

# COMMERCIALISATIONS IN AGRICULTURE

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## Abstract

*Policy discourses around agricultural commercialisations tend to separate producers into different types of farm (small farms, large farms) growing different types of crops (food crops, cash crops) with simple distinctions made between 'subsistence' and 'commercial' or 'export' agriculture. Lack of clarity about what commercialisation actually means may give rise to misconceptions, evoking certain fears that can obstruct the passage of policy into practice.*

*Writing on commercialisation highlights a number of aspects to what it means to be commercialised. However, the lynchpin of most, if not all, definitions of agricultural commercialisation is the degree of participation in the (output) market, with the focus very much on cash incomes. However, there are other dimensions to agricultural commercialization. First, there is the degree of participation in input markets. As farms become more commercial, they tend to rely less on own-produced inputs (e.g. manure, retained seed) and services from mixed farming systems (e.g. animal traction) and instead depend more on markets to supply their inputs (improved seed, inorganic fertiliser, crop protection chemicals) and services (mechanised equipment for ploughing, planting, weeding, harvesting etc – either hired/rented or purchased). Thus, on the input side we might define commercialisation as value of inputs acquired from market/ agricultural production value*

*Some writing on commercialisation highlights the importance attached to the profit motive within the farm business as an indicator of commercialisation. Agricultural commercialization means more than the marketing of agricultural output, it means the product choice and input use decisions are based on the principles of profit maximisation.*

*Looking beyond purely the agricultural activities of a household, some authors (e.g. von Braun and Kennedy (1994) propose household commercialization as a measure of integration into the cash economy, which they define as the proportion of total value of goods and services acquired through cash transactions or the share of gross income from all market sources.*

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*In recent time commercialization of smallholder agriculture has got increased attention by policy makers. However, more often than not large farm bias may develop in practice even though policy appears to be pro-smallholder on paper. Actions to encourage smallholder commercialisations could include more attention to food crops, pro-actively encouraging asset accumulation processes and making markets work for poor farmers in poor areas. However, to ensure that pro-smallholder policy documents lead to pro-smallholder policy on the ground, policy makers should create enabling environment for smallholders and strengthen the service delivery process. Yet, creating a good enabling environment and ensuring sufficient, timely and efficient service delivery is crucially dependent on policy processes.*

## **1. Introduction**

Accelerated growth in agriculture is seen by many as being critical if the MDGs are to be met in Africa. Although there are debates about the future viability of small farms (Hazell et.al. 2007), the official policies of many national governments and international development agencies accord a central role to the intensification and commercialisation of smallholder agriculture as a means of achieving poverty reduction. According to this thinking, smallholder agriculture is uniquely positioned to deliver broad-based growth in rural areas (where the vast majority of the world's poor is still live). However, others fear that strategies for commercialising agriculture will not bring benefits to the majority of rural households, either directly or (in the view of some) at all. Instead, they fear that efforts to promote a more commercial agriculture will benefit primarily large-scale farms. At best, the top minority of smallholders will be able to benefit.

In this paper, therefore, we discuss what is meant by the commercialisation of agriculture, emphasising the different pathways that commercialisation can take. We also examine what needs to be done if agricultural commercialisation is to be inclusive, bringing benefits to a large proportion of rural households.

The potential benefits of commercialisation and engaging in trade are well-documented. These include stimulating rural growth, which poor people can gain from directly, for example through: improving employment opportunities (depending on the labour intensity of crops grown); increasing agricultural labour productivity; direct income benefits for employees and employers; expanding food supply and potentially improving nutritional status. So-called multiplier effects encompass increased demand for food and services in the local area (von Braun and Kennedy, 1994).<sup>3</sup>

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<sup>3</sup> For work on multipliers and growth linkages see Delgado et al (1998)

But what does commercialisation mean? What does it mean to be commercialised? What kinds of commercialisation are good for the poor? Conversely, under what circumstances are poor people likely to be bypassed in favour of larger farmers and unable to take advantage of new opportunities? Governments have clear ideas of what they would like to achieve in creating and supporting a thriving agricultural sector, not least in the name of enabling agriculture-based economic growth. But do these programmes have the right focus in terms of poverty reduction? What informs them and what are the implications? Are appropriate mechanisms in place for effective implementation, including the right enabling environment and adequate and timely service delivery? What are the policy processes behind a successful pro-smallholder commercialisation policy?

This paper aims to engage in alternative perspectives of agricultural commercialisation to shift thinking and ways of framing the debates, arguing for a diverse range of commercialisations, locally specific trajectories, and differentiated engagement with domestic and export markets. The overarching question here is how to translate pro-smallholder commercialisations policy into practice. Growth-poverty reduction linkages for smallholder farmers through commercialised agriculture do not lie along just one or two channels, and indirect (or multiplier) effects are also key, especially those through labour markets.<sup>4</sup> Focusing on crops, the paper attempts to get away from the idea that there is one, ideal commercial agriculture, following a linear path to some clearly defined end point.<sup>5</sup> Hence the plural: commercialisations. This also allows for concepts of commercial agriculture that go beyond simple distinctions often made, such as those between 'food' and 'cash' crops.

Drawing on existing literature, the paper sets out a framework for describing the different kinds of commercialisation that co-exist. It attempts also to give a sense of what might be emerging in relation to this framework, in terms of diverse forms of commercialisation that respond to distinct livelihood needs and local contexts. This allows a time dimension, in terms of dynamics and future scenarios, and moves away from any presumption of a singular type of transition to a particular type of

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<sup>4</sup> See also: Pretty et al (1996) on sustainable agriculture's links to food security and strengthening rural economies; Swaminathan (1995); IDS work on labour exchange in Northern Province, Zambia (White et. al., 2005). The Commission for Africa report (2005) also cites family farms as the primary source of jobs in Africa, commercialisation of family-farms has important multiplier and employment creation effects going beyond the farm itself. For example, increasing employment in formal and informal trade can have far-reaching poverty reduction effects, giving the example of Benin where poor rural women make up 90 percent of informal traders.

<sup>5</sup> Livestock, aquaculture and other forms of agriculture are not within the scope of this paper, although the arguments presented here is equally valid for these and other sub-sectors.

'commercial' agriculture. This framework can be used to pose questions for empirical studies and to examine potential implications of different policy options, in terms of implementation as well as outcomes.

## **2. What are commercialisations?**

Policy discourses around agricultural commercialisations tend to separate producers into different types of farm (small farms, large farms) growing different types of crops (food crops, cash crops) with simple distinctions made between 'subsistence' and 'commercial' or 'export' agriculture. Lack of clarity about what commercialisation actually means may give rise to misconceptions, evoking certain fears that can obstruct the passage of policy into practice. Work by the Future Agricultures Consortium in Ethiopia has identified fears that commercialisation means, amongst other things<sup>6</sup>:

- A focus on non-food crops
- Squeezing out the smallholder farmer
- Expropriation of land, displacement
- Dispossession of peasants
- Increased food insecurity
- Capitalism
- Mechanisation, modernisation
- Capital intensity, rather than labour intensity

In other words, there is a fear that commercialisation essentially means promoting change that is in the interests of larger, more powerful players to the detriment of smallholder farmers.

### **2.1 Defining commercialisation**

#### **2.1.1 Production for market**

Writing on commercialisation highlights a number of aspects to what it means to be commercialised. However, the lynchpin of most, if not all, definitions of agricultural commercialisation is the *degree of participation in the (output) market*, with the focus very much on cash incomes<sup>7</sup>. One dictionary definition gives a spatial dimension, describing commercial agriculture as "the growing of crops for sale outside the

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<sup>6</sup> See Sharp K, E Ludi and S. Gabreselassie (2007).

<sup>7</sup> For example, Pingali (1997), von Braun (1995), among others.

community" (Encyclopaedia, Colombia University Press). The first question is whether a farm or household sells any of its crop output. After this, some studies consider the degree of commercialisation in terms of amount of crops sales (volume, income). However, a better approach is to consider the percentage of crop production marketed by a farm or household. Thus, Strasberg et al (1999) suggest the following simple household crop commercialisation index (CCI):

$$\text{CCI} = (\text{gross value of all crop sales} / \text{gross value of all crop production}) \times 100.$$

Whilst there are computational difficulties, we note that there is no reason in principle why this should not be extended to include livestock (on both the numerator and denominator). However, we do not pursue this idea further here.

