Agriculture, Value Chains and the Rural Non-Farm Economy in Malawi, South Africa and Zimbabwe

Andries du Toit

1 Introduction

This chapter presents an overview of findings of a DFID-ESRC Growth Programme (DEGRP)-funded project that investigates the connections between agricultural development and livelihoods in the rural non-farm economy (RNFE) in three Southern African countries: Malawi, South Africa and Zimbabwe.[1] The empirical findings of the project are recounted elsewhere (Chirwa and Matita 2015; Neves and Hakizimana 2015; Sukume et al. 2015). This chapter provides an analytical synthesis, exploring contrasts and similarities between three case studies in order to draw conclusions and also to develop hypotheses for follow-up research about the spatial characteristics of agro-food networks—and their implications for employment.

Since the middle of the first decade of the new century, agriculture has enjoyed increasing prominence in debates about development and poverty reduction in sub-Saharan Africa and elsewhere (Christiaensen and Demery 2007). Policy has aimed at increasing the efficiency and productivity of agriculture to ensure food security and to support long-term growth and economic transformation (Dorosh and Mellor 2013; FAO 1998; World Bank 2007). There are, however, grounds for caution. Agricultural development may have mixed impacts and may lead to unintended consequences. While it can promote overall food security and benefit some livelihoods, it may also destroy others—as when competitive farmers absorb landholdings of less efficient neighbours or commercial farms replace labour with machinery, for example. Agricultural development via increasing levels of

[1]For more information, see: http://degrp.squarespace.com and http://www.plaas.org.za/smead.

A. du Toit (✉)
University of the Western Cape, Cape Town, South Africa
e-mail: adutoit@plaas.org.za

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productivity and market integration may lead to reduction in employment intensity and long-term processes of de-agrarianisation (Bryceson and Jamal 1997; Li 2009, 2014). Policymakers regard these phenomena as an inevitable part of 'development': de-agrarianisation is held simply to be part of processes of industrialisation and urbanisation. This faith is, for example, evident in the World Bank's policy advice:

> In agrarian economies, the main avenues to improving living standards involve increasing productivity in farming, creating a dynamic economic environment in cities, and promoting labor reallocation from rural to urban areas, thereby sparking a positive spiral of productivity growth and improvement in living standards. Together, these approaches should lead to the expansion of off-farm employment opportunities, which are in turn an important driver of poverty reduction. (2012: 191)

Overviews of agrarian transitions in many parts of the developing world suggest that this optimism is misplaced (Oya 2009). People who have been pushed off the land often fail to find alternative employment in the non-farm sector. While market integration and agricultural intensification bring gains to some, they are often accompanied by rising inequality, vulnerability and the development of marginalised populations without access to welfare or jobs (Li 2014). How, then, can policymakers ensure that employment is intensive and growth inclusive? The urban industrial and service sectors are unlikely to accommodate everyone displaced out of agriculture. It is, thus, important to decrease the push factors within rural areas and to simultaneously maximise the ability of the RNFE to retain and create jobs.

These considerations raise important questions for agricultural policy: What are the prospects for those pushed off the land of finding local employment without migrating? What are the factors that support the ability of the RNFE to create employment? What is the role of agriculture itself in a diverse rural economy? And what are the consequences of agricultural development and agro-food system change? Can increasing productivity and profitability of agriculture contribute to local multipliers that support off-farm livelihoods and transformative jobs? Does improving market access for farmers also benefit non-farmers? Or, conversely, can market integration sideline emerging rural entrepreneurs? What are the implications for non-farm employment of different pathways to agricultural development? And how can such development be encouraged in directions that foster local non-farm employment?

This chapter begins with an overview of some of the theoretical literature on the nature of backward and forward linkages and their implications for the RNFE, as well as a description of the methodology and research approach used for the aforementioned DEGRP study. This is followed by a description of agricultural development and agrarian dualism in Malawi, South Africa and Zimbabwe. Afterwards, the key empirical features of non-farm connections are presented, before proposing an interpretive framework based on the identification of high-level, emergent systemic characteristics of the agro-food networks in question. This leads to a discussion of eight meso-level factors that appear to be most critical in shaping the prospects for employment in the RNFE.

2 Understanding Growth Linkages: Theoretical Debates and Research Approach

The classical model of farm/non-farm connections in rural development is provided by regional growth linkages theory, which states that the key driver of development in the RNFE is growth in externally tradable commodities (Haggblade et al. 2010). Connecting farmers to markets and stimulating growth in externally traded cash crops creates secondary benefits by supporting local demand via farmers' consumption and investment expenditure, as well as activities associated with forward linkages such as agro-processing too. As Hart (1998) has pointed out, much depends on the spatial configurations of backward and forward linkages and the political economy of investment. The benefits of agricultural growth cannot be expected to cascade automatically through local multipliers. That will only happen if the value chain's configuration and organisation allow it, and if it is supported by consumption choices and the political economy of investment.

