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Plantations, Contract Farming and Commercial Farming Areas in Africa: A Comparative Review

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Executive summary

Introduction

There is uncertainty and no small controversy surrounding the potential impacts of commercial agricultural developments that are being proposed for sub-Saharan Africa by domestic governments and foreign investors. Much of the debate concerns how Africa's rural poor could be affected. One response is to look back and review what the outcomes have been from earlier such developments. This should include consideration of the institutional setting to help us understand how institutions influence the character and outcome of commercial agricultural schemes. This working paper assesses the historical experience of three farming models that have figured in recent investments in sub-Saharan Africa: plantations, contract farming and commercial farming areas. Based on a literature review, the paper concentrates on the involvement of, and effects on, rural societies in and around the area where the schemes were located. It looks mainly at sub-Saharan Africa but also considers case studies from Latin America and Asia.

Defining and theorising the three farming models

Plantations grow one main cash crop; require capital investment; are larger than an average-sized holding although some land may be left uncultivated; rely on hired resident or non-resident labour, often including migrant labour; and are centrally managed. Ownership may be foreign or domestic, private or corporate. With contract farming, farmers agree in a written or verbal contract to supply produce to a buyer, usually at a pre-determined price, on a specific date and to a certain quality. There are several variants. One that may involve large-scale land acquisition is nucleus outgrowing, where contracted smallholders complement production on a central estate. Lastly, a commercial farming area constitutes multiple private commercial farms of medium or large scale that are more or less contiguous in an area. Commercial farming areas or blocks have been documented in Africa throughout the twentieth century, and in recent years there have been signs of increased activity and political rhetoric around such developments.

Academic analysis of the three models has been dominated by approaches from mainstream neoclassical economics and Marxist political economy. Early work from dependency and labour theory considered the socio-economic impact of plantations in developing economies. In recent decades attention has shifted to contract farming and smallholder agriculture. Since the 1990s, perspectives from New Institutional Economics have been especially influential on the debate around contract farming, typically reaching more optimistic conclusions than earlier critical agrarian perspectives about the benefits of this model. However, the potential for agribusiness to exploit the monopsony control that is inherent in contract farming presents a dilemma for economists. Regarding commercial farming areas, some of the most relevant theory addresses the emergence of indigenous middle-class farmers, including the notions of accumulation from below and farmers 'straddling' agriculture and salaried work.

Being aware of the trends and diversity in academic thought helps us to understand why researchers direct their data-gathering into particular areas, and why analysts and policymakers support certain farming models over others. Disputes over the relative advantages of small-scale and large-scale agriculture continue to inform positions. Currently there is much interest in economic linkages and whether the globalised food system presents new economies of scale in agriculture. Opinion on commercial farming models also depends on attitudes towards the peasantry, with positions divided over whether off-farm employment or land reform and continued peasant farming offer the better future for the rural poor.

Historical overview

The shifting trends in academic thought mirror the decline in foreign-owned plantations and rise in contract farming that occurred in sub-Saharan Africa during the second half of the twentieth century. This occurred partly because large-scale foreign operations became too risky after colonialism. It is only in the past decade or two that foreign plantations have become politically and economically viable once more.

The policy environment following African independence became much more amenable to forms of indigenous agricultural development, including state-run outgrower schemes and policies to encourage capitalist farming. However, the exact positions taken by ministers and local politicians have been changeable and sometimes contradictory, resulting in pluralistic agricultural policies. The widespread support by African governments for contract farming schemes, with their combination of small farmers and big business in symbiosis, is an apt metaphor for those governments' ambivalent positions. In the meantime, members of political elites have been able to acquire medium- and large-scale estates, often outside legal channels.

Plantations, commercial farming areas and contract farming schemes have all received substantial policy and financial support from African governments and international donors. The preferential support received by settler farms and multinational plantations during colonialism is well documented, but it is clear that private farming blocks and contract farming schemes also need to be understood as political-economic creations in which the state plays a key role.

Impacts of the farming models

Documented impacts of the farming models are reviewed in five main areas: impacts related to labour and contract

conditions; impacts on rural structures and other local impacts; impacts within the household; impacts on food security; and macro-economic impacts. The following is a summary of the key findings.

Plantations

There is widespread evidence of low wages, long hours, poor housing and health risks for plantation workers around the world. Employment conditions are usually best for workers on permanent contracts. With the shift from salaries to piece work observed in recent decades, wives and children have been called upon to help men in the field; however, women are frequently employed in their own right. Plantations can affect local food production by diverting labour from peasant agriculture and alienating land. Shifting cultivation systems, land traditionally used by women, grazing areas and land cultivated by newcomers to a community are particularly vulnerable to takeover. It may help with workers' incomes and wider food security if plantation employees are allowed to work on family or communal farms at peak times, and if residential workers are granted farm plots on the plantation. Some people, including widows and single mothers, are drawn into plantation labour by poverty and landlessness. In other circumstances, plantation employment is more an opportunity to diversify income sources and raise cash for special purposes. Pre-existing poverty and inequalities in land ownership are likely to be exacerbated by plantations.

Contract farming

It is widely asserted that participation in contract farming schemes provide a good earning, income stability and access to credit. Unfortunately such benefits often fail to reach the poorest farmers who, on the face of it, have the most to gain. There are typically barriers to entry, and agribusiness contractors have been known to tighten the terms of contracts or retreat to own-estate production over time. Two processes of socio-economic differentiation are associated with contract farming: differentiation between participants and non-participants; and differentiation among participants. Some nucleus–out grower schemes appear to have caused full proletarianisation or landlessness.

The literature suggests that positive spill-overs from contract farming, such as technology transfer, can be inhibited by suppression of competition by the contracting firms. It might be over-optimistic to expect contract farming to stimulate commercial agriculture and to tolerate the emergence of competitive producers and markets. There is, however, better evidence for employment and spending linkages. Because deductions are taken from farmers' pay to cover advances, cases of indebtedness and exploitation have been reported, although results vary considerably. There can be tensions within the household if the new crop requires an adjustment in working patterns, and if the earnings are paid to a male household head to control. This presents challenges to women but also an opportunity to renegotiate their labour obligations and their earnings potential. The risks posed by contract farming to food security within the household, and in the local area, could be minimised by ensuring that some of the pay goes to women, controlling land conversion and introducing a crop that does not clash with the farming calendar, while supporting local food markets.

Commercial farming areas

Large- and medium-scale farms create jobs for farm labourers. Some workers have been able to use their earnings to expand family holdings or set up their own operations. But in other cases workers are unable to accumulate enough savings or skills to get off the farm. Scant evidence was reviewed on conditions in commercial farming areas specifically, but generally speaking waged farm work is one of the worst paid, most hazardous and least protected of all livelihoods. As with plantations, commercial farms may have legal duties as employers of permanent staff but have increasingly transferred their workforce into casual or piece work. For female labourers, standards concerning maternity leave, the ability to breast feed at work and protection from sexual violence are regrettably low.

Large-scale farms seem to create more local linkages than plantations and perhaps more opportunities for pastoralists. There is a possibility that small farmers will adopt the crops introduced by commercial farming areas and that local agriculture will be stimulated, particularly if the commercial farmers or government introduce infrastructure. The flipside is that development of large-scale farms is likely to disturb local people's land access to some degree. Many workers are allocated garden plots by their employers, who recognise that wages are below subsistence levels but resist increasing them.

Cross-cutting findings and implications

The review suggests six determining factors that most strongly affect the outcome of schemes across all three farming models — plantations, contract farming and large-scale commercial farms (as a proxy for commercial farming areas). They are:

1. The terms of contracting or employment.
2. The behaviour of the employer.
3. Crop characteristics and farming practices.
4. Legal and policy institutions.
5. The local context.
6. Migrant employment.

This leads to some concluding observations. The first is that although the record of plantation firms as employers has been criticised, the wages and conditions for workers can be better, or perhaps less bad, on foreign-owned plantations than on large farms and smallholdings. This should be borne in mind as we search for farming models that can benefit the rural poor. Before accepting the argument that contract farming, for instance, can reduce

poverty because it involves poor smallholders hiring local labour, we should consider the wages and conditions that those hired labourers will face, as well as other dynamics that affect local labour patterns and entry barriers to participation.

The second observation is that large-scale agricultural schemes in developing countries can affect women in many ways, good and bad. This deserves careful study, not only because women have proved to be especially vulnerable to a range of negative consequences from large-scale agriculture, but also because the gender-related changes that occur within rural households lead, in turn, to changes in agricultural production and patterns of labour at the local level. 'Women' are presented as a fairly homogeneous category in this paper, but there will be differences among women that influence how they participate and are affected by large-scale agricultural schemes, such as class, education, ethnicity and marital status.

The final theme to emerge is the instability of plantations, contract farming schemes and commercial farms, and a fluidity in related rural livelihoods. Large-scale agricultural developments have proved vulnerable to competing land claims, internal financial and management pressures, external events and political opposition. Planners and researchers should consider the consequences of possible collapse or withdrawal for the farmers and farmworkers affected, as well as other local actors such as exposed lending banks, so as to to predict and control the outcomes of commercial agricultural schemes. Participants in contract farming schemes may exit while still under contract; farmers' organisations may evolve into competitive rivals; migrant workers may return to semi-subsistence farming. There are multiple interest groups in the rural landscape and agrarian change is not necessarily unilinear or irreversible. When considering the possible impacts of future commercial investments, we need to think beyond simple models of dualistic African agricultural sectors, polarised into large-scale enterprises and smallholdings, and consider a diversity of social relations that complicates the two-tier or three-tier class differentiation that is commonly reported in the literature as an outcome of development.

Contents

1. Introduction

The rush of private agricultural investment and land acquisition in sub-Saharan Africa since the mid-2000s has raised the prospect of a resurgence of plantations and other forms of large-scale commercial agriculture (Cotula et al. 2009; Gibbon 2011). Although this can be framed as an opportunity to stimulate poor rural areas, researchers and activists have expressed concern that land expropriation threatens livelihoods and food security, and that smallholders could be excluded from development (GRAIN 2008; Oakland Institute 2009). Early evidence of local people being displaced in large-scale land deals has prompted observers to identify institutional arrangements under which such risks could be averted. This includes proposals for codes of conduct and the search for more inclusive farming models (Vermeulen & Cotula 2010; World Bank 2011; FAO 2012).

Several analysts from donor agencies and research institutes have suggested contract farming as an alternative model to avoid the problems of displacement and create 'win-win' outcomes for local communities and private investors (Kay 2012; see Von Braun & Meinzen-Dick 2009). By contracting out production to smallholders agribusinesses could avoid having to acquire land at all (Liversage 2011, World Bank 2011: 34), although in practice contracting is often proposed in combination with central estate operations. African governments have also encouraged investors to design projects that incorporate local farmers, which some companies are happy to do for strategic reasons (Cotula et al. 2009). However, there are dissenters who question contract farming as a solution. In 2011, the UN's Special Rapporteur on the right to food claimed that contract farming is associated with a range of problems, including food-price increases and socio-economic marginalisation (De Schutter 2011). Several activists and analysts who support contract farming in principle suggest that it requires careful governance if the rural poor in developing countries are to benefit (Liversage 2011; Anseeuw et al. 2012).

There is therefore a need to investigate proposed agricultural business models or farm systems in depth and within their institutional setting so that we may understand their effect on different actors and the conditions that influence their outcomes. Examination of the institutional setting should cover the formal institutions that agribusinesses, governments and development agencies put in place to govern production, land tenure, market activity and so on (Platteau 2000; Berry 2002; Li 2011). But it should also cover informal and indigenous institutions, including values and norms, which regulate access to resources, gendered divisions of labour and aspects that are relevant to vertically or horizontally coordinated agriculture such as political patronage, employment relations and how farmers self-organise (Havnevik 2000; IFAD 2009). Institutions and organisations reflect wider forms and processes of production and reproduction in agriculture and within capitalism; so any study of institutions - and associated business models and farm systems - require deeper contextualisation.

This paper considers the historical experience of three agribusiness approaches or farm systems that have figured in recent investments in sub-Saharan Africa (henceforth referred to as 'farming models' for the sake of brevity): plantations; contract farming; and commercial farming areas.[1] This paper is based on a literature review and a comparative analysis of around fifty case studies - some concerning the same scheme- that were either published as stand-alone cases in the academic and grey literature or included in a larger publication. The focus is on sub-Saharan Africa, but developments in Latin America and Asia are considered. The review of the African material may be biased towards anglophone countries.

The paper begins by defining the three models and exploring how they have been understood from different theoretical perspectives. Chapter 4 charts the development of the three models in sub-Saharan Africa since the early twentieth century. An assessment of the diverse impacts of the three models is contained in Chapter 5. The paper ends by presenting some observations on the three models and suggesting six factors that are particularly influential in determining their outcomes for the rural poor.

2. Defining the three models

This chapter identifies the defining characteristics and variations of the three farming models, each of which involves different institutional arrangements and means of organising production. Attention is given to the ways in which land, labour and capital are combined, and the spatial and social implications.

2.1 Plantations

The plantation has been defined in many ways,[2] but if we compare definitions and reflect on historical descriptions of agricultural development in sub-Saharan Africa, it is possible to identify five core characteristics of plantations that apply across cases and provide a useful distinction from other farming models. These are that plantations: (1) grow one main cash crop; (2) require capital investment; (3) are larger than an average-sized holding although some land may be left uncultivated; (4) rely on hired resident or non-resident labour, often including migrant labour; and (5) are centrally managed. Some writers specify that plantations are always owned by private corporations, but the definition suggested here allows for corporate, state or individual ownership. The alternative term 'estate' is not used consistently and appears less frequently in the literature, except in Malawi (Lele & Agarwal 1989), but may be used as a general word to refer to the plantation holding (Ruthenberg 1980; Pryor 1982). In terms of size, the Protocol to the Plantations Convention provides a guide of at least 5ha (ILO 1982); in practice plantations are far larger: the

majority studied for this paper fell within a range of 3400–7992ha.[3] Typically, the farm work is done by hired workers who live on or off the plantation; some of the literature describes cases where plantations also employ tenant farmers (Kydd & Christiansen 1982; Nyanda 1989; Brass & Bernstein 1992; Gibbon 2011).

Plantations typically produce for export, but not always. Certainly this was the objective of the earliest colonial plantations established by European settlers (Thompson 1941). In a second phase, with the rise of imperial capitalism, African plantations became increasingly dominated by transnational corporations (TNCs) (Brass & Bernstein 1992; Loewenson 1992). A third, postcolonial phase, witnessed a splintering of the plantation sector, with new forms of private domestic ownership and state plantations. The diverse postcolonial plantations tend to have a strong link with agribusiness. If not directly owned or managed by TNCs, public and private plantations still rely on foreign markets for capital inputs such as equipment and machinery and, if producing for export, to sell their output (Sajhau &Von Muralt 1987). Plantations generally have high capital investment requirements and are sometimes described as capital-intensive. However, they are also known historically for their reliance on abundant land and labour and for their labour-intensive production methods (Davies 1987; Kemp & Little 1987; Kirk 1987b; Tiffen & Mortimore 1990; Marini 2001; Hayami 2010). Although the balance of these factors of production might be expected to shift towards capital as plantations adopt mechanisation and technology, this process has not occurred uniformly over time and the results are not necessarily straightforward. Some capital-intensive technologyused by plantations, such as chemical pesticides or mechanised ploughing, can indeed be land-or labour-saving (see Mackintosh 1989; Wunder 2001). Other plantation technology may be labour- as well as capital-intensive, as seen in floriculture (Gibbon 2011). The relative contributions of capital, land and labour thus varies across plantation sectors and systems, as does the overall level of mechanisation and capital investment.

The **intensity (and seasonality) of labour** on plantations depends to some extent on the crop variety being grown and the use of irrigation. There is no definitive list of African plantation crops, but the most common are: coffee; jatropha and tea (shrub crops); cocoa, oil-palm and rubber (tree crops); and bananas, pineapple, sisal, sugarcane, tobacco and perhaps cotton (field crops) (Acland 1971; Ruthenberg 1980; Hayami 2010).Tea, coffee, cotton and tobacco are particularly labour-intensive; banana, pineapple and sugarcane have pronounced peaks of labour demand during cutting and/or processing (Sajhau & Von Muralt 1987; Tiffen & Mortimore 1990; Grossman 1998; Randela 2005; Poulton et al. 2008). Certain crops, such as oil-palm, are highly perishable and must be processed rapidly after harvesting. Thus, a centrally managed plantation that

Table 1. Typical characteristics and variables of plantations

Typical characteristics	Variables
Monocrop cultivation	Crop characteristics Farming practices
Requires capital investment	Level of capital investment and ratio of factors of production (capital-labour-land); degree of mechanisation Whether it includes a processing plant
Large holding	Size of estate; proportion left uncultivated Original land use; whether the land was a greenfield site or converted from prior farm use How the land was acquired
Large hired workforce	Living conditions for workers, unionisation, adherence to labour laws Balance between permanent, casual, seasonal and piece workers The origins of the workers: were they peasants, landless and/or already wage labourers? Are they local or migrants?
Centralised management hierarchy	Ownership (foreign or domestic, private or state) Export orientation, although plantations are almost never intended to feed citizens of the host country Integration into the global economy
Risky	Extent of vulnerability of operation to risks: of land being seized by squatters or the state; production risk; asset specificity; a fall in commodity prices
Political and changeable	Extent and frequency of struggle over land and labour conditions Extent of state support, and forms of support received (e.g. cheap land, subsidies, low wage costs) Extent to which competitive production is restricted Relationship with political elites
Artificial	Aspects of artificiality, e.g. if the crop is non-indigenous, use of extended growing seasons, if intercropping is allowed, if the workforce is imported

Source: compiled by the author from the literature.

can coordinate timely production and delivery of the cropsis thought advantageous. If the plantation includes a processing plant, it must ensure adequate volumes to remain profitable — crude oil-palm mill requires a plantation of at least 4000ha (Friends of the Earth 2005). Nevertheless, several authors caution against using the characteristics of crops to justify the existence of plantations and explain their outcomes. 'One can find an example of every so-called plantation crop being grown successfully by peasants somewhere in the world,' writes Hayami (1996:1159).

Further dimensions of plantations are listed in *Table 1*. One theme to emerge is the **artificiality** of plantation landscapes. Plantations often involve the introduction of a non-indigenous crop, the transformation of landscapes to monoculture cultivation and the creation of a new labour force (Daviron 2010)-becoming 'an intruding force from without' (Thompson 1941:59). Another theme is their **political** nature (Pryor 1982). Early plantations were highly exploitative, involving violent expropriation or gross underpayment for the land, and slave and indentured labour (Loewenson 1992; Daviron 2010; Hayami 2010). Plantations during and after colonialism were heavily reliant on the suppression of competition from small-scale African producers and a range of measures to induce people to work on their estates (Acland 1971; Kydd & Christiansen 1982; Sender & Smith 1986; Pryor & Chipeta 1990; Jamal 1993; Daviron 2010). This facet of plantations is returned to in Chapter 4.

2.2 Contract farming

The second farming model, contract farming, is a system in which farmers agree in a written or verbal contract to supply produce to a buyer, usually at a pre-determined price, on a specific date and to a certain quality.[4] Typically, the buyer provides the necessary inputs and services to the farmers on credit and exercises some control over the conditions of production. The contracted farms may be small; what makes this a large-scale agricultural model is when the total area under contract is extensive in order to guarantee the buyer large volumes. Small farmers are often organised into village groups or cooperatives.The buyers are usually agribusiness processing companies or parastatals (Glover & Kusterer 1990:3;Little & Watts 1994;Vermeulen & Cotula 2010); some definitions highlight that contract farming is a strategy for firms to integrate backwards within the agricultural supply chain (Simmons 2002; Prowse 2012). Contract farming is a form of vertical integration: less tightly coordinated than plantations, where the owner has direct control over production on its land, but more so than buying produce on open spot markets (Grosh 1994; Key & Runsten 1999). Vermeulen and Cotula (2010) note the degree of integration varies (*Figure* 1).

