing humanitarian assistance rose from 2.9 million (in January 2015) to 10.2 million (in January 2016). Even during normal rainfall seasons, a large number of households are reported to be vulnerable to shocks, oscillating between being poor and not being poor. The figures are larger than standard poverty statistics would suggest, such as those used in World Bank studies. Such studies often focus on the resilience potential of farmers, where short-term circumstances are used to account for the dynamics. However, the social and economic scars of disasters can also be deep and long term. The damage to future livelihoods (through the loss of animals, seeds and labour) and the disruption in input and output exchange channels are just some of the factors that constitute the long-term vulnerability context, but that are not readily captured by statistics.

Small and fragmented farms

In Ethiopia, the average total farm land area per smallholder household is 0.78 hectare. The average number of plots constituting a household farm is four. Since the start of the land redistribution programmes in the mid-1970s, the general trend has been towards smaller and more fragmented land plots. Although for decades now agricultural reform programmes have emphasised the need for land consolidation and land accumulation among smallholder farmers, no such trend has yet been observed.

In a context where rural livelihoods are vulnerable and where agriculture is the main income source, people generally hold onto their land resources and distribute the
farms among themselves (within communities, to household members or siblings, etc.). Cultural and traditional practices, such as marriage customs, also reinforce the significance of holding land. Furthermore, the land policy in particular is perhaps the major reason for the current impasse. The land redistribution programmes, as well as the constraints on land transfer, have reinforced farm fragmentation and the decline in farm size. Land leasing, for example, is only practiced for short periods of three years, on average, which makes it difficult for entrepreneurial farmers to plan and get access to the necessary resources (such as loans) for long-term investments.

Young people and the need for land reform
In Ethiopia, unlike in many other African countries, the need to reform land tenure does not have to do with equity – at least not primarily – since land distribution is already fairly equitable today. Instead, the need to reform is bound up with improving security of land rights and easing restrictions on land transfer. The dominant effect of today’s agricultural land tenure system is that it impedes or prevents the long-term or complete transfer of land. An exception to this is mortgaging to siblings.

The need for land reform is closely linked to Ethiopia’s demographic challenges. With 45 per cent of the population aged under 15, and 71 per cent aged under 30, Ethiopia is a country of young people, who often have little or no opportunity to hold land of their own. Given that the majority of young people live in rural areas, the potential contribution of rural youth to economic and sustainable development depends on the job opportunities. Youth unemployment among those aged 15 to 29 is 25 per cent. Differences in opportunities and constraints on access to (and on the holding of) land among smallholder farmers are more likely to be generational, rather than a result of other factors, such as capital, capacity or knowledge. How this structural condition influences the future engagement of young people with agriculture and agricultural innovation should be seen as a critical problem.

Easing the constraints would have several positive effects. First, it would likely trigger the process of transferring land from less entrepreneurial to more entrepreneurial farmers, who are willing to invest, seek education and take risks in order to boost productivity. Secondly, if the rural youth is going to play a productive role in the agricultural sector, they need to have access to land for a reasonable time. Thus, allowing long-term land transfer could be a powerful incentive for young people to engage in agriculture. Thirdly, consolidating land plots into larger production units, rather than leaving them fragmented and scattered, would promote investment in improved technologies and methods.
Policy recommendations

Build capacity in water management. The policies on agricultural water development that have been adopted over the past two decades are commendable, in the sense that they have promoted dam and irrigation schemes on all scales – small, medium and large – with the objective of benefiting smallholder farmers (who were previously ignored in state policies and reform programmes). However, the focus continues to be on developing the physical infrastructure, like the actual dams themselves; meanwhile, the institutional and organisational aspects of water management need further attention. This is particularly pressing for the medium- and large-scale dam and irrigation schemes across the country. Small-scale schemes usually come from bottom-up initiatives, and so the organisation and management are set up at a local level, in harmony with the traditions and structures of the group or village that they serve. But medium- and large-scale dam and irrigation schemes usually come from top-down initiatives, and so farmers need to build their knowledge of water management, particularly with focus on common pool resource management, in order to make the best use of them.

Secure land rights and promote land consolidation. Securing farmers’ user-rights to their land is important: it guarantees the livelihood and food security of smallholders, and it also provides some incentives to improve and invest in land-use practices. But land policies have to look beyond the issues of security provision. The current structural limits – and more specifically, the problem of fragmented land plots – need to be recognised. Policy makers should encourage processes leading to the gradual consolidation of farms through the long-term (or permanent) transfer of plots to farmers who are willing and able to invest.

Support for co-operatives based on bottom-up initiatives. The scaling-up of farms – or rather, farm management systems – can also be achieved through co-operatives. Policy makers should support programmes aimed at encouraging farmers to develop co-operatives, especially those based on industrial crops, which have the potential to support a growing urban population. This could, for example, be achieved by guaranteeing minimum prices for a selected range of crops with industrial potential, or through state intervention in the quality grading of farmers’ products.

Put more effort into post-harvest handling. The policy approach to smallholder agriculture is geared to improving agricultural production. This is mainly because rural poverty and food security issues are framed as matters of agricultural production. However, there is a lot to be gained by directing more policy attention to the post-harvest aspect of the agricultural system. For example, investment in affordable means to reduce the loss of harvest (for example, storage facilities) is essential, especially in irrigation-based agriculture, where perishable products are grown.

Expand the use of trading services. Difficulties in accessing the markets is another post-harvest challenge, where efficient policies could help break the smallholders’ dependence on purchasing agents commissioned by global export companies or other middlemen. A good example is the Ethiopian Commodity Exchange (ECX). This is a trading service, set up in partnership between market actors and the Ethiopian government, and designed to meet smallholders’ needs, too. It provides producers with information on the market prices, in real time, through a toll-free phone-in service. The ECX has greatly reduced transaction costs and boosted income for producers. Unfortunately, only a few crops – mainly export cash crops like coffee – are included in this system, and so the majority of smallholder farmers do not have access to such information.

Liberalise the market for extension services. The role of the state in providing extension services (such as improved seeds and fertilisers – and the dissemination of knowledge on how to use them) has been indispensable over the past two decades, and is likely to remain so for the foreseeable future. However, attempts by domestic private actors to access the market have been less successful, partly because they lack the hard currency (mainly US dollars) needed to import, and partly due to bureaucratic regulations and exclusion from distribution networks. The state shows little or no interest in liberalising the market and opening it up to private actors. Policy makers should push for a change in policy on this point, since free competition will promote efficiency.

Further reading

About this policy note
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About the author
ATAKILTE BEYENE, Senior Researcher at the Nordic Africa Institute (NAI). His research is mainly focused on governance of natural resources, agricultural transformation and food and energy security – in Ethiopia, and also more broadly in East Africa and the Horn of Africa.

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