This is a fruitful direction to head in for understanding the growth implications of agricultural development in sub-Saharan Africa. Here, the reconfiguration of agro-food value chains continues apace. Processes of agricultural change and investment are directly restructuring agro-food systems (Hall et al. 2015). A growing policy consensus emphasises the importance of 'green revolution' technology, large-scale investment, access to metropolitan and overseas markets and integration into supermarket and agro-processor value chains. This is linked to perceptions of the desirability of large-scale, capital-intensive, industrial-style models of production, which are held to be dynamic, efficient and rational (Collier 2008; Sender 2015). The increasing popularity of large-scale agriculture among policymakers is, of course, controversial. For the purposes of this chapter, it is enough to observe that—regardless of the benefits for farmers—what value-chain restructuring means for other components of the rural economy is the key thing to be ascertained here.

The study whose findings are summarised here explores the different ways in which agricultural production is connected to the RNFE via three case studies. In each, the consequences of different pathways to agricultural development and their implications for local multipliers are explored. By tracing the connections between farm and non-farm livelihoods, the study answers questions such as: How are the backward and forward linkages of agriculture organised? How are they spatially configured? How does this influence local employment? What does the organisation and spatial pattern of farm/non-farm connections reveal about the prospects for inclusive growth?

Answering these questions raises formidable methodological challenges: How does one map the spatial configuration of farm/non-farm linkages? How can one draw conclusions about the relationship between these and the nature of employment? Existing research approaches are poorly suited to this task. Social accounting matrices, designed to reveal the backward and forward linkages of agriculture on a national scale, are not well suited to understanding subregional dynamics. The spatial patterns and socio-economic dynamics that matter here are also not easily

picked up in quantitative surveys. The study summarised here therefore opens up the issue by way of a detailed qualitative exploration of flows and connections in selected rural districts of Malawi, South Africa and Zimbabwe. The aim is to build up a detailed picture of socio-economic networks and flows, with a view to identifying the spatial patterns that emerge. Within each case study, a locally based team explored these phenomena in a particular district (or two): Mchinji in central Malawi, Mazowe and Masvingo in Zimbabwe, and Weenen in KwaZulu-Natal in South Africa. Fieldwork was carried out between 2012 and 2014, with detailed analysis taking place in 2015. These investigations cannot, of course, be generalised to the countries as a whole; at the same time, however, an in-depth look at local particularities can help reveal causal connections and highlight the complexities of articulations between agricultural activity and non-farm employment.

In each case, researchers selected a number of significant local farming enterprises (tier 1 case studies) for in-depth study, paying attention to the nature of market connections and upstream inputs as well as investment and consumption expenditure. In addition, the most important down- and upstream trading partners of each enterprise were identified. Researchers then visited these tier 2 businesses and repeated the process. The next round explored the tier 3 cases in turn. Here, down- and upstream linkages were identified but there was no fourth round—in part because with each iteration, the number of cases increased exponentially and also because, in most cases, tier 4 linkages are located far outside the study districts. A quantitative survey was then implemented of all nodes so discovered, collecting information about economic activity, employment and basic income as well as expenditure for all the enterprises. As noted, a detailed account of the nature of farm/non-farm linkages in each of the case study sites is provided elsewhere (Chirwa and Matita 2015; Neves and Hakizimana 2015; Sukume et al. 2015). This chapter discusses the insights that can be derived from cross-cutting analysis, identifying common themes and threads as well as highlighting what can be learnt from comparative analysis.

3 Three Agrarian Landscapes

3.1 Varieties of Dualism

While the rural landscapes of the three countries are distinct, they share a broadly similar Southern African history of colonial settlement, capitalist growth, modernising development and global integration. All three are shaped by the legacy of settler agriculture. They are, therefore, also characterised by some degree of dualism: colonial settlement has created a capital-intensive, commercially oriented sector, highly dependent on wage labour, with strong export links and integrated with global agribusiness. This sector coexists with a smallholder sector derived from an indigenous population, dependent on family labour and oriented towards subsistence agriculture and petty commodity production. The configuration of this dualism

is, however, different in each country. These varying configurations have implications for the backward and forward connections of agriculture and for the spatial configuration of value chains.