Some authors emphasise in their definitions of contract farming that the farmers' production decisions are dictated by the contracts or that the buyer has legal title to the crop, hinting at the power dynamics inherent to the model (Carney 1988; Watts 1994; Porter & Phillips-Howard 1997; Grossman 1998; Prowse 2012).But no definition gets across one of the key characteristics of contract farming, which is that **some inputs and/or services are typically advanced by the firm on credit (occasionally they are provided by the state or a third party), to be repaid with interest by participating farmers**. Also, many definitions do not specify the ownership of the land that is farmed. It tends to be assumed that the land is owned by the contracted farmers, but case studies of contract farming include arrangements where farmers do not cultivate their own land, or where the ownership status is not clear. Vermeulen and Cotula (2010) apply the separate category of 'tenant farming and sharecropping' to cases where farmers are settled on land owned by others, such as the large-scale irrigation schemes that emerged during the 1970s. In her review of Little and Watts' 1994 critique of contract farming, *Living Under Contract*, Tiffen (1995:426) reproached the authors for not clarifying the underlying ownership of farmed land. This is significant, Tiffen argued, because 'the power of farmers to evade, or to refuse to renew, [their] contract is stronger when they farm their own land … than when they are tenants.' The implications of land tenure are explored later in the paper.

Contract farming in developing countries is associated with high-value crops, often destined for export, that perish easily or require careful husbandry and might not be suitable for plantations, such as bananas, horticulture crops, tea and tobacco (Watts 1994; Poulton et al. 1998; Prowse 2012). In the nucleus–outgrowers model, contract farming is combined with a plantation, so that contracted smallholders, or 'outgrowers', complement

Figure 1. Contract farming as vertical integration

Degree of vertical integration				
← spot market		chain coordination		vertical integration →
open market	purchase agreement	contract farming	management contracts	fully incorporated land and production (e.g. plantation)
Types of business model				

Source: adapted from Vermeulen and Cotula 2010:33.

Note that although contact farming is located in the middle of the range, the degree of control in contract farming can vary from loose to highly specific contractual terms.

Table 2. Typical characteristics and variables of contract farming schemes		
	Typical characteristics	**Variables**
Contract	There is a written or verbal contract, agreed at or before planting time. Volumes or acreage, quality and delivery date are pre-agreed	Complexity of contract Length of contract. Annual contracts are common, but perennial crops require longer-term contracts Pricing. Most contracts specify pricing in advance using fixed prices. Alternatives include formula or consignment prices calculated after harvesting, or split pricing (part fixed, part consignment) Frequency of payment Arrangements for delivery or collection
	Conditions of production are specified to some extent	The degree of control. The following might be specified: seed varieties, input application, timing of field operations, harvesting methods, other cultivation techniques
	Typically, contractor retains right to reject produce that doesn't meet standards, and farmers may sell rejected produce elsewhere	Insurance, rights and sanctions (e.g. if contractor has legal title to the crop, whether farmer is insured or compensated for crop failure, if contractor guarantees to buy output, whether contractor has right to take over land)
Resource provision	Farmers are provided with some resources	What resources are provided (e.g. seeds, credit, fertiliser, ploughing services, extension). This can change during the scheme Who supplies the resources (e.g. firm, state banks, government, donors, intermediaries), and whether they have a monopoly over provision Nature of supervision; ratio of extension officers to farmers Whether tasks are done by farmers or the contractor
	Typically, some resources are advanced on credit	Alternatively, farmers are paid a lower producer price to cover deductions, or credit is forbidden. Some resources may be provided free of charge
Participation		Methods for selecting and screening participants If there is variation in contracts and incentives for farmers of different size and productivity
Operation		Ownership (e.g. private, state, public–private joint venture, multipartite with donor agencies, farmer stakeholding) If intermediaries are used, and what their duties are (e.g. distribute inputs, payments) Type of crop grown (e.g. staple, plantation crop, horticulture) and its labour intensity, input intensity, perishability, etc. Degree of vertical integration; whether a processing or packing plant is incorporated Relationship with international buyers, investors and agri-business in global agro-food value chain If scheme includes a nucleus estate Export orientation
Land		Land ownership and tenure security. Usually, farmers produce on their own land (freehold or *de facto*). Alternatively, farmers lease land, clear community land, or settle on state or customary land Whether clearance or deforestation occur
Scale		Size(s) of participating farms Share of farmers' land that is devoted to the crop Extent of participation (number of farmers, percentage of total farming population) Presence of rival contractors and/or markets

Source: compiled by the author from the literature.

production on a central estate. This model is pertinent to the current land-grab debate, as it often involves large-scale acquisition or transfer of land for the estate component. It was originally advocated by the Commonwealth Development Corporation (CDC) as a means to incorporate small farmers into commercial agriculture, and it became a significant development strategy in late and postcolonial Africa (Holly 1984; Epale 1985; Gibbon 2011). In the nucleus—outgrower model, the central plantation owner takes the place of the contracting firm in agreeing contracts, providing inputs, overseeing production and coordinating processing. Working with small farmers can be good public relations for agribusiness firms, and in some cases the outgrowing area can be rather small and to kenistic in relation to the main plantation (Glover 1984; Clapp 1988; Singh 2002; Richardson 2010; Oya 2012). In the original model, the farmers were settled on land acquired by the state or firm, and could be evicted (Tiffen & Mortimore 1990). Several authors use 'outgrowing' interchangeably with 'contract farming', but it is helpful to use 'outgrowing' only for the nucleus estate model (following Poulton et al.1998); 'contract farming' is used as the general term throughout this paper.

Table 2 lists some of the common characteristics and variables of contract farming. It reveals considerable variation. In an effort to make sense of the diversity, Eaton and Shepherd (2001) proposed a typology of five models that can be used to set up contract farming schemes (see also UNCTAD 2009:119; Prowse 2012:57–58). The five models are: (1) *centralised*, where the contractor, which could be a private company or parastatal, processes the crop itself, demands large volumes, applies tight quality control and often has a monopsony; (2) *nucleus estate*, a variant of centralisation which is often seen in resettlement schemes and uses the nucleus to demonstrate new crops such as oil-palm to the orbiting out growers; (3) *multipartite*, a joint venture that is more inclusive of smallholders than other models and whose public and private partners share the responsibility for input and service provision; (4) *informal*, in which small companies or entrepreneur traders arrange little more than marketing contracts[7] with farmers and rely on others to provide extension, credit and other resources; and (5) *intermediary*, where mostly private-sector contractors deal with a cooperative, village committee or similar third party and thus sometimes lose control over farmers' behaviour.

2.3 Commercial farming areas

Blocks or clusters of medium- and large-scale farms have emerged in many contexts and forms in sub-Saharan Africa. There have been blocks allocated for settlers by colonial authorities (Lindholm 2006), and state farm blocks established under socialism in Angola and Tanzania (McHenry 1977; Unruh 2012). This paper is interested in commercial forms of this farming system. Commercial farming areas or blocks have been documented in Africa throughout the twentieth century, and in recent years there have been signs of increased activity and political rhetoric around such developments. Among the current dynamics at play are: white South Africans and Zimbabweans looking for farmland abroad (Hall 2011; Sjaastad et al. 2012); indigenous farmers looking to expand or acquire holdings and profit from commercial crops (Sjaastad et al. 2012; Yaro, personal communication); national and local governments planning blocks to attract investment, as in Nigeria (Ariyo & Mortimore 2011), Zambia (World Bank 2011:152, German & Schoneveld 2012); and Mozambique (Beira Corridor 2010); and agribusinesses aiming to penetrate African markets (Hall 2012). As background to these developments, influential voices in international development have called for a greater role to be played by large-scale farming enterprises in agriculture and have encouraged the establishment of clusters of commercial farms along with private agribusiness providers (World Bank 2007: 211; Collier & Dercon 2009). This ideology is reflected in planned initiatives in Mozambique and Tanzania to establish blocks of large and medium-sized commercial farms, sometimes in conjunction with small-scale satellite farms and accompanied by inputs and infrastructure funded by the state, donors and the private sector (Beira Corridor 2010; SAGCOT 2011).

There is evidence, then, a range of agricultural developments that, despite bearing some similarities to nucleus–outgrower schemes or contract farming involving large farms, can be defined as neither plantations nor contract farming schemes but do present some common features of their own. It is proposed in this paper that these 'commercial farming areas', describing the presence of **multiple private commercial farms of medium or large scale that are more or less contiguous in an area**, constitute a third farming model whose recent forms could present distinctive patterns of agricultural investment and land use, involving both domestic and international interests. This proposal can be explored and tested through empirical research. The term 'commercial farming areas' is used (1) to emphasise their geographical contiguity while distinguishing them from old state farm 'blocks', and (2) to indicate the commercial nature of production and that commercialisation of the local agricultural sector is often an explicit objective. *Table 3* presents an overview of this third farming model.

The farms that make up commercial farming areas practise commercial agriculture. Considered as a continuum, commercialisation is determined by the degree of participation in crop or livestock output markets, excluding distress sales by poor farmers. Commercial farms are also associated with a degree of reliance on markets to source farm inputs, a substantial proportion of hired labour and an underlying motivation to seek profit, rather than minimise risk (Leavy & Poulton 2007). Commercial farms are **distinct from plantations** in that they tend to practise mixed farming rather than monoculture. According to accounts from commercial farming areas, farms might raise livestock and cultivate a range of staple, horticultural and plantation crops (*Table 3*). Often, part of the farm is left uncultivated. In the past, commercial farms have been characterised by a higher

Table 3. Typical characteristics and variables of commercial farming areas	
Typical characteristics	**Variables**
Several farms in a block or more-or-less contiguous area	Overall extent Number of individual farms
Medium- or large-sized farms	Sizes of individual farms Proportion of land left uncultivated Origin of land (e.g. previously cultivated, state, customary)
Individual and/or private ownership and operation	Indigeneity of farmers Expertise and endowments of farmers; sources of farmers' accumulated capital Any participation criteria
Typically mixed farming, either at block or individual farm level	Types and proportions of crops and livestock produced: plantation crops (e.g. bananas, coffee, sisal, tobacco), staples (e.g. barley, cassava, maize, sorghum,wheat), agro-fuel (e.g. soya, sunflower); high-value horticulture; livestock(e.g. cattle ranching, dairy, poultry)
Commercial production	Integration into value chains (may be less vertically integrated than many plantations) Export orientation
Some use of hired labour	Labour intensity Seasonality
Requires capital investment	Degree of mechanisation and irrigation usage, input intensity, level of investment and upfront costs
Typically accompanied by infrastructure for the area (e.g. roads, boreholes, electricity, processing plant)	Level and quality of pre-existing or new infrastructure
Typically involves some form of planning,support or collective action among the farmers	Degree of external planning Nature and extent of preferential support from government; degree of support from local elites Terms of finance and land tenure

Source: compiled by the author from the literature.

degree of individual ownership than plantations and a lower degree of vertical integration into international agribusiness value chains.

However, there is some analytical and descriptive overlap between commercial farms and plantations in the literature (Loewenson 1992). Furthermore, there is considerable variation between commercial farming areas in terms of the ownership and scale of constituent farms. Their owners include white settlers but also indigenous farm-owners for whom a range of terms are used — rich peasant, capitalist farmer, rural entrepreneur, landlord and so on — which may have analytical significance for the author (see Chapter 3).[8] In order to understand this model and its variations it is important to disaggregate the kind of farms that make up commercial farming areas.

Large-scale commercial farms are defined as private- or family-owned holdings that are far above the national average in size and employ a waged labour force (Mbilinyi 1988; Mabogunje 1989; Von Blanckenburg 1994; Poulton et al. 2008; Gibbon 2011). In some cases workers and their families are long-term residents on the farm. Like plantations, large-scale commercial farms are usually described as more capital-intensive and less labour-intensive than small family farms. As to whether they are more or less labour-intensive than monoculture plantations, it is hard to be definitive because relevant data are lacking (Humphrey et al. 2004; Gibbon 2011) and because, as mentioned in the plantation section above, labour intensity depends on the type of crop or livestock being produced, the stage in the maturity cycle and the kinds of technology and inputs used. Large farms might use small numbers of permanent workers, as on a cattle farm in Botswana (Sylvain 2006), or large numbers of seasonal workers, as on a sorghum farm in Sudan (Gibbon 2011). Nevertheless, certain elements of mixed farming, such as cattle raising and maize and wheat cultivation, do require less labour than most plantation crops (Mbilinyi 1988; Binswanger et al. 1995).

One dimension used to differentiate large-scale from **medium-scale commercial farming** is size. For example, the Zambian government defines medium farms as between 5ha and 19ha, and large-scale farms as above 20ha (Republic of Zambia2011), while in Kenya, medium farms may be 3–49ha and large farms 50ha-plus (Republic of Kenya 2010). Bernstein (2010b:93) argues that it is more appropriate to determine scale through farm capitalisation: 'the amounts of capital required to establish different types of farming — their "entry costs" in economists' terms — and to reproduce them.' Several authors identify further differences between medium- and large-scale agriculture. Jayne and Sitko (forthcoming) describe a group of emergent Zambian farmers who each control about 10–200ha but 'have little in common with large-scale commercial farmers in terms of race(most

commercial farmers in Zambia are of European descent)… access to finance, input application rates and farm management strategies.' In a study of clusters of domestic farmers producing vegetables for Kenyan supermarkets, Neven et al. (2009) found that although their farms were only 9–13ha in size, they made considerable use of wage labour and irrigation, had vehicles and packing sheds and drew additional income from outside farming. The authors concluded that these farmers were a distinct middle class, separate from large-scale commercial farms that produced mainly for export. By considering differences among Senegalese farmers in terms of their capitalist development, Oya (2004) proposes criteria such as degree of capitalisation and the pattern of surplus use to classify between and among medium-scale and large-scale producers — both of which may be involved in commercial farming areas.

Some commercial farming areas involve an element of **top-down planning** by private ventures and the state. This includes the recent cases of white farmers from South Africa and Zimbabwe moving to Nigeria, the Republic of Congo and Zambia and establishing or taking over farms of 1000ha or more in large blocks (Ariyo & Mortimore 2011; Hall 2011, 2012). There are also reports of earlier abortive schemes for South African and Zimbabwean farmers to be resettled *en bloc* in Mozambique (Juergensen & Krugman 1997; Hammar 2010). And it includes the initiatives in Mozambique, Tanzania and Zambia mentioned above. Other commercial farming areas **involve less central planning and may be internally driven**.[9] This might describe the clusters of private farms established by white settlers in Trans Nzoia, Kenya, and West Kilimanjaro, Tanzania (Foeken & Verstrate 1992; Consolidated Holding Corporation 2010), and the contemporaneous emergence of indigenous commercial farmers in parts of Tanzania (Raikes 1982). A forerunner to today's farming blocks is found in early twentieth-century Ghana, where capitalist cocoa farmers 'formed themselves into groups of clubs, known as companies, for the purpose of acquiring blocks of land which were then divided into strips' (Hill 1970:26).

Commercial farming areas may be established by local farmers or by people from outside, such as migrant farmers who opened up new cocoa areas in Ghana (Amanor 2011). There is often a **cyclical relationship** between large private farms and alternative models of agriculture such as state farms and smallholder resettlement schemes. In Tanzania, for example, British soldiers were allocated farms on the site of the failed state groundnut project at Urambo after World War II, and were gradually replaced by African settlers (Mbilinyi 1991). Other commercial farming areas are greenfield developments, located on land that was previously uncultivated (but not necessarily unused).

Planned commercial farming areas are typically supported by infrastructure provided by the government and ancillary services provided by investors. Even in cases where the commercialisation process is more internally driven, farm-owners may have lobbying power, benefit from political patronage or, like plantation companies, receive some form of government or donor assistance and subsidies (Raikes 1982; Sender & Smith 1986; Oya 2007; Jayne et al. 2012:34). Yet, despite this support, large farms are vulnerable to occupation by squatters and seizure through land reform (Poulton et al. 2008). Settler schemes in particular occupy an **uneasy political position** because of the non-indigeneity of their owners; their non-involvement of smallholders; and parallels with colonialism. This is an example of the ambivalence found within governments towards medium and large farmers, which is returned to later in this paper.

3. Theoretical approaches to the three models

3.1 Introduction

Plantations, contract farming and the kind of large-scale and medium-scale farms seen in commercial farming areas have been theorised within various schools of thought. But the reviewed literature is dominated by approaches from two schools in particular: mainstream economics and Marxist agrarian political economy. This section briefly outlines key features of those two intellectual traditions, before exploring relevant applications of theory to the three farming models.

Mainstream economics studies display a concern with efficiency and with the scarcity, intensity and relative proportions of the factors of agricultural production: land, labour and capital. Theories are employed to explain relationships between factors of production and agricultural change, such as Hayami and Ruttan's theory of induced innovation, and to identify circumstances in which large-scale commercial agriculture becomes economical (see Best 1968; Pryor 1982; Tiffen & Mortimore 1990; Marini 2001; Hayami 2010; Deininger & Byerlee 2012). The latter concern is necessary because most agricultural economics since the 1960s has followed the (neo-)populist proposition, developed by the Russian economist Chayanov, that small-scale farmsare more efficient than large-scale operations owing to their 'self-exploitation' of unpaid family labour (Harrison 1982; Byres 2003; Otsuka 2011; Collier & Dercon 2012). In accordance withn eoclassical economics thinking, those small farming households are considered analytical units analogous with the firm, farmers are assumed to be rational economic agents and their behaviour is explored in terms of incentives and decision-making (Harriss 1982a; Heald & Hay 1985; Mackintosh 1989; Bernal 1991;Brass & Bernstein 1992; Byres 2003; see Tiffen 1995; Key & Runsten 1999; Neven, et al.2009). Critics claim that neoclassical economist present family farming as an unproblematic, single category (Patnaik 1979; Byres 2003; Oya 2004, 2010), though some publications do refer to differences among small-scale farmers in developing countries (see World Bank 2007; Poulton et al. 2008). Although economists disagree over the benefits of formal and informal economic institutions, many argue that institutions work

well without government intervention and call for *laissez-faire* environments for agriculture, most famously as part of the Washington Consensus. Scholars from the Harvard Business School and elsewhere may consider the performance of agribusiness operations and their position within global value chains (Glover 1984; Glover & Kusterer 1990; Humphrey et al. 2004).

An important variant of neoclassical economics is New Institutional Economics, whose practitioners are less confident about the availability of price information and well-functioning markets, but more optimistic about the positive role that governments and institutions can play, particularly in minimising the riskiness of agriculture. The paper returns to this school of thought in the section on contract farming below.

The second intellectual tradition from which much relevant theory originates is **Marxist agrarian political economy**. This dates back to some key works from the late nineteenth and early twentieth centuries by such authors as Marx, Lenin and Kautsky, whose debates with the classical or orthodox political economists of the time continue to influence rural development policy and thinking today. Classical Marxist materialism retains a fervent interest in economic production as the basis for all social interactions and institutions. But agrarian political economy, focused on socio-economic structures in the countryside, differs from mainstream economics on two important and related points in particular: the efficiency of the small-scale farming sector; and its degree of homogeneity. Contrary to the '*narodnik*' populism of Chayanov, Marxist theory allows for the superior productivity of large, capitalist farms or estates and forecasts the eventual disappearance ofpoor peasants. In 1899, Kautsky argued that peasant farms were only able to survive by providing commodities cheaply and selling their labour-power (Patnaik 1979; Djurfeldt 1982; Mueller 2011). Furthermore, even before this capitalist transformation is complete, the peasant sector should be understood as being stratified or differentiated into classes, defined in terms of the ease with which they can reproduce and accumulate (Bernstein 2010c). As expressed by Lenin, also in 1899: 'Only the Narodnik economists persist in speaking of the peasantry in general … and close their eyes to the fact that the mass of the "peasantry" have already taken a quite definite place in the general system of capitalist production, namely, as agricultural and industrial wage-workers.' Class analysis is crucial to Marxist agrarian political economy, as it is used to define power-laden social relations between groups as well as the stage of capitalist development (Bernstein 1977; Byres 1991; Ellis & Biggs 2001). Whereas mainstream economics can be somewhat a historical, Marxist studies consider the origins of things, often taking a teleological view of rural development that includes the introduction of commodification and the alienation of labour and land. Accordingly, interest is paid to pre-capitalist societies — in pre-colonial Africa, for instance — and to the potential for class struggle and change (see Bernstein 1977; Cliffe 1977; Shenton and Lennihan 1981; Mamdani 1987; Brass & Bernstein 1992; Bernstein 2010b).

Rural scholars have elaborated on Marxist thought in various ways. The study of repressive ideology has been extended with poststructuralist discourse analysis. There is interest in power dynamics within the household and gendered class analysis (Mbilinyi 1988; Mackintosh1989; Carney & Watts 1990), and, at the other end of the spectrum, in the accumulation of capital and power by agribusiness corporations within a globalised food system (McMichael 2009).

