

Research Findings: Models of Commercial Agriculture in Kenya

Kenya provides a compelling case study of market driven agricultural evolution over the past century. Agriculture played a singular role in the development of the modern Kenyan economy, and while Kenyan agriculture was commonly regarded as a positive exemplar at a time when agriculture in many regions of Africa remained stagnant,¹ the sector faces new challenges. This is the backdrop to this study, which investigated the impacts of three models of commercial agriculture on economic development and rural livelihoods in an area dominated by small-scale producers.

A new policy cycle outlined in government documents includes the programmatic Vision 2030 strategy, which emphasises agriculture's role in transforming Kenya into an emerging economy. This new policy frame further underscores the significance of how different models of agricultural commercialisation benefit rural inhabitants while supporting new pathways of capital accumulation.

The acquisition of large tracts of land by agribusiness firms and foreign governments, and academic critiques thereof, are refocusing attention on the role of large-scale agricultural models for meeting Africa's future requirements.

Although small farmers are efficient and resilient, policy analysts now question if the small farm sector can meet the continent's future needs.² External investors, meanwhile, see underexploited African land as an opportunity to develop capital-intensive plantations and ranches.³ Collier and Dercon emphasise the intensification of labour productivity for transforming African agriculture:

For economic development to succeed in Africa in the next 50 years, African agriculture will have to change beyond recognition. Production will have to have increased massively, but also labour productivity, requiring a vast reduction in the proportion of the population engaged in agriculture and a large move out of rural areas.⁴

They argue that this transformation will entail much greater scope for large-scale, input intensive agriculture. But Poulton⁵ questions the assumptions behind the kind of big-push capital driven transition Collier and Dercon advocate for Africa, stating that, 'the diversity of its endowments and its tighter budget constraints mean that agricultural development

strategies in Africa need to be highly context specific, financially sustainable, and more evidence-based.’

Background to the Kenya Study

Kenya’s agrarian development over the past century inscribes the indigenous population’s shift from a source of labour for the colonial agricultural estates to yeoman and peasant farmers producing for a range of export markets. The resulting mix of small and large farms provides an entry point for examining the comparative importance of organisational variables including farm size and economies of scale within an agricultural sector characterised by a longstanding history of conflict and symbiotic interactions between large-scale estates and smallholder producers. The three models that feature in this study include plantations, commercial farms, and out-grower schemes. Smalley’s⁶ taxonomy describes the three models in terms of their distinctive features:


- **Plantations** (or estates) are relatively large, self-contained agribusiness farms, often connected to markets through vertically-integrated processing chains; their contribution to the surrounding economy is typically limited to labour hired in on a permanent or seasonal basis.
- **Commercial farms** are usually large farms more associated with mixed farming operations that tend to be contiguous within an area, even if surrounded by small-scale peasant farms who provide seasonal labour, and are owned by individuals or small companies.
- **Outgrower schemes** involve a nucleus estate linked to vertically integrated processing facilities and export markets that augment the crops produced on their own land by contracting small farmers who receive seeds, fertiliser, and other inputs in exchange for selling their produce to the contractor – and may also work for wages at times on the nucleus estate.

The relationship among the three models in Kenya is the product of an uneven process of gradual convergence of large-scale and small-scale producers’ market interests within a larger political and policy arena. The study examined their ramifications for generating income and employment, sustaining household food security, and fostering economic inclusivity in conditions of sustained competition over the country’s limited land and natural resources.

The field research was undertaken in Meru County, an area of mixed farming on the northern fringe of Kenya’s central highlands. The setting provided for the evaluation of the commercial models’ comparative influence on market access, transaction costs, technological change, the value of household production and returns to labour, but in a more interactive context than other country studies in Ghana and Zambia.⁷ The Meru fieldwork generated a comprehensive survey dataset based on households involved in the plantation, commercial farm, and out-grower economies. A series of life histories reflecting the survey sample complemented the household data.