In Malawi, family farming predominates. In 2005 some 88% of the population was still rural, while at present 60% of gross domestic product and more than 80% of value added in agriculture come from less than two million small farmers—most of whom own less than two hectares of land, typically farmed under customary tenure (Chirwa and Matita 2012). A significant proportion of agriculture is for own consumption, especially in the case of maize, which still accounts for 70% of the land under cultivation (Chirwa and Dorward 2013). Livelihoods are meagre: almost 60% of Malawi's population is poor, with 25% characterised as 'ultra-poor' (Chirwa and Dorward 2013). Alongside this population of smallholder farmers, there is an estate sector that monopolises the production of export crops. Initially consisting of fewer than 250 estates, it now comprises some 26,000 farms producing export crops such as coffee, groundnuts, soybeans, sugarcane, tea and tobacco (Kachule 2011). Estates account for about 1.2 million hectares of agricultural land—less than one-quarter of that under cultivation—but they simultaneously make up 90% of export agriculture (Chirwa and Matita 2015).

In South Africa, colonial settlement, settler agriculture, apartheid and more than a century of industrialisation have created a landscape almost the inverse of Malawi's. About 84% of agricultural land is farmed by a large-scale, commercially oriented and capital-intensive sector, one historically dominated by white settlers. This sector has undergone rapid concentration and consolidation: the number of farming units declined from a peak of some 120,000 in the mid-1950s to about 60,000 at the end of apartheid in 1994, and currently is estimated to be between 35,000 and 40,000 meanwhile. Within this sector, more than half of gross income from agriculture in 2002 came from only 6% of all farmers. In 2007, one-third of farming income came from the top 0.6%, meaning 237 units (Liebenberg 2013). This goes hand in hand with high levels of concentration down- and upstream. Markets in agrochemicals, agroservices, fertilisers and grain storage are dominated by a small number of consolidated and vertically integrated corporations (Bernstein 2013). Likewise, output markets are controlled by a handful of processors and food manufacturers, while the four biggest supermarket chains control more than 60% of food retail. Smallholder agriculture covers only a small portion of farmland and less than 10% of the population is involved in farming (Aliber et al. 2009; Liebenberg 2013). Even within the smallholder sector, households are heavily dependent on the commercial food and retail system for their food security.

Zimbabwe's rural landscape differs from both Malawi's and South Africa's. This is largely a result of the fast track land reform (FTLR) process, which transferred most of white-owned, large-scale commercial farms to smaller African operators. As a result, the dualistic character of post-independence agriculture has been replaced by less bimodal distribution. Agricultural-support institutions remain crisis-ridden and weak. Post-FTLR land tenure is still insecure, but there is evidence that the change has resulted in an invigorated smallholder sector—with production of maize and tobacco recovering quickly (Scoones 2014; Scoones et al. 2010). At the same

time, important aspects of large-scale agriculture have remained. Some scholars thus characterise the Zimbabwean agrarian landscape as hybrid, with corporate, settler and large-scale agriculture existing alongside petty commodity production (Moyo 2011).

3.2 *Mchinji: Constrained Dynamism*[2]

The district of Mchinji is located in central Malawi. Its administrative centre, Mchinji Boma, is situated on the main road, some 110 km from Lilongwe and 10 km from the Zambian border. It is also located on the railway line to Zambia. Only two local roads are paved: one that passes through Mchinji Boma from Lilongwe to Chipata on the other side of the Zambian border and another connecting it to the nearby trading centre of Kamwendo. Most of the unpaved roads are impassable during the rainy season. The local economy is dominated by agriculture, which is heavily dependent on rainfall. Local livelihoods are, therefore, seasonal and precarious. High fertility rates and in-migration from other districts as well as from nearby Zambia have led to significant population growth in the last two decades, increasing the pressure on agricultural livelihoods. The area around the town is characterised by a mix of smallholder farmers and estate growers. More than 90% of the local population relies on agriculture. Almost two-thirds of the local adult population spend most of their time on agricultural activities. Ten percent are involved in casual labour and only 6% are involved in wage or salaried employment.