A value of zero for the CCI signifies total subsistence, whilst a CCI value approaching 100 indicates higher degrees of commercialisation i.e. a greater percentage of crop production marketed. A big advantage of this approach is that commercialisation is treated as a continuum, thereby avoiding crude distinctions between "commercialised" and "non-commercialised" farms.

This simple index is open to criticism. One possible criticism is that it makes no meaningful distinction between a farmer who produces just one bag of maize and sells that one bag, and one growing fifty bags of maize who sells thirty of them. Based on the CCI, the first farmer, with a CCI of 100, would appear to be more commercialised than the second, who has a CCI of 60. There is some validity to this criticism, as this caricatured example shows. However, for reasons that will become clearer below, in practice there are few tiny farms that sell all of their output (at least, at lower levels of economic development) and similarly few large farms that do not sell most of theirs.

A related criticism concerns "distress" sales, i.e. crop sales by poor households straight after harvest because they are desperate for cash. Where it is food that is being sold, the household may then be forced to buy back the same (or indeed a greater) quantity of food later in the year when the price is much higher. In this case, the crop sale raises the CCI, but is in no way indicative of increasing household welfare. Survey evidence suggests that 10-15% of southern and eastern African rural households are *both* net food deficit (over the course of a typical year) and nevertheless sell a proportion of their food output soon after harvest (Jayne et.al. 2006, Poulton et.al. 2006). This shows that there is some substance to this criticism and that interpretation of any empirical results based on the CCI needs to take the phenomenon of "distress" sales into account.

What the CCI does very effectively is to bring subsistence food production to the centre of discussions about commercialisation. CCI falls below 100 to the extent that households devote their land, labour and capital resources to the production of food for own consumption, rather than to the production of crops (food or otherwise) for sale to the market. We discuss the reasons for the persistence of subsistence food production in more detail later in the paper. Even at this early stage, however, it is worth making the point that strategies for agricultural commercialisation should start by seeking to understand why households produce food for own consumption and then to create the conditions that will help them over time to devote less of their resources to this activity.

### **2.1.2 Additional dimensions to agricultural commercialisation**

Whilst the degree of participation in the output market lies at the heart of most definitions of agricultural commercialisation, some literature does address other dimensions of commercialisation (see, for example, the discussion in von Braun and Kennedy 1994). Here we briefly note three additional dimensions.

First, there is the degree of participation in input markets. As farms become more commercial, they tend to rely less on own-produced inputs (e.g. manure, retained seed) and services from mixed farming systems (e.g. animal traction) and instead depend more on markets to supply their inputs (improved seed, inorganic fertiliser, crop protection chemicals) and services (mechanised equipment for ploughing, planting, weeding, harvesting etc – either hired/rented or purchased). Thus, on the input side we might define commercialisation as:

ICI = value of inputs acquired from market/ agricultural production value

As is well illustrated by Pingali (1997), commercialisation on the input side is likely to proceed in tandem with the degree of participation in output markets. We, therefore, do not consider this dimension further in this paper.

Second, it is observed that, as farms become more commercialised, they rely increasingly on hired labour, with family labour focusing more on supervisory and managerial tasks. This may be linked to the opening up of other opportunities for the family's labour elsewhere in the economy. As farm production becomes increasingly business-oriented, rather than a matter of survival, some family members may choose to work in other occupations, with the remaining members hiring in workers to accomplish the necessary tasks. Alternatively, where commercialisation is associated with farm consolidation (see below), additional hired labour may be required to cope

with an expanding cultivated area. Note, however, that where farm consolidation is driven by rising real wages elsewhere in the economy, this will also encourage mechanisation (Pingali 1997), such that the increase in total labour input into the farm is limited.

An interesting case of reliance on hired labour at an early stage of agricultural development is provided by the top smallholder producers of cotton in Tanzania and Zimbabwe. These devote half to two-thirds of their land to cotton production and typically rely heavily on hired labour for most tasks related to cotton cultivation. Family labour thus has primarily a managerial role in cotton. However, family labour represents the dominant labour input into the household food production activities, which occupies most of the remaining land on the farm. In this case, the total area of land cultivated is too great for the household alone to supply labour. At the same time, attractive off-farm opportunities for family labour are limited, so family labour is still supplied on the farm. The distribution of this labour between crops reflects intra-household decision-making and division of labour arrangements, but also again highlights the significance of subsistence food production within agricultural commercialisation processes.

So far, we have considered labour hire as an indicator of commercialisation. However, another strand in the literature sees the form of labour used (family vs hired) as an important determinant of comparative advantage in crop production. We return to this in section 4.

Third, some writing on commercialisation highlights the importance attached to the profit motive within the farm business as an indicator of commercialisation. Thus, Pingali and Rosegrant (1995: 171) state that:

“Agricultural commercialization means more than the marketing of agricultural output; it means the product choice and input use decisions are based on the principles of profit maximisation. Commercial reorientation of agriculture occurs for the primary staple cereals as well as for the so-called high value cash crops. On the input side, commercialization implies that both traded and non-traded inputs are valued in terms of their market value”

This is a useful nuance within discussions on commercialisation. As will be discussed below, risk minimisation, rather than profit maximisation, is an important driver of subsistence production. The phenomenon of “distress” sales, discussed above, provides a good example of sale of crops that is not driven by a profit motive, but

rather a short-term survival need. Decisions to supply labour off-farm can also have both "push" and "pull" motivations (see below).

### **2.1.3 Broader (household-level) concepts of commercialisation**

Looking beyond purely the agricultural activities of a household, von Braun and Kennedy (1994) propose a measure of integration into the cash economy, which they define as:

ICE = value of goods and services acquired through cash transactions/ total income

Alternatively, we might consider a household commercialisation index, where:

HCI = gross income from all market sources / total income

A livelihoods perspective reminds us that, even in rural Africa, many households obtain half or more of their income from non-farm sources (Reardon 1997, Ellis 2000)<sup>6</sup>. For policy makers, an important note of caution is that seeking to increase the market orientation of the agricultural production of households whose comparative advantage lies in non-farm employment may be a fruitless task.

Broadly speaking, the non-farm income of rural households may be derived from casual labour hire, wage employment, private business activity (self-employment) or remittances. There may be complementarities between such activities and agricultural production, for example, where non-farm activities are conducted mainly in the dry season or where small land holdings are insufficient to absorb the entire household's labour, but they may also compete (Reardon 1997). Can pursuit of these activities be considered as commercialisation? This question takes us beyond the scope of the current paper. However, we offer the following brief observations before returning to our main theme of *agricultural* commercialisation.

First, there are important ongoing debates as to whether rising off-farm income shares in rural Africa reflect pull (opportunity) or push (survival) factors (see, for example, Bryceson 1999, Ellis 2000, and Dorward 2003). Whilst, for some households, dependence on non-farm employment may be as much about survival as about comparative advantage, there are other households (e.g. those with above-

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<sup>6</sup> We are interested here in all activities other than agricultural production undertaken by the household on its own account. These include both casual labour hire on the farms of others ("off-farm", but not "non-farm") and small business activity such as processing or handicraft making ("non-farm") that is conducted on the household's own property.



average educational attainment, but limited land holding) for whom non-farm employment makes more sense as an income maximising strategy than producing agricultural products for market.

Second, we note that hiring out labour onto other farms rarely accounts more than a small fraction of total off-farm income in a community or area (Reardon 1997, Otsuka and Yamano 2006). This is generally low return work. However, there can be exceptions. Maertens and Swinnen (2007) show that employment on large-scale export horticulture enterprises represents a "pull" opportunity for many rural households in the relevant part of Senegal. In the 1990s, smallholder export horticulture developed in Senegal. However, in the latter part of that decade, the inclusion of smallholders within the supply chain was increasingly challenged by the private grades and standards introduced by importers in the major European markets. The industry reoriented itself towards estate production, while retaining a minority of its original smallholder outgrowers (the top producers). It has subsequently grown to the point where the total number of people employed by the industry (estate workers plus remaining outgrowers) far exceeds the total number of outgrowers contracted prior to the reorganisation. Maertens and Swinnen (2007)'s analysis of household survey data divides the population of the export horticulture production zone into three categories: those who have remained as outgrowers, households with one or more member employed on the new export horticulture estates<sup>9</sup> and households with no direct connection to the industry. It shows that those who have remained as outgrowers are the best off. However, households with one or more member employed on the horticulture estates are significantly better off than households with no direct connection to the industry. Moreover, many of the households with one or more member employed on the horticulture estates would not qualify as outgrowers. Whilst they have similar education levels to outgrowers, they have less land and fewer non-land assets. Because of the relatively inclusive nature of estate employment<sup>10</sup>, Maertens and Swinnen (2007)'s simulations indicate that poverty levels in the area are lower under current arrangements than they would have been even had the contract farming form of organisation been able to continue.