Though less influential, other academic disciplines have provided empirical data and theory to understand plantations, contract farming and commercial agriculture. Notably, comparative history, sociology and international development studies have advanced thinking oninstitutions, livelihoods, access and people's sense of belonging, and contributed to dependency and modernisation theory (Platteau 2000; Forsyth 2005; Thompson 1941; Ellis & Biggs 2001; Hammar 2010; Hall et al. 2011). The popularity of the different theoretical approaches varies over time, as does their subject of analysis — contract farming has latterly attracted more analysis than plantations, for example.

Theory on peasant farming

Much of the literature, across theoretical disciplines, suggests that establishing plantations, commercial farm areas and certain contract farming arrangements increases demand for waged agricultural labour and leads to changes within the small-scale farming sector. How authors view such changes depends in large part on their normative position towards **smallholders and the peasantry**. At this point it is therefore useful to define what is meant by 'smallholder' and 'peasant'. According to Glover (1984), smallholders principally use their own and family labour to cultivate a smallholding, which Vermeulen and Cotula (2010) define as being smaller than 10ha.[10] 'Smallholder' is often used interchangeably with 'peasant', a more ideologically charged term. Following Harriss (1982a:24), peasants are defined here as 'rural producers who produce for their own consumption and for sale, using their own and family labour, though the hiring and selling of labour-power is also quite possible and compatible with peasant society'. Rural proletarians, in contrast, mainly sell their labour-power to others. These wage labourers are often defined as landless (Ramachandran 1990), but according to Lenin's (1899) classic definition, and many others since, rural proletarians might have a small farm holding, albeit one that is unable to fully support them.

Although Marxist scholars stress variation within the peasantry and painstakingly describe fine differences between class categories such as 'capitalist farmer' and 'petty commodity producer', who both sell their produce, it is generally argued that the archetypal self-sufficient subsistence peasant, or domestic commodity producer, who does not purchase any inputs, market any produce or sell any labour-power is no longer a useful category given the universal penetration of commodity relations (Bernstein 2010b; Cousins 2012). Countering neo-populism, scholars argue that such smallholdings

are economically efficient only because they are denied access to costly farm inputs and rely on unpaid family members, including children, working long hours of back-breaking work (Mbilinyi 1991; Watts 1994; Sender & Johnston 2004). Given their assumption that many poor peasants struggle to survive from own-account farming, some authors from the Marxist tradition endorse Bryceson's de-agrarianisation theory, which suggests pathways out of farming (Sender & Johnston 2004; Bernstein 2010c; Oya 2010; Mueller 2011). For followers of the livelihoods approach, an increase in off-farm wage labour is also to be welcomed, since according to this school of thought, livelihood diversification is key to increasing the resilience of the rural poor (Delgado & Siamwalla 1997; Davis et al. 2002; Boamah 2011).

Some mainstream economics, particularly that influenced by modernisation theory, is similar to Marxist thinking in that peasants are expected to be modernised and incorporated into capitalism (Heald & Hay 1985; Hinderink & Sterkenburg 1985; Ochieng 2010). Though small family holdings might be supported for efficiency reasons, in the field of development economics **poverty reduction** is a recurring watchword, and that often translates to a search for a farming model that will offer the greatest employment intensity, even at the expense of increased landlessness — e.g. Humphrey et al. (2004) and English et al. (2004) on Kenyan horticulture; also see Leavy and Poulton (2007:4–5) for a discussion of this approach. Such economic assessments tend to downplay the distinction between working on one's own farm and working on another, and any inherent virtues of peasant life. Collier and Dercon (2009:12) argue that mass out-migration from rural areas is a necessary step towards achieving significant poverty reduction in sub-Saharan Africa, and claim, 'African smallholders have not chosen to be entrepreneurs, they are in this activity by default.'

By contrast, certain Marxist political economists and defenders of the peasantry highlight the autonomy that self-employed farmers enjoy in comparison with landless or near-landless labourers. They might emphasise resistance by peasants to proletarianisation or to exploitation by agribusiness companies, and therefore come closer to a more romanticised view of small farmers (Harriss 1982a; Clapp 1988; Van der Ploeg 2012; see also Lipton 1981). Other agrarian authors, such as Li (2011), support in principle the desires of many rural people to diversify out of farming but maintain that small farm plots should continue to provide an economic safety net in the absence of alternative employment and social welfare.

Such differences in opinion over the value and prospects of smallholder farming may have influenced how authors have assessed the experience of large-scale agricultural schemes. Being aware of this theoretical diversity helps us to understand why researchers direct their data-gathering into particular areas, and why analysts and policymakers support certain farming models over others.

3.2 Plantations

Some of the earliest theory on plantations precedes the entrenchment of the neoclassical school within economics and originates from political scientists and classical economists who attempted to explain or justify the **emergence of plantations within the global economy** (Thompson 1941; Best 1968; Pryor 1982; Byres 2003). This includes Boeke's (1953) dual economy theory, which allows a space for foreign corporate plantations on the grounds that western industrialised agriculture could not be adopted by indigenous societies (Higgins 1956). Subsequent observers, notably Lofchie, described plantations as enclaves, often geographically isolated and politically insulated with minimal or negative effects on the local economy and food security (Sajhau & Von Muralt 1997; Jamal 1993; Hayami 2010; ILC 2011). Dependency theorists attacked the monopoly powers of plantation corporations and their expatriation of profits from the developing world (Best 1968; Bratton 1977; Siddiqui 1998). Although such theory concentrates on 'the plantation firm' as a private, often transnational, corporation, much of the empirical information comes from plantations with public or multipartite ownership.

There has also been **more mainstream economic analysis of the plantation as a farm system**, particularly as part of the long-standing debate over the comparative productivity of large and small farms. The economic arguments were excellently summarised by Pryor in 1982 and have not moved on greatly since then, perhaps because academics' attention has turned from plantations to contract farming and small-scale agriculture. Some authors identify an economic justification for the presence of plantations, such as the estates needing to be large to recoup the cost of clearing land, a reliance on export crops to generate foreign exchange, or a lack of marketing channels in developing countries (Ruthenberg 1980; Graham & Floering 1984; Hayami 2010). Nevertheless, it is generally agreed among mainstream economists that agriculture is likely to experience neutral or negative scale economies, and that operational costs, particularly the cost of recruiting and supervising workers, impair the efficiency of plantation production. Some argue that plantations represent a misallocation of factors of production and that they distort land and commodity markets by, for example, manipulating prices (Pryor 1982; Tiffen & Mortimore 1990). These views are consistent with the Chayanovian principle of family-farm efficiency. Work by Schultz in 1964 and other development economists supported that theory and also suggested small farms are more likely to create the rural linkages that lead to economic development. Their research led to a 'small-farm first' paradigm shift in development thinking during the 1960s (Ellis & Biggs 2001; Deininger & Byerlee 2012). However, the global agricultural landscape has since changed with the advent of technology, mechanisation and shorter value chains, and it is maintained by some that the efficiency and yields of large-scale agriculture have improved in recent decades (Ruthenberg 1980; Lele & Agarwal 1989; Simmons 2002), or that economies of scale are increasingly to be found in processing, marketing

and accessing finance (Marini 2001, Poulton et al. 2008; Collier & Dercon 2009; Hayami 2010; Deininger & Byerlee 2012). In the mainstream economics literature, it is thus common for authors to favour small-scale farming as an engine of rural development and to highlight some of the drains on productivity faced by plantations, but nevertheless to maintain that plantations still achieve scale economies for certain crops in certain circumstances (Hayami & Otsuka 1993; Binswanger et al. 1995; World Bank 2009; Poulton 2012).

A third area of theory on plantations in developing countries addresses the issue of labour, often from a Marxist angle. Some of this has concerned the welfare of plantation workers, spearheaded by work by the International Labour Organisation (ILO) in the 1960s, but greater academic interest has fallen on how plantations recruited workers and what effects plantation labour relations have had on agrarian societies (Kirk 1987a). Much of the empirical literature documents measures taken by plantation owners — and supportive authorities — to overcome labour shortages and induce people to work for them. The dominant explanations for the labour problem are that plantations were located in remote areas of low population density where land was abundant, and that where local people *were* available they either preferred peasant farming or were thought lazy and unsuitable by plantation employers (Graham & Floering 1984; Deininger & Binswanger 1995; Gibbon 2011). Li (2011) argues that in south-east Asia, this discursive prejudice against local people was used to justify the use of cheap, indentured migrants. The results of impressing people into plantation labour are typically described, sometimes romantically, as the proletarianisation of a peasantry and the monetisation of subsistence economies (Kydd & Christiansen 1982; Friends of the Earth et al. 2008; Jamal 1998; Vermeulen & Cotula 2010). However, Brass and Bernstein (1992) argue that colonial plantations often resulted not in proletarianisation but in de-proletarianisation. Drawing on evidence from Asia, they stress that wage work existed before the coming of plantations, and that rural proletarians became unfree workers through their recruitment into exploitative plantation labour. Evidence for such changes in rural structures is explored in Chapter 5 below.

Theories vary on how plantations can be expected to change over time. Focusing on the production function, mainstream economists hypothesise that the economic and social viability of plantations in developing countries will decrease as land and labour become increasingly scarce, on the assumption that plantations were typically located in land-abundant areas and took advantage of cheap or unfree labour (Pryor 1982; see, for example, Tiffen & Mortimore 1990; Marini 2001; Hayami 2010). Thus, soil exhaustion would become an increasing problem for plantation systems as developing countries reach the 'land frontier', and plantations could also become vulnerable to pressure for land reform as labour becomes more abundant relative to capital and to land (Best 1968; Hayami 2010). From a 'basic needs' perspective, meanwhile, Davies (1987) suggested that the growing surplus of labour in relation to land in Kenya would give plantation companies the licence to ignore calls to improve worker welfare. The contrary scenario is an increase in the cost of labour in a context of land abundance (Deininger & Byerlee 2012). It would be interesting to revisit these scenarios in the context of the current land rush.

Changes in labour availability also interest agrarian political economy scholars, in terms of how that affects the relations of production. Gibbon (2011) charts the development of functioning rural labour markets in sub-Saharan Africa since 1945, which has reduced the unfree forms of labour such as indenture that concerned Brass and Bernstein above. Evidence for an increase in plantations' use of irrigation technology and other forms of mechanisation over time concerns those interested in the environment and employment welfare (Ruthenberg 1980; Sajhau & Von Muralt 1984; Mackintosh 1989; Loewenson 1992).Because of such changes as the emergence of labour markets in developing countries and the introduction of mechanisation during the twentieth century, much of the theoretical literature on plantations is specific to the time in which it was written.

3.3 Contract farming

As theoretical interest in plantations has waned, a substantial body of literature on contract farming has developed in recent decades. Reviewers emphasise the wide variety of contracts and arrangements that have been documented— so wide that it is difficult to theorise contract farming as a discrete analytical unit, according to Little and Watts (1994) and Oya (2012). As with plantations, some authors narrow the scope by focusing on private contractors even though state schemes are common in developing countries (Grosh 1994).

Within mainstream economics, approaches such as modernisation theory, systems analysis and contract theory have been employed to understand contract farming (Clapp 1988; Prowse 2012). The school of **New Institutional Economics** (NIE) has been particularly influential. NIE presents contract farming as an institutional adaptation by rational economic actors to market failures. It is argued that the risks and challenges of marketing cash crops in developing countries have encouraged contract farming as an alternative to full integration or reliance on spot markets (Key & Runsten 1999; Kirsten and Sartorius 2002; Bolwig et al. 2009; Prowse 2012). As an arrangement to share risk and minimise transaction costs (Glover 1984), contract farming is purported to benefit both the contractor and participating farmers (*Table 4*).

In this way, contract farming is presented by some NIE scholars as an agreeable relationship between two parties. To reach a mutually beneficial outcome, however, the arrangement requires well-informed negotiations and mechanisms to enforce the contract. Authors following this line may discuss the risks to firms of contract farming, such as the cost of monitoring contracted farmers or the potential for farmers to

Table 4. The benefits of contract farming in developing countries, according to New Institutional Economics theory

Benefits	Background drivers and market failures	Potential problems
For firms:		
Ensures a reliable supply of produce, facilitates coordination	Increasing complexity and time-sensitivity of agro-food networks; thin or non-existent local spot markets with crude price signals	Inability of firm to enforce contracts or achieve monopsony could encourage side-selling and jeopardise supply
Provides ability to control the production process	Quality demands from buyers, particularly for high-value export crops	Transaction costs of supervising production; input diversion
Less costly and risky than plantations or other forms of full integration: - Production risk is transferred to farmers - Avoids land acquisition and related fixed investments - Avoids transaction costs of supervising workers and dealing with unions	Labour costs; political risk in developing countries; high labour intensity of many contracted crops	Costs of negotiating and monitoring contracts; risk of defaults; farmers might be unable to meet quality and quantity requirements, or to manage risk
Provides a means to induce production where land acquisition is not possible	Missing land markets; absence of property rights	
For farmers:		
Provides entry to lucrative markets	Transaction costs would be too high for farmers to produce contracted crops independently; capital market failure	Vulnerable to crop or contract failure, especially if up-front investment was required
Marketing risk is transferred to the firm	Uncertainty and cost of spot markets; riskiness of high-value crops	
Provides access to credit and farm inputs	Missing input markets; credit markets are missing, or local moneylenders charge extortionate rates	Firms can exploit farmers' lack of alternative sources
Farmers receive technical assistance and information on end markets	Bounded rationality; limited availability of public extension services	Loss of producer autonomy
Forward contracts provide collateral, insurance and stable prices	Risk aversion of farmers; spot-price volatility; missing insurance markets	Firms can exploit having exclusive purchase rights to the crop; fixed pricing lowers farmers' incentive
Provides work for surplus family labour	Labour intensity of many contract crops; imperfect land and labour markets	

Source: compiled from: Grosh 1994; Key & Runsten 1999; Kherallah & Kirsten 2002; Kirsten & Sartorius 2002; Simmons 2002;Singh 2002;Prowse 2012.

'side-sell' their produce to other buyers. More critical NIE scholars pay closer attention to power asymmetries between farmers and contracting firms. Simmons (2002:9), for example, admits that 'firms have advantages over smallholders in market knowledge and experience, information links, [and] legal expertise.' Clearly, **contract farming presents a dilemma for neoclassical economists.** They acknowledge that it works best when there are no alternative buyers or the contracting firm is explicitly granted a monopsony, as this helps to enforce contracts, prevent side-selling and thus ensure the success of the operation (Grosh 1994; Kirsten & Sartorius 2002; Simmons 2002; World Bank 2011:34, 89). However, monopsony goes against free market principles, and many economists express concern not only about the lack of competitiveness but also about the potential for contractors to exploit their position (Grosh 1994; Poulton et al. 1998; Kherallah & Kirsten 2002; Kirsten & Sartorius 2002; World Bank 2011:70). This conflict is present in much of the NIE literature.

Nevertheless, what distinguishes mainstream economists from agrarian political economists is that they tend to conclude optimistically that contract farming can benefit farmers with the right institutional arrangements. Like some analysts involved in the land-grab debate, they may call for codes of conduct or greater regulation by the state (Grosh 1994; Poulton et al. 1998;

Prowse 2012). Some authors call on contractors and governments to provide stronger incentives and legal systems, respectively, to aid contract enforcement (Eaton & Shepherd 2001; Kirsten & Sartorius 2002).

For mainstream economists, contract farming that involves smallholders provides an opportunity to capture the efficiency of family farms (Marini 2001; Oya 2012). From **an international development perspective** there are also advantages in smallholder contract farming: advocates argue that by providing participants with inputs, advice and a guaranteed market, this model enables poor farmers to overcome entry barriers and participate in global value chains, leading to poverty reduction and rejuvenation of small-scale agriculture (Buch-Hansen & Marcussen 1982; Leavy & Poulton 2007; Randela 2005; UNCTAD 2009:xxix). It is not always clear from such arguments *why* poor smallholders should be 'modernised' in this way, if not simply to come under state and agro-capital control and contribute to national (export) production. Some authors argue that growing cash crops benefits poor households (ILO 1994; Govereh & Jayne 2003); others argue that contract farming will encourage the emergence of a prosperous middle peasantry or have wider ripple effects (Prowse 2012). In any case, smallholder contract farming in developing countries has been widely supported by the World Bank, USAID and other international development agencies.

Despite this long-standing support in donor circles, much of the academic literature in the 1970s, 80s and 90s was highly critical of smallholder contract farming. Typically guided by **Marxist agrarian political economic theory**, authors began to ask whether contract farming excludes small farmers and creates indebtedness. Two edited volumes by Glover and Kusterer (1990) and Little and Watts (the above-mentioned *Living Under Contract*, 1994) have been especially influential. There are several strands to the argument. First, the notion of contracts between equal parties is rejected. Like some of the NIE scholars, authors discern unequal bargaining power and highlight contract abuses by contracting companies in monopsonic positions. According to Byres (2003), the costs faced by such firms of negotiating and enforcing contracts have been exaggerated. Clapp (1988) describes the contract as a form of 'mystification' that misrepresents a power-laden relationship as a freely made bargain. Second, authors argue that because the buyer oversees production, contract farming results in a loss of autonomy for participating farmers. This idea can be critiqued (Grossman 1998), but was useful in widening assessments of the impacts of contract farming beyond simple metrics of income. Third, critical authors seized on the neoclassical rationalisation of smallholder efficiency and claimed that contracting firms were, in fact, benefiting from the self-exploitation of peasant households. In combination with perceived 'de-skilling' of farmers, they argue, this turns peasants into piece-workers. Effectively subsidised by farmers' disguised labour, firms further benefit from the financial support of donor agencies keen to fund smallholder contract farming (Kirk 1987b; Clapp 1988; Korovkin 1992; Watts 1994). A fourth strand addresses the effects of contract farming within rural society. One potential outcome is the exploitation of a landless underclass who sells their labour-power to neighbouring farms (Porter & Phillips-Howard 1997). For the Marxist scholar Byres (2003), it is crucial to have an awareness of existing divisions within the small-scale sector and of the differing pressures and motivations of potential participants. Critical authors (and econometricians) also consider effects within the household (Prowse 2012). Informed by a more sophisticated understanding of rural livelihoods than was available to earlier scholars of plantations, these authors consider the impact on household members' other activities on and off the farm, and how households' consumption patterns change. Studies from a gendered perspective address how women cope with new demands on their time and new challenges to the traditional divisions of land and labour (Carney 1988; Mbilinyi 1991; Lincoln 1994; Mate 2001).

A final area of theory pulls out from a focus at village level and addresses the **wider political economy** of the contract farming model. Several studies consider the intertwined roles of agribusiness corporations, international capital and national governments (Oya 2012), such as Richardson on Zambia (2010) or Siddiqui on Costa Rica (1998). Authors locate contract farming within structural adjustment policies, industrial post-Fordism or the restructured global agri-food regime (Grossman 1998). Global value chain theory has also been used to analyse contract farming systems, especially within horticulture (Dolan 2004).

Given that contract farming offers so many areas of enquiry, it is not surprising that it is rare to find holistic case studies of contract farming that cover all bases. The debate on contract farming has become polarised (De Treville & Watts 1986; Oya 2012), and researchers tend to focus on specific areas in accordance with their theoretical approach. Thus, mainstream economists might provide detailed information on contracts and statistical analysis of farmer endowments, but neglect to describe the ethnicity and tenure regimes of participating farmers or investigate local power dynamics. Prowse (2012) argues that the agrarian political economists have neglected inter-firm and intra-firm aspects of contract farming, the characteristics of particular commodities, and the role of regulation and standards. For this reason, the fact that certain high-profile experiments in contract farming, such as the Mumias sugarcane and Kenya Tea Development Authority/Agency (KTDA) schemes in Kenya, have received disproportionate research interest can be advantageous, as it allows us to build up data and compare the conclusions of authors from diverse theoretical backgrounds. Some of their findings are presented in Chapter 5.

3.4 Commercial farming areas

Individually, large commercial farms are a well-established subject of analysis — particularly when contrasted with small family farms. But the concentration of such farms in contiguous areas or blocks has been less widely studied. However, there is a range of theory

Box 1. Rural class formation in colonial Nigeria

A 1981 article by Shenton and Lennihan provides an example of a Marxist class analysis of agrarian change in the context of colonial Africa. The authors argue that in the countryside of northern Nigeria, processes of rural class formation began before capitalism arrived, on the basis of kinship connections, patronage of the caliphate state and some indigenous merchant activity. With the advent of colonialism in the early twentieth century, capitalist British cotton firms attempted to gain a foothold in Nigeria's indigenous textile marketby offering cash advances to rural cotton producers in northern Hausa-speaking areas. The more prosperous Hausa farmers used the cash to expand their farms and hire wage labourers and were able to survive drought and a fall in cotton prices. Their poorer neighbours with smaller farms, however, depleted their grain stores and were forced to mortgage future crops to the cotton firms or local moneylenders, and to sell their labour to raise cash for taxes and food in an increasingly commodified society. Waged work caused them to neglect their own farms and led to a further diminution of yields, creating, according to the authors, a 'downward spiral of greater and greater impoverishment' (61). Simultaneously, the intensification of commodity relations contributed to a disintegration of customary reciprocal arrangements. In this analysis, production of surplus (cotton and food grains) by peasants not only allowed accumulation of capital by better-off farmers from below, it also provided the means for the poorer, cash-hungry farmers to be exploited. Although the British firms were replaced by state marketing boards at the end of colonialism, rural society had been inexorably changed by the arrival of capitalist relations of production (Shenton and Lennihan 1981).

on farms and commercial agriculture that can be drawn upon to inform understanding of this model, reflecting the variety in ownership, size and forms of support for the individual farms that form commercial farming areas.