This, however, should not be mistaken as a picture of bucolic stasis. Agriculture in Mchinji is dynamic, while also being severely constrained. In spite of biophysical and resource limitations, farmers are ready to experiment and innovate. Many have gone beyond food and traditional cash crops (groundnuts and tobacco) to non-traditional horticultural products such as cabbages, Irish potatoes and tomatoes. This diversification provides farmers with new sources of income, but lack of access to finance and lucrative urban markets; the constrained availability of land puts a limit on the livelihood opportunities that can be generated. The hampered dynamism of agriculture affects both on-farm and non-farm livelihoods. On the one hand, agriculture provides a basis for survival for large numbers of people. On the other, these livelihoods are only meagre and limited. Most households combine agriculture with a range of other activities in order to ensure survival and reduce vulnerability. Very few farmers provide stable waged employment for non-family members. The agricultural labour market is limited to its *ganyu* form—that is, casual and part-time employment by migrant workers or by poorer farmers seeking to supplement their paltry incomes.

[2]All information in this section is drawn from the corresponding case study report: Chirwa and Matita (2015).

This is also true of down- and upstream activities such as transport, local services and fresh-produce trading. These are typically modest or small in scale, informal in nature, often part of a diverse portfolio of other livelihood activities and almost always seasonal or part-time. They are also highly local: the supply chains and linkages that connect farm and non-farm livelihoods are strikingly short, and not separated by any great distance. Economic and social networks linked to farming are dense—distances are, according to the information gathered, never further than that of the nearest market town—and highly socially embedded, shaped by intra-and inter-household relationships and local institutions.

3.3 Weenen: A Centre in Decline[3]

Weenen is a small town with a population of less than 5000 people, situated about 40 km from Estcourt in the KwaZulu-Natal midlands. It is the second-oldest formal town in KwaZulu-Natal, and the landscape around it has been deeply shaped by the history of white settlement. An irrigation scheme created in the nineteenth century provided the basis for its development as an important centre for vegetable production. After the Second World War, the rise of irrigated agriculture closer to metropolitan centres like Durban and Pietermaritzburg led to Weenen losing its significance as a rural supply centre. Today, the Umtshezi Municipality (2008) Spatial Development Framework describes it as 'declining rural town'. The character of local agriculture clearly reflects this marginality—as well as the broader forces that have shaped South African agriculture generally. Agriculture is dominated by capital-intensive, medium-sized commercial farms. Over the last two decades, the number of farming units has halved: at present, 23 farms are operating in the area. They survive in an environment dominated by powerful supermarkets and intense competition. They continually seek to cut labour costs, reduce permanent employment and to replace workers with machines wherever possible. As a result, agriculture provides full-time employment for less than 10% of the population. Minimum wages—payable only for parts of the year—fall well short of the levels required to ensure food security.

Marginality does not mean that agriculture is moribund. On the contrary farmers pursue complex and dynamic strategies as they seek to balance the pressures of rising input costs, low prices and increasing downstream control of value chains. This complicates the simple and totalising characterisation of high market integration in formal agriculture in South Africa. Markets are diverse in their nature, organisation and location, and farmers arbitrage between them—operating simultaneously on local, regional and national scales. Economies of scale are not linear:

[3] All information in this section is drawn from the corresponding case study report: Neves and Hakizimana (2015).

scaling up or down is governed by significant lower and upper thresholds, involve complex trade-offs, require sophisticated strategies and involve shifting allegiances too. Crucial in this context is the ability of farmers to exploit and make use of local social capital, and to use inter and intra-household relationships to straddle sectoral and spatial divides—and even to upgrade, by diversifying so as to adopt new functions within value chains, moving into food and by engaging in non-farm retail.

Employment related to the backward and forward linkages of agriculture appears to be similarly constrained. In contrast to the localised nature of down- and upstream activities in Malawi, the supply chains and market linkages of Weenen farmers are spatially extensive: the businesses linked to them are far away, often well outside the local district. These markets are much more concentrated, characterised by monopsonies, arrangements for geographic exclusivity and by vertical integration. The RNFE in Weenen, far from being supported by agriculture, is mostly dependent on state expenditure—chiefly in the form of public sector salaries but also via cash transfers, in particular child grants and old age pensions. It is these fiscal resources—not productive activity—that sustains livelihoods in the district. Whereas local non-farm employment in Malawi is locally embedded and linked to agriculture, non-farm rural employment in the South African case is delinked from agriculture and disembedded.