When we consider the competitive strengths and weaknesses of different modes of agricultural organisation in Section 4, we might note the following lesson from the Senegal horticulture example. The direct poverty reduction potential from a particular

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<sup>9</sup> In the light of discussions elsewhere in this paper, it is, however, worth noting that, whilst estate farm workers derive more than one third of their income from agricultural wages, own-farm agriculture is the main source of income in the area. On average across the sample, two thirds of household income is derived from own farming.

<sup>10</sup> Migrant families are, however, under-represented as estate employees.

example of "commercial" agriculture is a function of the rate at which the enterprise can grow, its labour intensity (and the type of labour employed) and the returns to labour achieved. In general, although labour intensity varies considerably by crop (with horticulture amongst the most intensive labour users), smallholder agriculture uses labour more intensively than large-scale estates. However, in the Senegal example, the competitive advantages of the estate mode of organisation outweighed the labour intensity advantage of smallholder production, enabling more poor households to obtain higher returns through wage employment on estates than they could through own production.

Even this, though, may only be part of the story – an essentially static comparison. Work on ethical trade and working conditions on commercial farms (see Smith et al, 2004; Tallontire et al, 2005; among others) emphasises *quality* of employment. It calls for a more sophisticated approach to poverty that recognises that enabling smallholders to stay and work in their communities could be more poverty reducing than supporting large scale commercial farms in a fiercely competitive global market place (characterised by downward pressures on prices and increased concentration in markets over time) that offers only low paid, insecure work. Returning to the central theme of this paper, a key issue, of course, is whether smallholder households are forced off their land to make way for expanding estate production or whether sufficient land is available for them to co-exist with estate producers, hiring out some of their labour at the same time as pursuing their own (food and other) production activities.

Third, available evidence suggests that, in Africa, access to non-farm income is unequally distributed, with better-off households acquiring a higher share of their income from non-farm sources than poorer households (Reardon 1997). In absolute terms, the differences are even greater. The diversity of returns from different non-farm activities indicates the presence of barriers to entry into some activities; with education and access to capital, the two most commonly cited ones.

Our discussion about employment on commercial farms notwithstanding, the evidence from reviews such as Reardon (1997) and Otsuka and Yamano (2006) is that it is ultimately growth in non-farm activities within an economy that drives major falls in poverty. At first sight, this appears to call into question the importance of agricultural intensification and commercialisation to growth processes in Africa. However, this is a premature conclusion. There is some debate as to whether, in a predominantly rural economy, agricultural commercialisation is required to create the initial conditions for growth in manufacturing and service sectors. Haggblade et.al. (2007) argue that the causality can vary by specific case and context. However, even

where growth in manufacturing and service sectors responds primarily to external (non-agricultural) demand, Otsuka and Yamano 2006 argue that agricultural intensification may be necessary to permit households to invest in the education necessary to obtain the available employment opportunities. Consistent with the emphasis in this report on food access as a constraint to commercialisation, they note that food insecurity may also discourage investment in non-farm activities: "... according to the long-term panel studies in Asia, increased agricultural income, mostly generated from the Green Revolution, was a major source of funds to invest in children's schooling in the early years, which later led to the choice of lucrative non-farm occupations by children. The last finding raises questions about the sources of investment in children's schooling in Sub-Saharan Africa. In practice, many African farm households lack the financial resources to send their children beyond primary school. The Asian experience strongly suggests that it is the Green Revolution that must be realized to initiate the structural changes towards increasing investment in human capital and greater participation in non-farm activities in Sub-Saharan Africa. Indeed, without increasing crop income and improving food security in Sub-Saharan Africa, farmers will not be able to afford to send their children to schools *and allocate more time to non-farm activities.*" (2006, p30, emphasis added)

## 2.2 Processes of commercialisation

For food production systems, Pingali and Rosegrant (1995) describe farmers' level of market orientation using three classifications: "subsistence systems", "semi-commercial systems" and "commercial systems" (Table 1). Each classification has different farmer objectives, sources of inputs, product mix and household income sources, echoing our discussion above of the multiple dimensions of commercialisation.

At first sight, this typology presents a rather linear trajectory that sees farmers, indeed agriculture sectors, progressing, over time, from subsistence through a state of semi-commercialisation to a commercial system with clearly defined characteristics along the four criteria – each one captured on a scale or hierarchy. The transition is described thus: "as economies grow, households shift away from traditional self-sufficiency goals and towards income and profit-oriented decision making, so farm output is accordingly more responsive to market trends. The returns to intensive subsistence production systems that require high levels of family labor generally decline relative to production for the market with predominant use of hired labor. The proportion of farm income in total household income declines as family members find more lucrative non-agricultural employment opportunities" (Pingali and Rosegrant, 1995: 172-173).

**Table 1: Characteristics of food production systems with increasing commercialisation**

Level of Market Orientation	Farmer's Objective	Sources of inputs	Product mix	Household income sources
Subsistence systems	Food self-sufficiency	Household generated (non-traded)	Wide range	Predominantly agricultural
Semi-commercial systems	Surplus generation	Mix of traded and non-traded inputs	Moderately specialised	Agricultural and non-agricultural
Commercial systems	Profit maximisation	Predominantly traded inputs	Highly specialised	Predominantly non-agricultural

Reproduced from Pingali and Rosegrant (1995)

Table 1 is a simplification, but it neatly captures some important dynamics. One critique is that it focuses only on those who remain in agriculture; even if there is recognition that even these households will have other income sources beyond agriculture. Those who exit agriculture altogether - either because they specialise in non-farm activities or migrate out of rural areas altogether or end up largely as providers of wage labour to remaining farms - may be a minority at early stages of rural development, but grow to become the majority as both agricultural commercialisation and broader economic development proceed. Moreover, as shown by Otsuka and Yamano (2006), once growth in non-farm employment takes off, this can have a more dramatic impact on poverty reduction than even agricultural growth.

We might also observe that the path sketched out around Table 1 - developed principally in relation to Asia - applies largely to systems that start out as smallholder dominated. Bimodal systems (like those in Latin America and much of Southern and Eastern Africa) may have a quite different trajectory.

### **2.3 Specialisation and diversification**

Table 1 above associates the agricultural commercialisation process with a move from production of a very diverse product mix to a more specialised production enterprise. Production decisions are increasingly shaped by market forces in conformity with comparative advantage, rather than by a desire to spread risks in the context of highly imperfect markets.

However, once again, progress is unlikely to be linear. In particular, at the earliest stages of agricultural development, commercialisation may well be associated with

diversification. There may be two reasons for this. The first is that diversification in market-oriented crop (and livestock) enterprises may be an important way to spread market-related risks, given both market imperfections and volatility and the lack of other mechanisms for either ensuring against such risks or smoothing consumption when they occur. Leavy (2007) on Zambia and Gabreselassie et al (2007) on Ethiopia provide examples of households deliberately diversifying their market-oriented crop and livestock enterprises, rather than expanding a single enterprise, when they accumulate the resources to do so.

The second reason is that initial production of crops for market – especially non-food crops – represents diversification away from production of basic foods for home consumption. Heltberg (2001:3) observes that, “[s]mallholders produce market-destined crops *in addition to* the subsistence food crops they are growing anyway”<sup>11</sup>. In this case, the inconclusive nature of measuring commercialisation in terms of degree of specialisation can be illustrated using a Herfindahl index. If a farmer starts by allocating 90 per cent of land to maize and the remaining 10 per cent equally to 10 minor crops, the Herfindahl index is 0.811. If the farmer then switches to allocating 45 per cent each to maize (cultivated more intensively) and cotton, and only grows five other minor crops on the remaining 10 per cent, the Herfindahl index drops to 0.41. According to Heltberg, the degree of diversification has increased. According to Pingali (Table 1), the farmer has moved from a “wide range” of crops (eleven) to being “moderately specialised” (seven), with almost half of cropped area now planted with the clear intention to produce for market. Both views of the same shift are defensible.