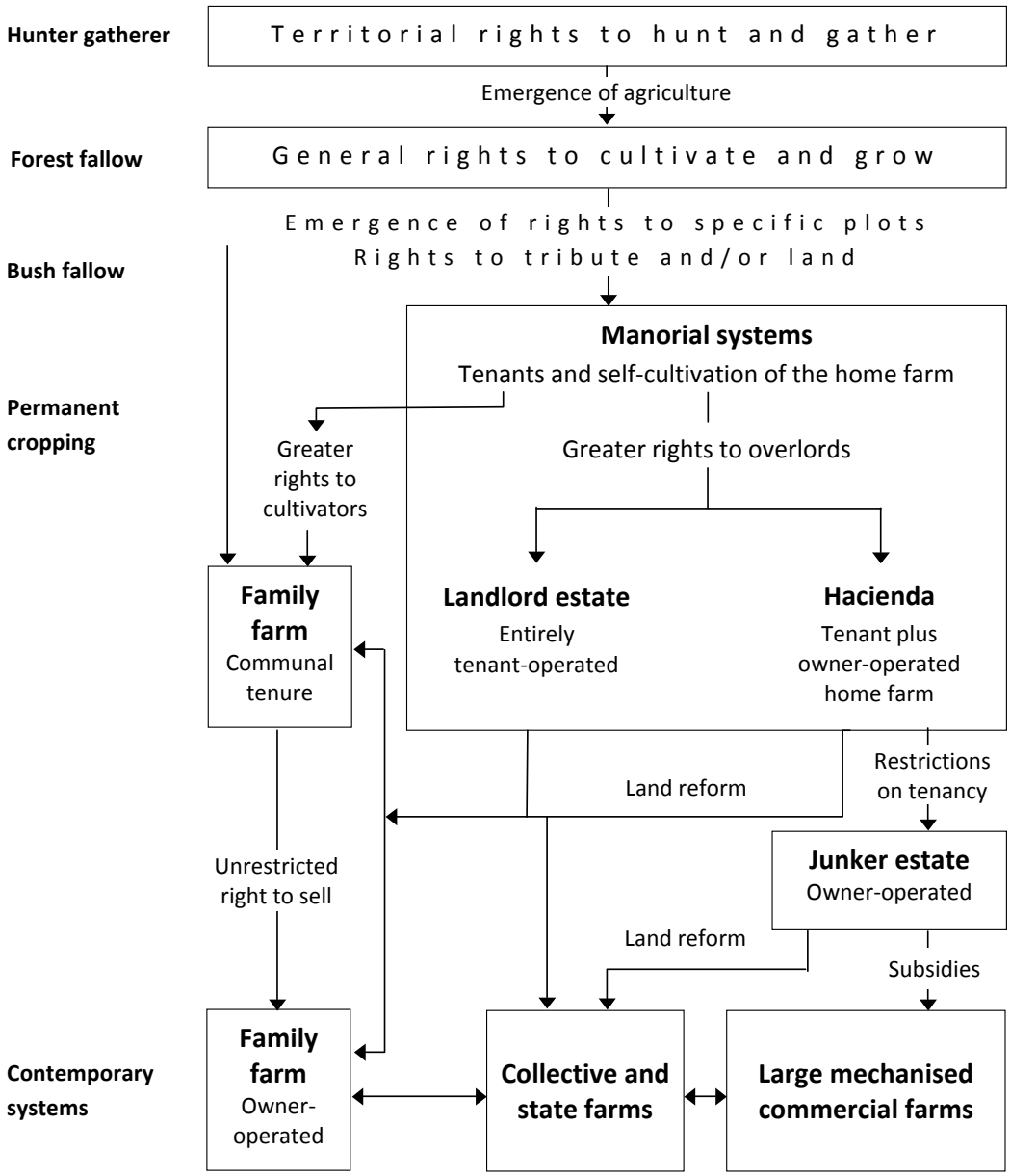
One relevant analytical theme concerns agrarian change and **the emergence of capitalist farming in rural societies**. A common starting point is the Marxist theory that over time, large-scale agriculture will become the dominant mode of agricultural production. Lenin's model of differentiation in which the peasantry dissolves into three classes of rich peasants, middle peasants and poor peasants is influential. In the transition to capitalism, some middle peasants combine with rich peasants and landlords to create a rural bourgeoisie; the rest are fated like poor peasants to become semi-proletarianised wage workers (Djurfeldt 1982; see *Box 1*). Independently of 'artificial influences' (Lenin 1899), capitalism may develop out of inequalities within the peasantry — this is the emergence of capitalism from below, 'from the soil of small-scale commodity production' (Byres 1982; Mamdani 1987:203).

The '**agrarian question**' facing Marxist scholars is why, in many cases of agrarian change, including in sub-Saharan Africa,the full capitalist transition in agriculture does not occur as predicted and peasant farming manages to persist (Shenton & Lennihan 1981; Byres 1983; Oya 2004; Mueller 2011). There are similar concerns among **neoclassical economists and modernisation theorists** that property institutions and economic development have not evolved in Africa in accordance with Western models (Mörner & Svensson 1991; Binswanger et al. 1995; Platteau 2000; Deininger & Byerlee 2012). A process of individualisation of property, intensification of agriculture and national de-agrarianisation is often presented as a natural progression for economies in the global South. That is evident in comparisons with countries in Asia and Latin America that appear to have travelled farther along the development path than sub-Saharan Africa, and in suggestions that unproductive small farmers should leave the sector (World Bank 2007:35, 92; Collier & Dercon 2009; World Bank 2011; Deininger & Byerlee 2012).

These theoretical puzzles have led analysts to consider the special characteristics of Africa that may have retarded capitalist rural development. Explanations put forward by mainstream economists include the relative abundance of land in Africa, structural problems within agricultural sectors and the comparative advantages of small farms, after Chayanov (Karshenas 2000; Deininger & Byerlee 2012). Additionally, scholars from several theoretical disciplines have identified external forces that may have inhibited indigenous agriculture. Dependency theorists and Marxist agrarian political economists such as Bernstein (1977) and Shenton and Lennihan (1981) suggest **imperial capital** as one such impediment, for firstly destroying pre-colonial natural economies and then preventing African producers from accumulating 'from below'. There is a large literature on the repressive influence of **colonial settler farms and plantations**, which some argue prevented an African rural middle class from emerging, similar to how feudal landlords in nineteenth century Prussia obstructed development among the enserfed peasantry (Bratton 1977; Biermann & Kössler 1980; Raikes 1982; Vickery 1985; Byres 1991). This idea has been explored from a different angle by the development economists Binswanger, Deininger and Feder, as part of the debate over scale economies in agriculture. Starting from the neoclassical assumptions of small-farm efficiency and land abundance, the authors conclude that for large farms to have emerged and survived, they must have benefited from **distorted interventions in the market** (Binswanger et al. 1993; Deininger & Binswanger 1995; see also Pryor 1982). Binswanger and colleagues argue that large farms relied on extra-economic coercion and distortions to defy market logic, using their political influence to exploit cheap or free land and labour, suppress competition from smallholders and gainsubsidies such as transport infrastructure or tax waivers (Binswanger et al. 1993:1242). According to this theory, the distortions also interrupted the development of private property rights for family farms (*Figure 2*).

African scholars within Marxist agrarian political economy have accused **indigenous elites** of appropriating resources at the expense of small-scale

Figure 2. Binswanger et al.'s model of extra-economic distortions affecting the evolution of agriculture and property rights



Source: Binswanger et al. 1993:1245.

producers (Bernstein 1977; Mulaa 1981; Mueller 2011). In a landmark analysis of rural change in Uganda, Mamdani (1987) proposed a twofold model of capital accumulation that includes a village bourgeoisie which emerged from the peasantry but also an external bourgeoisie of merchants and landlords who had accumulated their capital 'from above', drawing on political connections to acquire land and loans. Mamdani includes in this latter group local chiefs, bureaucrats and representatives of political parties and parastatal marketing boards. They were able to penetrate local agriculture and extract a surplus that was not reinvested in the sector, thereby causing the low productivity and technological progress of small-scale Ugandan agriculture. According to Mamdani, the ascent to power by the external bourgeoisie was facilitated by colonial interventions, post-independence rent-seeking and donor programmes. Working from more of a neoclassical economics position, Lipton (1981) theorised that involvement in independence politics had allowed urban elites in postcolonial countries to acquire a disproportionate share of resources and power (see also Bates 1981). Another pertinent category of 'agrarian capital beyond the countryside' (Bernstein 2010c) that is argued to have had a catalytic or destabilising effect on agrarian relations is **agribusiness expansion and the promotion of artificial inputs in rural areas** (Mbilinyi 1988:569; McCarthy 2010; Patnaik & Moyo 2011).

Despite these impediments, scholars acknowledge that some indigenous entrepreneur farmers have emerged from Africa's restructured, postcolonial societies, as seen in certain commercial farming areas. Anthropologists and agrarian political economists have documented the existence of pre-colonial commercial activity, particularly in West Africa, and called for greater

attention to how the development of African agriculture since colonialism has been shaped by cultural norms and local power relations (Hill 1970; Shenton & Lennihan 1981; Berry 1993; Sangmpam 1995; Bernstein 2010a). There is particular interest in the **role played by post-independence African states** as an external driver of agrarian change (Bernstein 1977, 1979; Raikes 1982; Harriss 1982b, c; Oya 2007; Jayne & Sitko forthcoming). First, states are argued to have both inhibited the emergence of indigenous capitalists and supported them through subsidies and rural development programmes (Cliffe 1977; Bernstein 1979; Raikes 1982; Thurston 1987; see Chapter 4 below). Second, African capitalist farmers are often reported to have links to the state apparatus, which they exploit either through **'straddling'** — that is, using income from salaried public-sector employment to finance land acquisition and commercial farming (Sender & Smith 1986) — or through political alliances and patronage, which is how several European farms in Kenya were transferred into African hands after independence (Okoth-Ogenda 1981). Given these findings, it is difficult to justify a strict separation between those farm-owners who built themselves up 'from below' and those who drew on extra-economic sources 'from above'. For example, successful middle or rich peasants that have accumulated wealth from agricultural production are argued to have also benefited from patronage politics, exploitation of communal reciprocal arrangements and incomes from outside farming (Mamdani 1987; Oya 2007; Bernstein 2010b; Jayne & Sitko forthcoming). Authors also emphasise the use of social capital and customary institutions by smaller-scale farmers to secure their access to land and inputs (Havnevik 2000; Berry 2002).

The result of all this work is a fairly rich literature that highlights the heterogeneity and fluidity of rural society, and presents several possible pathways of differentiation and accumulation between and within African countries (Cliffe 1977; Bates 1981; Harriss 1982a; Hinderink & Sterkenburg 1985; Bernal 1991; Berry 1993; Bernstein 2010b; Cousins 2012). It may be noted, however, that some of the key works are now decades old, supporting Oya's (2007) claim that empirical research into rural capitalist development in Africa has been lacking over the past 25 years.

Another theoretical theme relevant to commercial farming areas is the idea that various forms of commercial agriculture will benefit surrounding rural economies **through technology transfer and other spillover effects.** One body of literature argues that innovative medium-scale farmers can help to diffuse modern farming practices in an area (Neven et al. 2009). This idea is clearly shared by proponents of planned farming blocks or clusters, whereby it is hoped that large commercial farms will bring modern agricultural practices to rural area sand act as first-movers or hubs (Ariyo & Mortimore 2011; German & Schoneveld 2012; World Bank 2007:129; Beira Corridor 2010; SAGCOT 2011). The actual local effects of large-scale farms, plantations and contract farming have been, and are still, intensely debated in the literature, from Boeke's (1953) concerns over the interaction between foreign and indigenous farmers in Indonesia to Graham and Floering's (1984:100) confidence that through nucleus–outgrower schemes, 'good agricultural practices and their rewards are spread out in ever wider circles.' Mainstream economists may hypothesise or attempt to quantify the direct upstream and downstream production linkages, indirect spending linkages and employment multiplier effects of large-scale commercial agriculture (Machethe et al. 1997). This theoretical potential for positive spillovers is frequently mentioned as a possible benefit of large-scale commercial farming (Delgado 1999; Poulton et al. 2008:57; World Bank 2011). Critical authors argue that it is used discursively to legitimise agribusiness activity and large-scale land expropriation (Watts 1994; Richardson 2010; Hall 2012). Evidence for spillovers is explored in Chapter 5.

4. Overview of the models in sub-Saharan Africa

4.1 Historical development

Early visions for African colonies were that their development would be based on European plantations producing commodities for export (Jamal 1993; Daviron 2010). Yet many plantations struggled and they have never been a dominant mode of production or land use in sub-Saharan Africa. A recent estimate suggests plantations and large-scale farming have accounted for, on average, 5-7.5% of cultivated land in sub-Saharan Africa over the past century (Gibbon 2011).

In the early twentieth century **plantations** were established throughout sub-Saharan Africa by individual settlers and, increasingly, imperial corporations such as Del Monte and Firestone. In east and southern Africa, plantations were most extensive in the settler economies of Kenya, Zimbabwe and South Africa (Thompson 1941; Jamal 1993; Gibbon 2011) although plantations were also established in Mozambique (e.g. to grow sugar), the Congo basin (rubber), Tanzania (cashew and sisal), Zambia (sugar) and Uganda (cotton).[12] In West Africa too, plantations were established in territories with access to ports but many British and French colonial officials favoured an alternative strategy of supporting indigenous small holder production of cash crops such as cocoa in Ghana or ground nuts in Senegal (Epale 1985; Daviron 2010; Amanor 2011) (*Table 5*). In this region, native commercial farming and trading were already well established and much of the pressure to develop plantations came from foreign corporations (Gibbon 2011). From the 1920s onwards, the administration in Uganda also decided to concentrate on commercial peasant farmers rather than plantations (Cliffe 1977; Mamdani 1987; Carswell 2007).

White settler farmers were attracted to agro-climatic areas suitable for cash-crop and dairy farming (Mabogunje 1989). They include French settlers in Côte d'Ivoire; Germans in Cameroon; Italian estate owners in Somalia; and British farmers in Zimbabwe. Whereas

Table 5. The most important areas of production of perennial crops[a] in sub-Saharan Africa, as of 1980		
Crop	**Plantations**	**Smallholders**
Bananas	West Africa	
Cashew		Tanzania, Mozambique
Cocoa		Ghana, Nigeria
Coffee	Kenya	Kenya, C'ôte d'Ivoire, Madagascar
Oil-palm	West Africa	West Africa
Rubber	Liberia	Nigeria
Sisal	East Africa, Madagascar	
Sugarcane	Many countries	
Tea	East Africa	
Vanilla		Mozambique

Compiled from Ruthenberg, 1980. Ruthenberg notes that precise production data must be treated with caution. The problem of unreliable or patchy historical data on plantation crops in sub-Saharan Africa is also discussed by Gibbon (2011).
[a] This categorisation does not include cotton, groundnuts, rice or tobacco.

Portuguese settler farms in Mozambique were small or medium-sized, those in Kenya and South Africa were large and co-existed with corporate plantations (Loewenson 1992). Some countries experienced tensions or contradictions in colonial state policy between the two sectors (Mabogunje 1989; Mbilinyi 1991), reminiscent of the struggle between agro-industrial capital and the landed classes in Europe described by Djurfeldt (1982). Nevertheless, foreign plantations and large farms alike benefited from state support and unfree labour. Some colonial governments helped Europeans and Afrikaners to establish **mixed farming blocks**, particularly in southern African countries such as Namibia and Botswana (Guenther 1977; Lindholm 2006; Sylvain 2006). During and after the Second World War, several more blocks were set aside for ex-soldiers and other settlers in Sudan, Tanzania, Zambia and Zimbabwe (Cole 1962; Stocking 1983; Mbilinyi 1991; Rutherford 1997; Gibbon 2011). In the years following the war, agricultural labour markets emerged as forced labour was phased out, and plantations were forced to compete for workers among themselves and with rival employers such as South African mines and factories. Some plantations took on a patron–client nature in an effort to motivate and retain workers (Sender & Johnston 2004; Gibbon 2011).

The challenges facing foreign plantations grew after nation states won independence from colonialism in the late 1950s and 1960s. First, the gradual arrival of unionisation and worker legislation made labour more expensive for firms (Watts 1994; Vermeulen & Cotula 2010). Second, their land holdings became increasingly

Table 6. Relative shares of plantation and smallholder production of plantation crops in selected African countries, 1980s (per cent of total)				
Country and crop	**Plantations**		**Smallholdings**	
	Area	**Production**	**Area**	**Production**
Côte d'Ivoire:				
Cocoa/coffee	/	/	Mainly smallholders[a]	
Rubber	94	98	6	2
Oil-palm	62	89	38	11
Coconuts	65	87	35	13
Cameroon:				
Coffee/cocoa/cotton	20	36	80	64
Ghana:				
Cocoa	/	/	Mainly smallholders	
Kenya:				
Coffee	54	70	46	30
Tea	33	50	67	50
Sugar	/	55	/	45
Nigeria:				
Rubber	25	/	75	/
Cocoa/cotton	/	/	Mainly smallholders	

Source: ILO 1994:41.
[a] At least 80%.

vulnerable to takeover by new African governments with a populist agenda of africanisation (Acland 1971; Jamal 1993; Sender & Johnston 2004). Third, they had begun to make more money up- and downstream, away from actual production, in areas such as shipping and marketing (Oya 2012). These three developments explain the **decline of foreign corporate plantations since the 1960s**.

