

# How farming stimulates rural economies

## Insights from southern Africa

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### Key messages:

**1. Small-scale farming usually creates more links to, and more jobs in, the local non-farm economy, than large-scale farming.**

Since the potential of smallholder farming is far from developed, stimulating such agriculture will lead to significant additional growth in the rural economy.

**2. Most non-farm jobs arise from farmers spending more money on locally-produced goods and services.**

**3. Local authorities in rural areas need to support informal business, rather than regulate or tax it out of existence.** Simple public investments, such as water and power, can make a difference.

This brief provides context and policy-relevant analysis of the DEGRP-funded agriculture research project *Space, Markets and Employment in Agricultural Development*. Led by Andries du Toit of the University of the Western Cape, South Africa, the research looks at how agricultural development stimulates rural economies in Malawi, South Africa and Zimbabwe.

## Rural economies in southern Africa

The majority of the population of southern Africa, South Africa excepted, live in rural areas and earn much of their income from farming. With development, rural economies tend to diversify away from agriculture, so that an increasing share of total output and jobs come from non-agricultural activities undertaken in what are known as rural non-farm economies (RNFEs).

### Benefits of rural non-farm activity

Rural non-farm activity can be a source of **additional incomes** to rural households. It may either generate higher returns to labour; or simply provide an income earner at times of the year when there is little to do on the farm. Moreover, non-farm activities may not face the same hazards of bad weather, pest and disease attacks, and price fluctuations that farming does; **thereby spreading and reducing risk.**

Rural Asian experience shows that developments in RNFEs have resulted in considerable benefits for rural households, whose incomes are now considerably higher than they would be if they had to depend on farming alone (Wiggins, 2014).

In sub-Saharan Africa, the RNFE is often seen as a way to **generate jobs** in predominantly agrarian countries that still have rapid population growth, but where it seems unlikely that enough decent jobs can be created in urban areas to absorb those joining the workforce.

Rural non-farm activities can be a promising source of jobs for **rural youth** in particular. In many parts of Africa, most of the potential farm land has already been brought into cultivation, so that with each generation farms are divided among multiple sons and daughters.

### **Box A: Rural non-farm economic activities**

The rural non-farm economy (RNFE) consists of a great diversity of activities including:

- Processing, trading & transport of farm inputs and outputs.
- Non-farm primary production and its processing, such as quarrying.
- Manufacture and repair of consumer goods for local rural markets, such as furniture and pottery; or for domestic and export markets, such as textiles from local wool, or distinctive arts and crafts, perhaps for tourists.
- Transport and trading manufactured goods from cities to local rural markets.
- Services for local rural markets, including: privately-provided services such as hairdressing or teashops; public services such as schools, health posts, road maintenance; and services for visitors, such as accommodation and catering, or maintenance and care of natural conservation areas.

In more urbanised settings, non-farm services increasingly include those aimed at the fulfilment of urban needs in leisure and tourism, environmental services, healthcare (e.g. retirement homes), etc.

What is left is often not enough to farm on, yet many rural youth also cannot expect to find an urban job (Fox & Sohneson, 2012). Non-farm activities can therefore provide a viable alternative.

### **Agriculture's role**

Although a wide range of activities may be undertaken in rural non-farm economies (see box A), many of them are in fact still closely linked to agriculture.

Upstream from the farm are enterprises that supply inputs and services to farmers, while downstream from the farm, businesses collect, process, transport, and store farm outputs. Furthermore, when farm households earn extra income from agriculture, they spend more, including on locally-produced goods and services, thereby further stimulating the local rural economy.

Hence a multiplier effect applies from agricultural development to the rest of the rural economy: for every extra dollar of farm output, another dollar or more may be generated in local non-farm activity.

### **How strong is agriculture's contribution to RNFEs?**

The extent to which agricultural development boosts other areas of the rural economy depends on: the amount of value added in the supply chains; the extent to which supply chain activities, especially processing, are carried out locally; and the degree to which farm households consume locally-produced goods and services.

Closely associated with the creation and success of non-farm activities is the extent to which rural producers invest surpluses and savings in local business, either directly as entrepreneurs, or through the proxy of banks making loans to local businesses.

The size of these effects has been estimated, although most of that research is now rather dated (Box B).