According to Heltberg (2001:3), the tendency to add cash crops to existing food production activities can be attributed to the “urge for food self-sufficiency in environments of large transaction costs and high risks found in many sub-Saharan African (SSA) countries”. This contrasts with the belief of economic historians that “gains from specialisation are a key driving force in economic growth” (see North 1991; cited in Heltberg 2001). Heltberg concludes:

“Commercialization and diversification are therefore associated, at least at initially low levels of commercialization. This implies that smallholder agricultural commercialization may not yield the expected gains from specialisation and economies of scale and that it will not, in itself, be a prime engine of agricultural productivity growth. Nevertheless, commercialization is important as a livelihood

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<sup>11</sup> See also Omamo 1998(a) and (b)

strategy, source of cash income to farmers, and export revenue to the country, and worth promoting on those grounds+." (Heltberg 2001: 3).

We agree strongly with the emphasis placed here on "food self-sufficiency in environments of large transaction costs and high risks" and that one should not expect specialisation to occur until food markets function much better than they do in most of Africa today. However, we caution against the conclusions drawn on the grounds of economies of scale. Firstly, in Section 4 we discuss the evidence on the competitive strengths and weaknesses of smallholder vs commercial farms. There is very little evidence for economies of scale in agricultural *production* in low wage economies, although there may well be economies of scale in marketing and quality assurance (these are both information-related). Secondly, the expected gains from smallholder agricultural commercialization may not come primarily from the realisation of economies of scale. Instead, they arise when households are freed from producing food for own consumption, often in agro-ecological conditions that are far from ideal, and feel able instead to produce crops in which they have a clearer comparative advantage. Thus, von Braun and Kennedy (1994:3-4) write that:

"Subsistence production for home consumption is chosen by farmers because it is subjectively the best option, given all constraints. In a global sense, however, it is one of the largest enduring misallocations of human and natural resources, and, due to population pressure and natural resource constraints, it is becoming less and less viable."

### **3. Making agricultural commercialisation as inclusive as possible**

Several studies indicate factors that the authors consider important in distinguishing commercialised from non-commercialised growers and/or factors that affect "farmers' decisions to become more integrated in the market" (vonBraun, 1995:189). So-called "exogenous" determinants of commercialisation identified by these studies include: population change, availability of new technology, infrastructure, market creation, macro and trade policies.

We do not have time to discuss all of these in detail. However, in this section we discuss certain critical conditions that need to be in place if efforts to promote agricultural commercialisation are to benefit a large proportion of smallholder agricultural producers.

### 3.1 Market access

Given the centrality of participation in output markets in our definitions of commercialisation, market access is obviously crucial to commercialisation.<sup>12</sup> Market links bring broader benefits to poor people in rural areas, and there is plenty of evidence for this (see Dercon and Hoddinott, 2005, among others). However, households have different relations to markets because of costs associated with market transactions. The key is enabling farmers to access markets for their produce – as evidenced by the various 'making markets work for the poor' initiatives that emphasise market access as a major pathway out of poverty and the need to link farmers better up to new markets (DFID, Asian Development Bank, Commission for Africa report 2005; SIDA, 2003; World Bank World Development Report 2000/2001 chapter 10 making markets work better for poor people; Almond and Hainsworth, 2005, USAID). These stress the importance of agricultural growth, but also highlight infrastructure development as necessary to improve access to new markets as well as bringing other benefits to improve welfare overall.

Other aspects of the current orthodoxy include better market information, strengthening farmer organisations and promoting contract farming. However, while many measures implemented in support of increasing market access have value in their own right, there are still questions around who participates. Will it still only be the top few percent of farmers who respond, especially if on the whole smallholders cannot either buy their food reliably and cheaply from a market or intensify their own production?

Successes in various initiatives that fall under the banners of 'making markets work' for poor people and 'linking farmers to markets' have been mixed. Case studies from the DFID/ADB joint initiative focusing on financial, labour, and agricultural markets, and public private partnerships encompass contract farming schemes and other measures to encourage value chain participation by smallholder farmers, mainly in East and South-East Asia.<sup>13</sup> Contract farming schemes implemented in Cambodia encompass production of oranges, vegetables, rubber, tobacco and rice, with the aim to provide to/ achieve for smallholder farmers: price information; new technologies; lower costs of entering market; and access to credit. Of three schemes, two failed (CEDAC, an NGO supported scheme, and AADA, under a local farmer association)

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<sup>12</sup> For example, Heltberg's study of smallholder farmers in Mozambique finds "to stimulate commercialisation the most important factors appear to be improved access to markets and information, risk reduction, capital accumulation" (Heltberg, 2001).

<sup>13</sup> For more information see: Cambodia: <http://www.dfid.gov.uk/pubs/files/mmw4p/agcambodia.pdf> ; Vietnam: <http://www.dfid.gov.uk/pubs/files/mmw4p/agvietnam.pdf> .

because of weak market linkages – even though AADA managed to increase productivity 5-fold. The third scheme - Angkor Kasekam Roungroeung (AKR) – is a rice contract farming scheme of more than 1,000 households. Benefits of the scheme have been to increase specialisation and the adoption of new production methods, as well as access to a stable market and secure income. Participating farmers received higher prices than in the market and on the whole felt that they were better off as a result. However, the scheme has excluded poorer farmers with smaller farm sizes.

A study by Minten, Randrianarison and Swinnen (2007) of smallholder farmers contracted to supply local supermarkets describes how smallholder farmers under micro-production contracts, have received extensive farm assistance and supervision to help them meet the high quality standards and food safety requirements demanded by European supermarkets. Under the scheme, almost 10,000 vegetable farmers in Madagascar are now producing for this market. Benefits of the scheme include higher welfare, greater income stability and shorter lean periods. However, local supermarkets do not demand the same high quality and are reticent about contracts that emphasise higher quality standards.

The contracting farm households tend to be considerably higher educated than the average Malagasy household: "The households that have contracts with the firm are: 64% of them had finished primary schools, and only 1% of them did not do any studies at all. This compares to almost half of the national population that is analphabet" (Minten et al, 2007:9). An area under contract is restricted to 0.01 hectare, but given relatively short production cycles there can be many different contracts on the same plot over the course of the year. Usually there is only one contractor per household, and contractors can have only one contract at a time, but multiple household members can have contracts concurrently. Households also subcontract land to people outside the household.

On a much smaller scale, smallholder farmers in South Africa have been supplying a local SPAR supermarket, while SPAR supports and maintains market access. The initiative is underpinned by South Africa's Agricultural Black Empowerment (AgriBEE) Policy, introduced in 2004. These smallholder farmers are classified as emerging farmers, and meet 30% of the store's demand for fresh produce, supplying cabbages, spinach, and other vegetables. However, its reach is limited in that this amounts to only 27 farmers in total (Poulton et al 2006), especially given that there are about 3 million small-scale farmers in South Africa, mainly settled in communal areas and farming only 14 per cent of agricultural land (Poulton et al 2006); compared with 46,000 commercial farms who produce 95 per cent of marketed surplus on 86 per



cent of agricultural land. Participation of small-scale farmers in contract farming is still very limited.

These cases illustrate that while market access initiatives are valuable with many benefits to participating farmers, in practice relatively few are able to participate in what, on the whole, tends to be niche markets. That only the top few percent of smallholder farmers can actually benefit highlights the limitations of conventional thinking if it is decoupled from support for staples development. This is always going to hold back their ability to diversify out.

### **3.2 Access to staple foods: food markets and/or food production**

It is now a well-attested fact that the majority of smallholder households in Sub-Saharan Africa are net deficit in food production terms and that only a minority sell any food staples at all in an average year<sup>14</sup>. Illustrating this for the case of Kenya, Nyoro et.al. (1999) found that around 70% of households in the high potential maize zone were net sellers of maize, but in none of the other six major agro-ecological zones in their survey did the proportion of net seller households exceed 30%. Yet, almost all households grow staple foods and, in most cases, they devote the majority of their land area to them. It is thus not uncommon for studies of food crop marketing to find that the top 10% of producers account for 50% or more of marketed surplus. Similarly, studies of cash crop systems tend to find that, within a given area of smallholder producers, it is the larger farms that engage more heavily in cash crop production (especially where larger farms also equate to higher land:labor ratios), leading to similar distributions of cash crop sales.