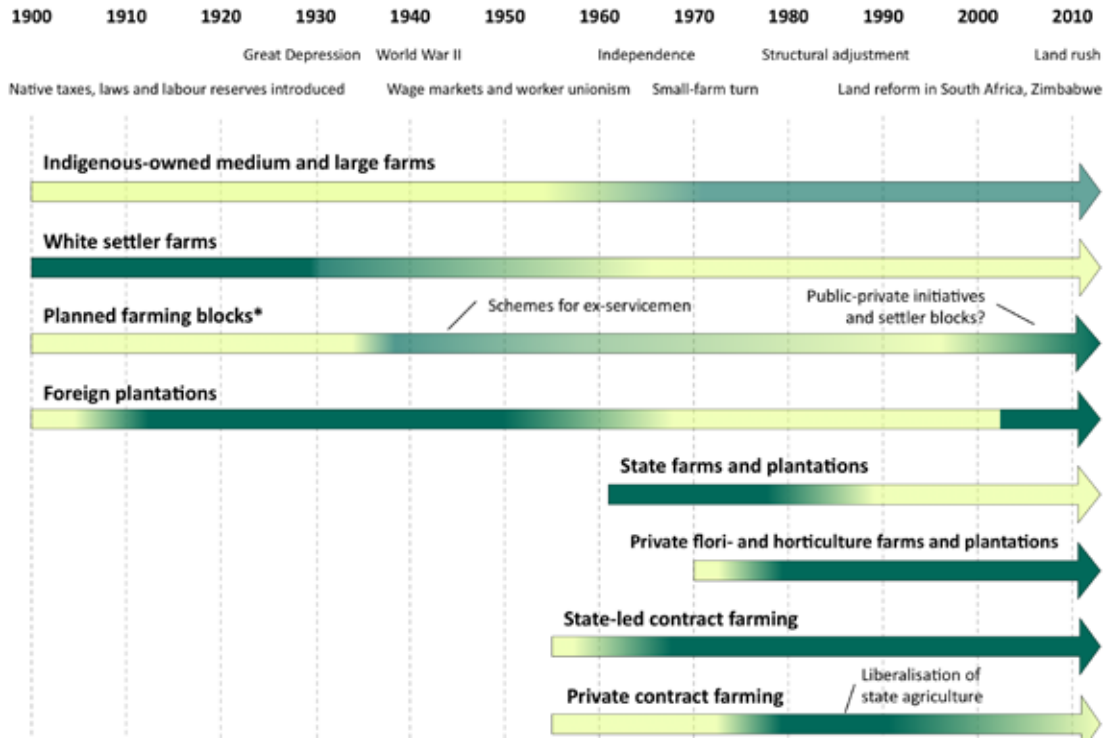
The result was widespread nationalisation of plantations, including but not exclusively in socialist countries such as Ethiopia, Mozambique and Tanzania (Chege 1979; Sajhau &Von Muralt 1987; O'Laughlin 1995), and the exit of white settlers from many countries,whose farms were subdivided or taken over by African elites, especially in Côte d'Ivoire, Ghana, Kenya and Nigeria (Bratton 1977; Hinderink & Sterkenburg 1987; Widner 1993). The large-scale farming sectors in Kenya, Zimbabwe and South Africa contracted (Gibbon 2011). African states experimented with alternative farming systems, especially cooperatives, resettlement schemes, large-scale irrigation projects and mechanised state farms. They managed agriculture through horizontal coordination, often achieving monopolies through state marketing boards and parastatal processing (Bates 1981; Maertens & Swinnen 2007). There were also policies to encourage middle-class farmers (Bernstein 1977; Raikes 1982), in some cases accelerating procedures that were initiated under colonial rule, including Kenya's 1954 Swynnerton Plan (Clayton 1978) and African farmer improvement schemes in Zambia (Jayne & Sitko forthcoming). Some countries invested in domestic plantations, such as Côte d'Ivoire, aiming for self-sufficiency in oil palm (Daddieh 1994), or Malawi, where small tobacco, tea and sugar 'estates' acquired by Malawians contributed significantly to agricultural GDP during the 1970s (Pryor & Chipeta 1990). Often, African land-owners belonged to a political elite or had links to the new parastatals (Bates 1981:56; Raikes 1982; Sender & Smith 1986; Mamdani 1987; Widner 1993; Kanyinga et al. 2008). This summarises the three main pathways along which **medium- and large-scale African agriculture** developed during the 1960s and 70s: (1) establishment of large state farms and schemes, sometimes using nationalised plantations, settler farms and farming blocks; (2) accumulation from below, supported by policies to encourage prosperous, middle-class farmers; and (3) elite capture of pre-existing farms, other arable land and associated state resources (see also section 4.3, 'preferential support' below). Unfortunately, empirical data on the historical extent of these large-scale and capitalist farms in sub-Saharan Africa is limited (Oya 2007; Gibbon 2011) and as such they are a somewhat unknown quantity as depicted in *Figure 3*.

Despite the reorientation towards indigenous and state-led agriculture, transnational corporations retained a presence in sub-Saharan Africa, either through plantations that survived nationalisation —in 1982, Unilever had plantations in the Democratic Republic of Congo, Cameroon, Ghana and Nigeria, for instance (Graham & Floering 1984) —or by supplying R&D, inputs, factories, feasibility studies and management services to state agricultural schemes.

At the same time as plantations were being transformed in the immediate post-independence period, there was increasing concern among planners and international development agencies to harness the potential of **small-scale farming**. The argument for small farms had been building among colonial authorities since the earliest days of colonialism (Epale 1985; Daviron 2010), and policies suppressing native smallholder cash-crop production were gradually relaxed before independence (Gibbon 2011). But during the 1960s and 70s an emphasis on small farms began to dominate rural development thinking, following the neopopulist turn in economics (Harriss 1982b; Ellis & Biggs 2001). In 1964, RJM Swynnerton of the CDC visited plantations in Cameroon and recommended new models to incorporate smallholders, including outgrowing (Epale 1985). In 1968 the new Ghanaian government established a Cotton Development Board to encourage smallholder production of cotton, which had previously been produced on estates (Poulton 1998). Convinced by the efficiency of small farms, foreign investors and donors such as the CDC, USAID and the World Bank became key supporters of schemes that encouraged rural development through smallholders while retaining a role for corporate agribusiness to facilitate their commercialisation (Buch-Hansen & Marcussen 1982; Glover 1984; Clapp 1988; Lele & Agarwal 1989; Little & Watts 1994:8). Africa witnessed a proliferation of **outgrower schemes attached to nucleus estates**, described by de Treville and Watts (1986:14) as a form of 'post-plantation production'.

In the 1980s and 1990s, neoliberal structural adjustment reforms encouraged the liberalisation of African agriculture, and states lost their monopoly marketing power as parastatals and marketing boards were dismantled. Smallholders also lost government sources of credit, extension services and inputs.An opening was created for private enterprise to penetrate African agricultural markets, including through contract farming. Since being nationalised, many plantations had struggled with managerial problems, run-down infrastructure, commodity price decline and the rising labour costs that the TNCs had faced (Kirk 1987b; Von Muralt & Sajhau 1987; Berry 2002). As their state farms and plantations foundered, indebted governments began actively encouraging foreign investment to increase foreign exchange from cash-crop exports. Several countries privatised plantations as part of structural adjustment programmes (ILO 1994), including Mozambique, Tanzania and Uganda, whose governments appealed to investors to rehabilitate sugarcane and sisal estates (Tiffen & Mortimore 1990; Haki Ardhi 2009; Marini 2001). Burkina Faso and Zambia both liberalised their cotton industries in the 1990s, turning to private contract farming schemes with inputs and extension services provided by the contractors (Brambilla & Porto 2005; Kaminski et al. 2009). The neoliberal privatisation process has been criticised by some observers as a means of re-commodifying public goods and facilitating the

Figure 3.The rise and fall of selected farming models in sub-Saharan Africa, 1900–2012



* A type of commercial farming area. Does not include state settlement schemes for small farmers.
Source: the author.

renewed takeover of communal resources by political and agribusiness interests—which are often considered one and the same (Amanor 2005; Shivji 2009; Patnaik & Moyo 2011). Changes were also taking place in the international agro-food regime, including concentration of the industry into powerful retailers with buying arms, growing demand for high-value horticulture crops whose production needs careful oversight, and technical developments in processing, storing and transport (De Treville & Watts 1986; Simmons 2002; Prowse 2012). From the 1970s onwards Africa's horticulture market expanded, mainly in Kenya, South Africa, Zimbabwe, Senegal and Côte d'Ivoire (Jaffee 1994; Minot & Ngigi 2004). Buyers for export and increasingly for domestic retailers (Neven et al. 2009) chose contract farming as a means to tightly control the provenance and quality of produce.

Thus, there have been five main drivers behind the **rise of contract farming in sub-Saharan Africa since the 1960s**: (1) concern among TNCs to develop cheaper and less risky alternatives to plantations; (2) political and economic desire by African governments to increase exports and incorporate a modern peasantry in their rural development plans; (3) support for smallholder schemes among Western donors; (4) stagnation and liberalisation of African agriculture; and (5) changes in the international food regime. Public, private and joint venture forms have occurred across the continent (Grosh 1994; UNCTAD 2009), although data to quantify their extent and importance to overall production are lacking (Oya 2012). Contract farming has been most seen in Kenya, where a substantial share in the tea export market was achieved through KTDA and other public–private schemes (Poulton et al. 2008; Oya 2012). It is also seen in countries where previously, for agro-ecological or political reasons, a significant plantation sector had not developed, such as Mali and Burkina Faso (cotton), Nigeria (oil palm, cotton) and Ethiopia (cut flowers). In some countries contract farming may dominate entire crops —as in Zambia, where it has accounted for all paprika and cotton produced (UNCTAD 2009, uncited source). Existence of contract farming does not necessarily mean smallholders are heavily involved — relatively few small farms are involved in contracting in South Africa, for example, while outgrower schemes in Zimbabwe tend to be somewhat marginal in proportion to the nucleus estates they are attached to (Randela 2005; Leavy & Poulton 2007; Oya 2012). Contract farming is now being proposed as part of large-scale land deals (Cotula et al. 2009), as well as public–private development projects such as Ghana's Commercial Agriculture Project (Republic of Ghana 2012) and the Kilimo Kwanza agricultural growth corridor in southern Tanzania, whose partners include USAID and Unilever (SAGCOT 2011).

Although contract farming remains a popular model among development policymakers, there are signs of a **trend towards greater vertical integration** over the past decade or two (Kirsten & Sartorius 2002; Vermeulen & Cotula 2010), as suggested in *Figure 3*. This provides the context for the recent spate of large-scale farmland investments (Cotula et al. 2009:57). Large, foreign plantations and farms appear to be more politically acceptable than they were; hence governments in

Nigeria, Republic of Congo and Zambia negotiating new schemes with foreign agribusiness (Richardson 2010; Hall 2012). Developing commercial farming areas with external investorshas become an explicit objective of Zambian governments (Roth et al. 1995; German et al. 2011). Some authors argue that within horticulture, processors and buyers are turning away from smallholder contract schemes and preferring to contract with larger farms or return to plantation production (see Schoneveld et al.2011 on Ghana; Grosh 1994 and Humphrey et al. 2004 on Kenya). Mueller (2011:30), a critic of the neo-populist school, argues that there has been a 'slow but discernible movement' away from the smallholder bias among development academics and World Bank analysts, owing to research that questions the evidence for small-farm efficiency and highlights the importance of diversified livelihoods away from the archetypal family farm. If it is the case that the 'small-farm first' paradigm is crumbling, or was always supported more as rhetoric than in practice, this could be relevant to the current land-grab debate, as such a shift might be facilitating large-scale land acquisition and make it more likely that smallholders will not be included in resulting agricultural operations.

4.2 Policy contradictions

Certainly, a theme to emerge from the literature is the **changing and sometimes contradictory positions taken by post-independence African governments towards smallholders, large-scale agriculture and private-sector involvement**. During colonialism, authorities disagreed on whether the production strategy should be orientated towards large or small farms, and on the degree to which indigenous smallholders should be allowed to cultivate cash crops. Immediately after colonialism, a preoccupation with industrialising African agriculture and achieving self-sufficiency meant that efforts and expenditure were concentrated on capitalist or state-owned large farms (Hinderink & Sterkenburg 1985; Lele & Agarwal 1989; Sender & Johnston 2004; Schoneveld et al. 2011). Yet for political and populist reasons the new governments also championed smallholders and land reform, while many members of the political elite acquired large farms themselves. Ivorien President Houphouët-Boigny, for example, rose to power partly by campaigning for the right of native farmers to compete with French plantations and became a significant plantation owner himself (Widner 1993).

The result in the decades since independence has been pluralistic agricultural policies and disagreement among ministers and local politicians over the inclusion of smallholders (see Kanyinga 2000:74, English et al. 2004:8; and Ochieng 2010:149 for examples from Kenya). Hammar (2010:413) describes an 'odd mix' of policy and practice that has characterised Mozambican agriculture since the civil war, combining 'neo-liberal economics and persistent state centralisation, alongside liberal political discourses of democratic rights to land and natural resources'. At times the pro-smallholder rhetoric of politicians such as Zambia's President Kaunda masked investment in large-scale agriculture (Loewenson 1992). Today much African agricultural policy is essentially dualistic, committing to both large-scale and small-scale development (Leavy & Poulton 2007). Land policies also betray misgivings about smallholder productivity (Spierenburg 2011). The widespread support by African governments for contract farming schemes, with their combination of small farmers and big business in symbiosis, is an apt metaphor for those governments' ambivalent, contradictory positions.

It lies beyond the scope of this paper to explore the pressures brought to bear on African policy by structural adjustment and the international agricultural trade regime, but it is possible to say that the attitude towards commercial farming has been guided by multinational corporate pressure and the advice of international donors, particularly the World Bank. The small-farm first paradigm discussed in Chapter 3 was embraced by the international development community and is enshrined in poverty reduction strategy papers (Lele & Agarwal 1989; Leavy & Poulton 2007). However, the World Bank has been accused of inconsistency on this point. Around the time of African independence, the Bank initially supported large-scale state and entrepreneur initiatives before shifting its focus to poorersmallholders (Gibbon 1992). During the 1980s the Bank continued to extol smallholder efficiency but also gave support to foreign plantations and ultimately funded auxiliary services provided by international agribusiness (Mbilinyi 1991). It discouraged parastatals and cooperatives, yet by encouraging contract farming instead, as it did in its 1981 Berg Report, it was advocating the kind of vertical integration that those state bodies had been trying to achieve (Holly 1984; Vermeulen & Cotula 2010; Oya 2012). Accusations that the Bank's 2008 World Development Report on Agriculture presents a similarly confusing message vis à vis agribusiness and smallholders are made by Li (2011), Mueller (2011) and others. 'The WDR 2008 suffers from a logical inconsistency between its acclaimed goal of poverty alleviation for African smallholder farmers and its conviction that large-scale commercial farming is the inevitable future of farming,' claim Havnevik et al. (2007:57).

African agricultural policy was also influenced by ideology concerning capitalist farming and the peasantry, related to the Marxist theoretical debates discussed in Chapter 3. Côte d'Ivoire, Kenya, Malawi, Nigeria, South Africa, Zambia and, initially, Tanzania, tended to support the emergence of an African yeoman class of capitalist farmers. However, the more socialist or less export-oriented governments in Angola, Ethiopia, Ghana, Guinea, Mali and Mozambique feared that this would be destabilising or threaten their revolutionary projects. Tanzania joined them in the late 1960s (Haki Ardhi 2009). This position was incompatible, at least rhetorically, with capitalist accumulation through participation in contract farming, or private indigenous ownership of large farms or plantations. Such positions change over time: following the overthrow of the socialist president Nkrumah, for example, Ghana began encouraging agribusiness investment in large-scale farms during the

1970s (Amanor & Pabi 2007). Some governments applied a mixture of policies, unable to impose their singular agricultural vision (see Clayton 1978 on Kenya; Clapp 1997 on Guinea; and Oya 2007 on Senegal).

Several authors suggest that African policymakers like some agribusiness corporations, did not trust in the capability or efficiency of smallholders and remained convinced by the scale economies of large, mechanisedestates (Buch-Hansen & Marcussen 1982; Lele & Agarwal 1989; Daddieh 1994; Foeken & Tellegren 1994; Leavy & Poulton 2007). Clearly it is in the interest of agribusiness that policymakers continue to believe in their efficiency and use it to justify the establishment of new plantations (Tiffen & Mortimore 1990). Politicians may have had other reasons to resist subdivision of large farms, such as the need to retain political alliances. Some of these authors argue that African governments favour private large-scale farming because it requires less state support than smallholder schemes. According to Leavy and Poulton (2007:14), 'large-scale farms can prosper when a basic enabling environment is in place. By contrast, smallholders tend to require pro-active service provision.' However, evidence suggests that large-scale commercial agriculture in Africa has benefited from more than just a 'basic enabling environment.'

4.3 Preferential support

Table 7 lists the ways in which **African plantations, commercial farms and contract farming schemes have been supported by states and donors** since the early twentieth century. They can be divided into measures to subdue competition from peasants and create a labour pool, and direct forms of support for agricultural enterprise. The greatest number of support measures is documented in colonial Kenya and Zimbabwe, which accords with scathing reports of exploitation in those settler economies (Bratton 1977; Biermann & Kössler 1980; Njonjo 1981; Deininger & Binswanger 1995) but might also reflect a bias in this review towards English-language literature. Particularly harsh policies are reported in South Africa and Portuguese territories such as Mozambique, even though that state became increasingly antipathetic towards foreign plantations (Lucas 1987). Preferential support was less extensive but still significant in other countries before independence. Settlers and plantation companies in Tanzania benefited from, among other things, cheap finance and land rents, fixed prices, government extension services and taxes on the peasantry (Boesen & Mohele 1979; Mbilinyi 1988; Gibbon 2011). In Zambia, settlers were not initially accorded much official support but the colonial government intervened after the 1930s when competing African producers threatened their survival (Vickery 1985). Countries where the state was less supportive or where support measures were unsuccessful in controlling the peasantry, such as Malawi, Nigeria and Senegal, developed much smaller foreign plantation and farming sectors (Kydd & Christiansen 1982; Mackintosh 1989; Watts 1994; Hayami 1996; Jeeves & Crush 1997).

Table 7 suggests that after independence, large-scale agriculture relied less on measures to prevent smallholders from growing cash crops and force them into wage work. This is presumably because of the emergence of labour markets and legislation after 1945 (see Sender & Smith 1986) and the growing acceptance of small-farm efficiency. Nevertheless, as late as the 1980s smallholders in Malawi were banned from growing certain varieties of tobacco and obliged to sell to the state marketing board in order to subsidise private estates (Lele & Agarwal 1989). Bates (1981) has written extensively on the use of marketing boards by African states to extract resources from smallholders.

The evidence confirms the assertion by Binswanger and colleagues outlined in Chapter 3.4 that large-scale farms have relied on market distortions. As Loewenson (1992:43) writes of plantations in Zimbabwe, 'in no case did this establishment and early development of plantation agriculture grow out of "free market" forces of open competition. Instead it was a product of brutal suppression of one class (the peasantry) to ensure the dominance of another (the large-scale landowner).' Therefore the concerns of plantation apologists Graham and Floering (1984) that incorporating smallholder outgrower schemes would dilute the economic efficiency of plantations seem entirely misplaced. Even with state support, many enterprises struggled. This includes settler farms in Tanzania being abandoned or acquired by TNCs after the Second World War (Mbilinyi 1988) and Zimbabwean farmers recently resettled in Mozambique and Nigeria who have complained of poor infrastructure and illiquidity despite being granted cheap land and access to credit (Hammar 2010; Ariyo & Mortimore 2011).

Many of these preferential practices inhibited African competition, as they were designed to do. African capitalist farmers have also been discouraged by socialist and pro-smallholder policies. However, there has been sporadic support for indigenous medium-scale and large-scale commercial farming, in Ghana, Kenya, Uganda and several other countries during the colonial period but more widely throughout sub-Saharan Africa since independence, reflecting the pluralism of much African agricultural policy. The support has come from governments and donors (*see Table 7*). In Ghana and Zambia, commercial farming areas were supported by cheap farmland, subsidised inputs and infrastructure provided by the state (Lundahl 1990; Amanor & Pabi 2007). The World Bank continues to support commercial farmers' unions throughout Ghana (Yaro, personal communication). African commercial farmers have especially benefited from lobbying power and influence with national and local political elites. Raikes (1982:359) argued that as Tanzania approached independence in 1961, 'a class of African rich peasants was emerging which … had already achieved a substantial degree of economic and political control at the local level, through improved access to resources related to its domination of the co-operatives and most other local administrative and decision-making bodies.'