Some Findings of the Field Research

The fortunes of Kenya’s most important export crops were closely tied to the performance of the state institutions until their generally



positive record began to decline during the 1980s due to a matrix of economic, political, and institutional factors. Following a succession of crises that effected far-reaching changes across the rural economy, there is again an apparent trend towards stabilisation. Time series data confirms the positive status of household food security and declining incidence of land conflict over the past 15 years.

The average household size is slightly higher in the commercial focal area (4.05 persons) compared to plantation and out-grower focal areas (3.65 and 3.58 respectively).⁸ The average land size is relatively small in general (0.76ha, 0.60ha, and 0.51ha per household for the commercial, plantation, and out-grower focal areas respectively).⁹ The availability of farmland is limited due to a shrinking availability of cultivable land in all three focal areas.

The sample also included households not linked to the commercial models. The scores for involved households were significantly higher than the scores for uninvolved households for the household wealth index, crop yields, fertiliser use, and most other variables. This confirms the benefits of engaging with commercial models, and the results of other studies showing that the benefits of commercial agriculture carry over to household food production due to factors such as the shared application of inputs and access to services such as credit.

The combination of commercialisation and liberalisation of state marketing chains decreased the importance of many traditional commercial crops, contributing to a general pattern of straddling, income diversification, and seasonal allocation of household labour that has characterised the rural economy since

the state institutional decline of preceding decades. As a consequence, farming is central to but not always the most important component of a given household's economic strategy. There are commonalities in the pattern despite the increase in rural stratification. For example, many local smallholders continue to combine their own land-based livelihoods with wage employment and small businesses or petty trade, while an emerging class of coffee growers are seeking to develop larger and more capital intensive farms on holdings ranging from five to fifty acres while also investing in urban areas.

The contribution of the different models to rural labour markets is central to the LACA research design, and the general findings in respect to employment underscore consistent wage differentials among the models and between women and men within each model. Kisima Farm's wages for permanent employment are significantly above the minimum wage, although those for casual workers are below the minimum wage. Otherwise, employment conditions are comparable for outgrowers and commercial farms, with both employing mainly casual labour at low daily pay rates. While the commercial farms employ more people, plantations employ more permanent workers than casuals and offer better terms of employment for their permanent workers.

The lack of highly remunerative employment, be it permanent well-paying jobs or their economic equivalents, is linked to the persistence of households' mixed livelihood strategies, even when their land holdings are economically unviable from a formal perspective. Despite the high rate of small farm sub-division, the value of land remains high relative to income generation and food prices are rising. These factors underscore the value of working even a

very small plot of land for the poor, as it anchors households' position in social networks while facilitating access to casual on-farm employment. The farmer associations forming around the emerging 'middle' farmers are another example of the role of social relations in presenting alternatives to production formerly dominated by cooperatives and marketing boards.

Developments in Nyeri, where many smallholder growers are earning significantly higher per kilo prices for their coffee, demonstrate how county governments can make a considerable difference in enhancing the per-unit output and value of coffee. The revival of the coffee sector, which is at an earlier stage in Meru, can benefit from some of the innovations including subsidised fertiliser and inputs pioneered in nearby counties.

Implications for Policy

The research in general points to a relationship between the value of production under the different models and the generally low and unequal terms of employment for most agricultural labour. Productive efficiency is highest under the plantation model, hence the more positive terms of employment. Commercial farm interviews, however, indicate that the monthly salary of a farm manager in the coffee zones can be over ten times the income of a full-time casual employee on the same farm. Such discrepancies are one of the factors constraining better returns to labour, a major influence on the potential value of smallholder horticulture and traditional beverage crops (tea and coffee). Interviews with the middle farmers highlight that at this juncture greater priority is given to increasing land size over increasing productivity.

This orientation lies at the intersection of different policy issues. Many analysts dating back to the 1970s have assumed Kenya's capitalist policies would sort out the land-labour-production equation over time, especially in regard to Kenya's skewed ratio of population to arable land. This has not occurred as envisioned, and as others have documented, the expected increase in labour and agricultural productivity did not occur in sub-Saharan Africa over the past four decades despite higher exit rates than in Asia after the Green Revolution.¹⁰

This in turn connects to the findings of our research, which indicate that after the massive expansion of smallholder participation, outgrower horticulture is often an auxiliary economic activity for many households and not a major source of capital or employment creation. The commercial farms, in contrast, display high potential for both accumulation and job creation but are still in a state of emergence that is being constrained by variables of labour, input prices, availability of capital, and other management issues. This brings us to the third model, the estates and plantation, which still carry controversial associations in Kenya.