This subsistence orientation persists because rural food markets in Africa are risky and subject to wide seasonal price variations. In this context, small farm households are rational to prioritise the growing of subsistence food crops, even when growing other crops for market would yield a higher mean return in a normal year. In this section, we develop this argument further. The corollary of this argument is that the expansion of commercial agriculture will generally have to go hand in hand with investments that increase the productivity of food staples.

There are two main strands of literature that investigate the relationship between subsistence and commercial agricultural production amongst smallholders. The first concerns the impacts of cash crop production on food security and nutrition. NGO

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<sup>14</sup> One of the first articles in the literature establishing this was Weber et.al. (1988).

and other critics of the promotion of cash crops have argued that cash crop production absorbs women's labour and may also justify men taking over land previously controlled by women. It thereby diverts these resources from food production for household consumption. Meanwhile, the resulting income is controlled by men, who prioritise personal consumption (e.g. of alcohol), marrying other wives or investment in fixed assets, rather than providing for the household's immediate food and nutritional needs.

A seminal work in this literature is von Braun and Kennedy (1994). Summarising across their case studies, they found that households that invest in cash crops rarely sacrifice food security to do so. Specifically:

- Farms adopting new "commercial" crops or technologies often devote a considerably smaller share of their land to food crops for own consumption than do non-adopters. In absolute terms, the area that they devote to food crops for own consumption may also be smaller. However, they generally achieve higher yields in their food crop production. As a result, per capita production of food for own consumption was as often higher for adopters than for non-adopters as vice versa.
- Higher incomes as a result of adoption of new "commercial" crops or technologies generally lead to higher calorie intake, although the increase is less than proportional due to increased non-food expenditure shares and a preference for more expensive calories (good for other aspects of nutrition). "Any negative tendencies to spend less for food because of loss of income control by women or because of increased involvement in market (cash) transactions are generally small and are more than compensated for by increased incomes due to commercialization" (p78).
- There is "no evidence for an adverse effect on child nutrition from increased commercialisation, even when income is held constant" (p46). Equally, though, child health indicators rarely improved, despite higher incomes, as (aside from food) additional incomes were rarely spent on items with short-run health benefits. The authors argued that increased incomes should be combined with public action to deliver improved health outcomes.

Whilst this first strand of literature examines the impact of commercial agricultural production on the food security of those who have already engaged in it, the second considers whether household concerns about food security act as a constraint to adoption of commercial agriculture. Specifically, if food markets are unreliable, inefficient or highly volatile, it is argued that farm households will prioritise feeding themselves and hence will only cultivate very small quantities of crops intended for sale if they expect to experience a food deficit (Fafchamps, 1992; Jayne, 1994).

Thus, under production conditions better suited to oil crops than to grains, Jayne (1994) found that, "Controlling for differences in household assets and location, grain-surplus households in five semi-arid regions of Zimbabwe were found to cultivate 48% more oilseed crops for the market than their grain-deficit neighbours" (p388).

Some evidence for this food-security-as-constraint-to-commercialisation view is also found in the studies reported by von Braun and Kennedy (1994). Thus, whilst several of the authors in that volume calculated that returns to land and/or labour were significantly higher under cash cropping than under food production for own consumption, adopting households generally devoted only 40% or less of their land to the new "commercial" crops or technologies, which was less than they continued to devote to subsistence food crops. Meanwhile, the smallest farms in the study areas were under-represented in cash crop schemes for various reasons, including both administrative selections (where this occurred) and their own choice.

The case study by Peters and Herrera (1994) neatly summarises why smallholders in Malawi plant on average around 80% of their land to maize. Prices of purchased maize are both high and unpredictable in the annual "deficit period" (December-January). However, in addition to this there are strong taste preferences for local maize varieties pounded in a traditional way and there are cultural reasons as to why cash resources within the household tend to get exhausted more readily than retained food stocks, hence making the latter more reliable as a food security reserve.

The Mozambique study by Heltberg and Tarp (2002) also highlights the importance of staple food production to agricultural commercialisation. Thus, in their regressions to explain the extent of participation in agricultural output markets, the single most important variable was the mean level of maize yield achieved in the district concerned. This could indicate that maize was readily available for purchase in the districts concerned or that individual households in such districts were able to devote land and labour to crops other than staple foods because they were also able to ensure a reasonable supply of food through own production.

Of course, the two aspects of the relationship between cash crop production and subsistence food production are not mutually inconsistent. Indeed, if adoption of a cash crop only occurs when concerns related to food security can be allayed, then non-negative outcomes of cash crop production on food security are likely to be observed.

More recently, Pandey et.al. (2006) have carefully investigated the role of upland rice in the farming systems of the northern uplands of Vietnam. Yields of upland rice are lower than for lowland rice, so households that have both upland and lowland plots tend to plant less upland rice in their upland plots<sup>15</sup>, which are better suited to higher value cash crops (tree or horticultural crops) or even maize (a cash crop in this context). In more accessible areas, households can also readily obtain rice through the market from nearby lowland areas, so also produce less upland rice. However, in more remote areas, households cannot rely on obtaining reasonably priced rice through the market and hence plant a much higher proportion of their plots to upland rice. Within the subset (210 households) of their household survey dataset that did not have lowland rice plots, Pandey et.al. (2006) show that higher upland rice yields are associated with a lower proportion of total area planted to upland rice and a higher proportion planted to cash crops. In a similar vein, Poulton and Ndufa (2005) found that, within three subdivisions of Siaya and Vihiga districts in western Kenya, households that achieved higher maize yields in the long rains season had more diversified cropping patterns (away from maize) in the short rains season, controlling for farm size.

Pandey et.al. (2006) argue that, "Rice productivity improvement can thus be an important strategy for escaping from poverty while assuring food security. Improvements in household food security can thus facilitate and reinforce the process of commercialization rather than negating this process, as is believed in some policy circles. [Contrary to these same beliefs] ... a more gradual approach that is based on enhancing food security first before launching a major commercialization program for uplands is likely to be more successful in bringing about the desired change (von Braun and Kennedy 1994). Examples abound where commercialization programs that did not give due consideration to food security have performed poorly in the uplands of Vietnam and elsewhere." (p77).

In the context of Vietnam, intensification of staple food production for home consumption may be a prerequisite for diversification into commercial agriculture principally in less accessible areas that cannot rely on food purchase from the market. However, basic infrastructure and transport is better in much of Vietnam than in most of Sub-Saharan Africa, whilst local food markets are also generally better developed (assisted by greater population density and the fact that the nation as a whole is rice surplus). In Sub-Saharan Africa, intensification of staple food production for home consumption may be a prerequisite for widespread diversification into commercial agriculture in many areas - not just the more "remote" ones.

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<sup>15</sup> Some upland rice is, however, still typically planted, as it is harvested before lowland rice and is available in time for consumption during the main lean period, September-November.

We note, however, that policies to promote staple intensification amongst food deficit households with small-medium land holdings, as a means to eventual diversification into production of other crops for market, are likely to be different from policies to (further) expand staples production amongst existing surplus producers. Thus, policies that raise the price of food staples should provide incentives for the latter to further expand their production, but will only worsen the trap that the former find themselves in, reducing the already scarce cash that they have to buy improved seeds or fertiliser. In areas of average or higher agro-ecological potential, but poor market development, a system of input vouchers for staples production might assist diversification into higher value crops, if accompanied by other interventions to simultaneously promote such alternative crops<sup>16</sup>. However, in semi-arid areas significant staples intensification may always be too risky for producers to contemplate. In such cases, widespread commercialisation of agriculture might only come with improved market access, allowing both purchases of staples and opportunities to sell crops more suited to local growing conditions. The Machakos area in Kenya may be illustrative here (Tiffen et.al. 1994).

### **3.3 Asset accumulation**

Intuitively, differences in asset holdings are likely to be a big determinant of who responds to incentives to commercialise. This is confirmed by empirical evidence, such as Heltberg's 2001 study of smallholder farmers in Mozambique, which identifies capital accumulation as an important stimulus to commercialisation. In this section, we discuss the key assets for rural households: land, plus livestock and equipment.