Table 7. Documented forms of preferential support received by large-scale agriculture in sub-Saharan Africa

	Plantations and large-scale settler farms[a]		Contract farming		Commercial farming areas[b]	Indigenous capitalist farmers
	Colonial period	Post-independence	Private schemes	Public or joint venture schemes		
1. Measures to suppress competition from peasants and force them into labour						
Measures to create a need for cash:						
Hut tax, poll tax, dog tax	●					
Grazing fees, charges for cattle dips	●					
Measures to inhibit peasant agriculture:	●					
Smallholder plots made too small	●					
Located on marginal land	●					
Crops destroyed	●					
Access to credit restricted or prohibited	●					
Little or no access to extension services	●					
Forced de-stocking	●					
Land acquisition restricted or forbidden	●					
Land acquired by firms or settlers taken out of circulation and left idle	●					
Measures to suppress competition:	●		●			
Forbidden from growing export crops	●	●		●		
Paid lower prices than foreign or large-scale producers	●	●	●			
Forced to sell to marketing board, forbidden from selling to traders	●	●				
Forced to work under Masters & Servants ordinance or similar laws[c]	●					
Labour mobility curtailed, creation of labour reserves	●					
Segregated employment laws	●					
Compelled to produce certain cash or food crops	●					
Evicted or pressured to give up land	●	●	●	●	●	●

Table 7. Documented forms of preferential support received by large-scale agriculture in sub-Saharan Africa (continued)

	Plantations and large-scale settler farms[a]		Contract farming			
	Colonial period	Post-independence	Private schemes	Public or joint venture schemes	Commercial farming areas[b]	Indigenous capitalist farmers
2. Measures to benefit firms and farms						
Cheap or disproportionate access to credit, including from state banks	●	●	●	●	●	●
Funding or loans from donors, including World Bank[d]		●	●	●	●	●
Loan repayments waived during economic crises	●					●
Alienated or expropriated land	●			●	●	
Cheap land, often granted long leases	●	●	●		●	
Supportive land laws	●	●	●	●	●	●
Located on prime land	●	●				
Use of slavery,[e] forced, indentured or attested labour[f]	●					
Support from police and local authorities in disciplining labourers or protecting farms	●	●		●		
Price support	●	●	●	●	●	●
Protectionism	●		●	●		●
Priority support from marketing boards and other policy mechanisms	●	●	●		●	
Granted a processing monopoly or buying monopsony			●			
Unlimited rights to export produce					●	
Subsidies for inputs, machinery, etc.	●	●	●		●	●
Allowed to expatriate profits		●	●		●	
Tax breaks, including corporate tax waived or postponed, exemption from import or export tax	●	●	●	●		
Cheap railway and wharf rates	●	●				
Support for employing expatriates			●			
State extension services	●		●	●	●	●

Table 7. Documented forms of preferential support received by large-scale agriculture in sub-Saharan Africa (continued)

	Plantations and large-scale settler farms[a]		Contract farming		Commercial farming areas[b]	Indigenous capitalist farmers
	Colonial period	Post-independence	Private schemes	Public or joint venture schemes		
2. Measures to benefit firms and farms						
State assistance in meeting international standards			●			
Good access to R&D, seeds; bias in agricultural research towards large-scale production	●				●	●
Infrastructure provided by state	●	●	●	●	●	●
Cheap water sources	●	●				●
Preferential treatment by the judiciary	●		●			
Lobbying power, influence with political elite	●	●	●	●	●	●

[a] Plantations and large-scale farms are considered together because some authors do not distinguish between them, especially early plantations established by individuals rather than corporations, and there do not seem to be significant differences in the support they received.
[b] This evidence is mostly from planned farming blocks for European or indigenous farmers.
[c] Includes Mozambican legislation of 1942 requiring Africans to work for six months of the year, Zimbabwe's 1926 Native Juveniles Employment Act and corvée labour requirements in French West Africa.
[d] Other donors include African Development Bank, Commonwealth Development Corporation, European Union and European Development Fund, OPEC, SIDA (Denmark), USAID and other national governments.
[e] African slavery occurred as late as 1910 in São Tomé and Príncipe (Daviron 2010).
[f] Attested labour was 'recruited by officially approved agents and issued with written contracts laying down a minimum working period within a maximum period of migration, as well as stipulating entitlements to shelter, food, medical attention and repatriation' (Gibbon 2011:30).

Contract farming, too, has benefited from a range of support measures, including tax breaks and rural infrastructure provision as well as substantial finance from the CDC and donor agencies keen to support agricultural projects that include local farmers. In joint public–private ventures, the state might step in to buy factories or pay off debts in order to prevent collapse. Contract farming should therefore be understood as a political-economic creation in which the state plays a key role (Daddieh 1994; Oya 2012).[13] 'Agribusiness relies on the state to restrict the arena within which market competition can occur,' note Little and Watts (1994:15). 'It cherishes market imperfections and actually benefits from "getting the prices wrong"'. Whereas colonial states protected plantations and settler farms in order to consolidate their empires and extract surplus, postcolonial African governments may be driven to offer favourable terms and subsidies to foreign agribusiness in order to increase exports and foreign reserves, reduce reliance on food imports and somehow stimulate rural economies that have stagnated since the withdrawal of state support through structural adjustment reforms.[14] Structural adjustments denuded the public agriculture sector, although De Schutter (2011:7) warns that 'contract farming should not … serve as an excuse for governments to neglect their duty to support farmers with the provision of public goods.'

The influence of governments and other institutions on the outcomes of large-scale commercial agriculture is now widely acknowledged (Grosh 1994; Grossman 1998; Vermeulen & Cotula 2010; Ariyo & Mortimore 2011; Prowse 2012). Of particular interest are state attitudes and legislation concerning acquisition of land by the state; foreign ownership of land; and the maximum size of foreign farms. As indicated in *Table 7*, the establishment of plantations has been eased by land laws, such as Nigeria's 1978 Land Use Decree, which made it easier for foreign capital to purchase land (Watts 1994). Daddieh (1994) explains that Côte d'Ivoire altered its property rights system in the 1970s to facilitate large-scale oil-palm production, whereas attempts by the state in Ghana to expropriate village land for oil-palm were comprehensively resisted. Useful comparisons may be found beyond sub-Saharan Africa. Establishment of oil-palm plantations in Indonesia and Malaysia has been facilitated by most of the land being state-owned forest, but in nearby Papua New Guinea, most land is owned by communities, obliging investors to deal directly with community landholders (Friends of the Earth 2005; Hall et al. 2011).

Observing how ambivalent policies, preferential support and land legislation have shaped the development of large-scale agriculture in the past could be relevant to the current land-grab debate, in that it may help to better understand:

- The full nature of plantations, commercial farming areas and contract farming schemes, including their cost to governments, donors and competing peasant producers.
- The diverse pressures on and motivations of African governments, including possibly complex or contradictory attitudes towards small-, medium- and large-scale agriculture.
- The potential for external factors to influence the direction and outcome of large-scale agriculture in a particular context, beyond notional economic actors in a vacuum.
- The difference between rhetoric and reality, and the discursive sensitivity of 'plantation' and 'peasant', such that a publicly stated commitment to smallholders is not always realised in practice.

5. Impacts of the three farming models

5.1 Introduction

This chapter considers what impacts the three farming models have had, grouped into five main areas: impacts related to labour and contract conditions; impacts on rural structures and other local impacts; impacts within the household; impacts on food security; and macro-economic impacts. Although the review focuses on experiences in sub-Saharan Africa since the early twentieth century, it also considers cases from elsewhere, particularly south-east Asia and Latin America. This is because the paper aims to be relevant for future research into agricultural models that emerge or are planned as part of the current large-scale land deals, and it is possible that those future models will take new forms in Africa.

First, a brief comment on assessing impacts is required. As noted in Chapter 3, academics, practitioners and policymakers measure the benefits of agricultural schemes in many ways. They use a range of metrics, based on differing theoretical assumptions, to define success and failure. This shapes the body of literature on large-scale farming models, as it guides the kind of evidence that authors gather and the conclusions that they come to. The following lists the diverse outcomes that may be prioritised by planners and observers of large-scale agricultural schemes:

- safeguarding the peasantry and avoiding landlessness (e.g. La Via Campesina 2010);
- generating employment or creating conditions for rural livelihood diversification beyond peasant farming (e.g. the livelihoods school, Humphrey et al. 2004);
- smallholder commercialisation and emergence of capitalist farmers (e.g. the World Development Report 2008);
- creating a conducive environment to attract foreign investment and ensure longevity and profitability of schemes (e.g. UNCTAD 2009);
- stimulating rural development through trickle-down effects and technology transfer (e.g. Kwara State regional government, Nigeria);
- macro-economic benefits such as reducing food imports or generating foreign exchange (e.g. domestic governments);
- inclusivity and democracy (e.g. Leavy &Poulton 2007; Vermeulen & Cotula 2010);
- ensuring worker welfare, labour mobility and/or smallholder freedom within contracts (e.g. ILO 2008);
- safeguarding women's control of farmland and opportunities for incomes from farming (e.g. Behrman et al. 2012);
- protecting rights of existing land users, including pastoralists and forest dwellers (e.g. Friends of the Earth 2005); and
- avoiding adverse environmental impacts (*ibid.*).

The aim of this paper is to assess the impacts of the farming models from a normative pro-poor perspective. The hope is to identify whether certain farm systems in certain institutional contexts could benefit the rural poor, without any a priori assumption that large-scale farming is inherently harmful. However, without taking a particular theoretical positionit is difficult to arrive at firm conclusions in this area, since there is wide disagreement within rural studies and the international development community on what is 'best' for poor rural people.

5.2 Impacts relating to labour and contract conditions

(a) Labour- and contract-related impacts of plantations

Plantations can be brutal places to live and work. They may no longer be associated with the slave labour and corporal punishment of colonialism (Daviron 2010; Epale 1985), but data gathered by the ILO and numerous researchers on plantation worker welfare since the 1950s provide **widespread evidence for low wages, long hours, poor worker housing, health risks and exploitation of child labour**. There are, however, possible

mitigating factors: firstly, conditions vary between plantations; and secondly, even when substandard conditions and services are provided, they might be better than what is available elsewhere, including the wages and conditions for workers on local small-scale farms. Writing about a tea plantation in Kenya, for example, Davies (1987) suggests that the medical dispensaries, hospital and ambulance service offered to workers compared favourably to anything provided by the state in the local area. That said, a review of the evidence can proceed, beginning with the wages earned by plantation workers.

Although earnings above the minimum wage are reported in some cases (Little & Tipping 1972; Pryor & Chipeta 1990; Mackintosh 1998; Cramer & Pontara 1998; Richardson 2010), most studies suggest that plantation wages are at or below the minimum wage. In 1990/1991, plantation wages were below unskilled construction wages in 60% of 23 developing countries sampled by the ILO (1994), not including in-kind payment such as housing and food. Rates of pay might vary with gender and the task. In addition to labourers in the fields and processing factories, plantations —like large-scale farms —also hire drivers, loaders and so on, who might have better wages and bargaining power (Cramer & Pontara 1998). Workers that live nearby might be trucked to the site in uncomfortable and dangerous conditions (FAO/ILO/IUR 2007). Workers that live on the plantation are often housed in inadequate dormitories and houses or required to build their own shelter, suffering from attendant problems of overcrowding and poor sanitation (Sajhau & Von Muralt 1987; Adagala 1991; Loewenson 1992; ILO 1994). This can be in spite of legislation in several countries stipulating minimum housing standards. Legislation has also been introduced to safeguard worker safety, given the high level of work-related accidents and illness associated with back-breaking outdoor work, reliance on tools and machinery, and, in particular, exposure to agro-chemicals. The ILO (1994) suggested that 2% of agricultural workers in Côte d'Ivoire, Kenya, Malawi, Sudan and Uganda had suffered from pesticide poisoning, while in 2002 a report claimed widespread herbicide poisoning of female plantation workers in Malaysia (Friends of the Earth 2005).

The existence of **legislation** along with the political will to enforce it is a key determinant of the welfare of plantation workers. During the second half of the twentieth century, plantations became a site of worker struggle, and unions achieved some success in increasing pay and improving work conditions (Sender & Smith 1986; Loewenson 1992; Hayami 2010; Gibbon 2011; see Porter & Phillips-Howard 1997:234 for an example). This was often at great cost: a report from the International Federation of Plantation, Agricultural and Allied Workers describes how union officials were harassed, evicted and detained in Zimbabwe, South Africa and Tanzania (IFPAW 1971). In 1961, police in Mozambique shot and killed 15 workers demonstrating on a tea plantation (O'Laughlin 2000). Other influential factors include: (a) **the crop characteristics**, which affect, for example, intensity of labour and whether it is possible for peasant-workers to also harvest food crops during the season; (b) **international commodity prices**, since a fall in the plantation crop price or a rise in input pricescreates costs for the plantation which are typically passed on to workers; (d) **labour scarcity and competition for labour** from other employers; and (e) the viability and **shadow wage** of the rival peasant sector. The last two points affect wages and the use of migrant labour (Tiffen & Mortimore 1990; Loewenson 1992). In 1974, wages in Malawi's plantation sector fell when alternative employment in South African mines was phased out (Lucas 1987). Similarly, Mbilinyi (1988) writes that Tanzanian plantations competed with mines in the 1950s — but were, nevertheless, able to keep wages low by employing female and child labour.

The **specifics of labour arrangements** further affect working conditions. Firstly, evidence suggests that workers recruited by middlemen, supervisors or contractors are more vulnerable to exploitation, and receive fewer employee benefits, than workers recruited directly by the plantation. This kind of recruitment was especially common in southern Asia (Sajhau & Von Muralt 1987; Ramachandran 1990). Secondly, it matters whether the worker is permanent, paid monthly; a contract, seasonal or casual worker, probably paid daily; or a piece worker, paid upon results. Permanent workers tend to receive higher wages, greater benefits and stronger legal protection than other types of worker, though their position is still unstable (Adagala 1991; Loewenson 1992; Siddiqui 1998; Lansing et al. 2008; Tallontire et al. 2005; Friends of the Earth et al. 2008). Thirdly, workers gain flexibility and income if they are able to do supplementary off-plantation work or continue peasant production for subsistence and exchange (see McCarthy 2010:833 for an example).Plantations may even prefer workers to remain 'semi-proletarian'— some labourers, reminiscent of Lenin's (1899:133) 'allotment-holding wage-workers', are given garden plots on the plantation, or maintain access to family smallholdings if they live nearby. Authors have suggested that this might be so that the employers can benefit from the self-exploitation of family farmers and pay lower wages than if workers had to purchase more food (Foeken & Tellegren 1994; Siddiqui 1998). A Marxist explanation is that employers wish to prevent workers from developing a class consciousness (Brass & Bernstein 1992).

When local people find alternative income sources or choose to remain in peasant farming, plantations face the major problem of labour shortage,which they may solve by recruiting migrant workers. This can create social tensions and, especially if the workers were recruited from abroad through indenture as has been common in Asia, lock them into debt with the plantation company and leave them vulnerable to deportation (Kirk 1987a; Brass & Bernstein 1992; Sender & Johnston 2004; Li 2011). Plantations also faced rising labour costs as a result of the increasing unionism. Partly in response to this, plantations have increased their use of mechanisation and employed more seasonal or casual labour in recent decades.

(b) Labour- and contract-related impacts of contract farming

Income and deductions

It is widely asserted that participation in contract farming schemes provides a good earning, above what farmers in the area can earn from non-contracted crops (Glover 1984; Carney 1988; Glover & Kusterer 1990; Warning & Key 2005; Bolwig et al. 2009; Richardson 2010). This applies across public and private schemes and includes outgrowing. The claims should be treated cautiously, however, since researchers might use assumptions or incomplete data (see Heald & Hay 1985). It is also possible that the high earnings of contract farmers are partly attributable to pre-existing endowments of participants or to less productive farmers having been dropped from the scheme (Heald & Hay 1985; Maertens & Swinnen 2007; English et al. 2004; Leavy & Poulton 2007). Participation in contract farming offers further benefits, such as income stability and access to credit, if not from the contracting company then by using the contract as collateral to borrow from a bank (Glover & Kusterer 1990; Singh 2002; Randela 2005; Minten et al.2009).

Earnings from contract farming are heavily determined by **prices, deductions and the system of payment**. Because of the high value of many contracted crops, the price paid to contract farmers is generally better than the local price for traditional food or cash crops (Grosh 1994). Typically, the price is decided in advance, sometimes by the government or a consortium of contractors (Poulton 1998; Prowse 2012).If there are alternative markets for the crop it can force the company to increase the price that it pays its contract farmers. Pricing is key, since if farmers receive a poor price, they are more likely to ignore instructions or opt out of the contractand do side-selling, but it also minimises the disparity between them and non-participants.

From this payment are taken deductions — loan repayments and other costs that farmers face. These can be substantial: some oil-palm smallholders in Indonesia spend 30% of their contract income on credit repayments (McCarthy 2010). The scale of deductions depends on the interest rate and the number of services and goods that farmers are obliged to pay for. **Farmers are usually provided with inputs, particularly fertiliser and seeds, on credit, but some schemes also charge for ploughing, harvesting, transport, processing and marketing**. The deductions paid by farmers contracted by sugar firms in western Kenya are particularly high, and a 2006 report recommended that the companies internalise or outsource many of their services (KESREF 2006). Farmers might also take out loans to acquire equipment and land if markets are available (Glover & Kusterer 1990).

Indebted farmers are vulnerable to inflation. A key factor is **how often farmers are paid**, as those who must wait a long time will accrue debts and interest. Sugarcane farmers might wait two years before the first harvest and lump-sum payment, whereas the year-round harvesting of horticulture and tea allows those producers to receive more regular weekly or monthly payments. Nevertheless, they, too, can face a long delay between delivering the produce and being paid (Singh 2002; Minten et al. 2009; Vermeulen & Cotula 2010). The resulting indebtedness can create dependency on the contracting firm (Glover and Kusterer 1990). In one example from Indonesia, farmers were required to pay off their debts with labour (Friends of the Earth et al. 2008). Contract farming is already thought to make farmers vulnerable by increasing their involvement in cash-crop cultivation, which can have more variable yields than traditional crops and expose farmers to fluctuations in the global market (Key & Runsten 1999; Randela 2005). There are instances where companies or governments have intervened to support farmers, however, such as by lowering interest rates or renegotiating debts.

Power dynamics and control

The **behaviour of the company** or parastatal, its staff and its sub-contractors strongly influences the welfare of farmers under contract. At a strategic level, farmers might be vulnerable to a process of 'agribusiness normalisation', whereby, after a generous honeymoon period of one or two seasons, the firm begins to tighten the contracts and conditions for participating farmers who are now committed, perhaps through debt, to continuing (Glover & Kusterer 1990; Simmons 2002; Singh 2002). Where quality criteria are used to grade and price contracted produce, farmers have complained of companies abusing the system, particularly if the criteria are arbitrary or subjective (Glover 1984; Clapp 1988; Watts 1994; Grossman 1998; Eaton & Shepherd 2001; Minot & Ngigi 2004). Generally, the literature suggests that the more sub-contractors and employees are involved in services such as land clearance, input supply, harvesting and transport, the more scope there is for bribery and profit skimming. Examples include tractor drivers siphoning off fuel, intimidation by work gangs and staff taking kickbacks from input suppliers (Mulaa 1981; English et al. 2004; KESREF 2006). Corruption and farmer grievances are particularly common in the area of delivery. Arrangements for getting contracted produce to the contractor vary, and include collection points in villages where farmers bring their crops to be inspected and weighed by a company representative, and farmers delivering, or accompanying a truck delivering, produce to the central processing plant. There are reports of farmers having to pay bribes at the gate or waiting for several hours to be let through, while their crops dry out and the price paid withers (Mbilinyi 1988; Glover & Kusterer 1990:116). Poor road infrastructure and faulty weighbridges present further delivery challenges. Aside from adding to the operational costs that are passed on to farmers, corruption erodes the trust between farmers and the company and lessens the chances of schemes succeeding (Prowse 2012).

However, **cheating of contracts by farmers** also goes on. This includes cheating the company at the point of delivery, for example by filling sacks with stones (Mbilinyi 1988), and so-called input diversification, where farmers either apply inputs such as fertiliser to other, non-contracted crops or sell it locally on the black market. The behaviour that especially concerns companies and economists is farmers side-selling contracted crops to alternative buyers, which threatens the volumes companies need to achieve, wastes their investment in training and extension, and can lead to collapse of the scheme. It was noted earlier that as an economic operation contract farming works best when the company has a monopsony or can enforce contracts, but this isn't always possible, and **side-selling to alternative markets is commonly reported in the literature**, as are instances of farmers switching from contracted crops to other crops in order to seek better returns or respond to food insecurity (Mbilinyi 1988; Clapp 1998; Poulton 1998; Amanor 2005). Frustratingly, authors often fail to document whether the farmers have broken the terms of their contracts or have simply switched after contracts have lapsed. In one case from cotton farming in Zambia (Brambilla & Porto 2005), however, it is clear that smallholders were still under contract when, in 1999, they began selling to rival ginning firms and traders that had emerged to challenge the contracting firms' monopsony. Their side-selling led to loan defaults and lower profits for the other smallholders, and the schemes collapsed. Farmers decreased their cotton production and turned to maize. Only when the firms took steps to enforce contracts and widen participation did contract farming re-start. This example illustrates the tension between competition and monopsony, farmer freedom and company control, at the heart of contract farming.

Relevant here are the **sanctions** that farmers face for side-selling, failing to deliver adequate yields or otherwise breaching their contracts. As Tiffen (1995) argued, farmers that own land are in a stronger position than participants who lease or have been granted plots and face the ultimate sanction of eviction. Landholders tend to face weaker sanctions of losing a licence to grow the crop or not being able to participate in future, which can be evaded in any case by, for example, re-registering under a relative's name. Hence, foreign sugar companies in Mozambique prefer outgrowers on sub-leased company land to independent contract growers, as it gives them more control over contract enforcement (Marini 2001).There are suggestions, especially from mainstream economists, that **companies are actually in a relatively weak position when it comes to enforcing contracts**. In some circumstances it can be costly and time-consuming to bring farmers to account and risks damaging the company's local standing, in which case the company is likely to resort to milder sanctions and social pressure (Poulton 1998;Minten,et al.2009).

These examples of cheating and contract evasion might suggest that some farmers are freer than is claimed by critics. To paraphrase Brass and Bernstein (1992), the crucial aspect of labour freedom is not whether you choose to sign up, but whether you are free to leave. Clapp (1988) and Little and Watts (1994) admit that contract farming can involve resistance and negotiation, and that contractual terms are not always realised in practice. Arguably, this undermines those authors' attack on contract farming as a form of subjugation.