### Box B: Estimating multipliers from agriculture to non-farm activity

During the late 1980s and early 1990s a flurry of studies estimated the multipliers from agriculture to the rest of the rural economy, arriving at results that ranged from 1.3 to 4.6. Typically, the bulk of the effect, 75% or more, came through consumption spending (Delgado et al., 1994a, 1994b; Haggblade et al., 1989, 1991; Hazell and Ramasamy, 1991).

The estimates came from models; but these were criticised for unlikely assumptions about highly elastic supply of non-tradable goods and services in rural economies (de Janvry, 1994).

Since then, surprisingly few attempts have been made to build better models, despite the optimism of Adelman & Taylor (1996) about the potential for village-level social accounting matrices to estimate multipliers in rural societies.

## The DEGRP research

### Aims

The *Space, Markets and Employment in Agricultural Development* (SMEAD) study aimed to understand how agriculture, through its links with production and consumption, influences the local rural non-farm economy: its size and composition, the location and scale of activity, and employment.

This helps to answer questions about how different rates and forms of agricultural growth may create decently-rewarded jobs in the local rural economy, and the factors that stimulate and obstruct multipliers from agriculture to the rest of the local rural economy.

### Methods

The research compared agricultural and non-farm activities in four distinct rural areas in southern Africa:

- **Malawi** - Mchinji District, central Malawi;
- **South Africa** - Weenen town, Uthukela District, Kwazulu-Natal; and
- **Zimbabwe** - Mazowe District in the north and Masvingo District in the south

It did so by tracing the links from selected farms (first tier enterprises) to the rest of the local rural economy, listing all their economic links in production, both upstream and downstream of

the farm, and in consumption so as to identify the non-farm enterprises benefitting from agricultural activities. The exercise was then repeated with these non-farm, second tier enterprises, so that their links were also mapped. Finally, the third tier firms listed by the second tier firms were visited.

In some cases, the third tier firms were already distant, by 100 km or more, from the district studied and were omitted from study. In almost all cases the links from third to fourth tier firms crossed the boundaries of the study area. At each of the three levels of enterprise, information was sought on costs, incomes, and employment of the farm or firm.

Study design differed between countries in terms of the comparisons made. In Malawi and South Africa the studies compared the links generated by smallholders to those arising from medium-scale commercial holdings and estates in a single area. In Zimbabwe, resettled small-scale farmers in two areas were compared, further distinguished by their main enterprises of maize and tobacco in Mazowe and beef and horticulture in Masvingo.

These differences of approach have the virtue of shedding light on a wider range of processes than might otherwise have been observed, but they make it harder to draw conclusions across the countries.

### Country context

The four locations studied differ significantly in their degree of agricultural development, commercialisation and, in Zimbabwe, in the effects of land reform.

#### **Mchinji District, Malawi**

Mchinji District lies along the frontier with Zambia. Smallholder agriculture dominates, farmers typically cultivating smallholdings of less than 5 hectares. While much of this land is used to grow cassava, maize and sweet potato for home consumption, increasingly, small surpluses of beans, groundnuts, Irish potato, maize, soybean, tobacco and vegetables are sold by smallholders.

Development of agriculture is, however, limited by shortage of capital, low education, and limited local demand. The District also has some estates growing cash crops of barley, groundnuts, hemp, maize, soybean, sunflower and tobacco.

#### **Weenen, KwaZulu Natal, South Africa**

The municipality of Weenen lies on a fertile alluvial plain through which the Boesmansrivier flows, and has a small market town at its centre. Water is abstracted from this river to irrigate the surrounding farms, many of which specialise in growing vegetables.

Most of the land is occupied by some two dozen medium-scale commercial farms (MSCFs), ranging from 50 to 300 hectares, operated by white South Africans. In addition, some smallholdings of five or fewer hectares can be found, whose owners are invariably black.

Weenen developed in the nineteenth century as a centre of vegetable growing; it even had a narrow-gauge railway to transport cabbages and other vegetables to market. More recently, however, it has become marginalised: Weenen's farms cannot produce the volumes that would allow them to contract with South Africa's large supermarket chains. As a result most farms have

shed labour, and the town itself has lost urban functions to larger centres in KwaZulu Natal, which can now be reached in less than an hour's drive from Weenen.

#### **Mazowe District, Zimbabwe**

Located just 60 km north of Harare, Mazowe is a largely rural district where farming is the main activity. Its population grew rapidly between 2002 and 2012, by 22%, owing to an influx of farmers resettled on the former large-scale commercial farms (LSCF) that had been taken over from the late 1990s. These farms have been divided into medium-scale holdings with 100 or more hectares, and small-scale farms of around six hectares.