#### **3.3.1 Land**

Jayne et.al. (2003) present evidence from five countries of southern and eastern Africa (Ethiopia, Kenya, Mozambique, Rwanda and Zambia) of land holding patterns amongst smallholder households in the 1990s, based on nationally representative rural household surveys. Average land holding sizes per household have fallen by one third to one-half since the 1960s, as populations have risen (see also Ellis 2005). Contrary to some stylised facts about the relatively egalitarian nature of land distribution within communal tenure systems, Jayne et.al. (2003) also demonstrate that there is considerable inequality within land holdings – at least as great as in Asia at the onset of the Green Revolution. Only about a third of this inequality can be

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<sup>16</sup> The challenge of providing a coordinated package of support measures to both promote staples intensification and simultaneously assist diversification should not be underestimated, however.

explained by inter-village effects (for example, differences in agro-ecological potential and local population densities); the remainder is within-village inequality. Observable household variables, such as demographic structure and livestock holding (see below) explain a further 12-20% of total observed variation. Jayne et.al. (2003, p267) suggest that "institutional and governance factors operating within local systems for allocating land" may account for some of the remaining inequality. Thus, for example, the first clans and families to settle an area commonly receive larger land allocations than later arrivals, whilst other studies indicate that those related to the chief responsible for land allocation receive larger allocations than those without such links.

Jayne et.al. (2003) show that around 25% of households in all five surveyed countries have access to less than 0.1 ha of land per capita – near landless. They also show that income per capita rises sharply as land holding rises from this level to 0.25 ha per capita (and more gradually thereafter). In other words, whilst households with lower land per capita obtain a higher share of their income from non-farm sources than households with a greater land endowment<sup>17</sup>, this is insufficient to compensate for lower land holdings in a predominantly agricultural economy.

Jayne et.al. (2003, p254) comment that "the poor generally lack the land, capital and education to respond quickly to agricultural market opportunities and technical innovation". Thinking specifically about land, we argue that small land holdings interact unhelpfully with poorly developed food markets to keep poor households focused on the production of (often-low value) staple food crops. Thus, at any given yield level, a household with lower land per capita has to devote a higher proportion of its land to food production if it is to achieve a given level of self-sufficiency. There is then less land available, if any at all, for production of higher value crops for market.

We note at least two effects of small land sizes on agricultural commercialisation. Firstly, in the absence of efficient food markets, households with smaller land sizes have to be assisted to achieve higher staple yields before they will begin to devote land to production of higher value crops for market<sup>18</sup>. Secondly, lower land per capita means that they will be able to benefit less (in absolute terms) from their commercialisation efforts.

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<sup>17</sup> Jayne et.al. (2003) also examine the relationship between share of non-farm income and total income per capita and find that this is positive in all countries except Ethiopia – a finding that is broadly consistent with that of Reardon (1997).

<sup>18</sup> Note that higher yields for staples also raise the returns to their production, which may discourage diversification into other crops.

These points are illustrated by Table 2, which is derived from action research carried out in Siaya and Vihiga districts of western Kenya in 2001-2005. Land holding sizes in these districts are tiny, such that in a 2005 survey the 75<sup>th</sup> percentile household only had access to around 0.6ha, albeit land that could be farmed in two seasons per year. (This works out at 0.18ha per capita – below the threshold of 0.25ha per capita highlighted by Jayne et.al. 2003). Table 2 considers possible outcomes from agricultural intensification efforts that permitted an intensification of maize production in the long rains season, so as to permit diversification into other crops in the short rains. In the project in question, intensification of maize production was being promoted through provision of technical advice plus a credit scheme that assisted households to acquire improved maize seed and inorganic fertiliser. Production of soybean was being promoted for cash, food and soil fertility benefits, whilst planting fast growing "improved fallow" tree species on small parcels of land helps restore soil fertility as well as producing firewood, poles or fodder. Kales provide additional cash income. In the "best case" scenarios shown in Table 2, maize and bean yields for the 75<sup>th</sup> percentile farm are double those recorded by the actual 2005 project survey.

According to Table 2, the 75<sup>th</sup> percentile farm household could satisfy all its maize requirements at these enhanced yields (per capita consumption requirement is about 140kg per person p.a.) and devote 80% of its land area to crops other than maize during the short rains season. However, its income per capita from farming activities alone would still only be around half of the international poverty line of US\$1 (PPP terms), meaning that it would require non-farm activities to take it out of poverty. Meanwhile, with lower expected yields, as very poor households are rarely early adopters of new technological packages, the 25<sup>th</sup> percentile farm household would not satisfy its maize requirements, so would be likely to continue devoting most or all of its land to maize and beans for home consumption.

Jayne et.al. (2003) acknowledge that there are few easy solutions to the problem of limited land access for many African smallholder households. In both Malawi and Ethiopia land redistribution programmes to enforce a floor level of land holding per farm household are periodically floated in policy dialogues. Less radical would be efforts to stimulate land rental markets within customary tenure systems (see Crookes and Lyne 2003 for an example from KwaZulu-Natal) or investment in irrigation. What is clear is that efforts to stimulate intensification and commercialisation amongst farm households with small landholdings will require significant coordination across several services and markets: provision of technical advice; supply of both improved maize seed and alternative high value crops; supply of fertiliser and a mechanism for making it affordable to poor households (either credit or subsidy), and some form of linkage to a market for higher value produce. This may

be achieved in a project setting, but is a formidable challenge for regular development administrations (see Section 5). Moreover, the continued absence of a replicable seasonal credit model for small-scale, semi-subsistence farm households in Africa suggests that intensification and commercialisation amongst farm households with small landholdings might only be feasible where the state is willing to invest in a fertiliser subsidy as a way of overcoming the affordability constraint.

**Table 2: "Best Case" Agricultural incomes for representative farm households in western Kenya**

Cropping Pattern (ha)	75 <sup>th</sup> percentile Farm		25 <sup>th</sup> percentile Farm	
	Long Rains	Short Rains	Long Rains	Short Rains
Maize/Beans (intercrop)	0.42	0.12	0.2	0.2
Soybean	0.06	0.24		
Kales	0.12	0.12		
Improved Fallow		0.12		
Total (ha)	0.6	0.6	0.2	0.2
Assumed Yields (t/ha)				
Maize (intercrop)	3.0	1.5	1.37	0.7
Beans (intercrop)	0.6	0.4	0.29	0.2
Soybean	1.5	1.5		
Kales	5.0	5.0		
Family Size		6.5		4.0
Maize Production per person p.a.		222kg		104kg
Net Income per person / day:				
KShs		16.63		3.78
US\$ PPP (current)		0.47		0.10

Source: adapted from Poulton and Ndufa (2005)

Jayne et.al. (2003) acknowledge that there are few easy solutions to the problem of limited land access for many African smallholder households. In both Malawi and Ethiopia land redistribution programmes to enforce a floor level of land holding per farm household are periodically floated in policy dialogues. Less radical would be efforts to stimulate land rental markets within customary tenure systems (see Crookes and Lyne 2003 for an example from KwaZulu-Natal) or investment in irrigation. What is clear is that efforts to stimulate intensification and commercialisation amongst farm households with small landholdings will require significant coordination across several services and markets: provision of technical advice; supply of both improved maize seed and alternative high value crops; supply of fertiliser and a mechanism for making it affordable to poor households (either credit



or subsidy), and some form of linkage to a market for higher value produce. This may be achieved in a project setting, but is a formidable challenge for regular development administrations (see Section 5). Moreover, the continued absence of a replicable seasonal credit model for small-scale, semi-subsistence farm households in Africa suggests that intensification and commercialisation amongst farm households with small landholdings might only be feasible where the state is willing to invest in a fertiliser subsidy as a way of overcoming the affordability constraint.

Even then, Table 2 suggests that efforts to promote commercialisation should focus on reaching households with middling land holdings<sup>19</sup>, on the assumption that better endowed households are likely to adopt promising technological packages fairly readily. According to Jayne et.al. (2003), the long-term hope for poorer households with tiny land holdings is that eventually agricultural growth will stimulate growth in non-farm employment opportunities. Until then, such households may best be assisted through some form of social protection intervention (e.g. public works programmes, cash transfers, possibly also including fertiliser subsidies as social protection).