Another factor that influences the outcome for contracted farmers is their **group bargaining power**. Individually, contracted farmers often complain of **a lack of transparency** over the payment system, their debts and what services they are paying for. A recent review of 19 contracts from eight countries found that crucial details such as length of contract and pricing are often omitted (Prowse 2012). To strengthen their negotiating position and gain information, farmers might form **representative organisations, such as cooperatives and farmers' associations**, to act on their behalf as what Eaton and Shepherd term intermediaries (see Chapter 2.2). The cotton producer groups described by Kaminski et al. (2009) are a positive example. Farmers also gain leverage by gaining representation among management or securing a profit share. The best known case of this is the KTDA (Kenya Tea Development Agency, formerly Authority) scheme. The presence of smallholders on the KTDA board from the start enabled them to fight against efforts from the World Bank and other donors to exclude the smallest, poorest farmers, and resulted in privatisation in 2001, with the scheme now entirely smallholder-owned (Ochieng 2010).

According to Oya (2012), the KTDA example demonstrates the potential for political and economic struggles over the operation of contract farming schemes. However, it seems to be quite an unusual case. Cooperatives and joint ventures are not necessarily associated with empowerment; Vermeulen and Cotula (2010) report another case from Kenya, the Mwea irrigated rice scheme, where participating farmers hold a 45% stake in the central milling plant but still lack influence with the parastatal that runs the scheme. There are two further caveats to make. Firstly, although having a single representative organisation to deal with can benefit firms by reducing their transaction costs and help to enforce contracts, Key and Runsten (1999) argued that, in Mexico at least, an increase in collective organisation by farmers ultimately persuaded agribusiness companies to seek alternative, weaker growers or to retreat to vertical integration. Secondly, we should bear in mind that cooperatives and associations can generate costs for farmers in terms of overheads and membership fees, adding to their debts (Mbilinyi 1988; Mate 2001). When they act as middlemen for distributing credit, inputs or payments, there is also scope for inefficiency and corruption, a charge that has been levelled at outgrower institutions in Kenya's sugarbelt (KACC 2010).

It may be recalled that critical agrarian scholars have complained that, by imposing strict instructions on how to grow contract crops, contract farming disempowers peasants through a process of de-skilling that demotes them to the status of propertied labourers (Clapp 1998). The literature suggests that many companies do indeed

assert control over cultivation, in two ways: (1) through training, monitoring and providing detailed instructions over which inputs to apply and when; or (2) by field staff carrying out certain activities, such as spraying or cane-cutting, themselves. There is little qualitative evidence for how farmers feel about this. Mbilinyi (1988) writes that tea growers in western Tanzania felt their control had been dispossessed; Poulton (1998:85), researching a cotton scheme in Ghana, hypothesized—although was unconvinced—that a lack of commitment among farmers was due tothe fact that they felt no sense of ownership. However, two of the most optimistic documented cases of contract farming, from Madagascar and Uganda, featured high levels of control over production by the contracting firms, yet the authors reported high participant satisfaction (Bolwig et al. 2009; Minten et al.2009). Besides, according to Grossman (1998), an author who stresses actors' agency and the influence of local context, farmers are free to adapt contractual instructions and reject poor advice (see also Glover & Kusterer 1990 on Peruvian farmers).

To some extent, what researchers find reflects their theoretical position. But a tentative conclusion is that there is a balance to be struck to provide farmers with sufficient support and guidance while avoiding paternalism and giving instructions that have an adverse effect on farmers' other crops. Setting aside the matter of a loss of autonomy, tight control can have the beneficial effect of helping farmers to achieve high yields and thus earnings, ensuring high loan repayment rates and avoiding large disparities in wealth among participants (Buch-Hansen & Marcussen 1982; Amanor 1999). Because it is so important for indebted contract farmers to achieve high yields, they might even demand more, not less, instruction (Waswa et al. 2012). This might apply to schemes where crops are new to the area and where the extension services provided are sub-standard. If the quality of services is poor, particularly extension, this undermines one of the key arguments for contract farming: that it provides smallholders with rare access to ancillary services (Glover 1984).

The issue of control does not apply only to farmers' skills. It is just as important to consider how **organisational control** affects participating farmers. For example, the Mumias Sugar Company in Kenya is not thought to be particularly controlling over cultivation practices — and was even criticised in 2006 for a lack of supervision — yet its monopoly control over ancillary services has diminished participants' power and earnings (Waswa et al. 2012). Its apparently excessive control in this area has a harmful effect, but in other areas greater organisational control by contractors and political authorities is needed, in order to coordinate delivery in Kenya's sugarbelt for example (KESREF 2006), or to ensure equitable allocation of land for contract farming plots, as in Indonesia (McCarthy 2010). Again, it seems that a balance is needed.

An area where contract farmers do retain control irrespective of de-skilling is in **allocating and hiring labour**. There is widespread evidence that even the smallest farms use hired labourers to work on contracted crops at peak times. The welfare of these workers, and not just the farmers that hire them, should be included in assessments of the impacts of contract farming schemes.

(c) Labour- and contract-related impacts of commercial farming areas

Information on the experience of farmworkers employed in commercial farming areas was gleaned from: accounts of a 1950s scheme for British servicemen in Urambo, Tanzania (Mbilinyi 1991); three farming blocks in Botswana, Namibia and Zimbabwe (Guenther 1977; Rutherford 1977; Sylvain 2006); and Zambia's MkushiBlock, where a number of British, Greek, South African and Zimbabwean farmers, as well as incomers from elsewhere in Zambia, have settled since the land was first cleared for Europeans in the 1940s (Cole 1962; Stocking 1983; Sjaastad et al. 2012).Information is also available on more general farmwork during the twentieth and early twenty-first centuries on white settler farms in southern Africa, indigenous-owned capitalist farms and medium and large contract farms engaged in horticulture.

Generally speaking, **waged agricultural workers in Africa have been overlooked by researchers,donors and policymakers** (FAO/ILO/IUR 2007). The thousands of black farmworkers in Namibia, South Africa and Zimbabwe were neglected politically and were not initially considered in debates over the redistribution of white farmland (Du Toit 1994; Rutherford 1997; Moyo et al. 2000; Werner 2003). Casual workers or workers on peasant farms are easily missed by statistical surveys (Kydd & Christiansen 1982; Cramer & Pontara 1999). However, the available evidence suggests that **waged farm work is one of the worst paid, most hazardous and least protected of all livelihoods**. The poverty rates, long hours and poor housing conditions appear similar to what is found on plantations; one difference being that workers on mixed farms are also exposed to diseases transmitted by livestock. Across all farm sizes, waged workers in Africa consistently suffer higher rates of poverty than the rural population in general (FAO/ILO/IUR 2007). The workers include children, who often help to meet piece rates. Rates of HIV/AIDS among farm workers in Africa are very high.

Historically, the predominantly white owners of large commercial farms in southern Africa used a range of measures to force people into work and prevent them from leaving (Jeeves & Crush 1997; O'Laughlin 2000; Gibbon 2011). There are reports of farmers in 1950s Namibia holding children of San workers hostage to prevent their parents deserting (Devereux et al. 1996). Despite the gradual outlawing of the harshest treatment, poor working conditions persisted throughout the twentieth century. In countries where farmers had strong political lobbying power such as Namibia and Zimbabwe, they resisted legislative measures to improve pay and

Box 2. Worker restrictions on large farms in Kenya

In *Tied To The Land* (1994), Foeken and Tellegren surveyed nine mixed farms ranging from 40ha to 400ha in Trans Nzoia, western Kenya. They identified four groups of farmworkers: permanent workers who resided on the farm; resident casual workers; non-resident casual workers who lived nearby; and employed squatters. The number of migrant workers was low. The authors found the usual discrepancy between permanent and casual workers in terms of benefits and pay: the permanent workers earned a monthly salary (albeit below minimum wage) and most were given a house, access to medical services and a one-acre garden plot. Casual workers, paid daily or piece rates, received fewer benefits. However, the authors also noted a difference in employment terms between the resident and non-resident workers. Those living on site, even the permanent workers, were forbidden from working outside the farm under threat of eviction and were restricted in what they could grow on their small plots. According to Foeken and Tellegren, this tied the workers to the farm and increased their dependence on the low income it offered. Non-residential workers were under no such restrictions and had greater freedom over their labour-power; however, they were not necessarily better off, since it tended to be the poorest households in the local area who engaged in farm work to start with. Indeed, the best off were local smallholders with access to non-farm employment who did not work on the commercial farms at all.

worker welfare, arguing that it would harm struggling farmers (Von Blanckenburg 1994; Werner 2002). Evidence of comparatively better pay is provided by two recent studies of horticulture farming in Kenya (Dolan 2004; Neven et al.2009). However, in Kenya as elsewhere there is evidence of poor employment conditions for casual and seasonal workers, whose positions are less secure and who are typically offered worse pay and fewer benefits than permanent workers. As with plantations, there are several possible reasons why farms shift more of their workforce into casual or piece work, including: labour shortages; a fall in producer prices; seasonal demands of the crop or livestock in question; demands for farm flexibility from globalised buyers; or an attempt by farmers to escape their duties as employers towards permanent staff. The literature also reveals **substantial reliance on migrant workers**. Indeed, the perception that farmworkers on Zimbabwean settler farms were predominantly foreign is one reason why they were politically sidelined after independence (Moyo et al. 2000). According to the UN, migrant farmworkers form a particularly vulnerable, poorly treated group (FAO/ILO/IUR 2007), although there are cases of skilled, experienced migrant workers being sought-after by employers (e.g. Mackintosh 1989).

What has driven the consistently low pay and poor treatment of agricultural wage workers in Africa?One factor has been the **low political profile of farmworkers**, especially compared with the strong lobbying power and state patronage of commercial farm-owners on the one hand, and the NGO and donor communities' preoccupation with smallholders on the other. In some countries farmworkers were not covered by legislation that protects workers in other sectors (FAO/ILO/IUR 2007). Often, state inspection and enforcement of welfare measures such as minimum housing standards has been stymied by a lack of resources, obstruction by farmers and a lack of commitment by politicians who own farms themselves (Jeeves & Crush 1997; Foeken & Tellegren 1994). **There are farmworker trade unions, but they have been constrained by political suppression and the dispersed nature of the agricultural workforce**: for example, seasonal, migrant workforces can be difficult to organise, while permanent workers on remote farms might not be able to travel to meetings (Werner 2002; Cramer et al. 2008; ILO 2008). In Zimbabwe, union influence was weak until the 1990s, when interest in farm welfare increased as part of land reform (Moyo et al. 2000). In one of the case studies of horticulture farms in Kenya, the author found that although around a third of farmworkers were members of the Kenya Plantation and Agriculture Workers Union, few permanent workers were aware of their rights and many of the informal, casual workers were not eligible for union membership (Dolan 2004; see also Tallontire et al. 2005 for similar findings from South Africa and Zambia).

Another factor relates to the **lack of independent land tenure** enjoyed by many workers on large farms. It has been common for labourers to live on the farm, in either purpose-built compounds or houses they build themselves. After independence, many African governments actually wanted farmers to use full-time residential labour rather than recruit workers from native reserves (Gibbon 2011), and farmers in some countries are legally obliged to provide housing for permanent workers. Historically, farmers have also drawn labour from squatters living on the farm (Throup 1987; Mabogunje 1989). Living on site seems to affect farmworkers' bargaining position by giving their employer the ultimate threat of evicting them. At Zambia's Mkushi Block, as Sjaastad et al.(2012:14) explain, the in-coming Zimbabwean farmers were used to a 'paternalistic and authoritarian approach to labour, with workers and their children living in on-farm settlements'. But in Zambia, most of their workers lived off the farm and proved more difficult to control, resisting the Zimbabweans' discipline with strikes and violence. *Box 2* provides an example from Kenya in which resident farmworkers were threatened with eviction if they did additional work off the farm. In some ways, therefore, being provided with accommodation but no tenure security might increase workers' dependency and inhibit their livelihood options (Moyo et al. 2000; FAO/ILO/IUR 2007).

A final observation is that participation in commercial farming areas, and the general operation of a medium or large-scale commercial farm, requires considerable up-front equity and capital investment. Recent Zimbabwean farmers joining the Shonga Farms scheme

in Kwara State, Nigeria, have had to clear the land, establish farm infrastructure and provide US$80000 in share capital (Ariyo & Mortimore 2011). Some farmers enter into contract farming arrangements and suffer from some of the same debt-related problems experienced by contract smallholders. See, for example, Hammar's (2010) study of Zimbabwean farmers who moved to Mozambique and became contract tobacco growers in the early 2000s. The financial vulnerability of commercial farmers is relevant to rural poverty as it can encourage them to hire less well remunerated casual or piece workers, and increase the overall instability of large-scale agricultural schemes. This is explored further in the following section.

5.3 Impacts on rural structures and other local impacts

(a) Local impacts of plantations

In comparison with the body of empirical data on plantation worker conditions and the copious theoretical literature, information on the socio-economic impacts of plantations on their surrounding areas is scanty. Much of the discussion seems to remain at the theoretical level, such as the debate over enclaves and linkages, or concerns over the (de)proletarianisation of labourers (Davies 1987). The mainstream economics approach is to predict impacts by calculating the total economic value (TEV) of alternative business models (Yaron 2001), or to weigh up actual trade-offs: a typical paper is Lele and Agarwal's *Smallholder and Large-Scale Agriculture in Africa: Are There Trade-offs between Growth and Equity?* (1989). Still, there is enough literature to identify four key aspects in which plantations have an effect at local level: employment and spillover effects; impacts on land, labour and class structures; squatting and conflict; and environmental impacts.

Spillover effects

The theory that plantations will benefit local agriculture through technology transfer and other spillover effects is commonly argued by plantation advocates, and evidence suggests that this has occurred in many cases. If they can acquire land, former workers might attempt to establish independent operations using their plantation crop experience, as reported in Indonesia with oil-palm (McCarthy 2010; Papenfus 2000; Li 2011) and colonial Côte d'Ivoire (Oya 2007). In the past, rural areas have benefited from new infrastructure such as roads. It is also recorded that the arrival of a plantation workforce can stimulate local petty trading, not only for smallholders to sell food and goods to the estate but also, occasionally, for workers with plots to sell food to locals (Epale 1985; Schoneveld et al. 2011). Partly the spillovers depend on the **benevolence of the plantation operator**; in one recent example, the company provided free ploughing services for local smallholders (Boamah 2011). While plantations may also provide local employment, there are instances where jobs are given to migrants or the level of employment declines once the plantation is established (Vallely 1992). It appears that companies are increasingly pledging to recruit at least a proportion of their workforce locally as part of deal negotiations, although they do not always honour this (Hall et al. 2011; Schoneveld et al. 2011).

Rural structures

This leads on to broader impacts on rural structures. By hiring local people, **plantations can affect food production by diverting labour from peasant agriculture** on family or on communal holdings (Mackintosh 1989; Pryor & Chipeta 1990). Such was the outcome of the recent establishment of a jatropha plantation in western Ghana, where, although people tried to sustain peasant farming at the expense of other off-farm jobs, there was still a clash in the demand for their time which affected local food production (Schoneveld et al. 2011).

That would not occur ifthere were surplus household members looking for work or people who are already landless labourers. They could be employed on the plantation with minimal disruption to peasant farming (although it might create labour shortages for competing local employers). Recent evidence suggests that there are parts of rural Africa with high population densities (over 500 people per km^2) and increasing inequality in land ownership (Jayne et al. 2012). That might suggest there are pools of people fromlandless or near-landless householdswho could benefit from plantation wage labour, without food production being adversely affected.

However, it seems that jobs created by plantations are not numerous, skilled or well paid enough to effect wholesale rural transformation and alleviation of poverty. It is questionable whether becoming a wholly proletarianised unskilled worker who depends on a plantation for income and a place to live offers a chance to progress (as suggested by Hayami & Otsuka 1993, in the Philippines) or is rather a dead end with few prospects for improving one's lot (especially for women; see Adagala 1991; Lincoln 1994). Case studies reveal that a neat transition of people moving from peasantry or landlessness into plantation employment often fails to materialise. In the Ghanaian example mentioned above, only three households that lost land to the plantation subsequently found employment with the company (one reason being that the recruitment centre was more than 20km away). Furthermore, areas of dense populations and little land availability are not an obvious place for plantations to be established.

Outside such areas, particularly in sub-Saharan Africa, it is common for local people to persist with peasant production to some degree, as a risk diversification strategy and cultural preference, among other reasons (Oya 2010). Perhaps a better solution, therefore, is for the working arrangements to be flexible enough to allow plantation workers to work on family or communal farms at peak times, or, alternatively, for the plantation

company to grant workers land or allow them to intercrop with food crops. This may not be possible if the labour requirements of the plantation crop overlap with the seasonal labour demands of food crops grown by peasants.

By hiring migrants or foreigners, plantations would avoid diverting labour from local production, and there might be a positive spillover effect of local producers selling food to incoming workers. However, migrant recruitment is associated with a growth in local prostitution, money leaving the area as remittances and heightened vulnerability of workers to exploitation (Epale 1985; Nyanda 1989; Loewenson 1992; Richardson 2010; Julia & White 2012). Furthermore, if migrants stay in the area there can be tension and competition over land and jobs (Friends of the Earth et al. 2008; Li 2011).

Plantations also affect local production by alienating land previously used for peasant agriculture or foraging. Shifting cultivation systems are particularly vulnerable to takeover, as fallow land may be seen as unused. Also vulnerable are: areas used by women such as individual plots separate from family holdings or marginal areas where they gather firewood or handicraft materials; grazing areas used by pastoralists; and land cultivated by newcomers who have a weaker claim to the land within the community (Unruh 1990; Richardson 2010; Schoneveld et al. 2011; Julia & White 2012). The extent of land alienation, and the ease with which land is alienated, depends on several factors: the land rights of local people; whether it is state or community land; collusion of politicians and elites; inclusiveness of consultation and decision-making; whether schemes provide compensatory land; and norms of land ownership —for example, in Ghana outsiders can claim land simply by clearing or planting on it (Poulton 1998; Amanor & Pabi 2007). Further land can be lost if the plantation stimulates land speculation by attracting copycat farmers to the area, or if the poorest peasants are pressured to sell land to others. Land accumulation is particularly common in Indonesia owing to its *plasma* system of nucleus oil-palm estates with attached smallholdings which can be bought and sold. The implications of land alienation for access also depend on: (1) land availability, since alienated users may be able to shift to other areas as witnessed with the Virungo sisal plantation in Kenya (Kanyinga 2000) or call on social capital to obtain replacement land from neighbours (Schoneveld et al. 2011); and (2) how much of the alienated land is left 'idle' and not put into production by the plantation company. On a coconut estate in the Philippines local people continued to grow food crops between the trees for several years until the landowner became more hostile (Vallely 1992).

One effect of a decline in local food production is an increasing reliance on cash to buy food. This is part of the broader growth of cash economies in rural areas, including the emergence of labour and land markets. Several authors claim that local people are forced into plantation work to earn cash because they cannot earn enough from peasant agriculture. That might be because of the plantation sucking away land and labour as described above, but it might also be because peasant agriculture was already struggling due to, for example, lack of state support and marketing channels. Women plantation workers interviewed in Indonesia said they liked having cash now, as it was difficult to feed the family previously (Julia & White 2012). In the past people also did wage labour to raise cash for particular needs, such as bride fees (Epale 1985).

So there are **different reasons why local people engage in plantation labour**. A recurrent explanation in the literature is that people are forced into it by poverty and landlessness. This was the case in Costa Rica's Rio Dos Novillos watershed, where working on banana and pineapple plantations was a survival strategy for household members only marginally engaged in agriculture (Lansing et al. 2008). Such poverty and landlessness is a sign of pre-existing inequality and, perhaps, class differentiation (Bernstein 1977) but could be exacerbated by the plantation itself having disrupted the local economy, as described above. Hence, perhaps, why some authors have claimed that plantations are located in 'zones of poverty' (White & Dasgupta 2010). In this scenario the de-proletarianisation process described by Brass and Bernstein of free wage workers becoming unfree plantation workers could occur. In other circumstances, local people are argued to engage in plantation work more sporadically. They treat it as an opportunity to diversify income sources and raise cash when needed, to complement rather than replace peasant farming. This was reported in southern Laos, where locals preferred to work only two or three periods in a year (Kenney-Lazar 2011). In the case of the nucleus–outgrower schemes of western Kenya's sugarbelt, it appears that some of the outgrowers also work in the central processing mills (KACC 2010). Aside from the health of the rival peasant sector, another factor that determines whether people accept plantation labour or not is the existence of alternative income-earning options, which could be limited in remote areas or require capital or education. Some people might also be cut off from alternatives because of cultural norms. For example, young women tended to work on the Bud Senegal plantation in the 1970s because the only alternative—independent trading—was seen as shameful (Mackintosh 1989). And what about those who do not engage in plantation labour? They include: locals who are not favoured by the plantation recruiters or local elites, such as settler migrants in Brong Ahafo, Ghana (Schoneveld et al. 2011). They include women who are not employed because the plantation and culture favour male workers, or who are unable to work because they have too many domestic duties. And they include people who are put off by the low wages, monotonous work or poor working conditions, are inhibited by cultural norms against plantation work, and are less desperate (see McCarthy & Cramb 2009).