3.4 Mazowe and Mazvingo: A Landscape Transformed[4]

The Zimbabwean study focusses on two districts: Mazowe, the southernmost district of the province of Mashonaland Central, and Masvingo, one of the northernmost districts of Masvingo Province. Mazowe is a well-established agricultural region with good roads situated some 50 km from Harare. It comprises a communal area and new resettlement schemes. It has fertile soils and reliable rainfall in the higher altitudes during summer and a well-developed water infrastructure. Historically, it boasted a large-scale commercial farming sector, including citrus and dairy. Post-FTLR, it has the highest proportion of commercial resettlement schemes in the country. Both communal areas and newly resettled farms are involved in a wide variety of commercial activities, ranging from field crop production (cotton, maize and burley tobacco) to horticulture (citrus) to livestock and dairy farming. Mazowe also has a diverse RNFE that includes both local service industries and other activities like small-scale gold mining and the production of bottled water. Masvingo is drier than Mazowe. While it is further from Harare (almost 300 km away), it has relatively good transport infrastructure: the A4 road between Beitbridge and Harare

[4]All information in this section is drawn from the corresponding case study report: Sukume et al. (2015).

runs through the town of Masvingo; so does the A9 between Gweru and Mutare. It is also linked to Gweru and Harare by rail. Although it has several dams and reservoirs, it is unevenly served by irrigation. Before the FTLR, the main agricultural activity was large-scale cattle ranching. Post-FTLR, these farms have been subdivided and the district has transitioned from large-scale ranching to smaller multifunctional herds. The RNFE is significantly less complex and diverse than in Mazowe, with tourism playing a significant role herein.

The Zimbabwean country study provides interesting insights into a landscape still experiencing high degrees of flux in the aftermath of FTLR. As in Malawi, farmers in Zimbabwe are noticeably pluri-active; unlike in the other two country cases, however, agriculture—at least in Masvingo—is characterised by the presence of a significant population of recent entrants, many of whom have histories in Zimbabwean cities and in civil sector employment. These connections provide financial and income resources that allow continued diversification though investment. Likewise, market relations are diverse: whereas informal and local produce markets play a role, livestock and tobacco farming are linked to distant and international markets. The transition brought about by the FTLR has led to a sweeping transformation in the backward and forward linkages of agriculture. In Masvingo, increasing levels of self-provision among small livestock farmers have boosted sales of dipping chemicals, vaccines and application equipment to smallholder farmers. Meanwhile a new class of participants has emerged in downstream beef value chains too, acting as agents and as aggregators between small farmers, small abattoirs and traders dealing in larger quantities of this commodity.

Agriculture is, thus, linked both to a thriving non-farm small-, micro- and medium-enterprise sector and to distant, powerful, corporate players. The reorganisation of agriculture has created opportunities for small and medium non-farm enterprises, while corporate role players have, in some sectors, adapted their organisation to deal with different economies of scale. This creates down- and upstream markets that are significantly more complex and diverse than those found in the Malawian and South African cases.

4 Making Sense of Farm–Non-Farm Connections

The three case studies seem to indicate that there are indeed interesting connections between the spatial configuration and social organisation of agricultural value chains, on the one hand, and the nature of the RNFE, on the other. The question is, however, whether it is possible to develop a synthetic, cross-cutting analysis. What pattern emerges from a comparison of these case studies? Is it possible to identify what characteristics of the agro-food networks either support or undermine rural non-farm job creation?

4.1 Emergent Network Characteristics

One way to answer these questions is to characterise the high-level nature of the networks that are created by the interactions between relevant actors. The aim here is to identify what in complexity theory is called the 'emergent properties' of agro-food networks—in other words, properties that do not belong to the nodes or elements of the networks but rather characterise the overall system itself (Aziz-Alaoui and Bertelle 2009). Of course, systems have many different emergent properties. In this case, the task is to identify those that vary meaningfully between the cases and are, arguably, related to non-farm employment. Working from these considerations, four such high-level characteristics can be proposed:

1. Density: This refers to the number of local nodes (agricultural and non-farming enterprises) that exist in the network within a given area, and the physical distance between them. All other things being equal, density can plausibly be taken as an indicator of employment-intensive growth. This is one of the crucial differences between Mchinji and Weenen: while Malawian farm and non-farm enterprises are often modest in size and profitability, links are not spatially extensive. Pursuing down- and upstream linkages through the various tiers of our fieldwork iterations would identify numerous lines connecting and criss-crossing in the same district, often less than 10 km apart. This is in contrast to the South African case, where links are spatially extended, often crossing district and even national boundaries. Thus, while many of the third- or fourth-tier connections in the Malawian (and also in the Zimbabwean) study are spatially contiguous, third-tier connections of South African farms, particularly upstream, could be as far away as Johannesburg or Dubai. Density, in this sense, is a measure of the local character of backward and forward linkages. Density may also indirectly foster employment intensity through synergistic effects, by reducing transport costs and obstacles to access as well as supporting the development of local, secondary markets.
2. Local embeddedness: This refers to the extent to which nodes in the socio-economic network are subject to local influences and formal or informal regulatory pressure. In a network with a high degree of local embeddedness, socio-economic nodes are integrated into other social institutions: associations, markets, kinship networks and political structures. A network in which many enterprises have an enclave nature (with little local accountability and high dependence on distant centres of control) tends, conversely, to be more disembedded. Local embeddedness arguably makes for greater local employment effects. Tobacco farmers in rural Masvingo, with strong personal connections to the local area and high dependence on local systems of power and patronage, are more likely to make consumption and investment decisions that benefit local economic players than, for example, estate farms in Malawi. The latter's procurement policies are contrariwise determined in Blantyre or Lilongwe; another example is commercial white farmers who spend their money in Durban or Pietermaritzburg, and send their children to distant boarding schools.