### **3.3.2 Animal traction**

Another asset that greatly assists smallholder households to respond to market opportunities is animal traction (livestock plus the relevant equipment). Animal traction allows farmers to respond quickly to rains, thereby increasing yields, and to cultivate more land (assuming that they have access to it<sup>20</sup>). In addition, livestock ownership can provide manure for soil fertility, to the benefit either of staples intensification or of cash crop productivity. West African cotton sectors provide an excellent example of a virtuous circle of cash crop production and animal traction investment, with profits from cotton being reinvested in animal traction to the benefit of both food production and cash crop productivity (Savadogo et.al. 1998). Historically, cotton sector policy in West Africa has promoted animal traction adoption, with the result that 30-40% of farm households are considered fully equipped for animal traction use (weeding as well as planting). By contrast, in southern and eastern African cotton sectors, fewer households are equipped even to plough with their own equipment. "Top end" producers in the different regions achieve similar yields, but the much greater proportion of fully equipped producers in West African cotton sectors goes a long way towards explaining the much higher average yields achieved by these sectors as compared with southern and eastern Africa.

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<sup>19</sup> The figures cited by Jayne et.al. (2003) show mean land holdings amongst smallholder households ranging from 0.16ha per capita in Rwanda to around 0.6ha per capita in Zambia.

<sup>20</sup> Jayne et.al. (2003) found that landholdings both per household and per capita were strongly associated with livestock ownership. The causality could work both ways here.

## 4. Which crops and markets?

It is clear that - contrary to the fears described in Section 2 that commercialisation means large scale, export-oriented farming, and essentially changes that favour larger, more powerful players to the detriment of smallholder farmers - commercialisation as measured by something like the CCI could be relevant for any size of farm and any market. What is important is that farmers' benefit from participating wherever the opportunities are and will respond to any market opportunities that are available. This does not mean exclusively export markets. Indeed, staples markets in SSA are estimated to be worth US\$50 billion per annum and growing at 4 per cent per annum (Diao et.al. 2003) <sup>21</sup>. Further, in reality large-scale and smallholder have different strengths, which give each of them advantages in producing certain crops.

### 4.1 Competitive strengths and weaknesses of different farm types

Often, different modes of commercialised agriculture exist side-by-side and interact with each other.<sup>22</sup> These include:

- o Small-scale farmers:
- o Small-scale 'non-commercial' farmers – might sell some produce but do not or can not make their entire living from farming (Type A);
- o Small-scale commercial farmers – tend always to have been market-oriented and make a living from selling their output (Type B);
- o Emerging commercial farmers – small-scale investors, often farming as a secondary activity;<sup>23</sup>
- o Large-scale 'business' farming.

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<sup>21</sup> In a study of maize pricing and policy in Kenya, Jayne et al (2001) also state the case for diversified crop production: "productivity growth in agriculture is likely to be a precondition for injecting purchasing power into rural areas and hence stimulating demand and employment growth in the broader economy. But this will require viewing agricultural income growth as deriving from many crops. Important regional differences suggest that tailoring policies with their regionally dis-aggregated impacts in mind can lead to improved outcomes" (2001: 25).

<sup>22</sup> See for example, White et al (2006) on Zambia, Cromwell et al (2005) on Malawi; Sharp et al (2007)'s Future Agricultures work on Ethiopia.

<sup>23</sup> See work on "New actors in rural land markets" Ouedraogo (2006); Toure and Seck (2005). Work under the Future Agricultures Consortium by Amdissa Teshome, exploring young peoples' aspirations in relation to the agriculture sector suggest that this is the type of farming that many young rural people, the sons and daughters of farmers themselves, would hope to be farming in the future.

A long-standing literature (see, for example, Binswanger and Rosenzweig 1986) observes that different farm types have different advantages and disadvantages when it comes to production and marketing. Some of these are summarised in Table 3. Crudely speaking, the competitive advantages of smallholder farms are centred on their low-cost supply of (generally) highly motivated family labour, whereas large-scale farms face lower costs in most other input and output market transactions.

**Table 3: Competitive strengths and weaknesses of different farm types**

	Smallholder farmers		Small Investor-farmers	Large-scale farming
	Type 'A'	Type 'B'		
Land	*	**	**	**
Finance / Credit		*	**	***
Inputs: access/ purchase	*	*	**	***
Skilled labour: access		*	**	***
Unskilled labour: motivation, supervision	***	***	**	*
Contacts/networks	*	**	**	***
Market knowledge	*	**	***	***
Technical knowledge	*	**	***	***
Product traceability and quality assurance			*	***
Risk management	*	*	**	***

\* = poorly positioned (no star is worse!); \*\*\* = well-positioned

Table 4 takes the analysis in Table 3 one stage further and assesses the likely competitiveness of different farm types in different crops and markets, given the technical and economic requirements of different crops and the demands made by different markets. This is an area where the predictions of theory and actual experience of commercial competitiveness tally quite closely.

One implication of this sort of analysis is that the dominant type of farm that is observed during agricultural commercialisation will depend at least in part on the types of crops being promoted (in turn, a function of agro-ecological conditions and market opportunities) as well as the markets being targeted. Large-scale farms might flourish because they are the most appropriate mode of commercialised agriculture for particular crops and markets in which the country or region has comparative advantage – not necessarily, because there is a large farm bias in policy. Equally, a

country or region may do well in two product groups (say, coffee and export horticulture in Ethiopia), with smallholder production systems dominating in one and large farms dominating in the other.

**Table 4: Predicting Competitiveness of Farm Types in Different Crops and Markets**

	Smallholder farmers		Small Investor-farmers	Large-scale farming
	Type 'A'	Type 'B'		
food staples (local/national/regional markets)	✓	✓		?
high value crops, e.g. horticulture (local/national/regional markets)		✓	✓	
low value export commodities, e.g. cassava, soya, grains				?
horticulture exports		?	?	✓
traditional export commodities		coffee, cotton, tea, groundnuts	✓	sugar, tea, tobacco

## 5. Documentation versus Implementation

However, there may also be other reasons why large farms are seen to do better than smallholder farmers.

Given the diversity of policies at the national level care should be taken when making generalisations. It is necessary, however, to consider how policy narratives, given their in-built assumptions about the way things work, translate in implementation.

At the national level, Poverty Reduction Strategy Papers (PRSPs) are one component of an array of policy instruments and strategies for poverty alleviation and economic development. It is not clear from various PRSP documents (Ethiopia, Kenya, Malawi, among others) that they do in fact focus – either explicitly or implicitly – on large-scale/estate export-led agriculture to the exclusion of small-scale farmers. Most PRSPs see the commercialisation of peasant agriculture as a key pillar of rural development. It is fair to say, however, that most current government policy, backed by donors, appears to promote an essentially dualistic agricultural system, through supporting large commercial farms on one side and the 'small farm sector' on the other.

How policy objectives translate into policy actions is important – a point also made in recent reviews of the rural focus of PRSPs and PRSCs (Poverty Reduction Support Credits).<sup>24</sup> These found the seeming neglect of rural issues in PRSPs to be “not so much the lack of policies targeting the rural productive sectors but rather the nature and reach of those policies” (Cromwell et al, 2005:3)<sup>25</sup>.

## **5.1 Commercialisations in policy discourse**

More often than not large farm bias may develop in practice even though policy appears to be pro-smallholder on paper. Why does even the best-intentioned policy not lead to smallholder development in practice? Interventions that actually arise can differ from the stated policies that are supposed to shape them for various reasons, including: i) Individual officials or politicians do not believe pro-smallholder rhetoric of policies (but it is difficult to find evidence for this); and ii) Large-scale farms can prosper when a basic enabling environment (Macroeconomic stability, banking sector, trunk infrastructure, political support for private enterprise, R&D) is in place, as they are able to source critical services themselves. By contrast, smallholders require pro-active service provision, and this is an implementation issue. Smallholders need to be provided with a range of pre- and post-harvest services (market intervention and linkages, extension advice, finance schemes, input markets, capacity building for farmer organisations). None of these will be entirely private sector driven under current conditions in SSA, there nearly always has to be some state role if not in service provision then in its regulation. Thus, where state capacity is lacking, large-scale farms may still perform whilst smallholder systems languish. This is different from a pro-large scale bias, but the outcomes may not look that different. Large-scale farms are also able to prosper even with a non-performing Ministry of Agriculture, while smallholders need the services that the Ministry of Agriculture is supposed to be responsible for.

In some instances, implementation can reflect the priorities of elites, so national governments, and resources allocated to pro-poor activities, do not reflect MPRS priorities (see Chirwa et al, 2006 on Malawi). Taking Malawi as an example, there is a tendency towards seeing the agricultural sector as principally dualistic in nature with the estate sector on the one hand, and small farms on the other. Small farms are further subdivided by type into: commercial small farms (about 10 per cent of small

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<sup>24</sup> See for example, World Bank (2005). A Review of Rural Development Aspects of PRSPs and PRSCs, 2000-2004.