#### **Masvingo District, Zimbabwe**

Sharing a border with Mozambique, this district also saw land redistribution in the late 1990s and early 2000s, as former large ranches for beef cattle have been split into medium-scale and small-scale holdings where crops are now grown in addition to raising cattle.

## Findings

### Production links

The study revealed a variety of production links to and from the farms surveyed, both upstream – in supplies of agricultural inputs, labour and finance – and downstream, in transport, storage and processing of agricultural products.

Upstream from on-farm activities, the key link with the rest of the rural economy is labour: with the exception of the smallholders in Mchinji, most of the farms surveyed hired in significant amounts of labour from the local rural area.

Two variations were clear: one was that some farm enterprises generated far more jobs than others, with vegetables requiring around 300 days labour a year per hectare, while beef cattle herding at the other end of range needed just seven days of labour a year per hectare.

Scale of operation is the other difference, most clearly seen in Weenen: for any given enterprise, small-scale operations tend to use more labour than larger-scale farms.

Otherwise, upstream links were few. Some seed, fertiliser, and agro-chemicals were bought; some ploughing services hired. For larger-scale operations, as with the medium-scale commercial farms (MSCFs) in Weenen and the estates in Mchinji, inputs came from distant cities, generating little local activity. Few of the smallholdings had access to formal financial services: only the MSCF and estates had bank credit.

Downstream of the farms, processing was limited to drying tobacco in barns, some maize milling, sun-dried vegetables and an abattoir, with most of these cases from Zimbabwe.

All told, the links in production from farming to the rest of the rural economy were quite limited. That, of course, may reflect that agriculture has not yet been fully developed in the Malawian and Zimbabwean cases, so that production links may grow as agricultural productivity and commercialisation increase. Yet Weenen offers an alternative perspective: there, highly-productive, medium-scale farmers do much of their business directly with distant cities and thereby generate little activity locally beyond the farm gate.

## Consumption links

In Mchinji, Mazowe and Masvingo, farmers spending their small incomes created a demand for local grocery shops, hardware stores, and local periodic markets where clothes and other consumer goods would be sold. These were particularly active after harvests. In these cases, most of the incomes creating demand came from farming, or from farm wages: the amount and growth of the activity thus depended largely on the dynamism of local agriculture.

In Weenen, those with middle to high incomes tended to shop in the regional centres of Estcourt

and Ladysmith, rather than in the town itself. The few shops in Weenen served the everyday needs of people on low incomes. Every month, however, pension pay days saw an influx of informal traders peddling food and economical consumer goods.

In this case, however, agriculture was far from the dominant source of incomes. The bulk of Weenen's income came either from transfers, above all state pensions, or employment in public services such as schools and police. The study estimated that transfers dwarfed the value of farm wages by ten times, and public sector wages were twice the farm wage bill.

## Spatial relations

Smallholders tend to have more local links than larger farmers and estates: they buy any agricultural inputs they need from local stores, and when they sell output, it is to local traders. That means more local jobs. Since people on low incomes tend to be more common in rural than urban areas, local links tend to create jobs where they are most needed.

Larger-scale farms tend to link directly to sellers of inputs and buyers of output in more distant centres: they cut out the middlemen. It is a fair assumption, even if the study does not have the data to confirm it, that as a result they pay less for inputs and get higher prices for their produce. The supply chains in which they participate may be thus more efficient.

It would seem that spatial relations pit efficiency against equity; but that might ignore the extent to which local enterprises develop localised capacity to invest, innovate and solve problems.

## Policy implications

The SMEAD research has generated much information, but a few key points stand out for policy makers:

1. **Scale of farming matters for the number of jobs created on-farm, and for local linkages.** Small-scale farms invariably use more labour per hectare, and tend to have more local links than larger-scale farming. Hence land redistribution from larger to smaller units as seen on a large scale in Zimbabwe, and to a lesser extent in South Africa, potentially creates more jobs. That, of course, is not necessarily positive if the jobs are informal and poorly paid. But when unemployment and under-employment are high, jobs of any kind may be valuable.
2. **Farming is far from reaching its potential.** Shortage of capital, and perhaps some know-how, limit productivity. Irrigation, for example, is rarely taken up even where water sources exist. Partly this arises from lack of experience, partly from lack of capital to invest in pumps, pipes and other equipment, and partly through collective action problems that apply when water can only be economically abstracted in schemes that irrigate multiple farms.