3. External connectedness: This means the extent to which links connect local nodes to distant markets and resources. The horticulture farmers of Weenen and the tobacco farmers in Mazowe are strongly connected to input and output markets that are hundreds and even thousands of kilometres away, whereas the small farmers in Mchinji are constrained by their lack of any such connections. External ties of this kind can be powerful conduits for connecting local economies to sources of income and profitable markets. With regard to external connectedness, two points are salient. First, external connectedness has ambivalent effects and can act both to support and to undermine local employment opportunities. Thus, forward linkages potentially promote local employment and livelihoods when they allow access to markets in agricultural tradables—but these linkages can also increase vulnerability, in the sense that price shocks will be more directly transmitted to the local economy. External connectedness upstream from farms or within the local sector can, of course, also increase leakage from the local economy.

   Second, value chains are not the only form of external connectedness. In Malawi and Zimbabwe, household structure and migration provide another important vector of connection, leading to the existence of stretched households that straddled the urban–rural divide. Income from remittances and the investment decisions of urban households with rural connections is another important source of economic flows. In Weenen, the dominant form of external connectedness—at least as far as poor people are concerned—is provided by fiscal arrangements in the form of public service wages and social grant income. These constitute an enormous source of flows into the local economy. Indeed, it is these transfers—not trade—that support the RNFE in South Africa in general. Furthermore, external connectedness within downstream markets—for example when supermarkets are present—can result in money being sucked out of the local economy.
4. Distribution of Power: A Final Important Characteristic of an Agro-Food Network Seems to Relate to the distribution of power and resources within it. One way to think about it is to focus on the extent to which there are significant disparities in scale between nodes, but it also relates to the nature of power relations and governance between them—for example monopolies, monopsonies or strongly vertically integrated value chains that capture some nodes in relation to others.

The ability to pursue these lines of analysis depends on the ability to define these characteristics clearly, and perhaps even link them to clear quantitative indicators. This is challenging: some qualities like density or external connections are amenable to quantitative analysis, while others like local embeddedness or power distribution are not. More importantly, these notions need to be deployed with attention to context. The significance of density, for instance, is shaped by biophysical factors and by transport infrastructure: value-chain links are longer in, for example, arid Masvingo than in fertile Mazowe; a few kilometres of unpaved road during the rainy

season may be much more expensive and time-consuming to traverse than a paved highway ten times longer in KwaZulu-Natal.

But within these limitations, the lines of inquiry just presented seem to provide a useful basis for comparative analysis. It is, of course, important to test the underlying hypotheses: Are features like higher density, social embeddedness, external connections and a more equal distribution of power in fact related to more livelihoods-intensive and inclusive development paths? But beyond this, it is also important to develop hypotheses about the detailed nature of the causal dynamics: What are the factors that promote density, downstream connections to external markets and positive forms of social embeddedness? What are the connections with the nature of employment? And, what are the relationships between them?

4.2 An Interpretive Framework

On the whole, the evidence provided by the three country studies adds valuable detail to the theoretical insights arising out of the aforementioned debate between Hart and the proponents of regional growth linkages. They seem to support Hart's contention that there is a need to be cautious about relying simply on growth in external tradables to support the development of an inclusive rural economy. Clearly, external tradables are important: in Malawi, the lack of connection to distant and lucrative markets limits the extent to which movement into the new commodities can increase farmers' income but external connectedness on its own is not enough. Access to distant markets through vertically integrated value chains can support local development—but only if these value chains touch down in local agro-food networks that are dense, locally embedded and not characterised by enormous disparities in market power and regulatory clout.

