

The supermarket revolution and smallholder farmers

Agricultural supply chains in developing countries are undergoing a transformation towards higher-value products, stricter standards, and vertical integration. This can have far-reaching consequences for rural development. Recent research has concentrated on the export sector. But domestic supply chains are changing, too, often driven by supermarkets and their procurement channels. In many developing countries, supermarkets are expanding very rapidly, so the term “supermarket revolution” is sometimes used.

We have analysed impacts in the Kenyan small farm sector in a project funded by the German Research Foundation (DFG). We collected data from 400 randomly selected farm households in Kiambu District, where the two biggest Kenyan supermarket chains, Nakumatt and Uchumi, source vegetables for their stores in Nairobi. Foreign supermarket chains so far play a minor role in Kenya. Our sample includes farmers that supply vegetables to supermarkets as well as farmers that sell in traditional channels.

Farmers produce leafy vegetables, including exotic ones such as spinach and kale, and indigenous ones such as *amaranthus* and black nightshade. Traditional sales are spot-market transactions between farmers and traders without any prior agreement. Depending on the demand and supply situation, prices are subject to wide fluctuation. In contrast, supermarkets have contractual agreements with farmers regarding prices, quality, hygiene, and consistency

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in supply. Prices are usually higher and more stable than in traditional channels, but supermarkets make their payments only once a week. Supermarkets refuse delivery from farmers who are not supplying regularly or do not meet the contractual standards.

Our analysis shows that participation in supermarket channels has a positive impact on farm productivity. Higher output prices and market assurance increase farmers’ ability and willingness to upgrade their technology, including use of high-quality seeds, more organic fertiliser, and better irrigation equipment. Supermarket participation also increases scale efficiency: due to reduced marketing risk, farmers tend to specialise, harnessing economies of scale. We also examined impacts on household living standards. Participation in supermarket channels causes average gains in per capita income of almost 50 per cent. Thus, poverty rates among supermarket suppliers fell by 20 per cent.

Supermarkets also have positive rural employment effects. The special supermarket requirements entail intensified production and post-harvest handling, increasing farmers’ demand for hired labour. Participation in supermarket channels increases hired labour use by over 60 per cent. Especially women find more employment, as female labourers are preferred for certain operations such as cleaning and bundling the vegetables. Women’s access to paid employment tends to increase their economic independence and control over income. These findings suggest that the supermarket revolution

can contribute to agricultural growth in the small farm sector and broader rural development. However, supermarket procurement channels in Kenya are still evolving. Follow-up research will have to analyse whether or not the benefits are sustainable. Moreover, when developments expand geographically, disadvantaged households may be bypassed. Better educated and trained farmers are more likely to be involved in supermarket channels. Moreover, good infrastructure and access to public transportation and credit are factors that facilitate participation. Hence, typical market access constraints will have to be addressed to avoid undesirable social outcomes.

In Kiambu, an international NGO has promoted collective action among farmers, also providing special training on supermarket requirements, an advance payment scheme, and related institutional support. These activities reduce transaction costs and contribute to making farmers more reliable trading partners for supermarkets. Such efforts should be sustained and scaled up for better linking smallholders to emerging value chains.

Further Reading:

Rao, E.J.O., B. Brümmer, M. Qaim (2012). *Farmer Participation in Supermarket Channels, Production Technology, and Efficiency: The Case of Vegetables in Kenya*. *American Journal of Agricultural Economics* 94: 891–912.

Rao, E.J.O., M. Qaim (2011). *Supermarkets, Farm Household Income, and Poverty: Insights from Kenya*. *World Development* 39: 784–796.



Smallholders from Kiambu District supply Nakumatt stores in Nairobi.

Photo: J. Boethling