Hence the policy challenge is the familiar agenda for agricultural development of ensuring a reasonable investment climate, public spending on rural public goods, and efforts to overcome the failings of markets for inputs and finance.

The exception is Weenen, where most agriculture is highly productive, but has apparently reached the limits of what can be done with the land and water present. In a competitive South African farm sector, its farmers are faced by declining real prices for outputs and thus look to economise on their costs to maintain their incomes.

3. **Links downstream of the farm and in consumption offer the most opportunities for non-farm business.** These links are usually in the form of retailing, some services and transport enterprises. The contrast between Weenen and the other sites, however, was sharp. In Mchinji, Mazowe and Masvingo the reports suggest a growing agricultural economy — albeit in Zimbabwe recovering from the disruption of the land reform — with concomitant growth of largely informal non-farm business, relying heavily on labour and thereby generating jobs, if not particularly well rewarded jobs. In Weenen, agriculture was growing only slowly and creating very few local jobs.
4. **Local authorities could do more to encourage and facilitate non-farm business.** Or at the very least cease to discourage it, especially where smaller-scale, informal activities are concerned.

In South Africa and Zimbabwe in particular, informal businesses are frequently seen as untidy, insanitary and otherwise undesirably ramshackle, leading to over-regulation of informal activity in small urban centres. While some informal businesses may correspond to this perception, improvements are possible. In Weenen, for example, operators of stalls at markets would value lockable storage, power and water at their stands.

Excessive taxation of informal activity is also a problem, under-funded local authorities in some countries taxing informal enterprises to raise revenue, often with flat rates that result in heavy percentage charges for very small businesses. Though this is not the case in South Africa, it has been reported for Uganda and Tanzania (Balihuta & Sen 2001, Ellis & Mdoe 2001, Ellis & Bahiigwa 2001).

## Further questions

Not explored by the project, but also worth considering, are the issues of: rural enterprises not linked to agriculture; and location of economic activity.

### Rural enterprise independent of farming

Most RNFE businesses studied by the project were linked to farming. Only a few were independent of agriculture: gold panning in Mazowe, and game reserves and associated tourism in Weenen, were the main examples reported. However, it would be good to have more observations of those RNFE activities that are largely independent of agriculture.

Ellis (2005) suggested that much new economic activity in rural Eastern Africa was not linked to farming. That has neither been confirmed, nor fully rebutted. Public services are rarely studied for their economic contributions, yet in some communities, appreciable numbers of jobs, and relatively well paid jobs, can be found in schools, health posts, water and power utilities, highway maintenance, and so on.

From the observations of Weenen, the working hypothesis is that the wealthier and more urbanised the country, the greater the weight of rural public services in rural economies.

### Location of activity

Perhaps the broadest question concerns the location of activity, prompted particularly by the study of Weenen. Is it better to have local or distant activity? Weenen's farms do create jobs in input supply, for example, but they are located further away in regional centres, such as Estcourt and Greytown, and in the distant cities of Gauteng rather than in the local market town.

Similarly, Mchinji's estates have many links organised by company headquarters in Blantyre or Lilongwe, so that inputs are procured at those

places and delivered by lorry to the estates with hardly any local activity associated with them. Jobs are being created, just not in the local rural economy.

According to the concept of agglomeration economies (Krugman, 1993), it may be more efficient to carry out those functions that can be performed there, in cities. A dilemma arises from the mismatch between the location of jobs and where people live.

Weenen, for example, has high rates of unemployment, at very least 13% and probably far higher since some who might work, the 'discouraged', are not always considered part of the workforce. Is it best, then, to find ways to encourage more localised activities, or to assist the unemployed to find work where the jobs are?

### Key project outputs

Research outputs to date comprise three country studies, all published by the Institute for Poverty, Land and Agrarian Studies (PLAAS), Faculty of Economic & Management Sciences, University of the Western Cape, South Africa:

- *Space, Markets and Employment in Agricultural Development: Malawi Country Report*  
Chirwa, W. E. and Matita, M. M. (2015)
- *Space, Markets and Employment in Agricultural Development: South Africa Country Report*  
Neves, D. and Hakizimana, C. (2015)
- *Space, Markets and Employment in Agricultural Development: Zimbabwe Country Report*  
Sukume, C., Mavedzenge, B., Murimbarima, F. and Scoones, I. (2015)

In addition, the project has produced policy briefs, blogs and videos. All materials are available at: <http://www.plaas.org.za/smead>

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