Where this is the case, increasing levels of trade and income flows lead to significant benefits through intermediate inputs, consumption outlay and investment expenditure; and, to an even greater extent through the forward linkages of agriculture—that is, local retail, processing and transport. This is suggested by a comparison of the cases of Masvingo, where income from the lucrative sale of tobacco to Chinese buyers enters a district characterised by high degrees of local embeddedness, and Weenen, where highly efficient farmers gain significant profits from their connections to markets in Durban and Johannesburg but invest little into the local economy via employment or by way of consumption and investment expenditure. This hypothesis is, however, still extremely general. It is probably true that external connections on their own are not enough to support an inclusive RNFE, and also that these positive effects are mediated by local embeddedness, density and the absence of big power differentials or hierarchies. For this insight to be useful and translatable into workable policy recommendations, it is necessary to identify the underlying meso-level factors that can support the right mix of these emergent system characteristics. On the basis of the three case studies considered, the following eight meso-level factors seem to be particularly relevant:

1. Character of the macro-economic context: One of the most important differences, for example, between Mchinji and Weenen is that the former is part of a national economy that itself is largely rural, with significant limitations on aggregate demand, whereas the latter is deeply integrated into a dynamic, globally embedded urban economy. The character of the broader economic environment has enormous implications for the potential and limitations of the RNFE. Yet, as pointed out above, external connections are not only routed via access to markets in externally traded goods. Rather, important dimensions of integration have also been achieved through distributive arrangements: remittances in Malawi, hybrid enterprises and households straddling urban and rural spaces in Zimbabwe, and fiscal redistribution via public sector salaries and social grants in South Africa. These linkages—and not only cash crops on their own—seem to account for much of the dynamism and diversity of the RNFE. Fiscal redistribution may be as important for the development of the RNFE as productive activity is.
2. Communication and transport infrastructure: This often plays out in counter-intuitive ways. In the case-study districts, good communication and transport infrastructure play a major role in facilitating access to markets but they also have different impacts. Sometimes they reduce local embeddedness, sometimes they create opportunities for powerful external actors to crowd out and marginalise local entrepreneurs—and sometimes they act to suck consumption and investment expenditure out of the local district.
3. Concentration and scale of agricultural production: Small-scale farmers are more likely to rely on nearby sources for agricultural inputs, especially in the case of specialised services and intermediate ones such as seedling production, tillage, intermediate technology and the like. Small-scale farming is more labour-intensive. The consumption and investment expenditure of small farmers is more likely to benefit the local economy. Downstream, smallholder agriculture creates opportunities for aggregators and small-scale transport providers. Smaller horticulture and livestock farmers are reliant on local markets and retailers, who provide significant opportunities for local entrepreneurs. An important exception is tobacco in Zimbabwe, where small-scale production maintains its links to distant and vertically integrated export markets because the systemic shift towards small-scale producers has forced a reorganisation of transport, trade, financial and input markets. In contrast, large-scale agriculture is more likely to be directly connected to suppliers that are themselves large in scale, diversified, vertically integrated, lean in employment terms and distantly located. Large-scale horticulture is less employment-absorptive and tends to be much more connected to vertically integrated, buyer-driven supermarket value chains. Large-scale horticulture, while significantly more externally connected, is, thus, also noticeably less locally embedded.
4. Organisation of output markets: On the one hand, vertically integrated, buyer-driven value chains can put local producers in touch with lucrative markets. On the other, high degrees of vertical integration tend to have a significantly varying impact—creating distinctions between insiders and outsiders. Interestingly, the three case studies suggest that significant opportunities exist even in the absence

of highly vertically integrated market connections. Indeed, one of the more interesting findings of the study is the importance of informal local retail, processing and distribution economies in sustaining farmer and non-farm employment and supporting local multipliers. Here, an important contextual factor is supplied by the absence (to a greater or lesser extent) of large supermarkets: first, the absence of powerful retail competitors protects opportunities for hawkers, informal shops, local vendors, local wholesalers and fresh produce markets. Second, the profits from these enterprises tend to stay in the local economy instead of being sucked out by big retailers.