<sup>25</sup> The study, which examines three PRSPs: Malawi, Nicaragua and Vietnam, also notes the seeming lack of hard evidence of what actually has been or is being implemented (page?). See also Shepherd and Fritz (2005).

farms); small farmers with commercial development potential (about 50 per cent), and severely resource constrained small farmers (about 40 per cent). For this bottom cadre of small farms the policy focus is on social safety nets, with little indication of how this links to broader economic growth efforts (Cromwell et al, 2005).

## **5.2 Pro-smallholder policies on the ground**

What are the components of pro-smallholder policies on the ground? In the class of smallholder farmers, there is usually a 'top' group that tends to make a profit. For example, in West African cotton systems this is, unusually, 40 per cent of smallholder farmers, but fewer than 10 per cent in Southern and East Africa. What is required for such smallholder participation? There needs to be considerable action on the ground, otherwise only the large-scale farmers and the top 10 per cent or so are going to participate and benefit from opportunities. If people are not proactively enabled to get involved then there will always be a bias towards the top end. This leads us to question severely the equality of the focus of policy. Actions to encourage smallholder commercialisations could include:

Attention to food crops. Precarious rural food markets mean that farm households, rationally, will prioritise feeding themselves over selling their crops, even if growing other crops for market would yield a higher mean return in a normal year. Empirically, once a household's food security needs have been met only then does it make sense to invest in producing for the market. The upshot here is the expansion of commercial agriculture would need to be complemented by investments to increase the productivity of food staples, rather than focusing solely on policies that incentivise those already growing a surplus (such as increasing the price of food staples) but only serve to penalise those households who will experience this as a further drain on scarce cash resources.

Pro-actively encouraging asset accumulation processes, for example through promoting investment in animal traction, to create a virtuous circle between cash cropping and assets (see, for example, Savadogo et al., 1998);

Making markets work for poor farmers in poor areas, making the most of and creating market opportunities that are relevant to local producers without resorting to ideological or preconceived ideas about export versus domestic production, or high potential compared with less favourable areas. Localised opportunities have real potential to improve household incomes and food security.

Which markets do present the best opportunities to smallholder farmers? There is an ongoing debate about the relative importance of export and domestic markets for African agriculture. The arguments for paying adequate attention to domestic market opportunities are: 1) size of domestic markets, boosted by both population growth and urbanisation (estimated at \$50 billion compared with a combined total of just over \$8 billion for agricultural trade over the period 1996-2000; Diao and Hazell, 2004); 2) much less restrictive quality standards and requirements within domestic markets (relatively more smallholder-friendly) compared with export markets; and 3) from a growth perspective, the additional multipliers that come from lowering food prices.

*Smallholder vs large-scale farming:* These have their relative strengths, for smallholders these lie in labour motivation and supervision; for large-scale, commercial farms their advantages are associated with access to market information, extension advice, finance, inputs, fixed costs, and output market linkages. There are also questions around the extent to which one can provide quality assurance and traceability in a cost-efficient way within smallholder systems compared with larger scale operations. Supermarkets and other players in export markets tend to favour the latter.

The relative strengths of different farm types/systems mean that one system tends to perform better in some crops (e.g. smallholders in labour intensive crops where quality assurance and traceability are not yet important) and the other in others. We should not assume that all crops are the same any more than we assume that all farms are. This is an area where the predictions of theory are well borne out by actual experience. It may be difficult to fight the thrust of large farms in some cases. In others, smallholders will do just as well as large farms or better. Therefore, in terms of what a government is to encourage and support, there needs to be in the mix crops that are not all "large farm crops".

We must also remember the degree of heterogeneity within smallholder systems. Realistically not all smallholder farmers are going to be participating. There will be some people for whom it is just far too risky to grow cash crops and buying food.

### **5.3 How do we ensure that pro-smallholder policy documents lead to pro-smallholder policy on the ground?**

If there is a disparity between pro-smallholder agriculture policy on paper and what is happening in practice, then we need to identify the channels for policy to reach smallholders on the ground. What do smallholder farmers need to support them in stepping up production for the market that works with and enhances what they are

already doing, given that most farmers do sell at least some proportion of their output and the different routes open to farmers to sell into markets.

### **5.3.1 Enabling environment**

Creating a good enabling environment is rarely enough for a strong smallholder sector to spontaneously take off. An enabling environment for the agriculture sector, most of it centrally provided, includes:

- Macro-economic stability, favourable real exchange rates;
- Reasonably strong banking sector, not just city-focused;
- National investment promotion policy;
- Core infrastructure;
- Research & Development;
- Political support of private enterprise;

Getting all of these rights might be enough for large-scale agriculture and/or agribusiness development, which might in turn facilitate some smallholder involvement. However, smallholder commercialisation also requires much more active service provision, most of which has to be organised at decentralised (e.g. regional) level.

### **5.3.2 Service delivery**

Service delivery includes provision of:

- Finance schemes;
- Extension advice;
- Input markets/systems;
- Market information and linkages;
- Capacity building for farmers' organisations;
- Asset accumulation of farmers.

Service delivery is crucial. Large commercial farms have the infrastructure (internet, transport, clout) to sell output successfully as long as the enabling environment is there. By contrast, someone has to bring it to smallholder farmers; otherwise, only large-scale farmers are able to take advantage of this enabling environment. Within contract farming schemes some of these services may be provided by agribusiness, but not usually capacity building for independent farmers' organisations and not the



support for asset accumulation or staples intensification highlighted above<sup>26</sup> – these still have to be provided somehow, and can be critical to the impact of contract farming on livelihoods and poverty. Moreover, contract farming is not appropriate for all crops – for example those for which independent local markets exist – and in these other cases all the services listed above have to be provided independently if they are to exist at all.

Decentralised/ regional service provision is essential, and is especially important in the domestic sector. But even national export markets still need some implementation at regional (within-country) level. These points to coordination at the local level to give smallholder farmers the package of services they need. Co-operatives and farmers groups have potential roles both as service providers and as participants in local policy processes (such as in advocacy and coordination), but who promotes these groups? In many cases, too much external pressure for the formation of farmer organisations can lead to weak groups forming in response to initial incentives – not strong, independent groups (Stringfellow et.al. 1997).

### **5.3.3 Policy processes**

Creating a good enabling environment and ensuring sufficient, timely and efficient service delivery is crucially dependent on policy processes. How are governments/ ministries of agriculture working to provide and support these, given the distinctions between enabling environment and service delivery?

The enabling environment is not only central, but is handled almost exclusively (perhaps with the exception of R&D) by ministries other than Agriculture – the now common observation is that Ministry of Finance handles more policy relevant to agriculture than the Ministry of Agriculture (see also Cabral and Scoones, 2006). However, if Ministry of Agriculture is not actively committed to ensuring that services are provided to smallholders, then the likelihood is they will not be (with the partial exception of contract farming schemes noted above), and large-scale farms can develop where the Ministry of Agriculture is ineffective. Historically, Ministries of Agriculture have seen their role to be that of providing services – which have rarely reached more than a tiny minority of largely privileged, well-connected farmers. Instead, their role should be to support decentralised service provision and local level coordination mechanisms (effectively, providing a technical input into processes that are actually focused on local government).

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<sup>26</sup> Historically, WCA cotton systems were again an exception to this rule, as the whole rural development effort in the cotton zones was mandated to the cotton company. (This is ceasing with liberalisation/reform).

This points to reorienting Ministries of Agriculture – specifically, to maintain strong state capacity but as a recent Future Agriculture paper on policy narratives in African agriculture suggests: “refocus attention on key roles – including investment in state-led reforms to help create the structural conditions for kick-starting the agricultural economy” (Cabral and Scoones, 2006, p32). This means on-going investment in coordination and intermediation functions. Of course, such a shift to substantial state function for ministries is not trivial. A change in agricultural governance setting, against many vested interests, is certain to be challenging in terms of organisation and capacity, not to mention politically. However, if we want to see agricultural commercialisation policy that reflects and promotes pathways that are truly pro-poor, pro-smallholder and pro-‘development’, governments and donors need to move beyond rhetoric to actually recognising and supporting channels and environments through which smallholder farmers can and do participate.

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