The ranch-plantation belt in Meru formerly served as a buffer zone between the smallholder reserves and pastoralist areas. Over the past several decades state schemes and informal settlement have brought smallholders and the estates into close proximity, the latter also having undergone a process of sale, sub-division, and diversification in some ways similar to processes occurring in smallholder and large farm areas elsewhere.

Kisima Farm, the focus of our plantation model study, has evolved from a sheep ranch

into a professionally managed agribusiness over the past three decades. Kisima has over this period evolved from an exemplar of the least inclusive commercial model in the literature to a dynamic enterprise that is boosting smallholder potato yields by producing certified seeds for the local market. Technological innovation is arguably the single most effective method for addressing the low productivity and low farm income issues that appears particularly acute in the commercial farm and outgrower sectors. Kisima has contributed to change here by introducing practices for the efficient use of inputs and enhanced land management associated with precision agriculture. One of the local outgrower firms has embraced the same technological strategy and is extending the benefits of precision agriculture to a new class of 'middle' fruit and horticultural farmers who have been developing new farms in Meru's humid lower-altitude agro-ecological zones.

Kisima is also assisting neighbouring communities through a variety of contributions to schools, clinics, and student bursary support through its pro-active Corporate Social Responsibility programme. It is taking a lead role as well in managing local water resources – a problem identified by respondents across the research zone as the most volatile and contentious issue facing the region.

Access to irrigation water appears to be a new driver of stratification in the French bean out-grower areas, and control of the groundwater provided by Mt. Kenya's streams and rivers is increasingly a flashpoint for communal conflict within and beyond the commercial farming zones. This is the most obvious domain where state policy and infrastructural projects can contribute to the agriculture sector and the larger region's progress.

End Notes

- 1 Lofchie, M. (1989) *The Policy Factor: Agricultural Performance in Kenya and Tanzania*, Boulder, CO, USA and London, UK: Lynne Rienner Publishers
- 2 Lofchie, M. (1986) 'Kenya's Agricultural Success', *Current History*, May
- 3 Collier, P. and Dercon, S. (2009) *African Agriculture in 50 Years: Smallholders in a Rapidly Changing World?*, presented at the Expert Meeting on How to Feed the World in 2050, 12-13 October, Rome, Italy: Food and Agriculture Organization of the United Nations, Economic and Social Development Department
- 4 Deininger, K. and Byerlee, D. (2012) 'The Rise of Large Farms in Land Abundant Countries: Do They Have a Future?', *World Development*, 40(4):701-714
- 5 Collier and Dercon 2009: 1
- 6 Poulton, C. (2012) *The State and Performance of African Agriculture and the Impact of Structural Changes*, a paper presented at the 28th Triennial Conference of the International Association of Agricultural Economists, 18-24 August, Foz do Iguaçu, Brazil: IAAE
- 7 Smalley, R. (2013) *Plantations, Contract Farming and Commercial Farming Areas in Africa: A Comparative Review*. Working Paper 055, Cape Town, South Africa: Institute for Poverty, Land and Agrarian Studies
- 8 The Kisima farm area provided the focal area for the plantation model. The out-grower research focused on Kithoka location, one of the county's main areas of smallholder horticulture. A traditional coffee-growing zone near Meru town provided the locale for investigating the commercial farm model.
- 9 The average household size of the sampled households in all three focal areas is lower than the national average of 5.1 persons per unit.
- 10 The relatively dense population in the focal areas explains the contrast with average land size at provincial and national levels, which are 1.70ha and 1.75ha per household respectively.
- 11 Headey, D., Bezemer, D. and Hazell, P.B. (2010) 'Agricultural Employment Trends in Asia and Africa', *World Bank Research Observer*, 25(1):57-89

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