5. Nature and organisation of input markets: The implications for local agro-food networks of the nature of input markets vary greatly according to input types. For basic agricultural inputs such as agro-chemicals, fertilisers and machinery, input markets are highly concentrated and dominated by companies situated far away from the local district. For these inputs, vertical integration and concentration is associated with high degrees of upstream external connection and low levels of local embeddedness. Providers of basic inputs appear to be highly adaptable across scales, and engage with ease with both large- and small-scale farmers. Intermediate inputs and specialised services, ranging from seedling production in horticulture to veterinary services and mechanical repair to forestry that supplies timber for tobacco curing, are more likely to be locally situated meanwhile. They are more sensitive to differences in the scale of agricultural production.
6. Policy frameworks and institutional support: Some of these are infrastructural (access to irrigation and to good local transport networks). Others relate to policies for agricultural support, for instance fertiliser subsidies in Malawi. A key issue in all three case studies is the patchy and uneven nature of extension support for agriculture, partly as a result of liberalisation and structural-adjustment policies. Farmers have become much more dependent on sales representatives and other private sector intermediaries, a shift that is likely to decrease local embeddedness and increase upstream external connectedness—and, hence, the leakage of money out of the local economy. The privatisation of agricultural support and information brokerage seems to promote the capture of institutional and policy support by small groups of farmers and industries, contributing to the unequal distribution of power and access within local economies.
7. Commodity and product variation: Horticulture, for instance, is associated with higher levels of employment and a greater local density of down- and upstream connections than most field crops. Small-scale tobacco production also seems to generate significant local employment opportunities, partly because of the importance of skilled labour at key points in its production, processing and transport. Livestock is significantly less labour-intensive per hectare, but marked by complex and rich backward and forward linkages between producers, transporters, feedlot operators, abattoirs, butchers and retailers. Field crops and cash crops such as soybeans, groundnuts and tea are significantly less labour-intensive. They are not locally embedded in their processing, and link small farmers as price takers to distant markets.

8. Local political economy and social networks: Social integration into family and village networks, for instance, promotes the greater tendency of resettled farmers in Zimbabwe towards local consumption and investment expenditure—in sharp contrast to the more metropolitan commitments of white (and wealthier African) commercial farmers in Weenen, who tend to invest in urban networks. Social networks, institutions, political commitments and membership of local institutions like churches play a key role in how farmers are plugged into economies, and shape the way in which they handle competition with one another as well as their transactions with both down- and upstream players.

5 Conclusion

The DEGRP-funded project, whose findings have been summarised in this chapter, investigates only three cases in a regional agricultural landscape that is characterised by great diversity and dynamism. At most, the interpretation advanced here should be seen as developing a framework for further investigation and discussion. At the same time, the hypotheses that can be advanced seem distinctive and consequential. They provide a useful framework for exploration and testing in follow-up studies. A first central finding is that external connectedness on its own is not enough to guarantee that agricultural development benefits the RNFE. Access to distant markets through vertically integrated value chains can support local development, but only if these value chains touch down in local agro-food networks that are dense, locally embedded and not characterised by highly unequal power relations. Where this is the case, trade and income flows can lead to significant benefits to the local economy through the purchase of intermediate inputs, local consumption outlay, investment expenditure and, in particular, through the forward linkages of agriculture: local retail, processing and transport. This should have significant implications for development models that seek to stimulate inclusive growth through agricultural investment.

Second, scale is an important factor. In South Africa, large-scale, mainly white commercial farmers are able to gain significant incomes from highly efficient farms that access distant markets. However their input links often bypass local markets, they provide only limited local employment and much of their consumption expenditure occurs elsewhere. In Malawi, the same tends to be true of large estate farms. This contrasts strongly with Zimbabwe where, for instance, small tobacco farmers' windfalls from trade with China circulate in the local economy, creating opportunities for other rural entrepreneurs. In all these case studies, a common pattern emerges: where large-scale agriculture is owned by distant players or by a local farming elite with few local political or social commitments, economic networks are created that are unlikely to stimulate local opportunities. This seems to offer support for arguments for redistributing land towards small farmers. Similarly, certain kinds of regional integration can exacerbate local marginalisation and unemployment. The positive spin-offs of agricultural development in Malawi and Zimbabwe seem to be

strongly related to the absence of powerful, vertically integrated and internationally owned supermarkets. When these enter, they can marginalise small farmers, while also competing with local traders, sucking money out of the local economy and undermining economic multipliers. The existence of small, locally owned retail enterprises and markets seems to be a key element of the local agrarian structure—and is crucial for circulating money and economic opportunities.

Third, beneficial connections with the broader economy are about more than growth in external tradables. Exporting agricultural produce is not the main or even the only way in which rural economies can tap into the national and urban economies. Rather, rural districts are multiply connected to urban centres—not only through market linkages but also by way of fiscal distribution (social grants and public service salaries), the expansion of the non-agricultural urban economy into rural areas and the existence of migrant networks and household economies that straddle the urban–rural divide. Additionally, many of the entrepreneurs who are linked to agriculture also depend on other, non-agricultural service industries. So, while agriculture can contribute to local employment, its ability to do this is enhanced by the existence of a diverse RNFE that can ensure that more money circulates in the local markets on which small-scale farmers and entrepreneurs down- and upstream from them depend.

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