From the limited evidence, some conclusions can be drawn about the impact of plantations on rural structures from a Marxist agrarian political economy perspective. **Pre-existing poverty and inequalities in land ownership**

are likely to be exacerbated by plantations, particularly if local peasants are drawn into the plantation labour force. The effects on the very poorest might depend on local land availability, as that can slow down the creation of landlessness. It can also prevent people from losing access to land-based resources for livelihood activities, which is important as both landlessness and a decline in livelihoods appear to force people into plantation labour.[16] However, **plantation workers resist full proletarianisation** by continuing to farm, on or off the plantation, perhaps with the encouragement of plantation owners aiming to minimise wage and food costs. Thus, proletarianisation may be more complete among migrant workers with fewer links to land, although depending on land availability and tenure norms, seasonal migrants could have peasant holdings to return to (see Pryor & Chipeta 1990). Off the plantation, there may be a **decline in peasant petty commodity production** and a growth of the cash economy, as part of wider agrarian changes. Authors disagree whether the increased dependence on wage work and external food sources increases vulnerability or increases resilience through diversification. Finally, **processes of capital accumulation and classdifferentiation** appear to occur in certain circumstances: when land speculation takes place; through opportunities to increase petty trade; between workers and peasants if plantation wages are lower than peasant incomes; or among workers due to differences in wages and land ownership between permanent and casual contracts. When the plantations are small and privately owned rather than by foreign corporations, their owners, too, may represent an emerging middle class (Pryor & Chipeta 1990; Siddiqui 1998).

Squatting and conflict

Because many plantations expropriated community land, left parts uncultivated and became dormant during economic crises, it has been common for aggrieved locals and economic in-migrants to poach or squat on plantation land. Plantations have always been sites of resistance, not only in colonial times but more recently, as in Brazil, where landless organisations are strong, and south-east Asia, with violent clashes between local people and plantation workers in Indonesia and Malaysia (Friends of the Earth 2005; Hall et al. 2011; Li 2011). Whether squatters eventually achieve land reform is related to their capacity to self-organise, gain support from local politicians and claim strong ownership rights (see Kanyinga 2000).

Environment

Patchy evidence is available on the environmental impacts of plantations. Historically it is a neglected area of research, but recent work on oil-palm expansion in south-east Asia and large-scale biofuel deals around the world is changing that. The widespread use of agro-chemicals for plantation crops has already been commented upon in relation to their effects on worker health, but they have also caused pollution of fish stocks and water sources, particularly when processing plants are involved (Richardson 2010; Julia & White 2012). Certain crops such as cotton and bananas are especially input-intensive (ILO 1994). If the plantation is a greenfield development there are risks to biodiversity, notably in the conversion of tropical forest (Friends of the Earth 2005), but adverse consequences such as soil erosion and deforestation may also ensue if local farmers are pushed into marginal areas or take land out of fallow (Siddiqui 1998). Furthermore, charcoal-burning and wildlife poaching are reported to increase when local livelihoods have been disrupted by a plantation.

(b) Local impacts of contract farming

A holistic assessment of a contract farming scheme should consider its impact on not only the contracting company and participating farmers but also the wider community where it is located (Little 1994; Singh 2002). Some researchers have been criticised for failing to do so and for evaluating a scheme's success purely in terms of participants' satisfaction (Clapp 1988). In some of the studies that take a quantitative, economics-led approach, local non-participants are used as a benchmark to measure the welfare of participants against, without the authors considering political-economic reasons why they did not participate or whether it is feasible that the scheme could be expanded to include all non-participants in future (Buch-Hansen & Marcussen 1982; Warning & Key 2005; Bolwig.et al. 2009; Prowse 2012). The following sub-section considers who does and does not take part in contract farming schemes and why, before going on to consider the potential impact of this on rural agrarian structures and the wider impact of contract farming in terms of local spillover effects, community tensions and environmental impacts.

Participation

According to NIE theory, farmers in developing countries choose to participate in contract farming for rational economic reasons, to overcome the uncertainty of spot trading and missing factor markets (Grosh 1994). Individuals weigh up the opportunity costs of contract farming against the potential for higher revenue, a stable income and access to export markets, credit, extension services and information (Warning & Hoo 2000; Simmons 2002). This is supported by a survey of contract farmers in Madagascar, which found that having an income source during lean periods and gaining access to inputs were the most common reasons for joining the scheme (Minten et al.2009; see also Kaminski & Thomas 2011:176). According to this theory, contract farming is likely to attract the smallest and poorest farmers, since they are likely to be in most need of credit yet lack the collateral to obtain it, and to be most attracted to a high or more stable source of income (Glover & Kusterer 1990).

However, there are three problems with understanding participation in narrow economics terms. Firstly, models that present contract farming as a rational institutional

solution typically fail to ask what caused the problem. That is, they downplay the reasons behind missing markets and rural poverty, such as a withdrawal of state agricultural services, a lack of rural investment in alternative crop markets or structural adjustment reforms that removed alternative sources of credit and fertiliser (Grossman 1998; Poulton 1998; Amanor 1999). Some companies deliberately establish contract farming schemes in remote, underdeveloped areas where there are no competitors (Grosh 1994). Thus, 'whether smallholders decide to become involved with contract farming depends on the alternatives available to them' (Vermeulen & Cotula 2010:48). Secondly, there is evidence that, rather than making independent decisions on economics grounds, farmers might be coerced into schemes by powerful companies and elites or tempted by agribusiness advertising (Clapp 1988; Glover & Kusterer 1990; Richardson 2010). Thirdly, as NIE authors acknowledge, many schemes have explicit or implicit participation criteria that exclude the poorest smallholders. Therefore, although contract farming can have a beneficial effect of providing credit, inputs and market access to poor farmers (Carney 1988), it often fails to reach them.

The historical overview in Chapter 3 mentioned that in some countries such as South Africa, the participation of small farmers in contract farming has been minimal. Sometimes the contracting company sets explicit **criteria for participation** as a contract farmer, such as having a minimum size holding or registered land title. In others, poor or small farmers are effectively excluded by entry barriers such as the need to have irrigation capacity, certain equipment or simply enough household labour-power to grow the crop. When 3000ha of Rwandan marshland were leased to a sugarcane firm in 1997, the villagers who were able to hold onto their plots and become outgrowers tended to be already commercialised, quicker to adapt or able to afford the investment of converting their land to sugar (Veldman & Lankhorst 2011). Some farmers are also documented as having declined to participate in contract farming schemes because of their aversion to credit and risk. These explicit and implicit inclusion criteria clearly favour the better off and indicate a level of wealth differentiation among farmers, but there are also cases where participation is based not on financial capital or land ownership, but on social capital. This occurs when companies screen farmers on the basis of honesty or commercial experience, or use local agents to select participants. In those circumstances, having connections to local elites is advantageous and there is scope for bribery (Poulton 1998; Warning & Key 2005; Richardson 2010). Lastly, being able to participate in contract farming schemes can be a matter of luck —**geography** is a particularly strong factor, with companies often selecting villages that are in good agro-ecological zones, close to the nucleus processing site, near roads or near one another to minimise operational costs (Graham & Floering 1984; Glover & Kusterer 1990; Amanor 1999; Key & Runsten 1999; Minten et al.2009).

In addition, there may be a preference to contract with larger farms for economic or ideological reasons. The literature suggests that **companies are often deterred by the cost of training and monitoring a large number of small farmers**. Depending on the crop, smallholders can find it difficult to meet quality or quantity requirements, and companies can prefer to use producers that are more experienced and less risk averse and need less financing (Glover & Kusterer 1990; Kirsten & Sartorius 2002). In one example from Mozambique, large farms contracted to grow sugar were foreign-owned, because the participation criteria of having access to capital, managerial capacity and experience in sugarcane production excluded even large Mozambican growers. Even in a second phase, when the sugar contractors were to increase their reliance on outgrowers, they planned to exclude smallholdings under 10ha, because they doubted small family farms could make the initial capital investment and preferred not to coordinate a large number of growers at harvest time (Marini 2001).

This literature review found only five examples where companies preferred to contract with smallholders or where poor, small farmers faced no barriers to entry — in Chile (Korovkin 1992), Mexico (Key & Runsten 1999), Uganda (Bolwig et al.2009), Kenya (English et al. 2004) and Senegal (Warning & Key 2005). An NIE explanation is that the potential efficiency gains of smallholder production are outweighed by transaction costs, perhaps because of the quality demands and time-sensitivity of many contracted crops. Often companies that initially select smallholders shift over time to contract with larger farms or retreat to plantation production. Furthermore, the donors and policymakers that support contract farming schemes might purposely target larger farms, in order to encourage a rural middle class. This was the case in 1970s Kenya, where planners of the Mumias sugarcane scheme expected peasants with less than three acres of land to become a labour pool for larger farmers (Mulaa 1981), and smallholders had to fight for inclusion in the KTDA scheme against the advice of the World Bank, the CDC and agribusiness (Ochieng 2010).

Despite these contrary forces, it is possible to identify **factors that increase the likelihood of poor and small farmers being included in contract farming schemes**. First, public schemes are more likely than private schemes to welcome farmers with very small holdings if they have political objectives of inclusion and poverty reduction (e.g. Carney 1988). Governments and donors sometimes make subsidised credit available to private companies if they include smallholders (Oya 2012). Second, smallholders might be able to overcome a preference for contracting with larger farmers if they lobby through cooperatives,have local political support or are represented within the scheme's management. Third, explicit participation criteria might not be adhered to in practice by the scheme administrators, enabling farmers without the minimum farm size or paperwork to join. Fourth, poorer farmers are better able to participate when there are low barriers to entry. This can be quite serendipitous: in the example from Kenya, the

company in question placed a limit on the amount of French beans that each contract farmer could grow in order to discourage side-selling, which meant that smaller farmers could participate (English et al. 2004). Finally, **context** is important in guiding company strategy. In the case from Chile, a tobacco company preferred using smallholders partly because, in the 1950s, larger farms were owned by landlords who were resistant to following strict contractual instructions (Korovkin 1992). In Mexico, one of the factors that persuaded a domestic horticulture business to contract with smallholders rather than begin large-scale production itself was that local peasants would not rent their land to outside companies, which made farmland scarce and expensive (Key & Runsten 1999). However, in the above-mentioned case from Mozambique, sugar companies had plentiful land but faced substantial costs of rehabilitating state-owned sugar factories, an imperative that led them to contract with large commercial farms that would not need credit and could quickly produce large yields (Marini 2001).

Rural structures

If better-off individuals are being selected through some form of screening, it suggests that the farmers with contracts are not the farmers who have the most to gain on the face of it; that is, very poor farmers with few endowments who are struggling to thrive in spot markets (Simmons 2002). Unfortunately it is difficult to know to what extent the poorest smallholders are being excluded. This is because it is rare for detailed information on the wealth of participating farmers to be provided in research, and rarer still for that information to be broken down into wealth before participation and wealth after. Similarly, it is hard to be sure whether differentiation observed among farmers in scheme areas is attributable to participation in the scheme itself or would have occurred anyway as part of broader agrarian changes. There are usually participation criteria that select for better-off farmers, and it is also possible that farmers who choose to participate share certain characteristics; contract farmers in the Madagascar scheme had above-average education, for example (Minten et al.2009).

That methodological limitation could affect evidence that contract farming is associated with an increase in socio-economic differentiation in rural areas. This is a subject that has particularly concerned scholars influenced by Marxist agrarian political economy. (Remember that in orthodox Marxist theory (Bernstein 1977), differentiation is not just about income inequality; it is about how accumulation of capital affects relations of production between classes, with rich peasants investing in inputs and using wage labour, and poor peasants become waged employees.) Based mainly on their findings, **two processes of differentiation** can be said to occur with contract farming: differentiation between participants and non-participants; and differentiation among participants.

In the first scenario, contracted farmers benefit from high prices paid for contracted crops and use their access to credit and inputs to increase productivity or expand their holdings. If the contractor deliberately selects larger farmers they may represent a rural middle class. An example of this scenario is the difference between successful contract oil-palm smallholders and poor jungle-rubber farmers in Sumatra (McCarthy 2010). The process is facilitated by pre-existing differentiation among potential farmers (Singh 2002; Veldman & Lankhorst 2011; Prowse 2012) and, conversely, inhibited when poor smallholders are included in schemes. If the contracted crop is already produced locally it can also minimise differentiation between participants and non-participants (Leavy & Poulton 2010), although in the Kenyan sugarbelt non-contracted farmers grew sugar just as contracted farmers did but were still at a disadvantage as they lacked access to credit and could not break the contractors' monopsony (Karugia 2003).

In the second scenario, there is a discernible gap between the best-off and worst-off participants which widens over time. Wealthier contract farmers are better insulated from price fluctuations than poorer farmers and less vulnerable to indebtedness. Again, in most cases this develops out of pre-existing differentiation; for example, poorer households might start out with smaller or lower-quality holdings (Prowse 2012). Some schemes explicitly encourage differentiation by rewarding the most productive farmers — an example from Ghana (Poulton 1998) describes two measures taken by the contracting firm to improve productivity that happened to favour the better-off: replacing a flat producer price that included input costs with a higher price and separate deductions; and an initiative to grant the best farmers with additional plots. But certain factors constrain differentiation among participants. In the early years of the Mumias sugarcane scheme in Kenya, the strict control and centralisation enforced by the company acted as a brake on differentiation by minimising variation in yields, and therefore incomes, among contracted farmers and providing few opportunities for entrepreneurs (Mulaa 1981; Buch-Hansen & Marcussen 1982). Limiting the acreage that farmers can devote to the contracted crop has a similar dampening effect (Grosh 1994). In Burkina Faso, private extension agents have discouraged farmers from excessive cotton expansion and the amount of inputs that may be obtained on credit is controlled, in order to minimise risk (Kaminski,et al. 2009; Kaminksi & Thomas 2011).

Assessed in terms of Mamdani's (1987) categories of accumulation from above and from below, it appears that some of the better-off farmers improve their position using profits from contract farming production itself — that is, they accumulate from below — although this agricultural source of accumulation is often inseparable from what economists and political economists would call extra-economic resources, such as social networks, income from outside farming and political connections. Although some authors discern Lenin's three tiers of capitalist farmers, peasant farmers and poor worker-peasants emerging (Mulaa 1981; Buch-Hansen & Marcussen 1982; Korovkin 1992; McCarthy 2010), **contract farming does not appear to often cause full**

proletarianisation or landlessness. That is most likely to happen with nucleus–outgrower schemes or arrangements where contract farmers use community land for growing the crop, as a result of which local peasants are displaced and then find themselves excluded from participation as contract farmers (see Mulaa 1981; Carney 1988; Little 1994; Amanor 2005; McCarthy 2010). The chances of landlessness are increased, however, when differentiation occurs among contract farmers and the poorest participants are pressured, perhaps after getting into debt, to sell their land to richer neighbours or incomers, leading to **land concentration** (Mbilinyi 1988; Randela 2005; McCarthy 2010). *Box 3* illustrates how the outcome can be affected by contextual, historical factors.

Spillover effects

It is often argued that contract farming creates a beneficial ripple effect by introducing participants to new technologies that they then apply to other crops and that 'can spill over on to adjacent fields and into nearby villages' (Prowse 2012:22). Through processes that are not always explained, contract farming is said to overcome agricultural stagnation and stimulate the broader commercialisation of smallholder farming (Buch-Hansen & Marcussen 1982; World Bank 2007; Prowse 2012). But it is by no means clear from the literature that this occurs.

In the **few cases where technology transfer is documented**, it typically takes place on participants' own holdings or originates with fertiliser that they obtain through the scheme. This might indicate a bias in the research towards participating farmers at the expense of information on non-participants in the wider community. Documented examples of technology transfer include illicit input diversification, where farmers apply the fertiliser to other crops or sell it to farmers nearby (Glover & Kusterer 1990; Grossman 1998), and farmers increasing weeding and use of compost (Eaton & Shepherd 2001:14; Minten et al. 2007). However, it can be difficult for farmers to adapt the new inputs and techniques to other crops (Bolwig et al.2009; UNCTAD 2009), and the quality of extension services is not always high.

Wider uptake of technology by non-participating farmers can be inhibited by suppression of competition by the contracting firms (Mulaa 1981; Papenfus 2000). Monopoly control is also one reason why contract farming schemes can fail to create other spillovers such as production linkages. This could apply when the contractor is a national parastatal and provides inputs and ancillary services itself, creating few opportunities for local providers. At the other end of the scale, when the contractor is a foreign firm or has links with international agribusiness, it might prefer to procure its inputs and services from outside the local area (Davis et al. 2002). A study of the new private cotton schemes in Burkina Faso found few linkages and a small increase in local demand for goods that was probably not enough to significantly improve poverty levels (Kaminski et al. 2009; for another example see Kimenye 2002). It might be over-optimistic to expect contract farming to stimulate commercial agriculture in an area outside the scheme itself, since the capacity of small farmers to start selling cash crops independently is limited by: (a) conditions of monopsony/monopoly that contract farming prefers; and (b) the entry barriers and missing factor markets to entry that made contract farming appealing in the first place (see Delgado & Siamwalla 1997:14, Amanor 1999:109; Jayne,et al. 2010:38). It is not logical to expect companies to tolerate the emergence of competitive producers and markets.

Participants that gain experience in commercial agriculture might be able to find alternative channels, outside the companies' control. In an example from Guatemala, farmers responded when the buyer suspended purchases by finding a regional cooperative to help them sell produce at a new market (Glover and Kusterer 1990:27). A study from Indonesia found that women drew on knowledge gained from working on commercial oil-palm estates to identify alternative small-scale opportunities in rubber and cocoa (Julia & White 2012). Similarly, where schemes are less controlling there is greater scope for local businesses to provide services

Box 3. Processes of differentiation and institutional change in Chile

Korovkin (1992) provides a useful study from central Chile that allows comparison of the outcomes of two phases of contract farming in the same location. The first was a tobacco phase after World War II, the second a period of fruit contract farming during the 1970s and 80s. In both phases, differentiation occurred through wealth accumulation and reinvestment by the more prosperous contracted farmers. However, the class distinctions were more marked during the second phase. The author found that the earlier tobacco farmers who needed extra labour had used a form of peasant share-cropping, which gave poorer local people a chance to access land. But the contracted fruit farmers used poorly paid wage labour instead, offering less chance for workers to accumulate wealth or land. Whereas the post-war tobacco contracting company had actually preferred to work with smaller farms, when fruit contracting arrived the poorest farmers found it more difficult to participate, because fruit-growing is more capital intensive and there were obstacles to obtaining state loans. There was already much more landlessness in the area by the 1970s, partly because a collapse in the earlier tobacco scheme had prompted farmers to shift into less labour-intensive arable crops, thus creating a labour surplus. Another significant difference was a change in the local communal arrangements for land management. Before the tobacco phase, these *comunidad* institutions had served to protect land access for the poor. But during the fruit phase, their nature changed and they became more of a tool to serve the interests of better-off fruit farmers, including conversion of pasture and eviction of settlers from communal land.

and inputs (English et al. 2004). One form of technology transfer might be when farmers' organisations, formed to strengthen participants' position with the contracting firm, develop into agricultural cooperatives that become competitors of the agribusiness firms (e.g. Korovkin 1992).

There is better evidence for positive spill overs from **employment** and **local spending** (i.e. consumption linkages). It has been mentioned that even smallholders hire workers for labour-intensive contract crops, but the most jobs are created on larger, wealthier farms, since their owners can more easily afford labourers' wages and also tend to have off-farm income and therefore less time to spend on the farm (Little 1994). Schemes that include processing or packing plants, or employ local agents and extension officers, generate further job opportunities. Some studies suggest that individuals who take waged work often come from households that lack the labour-power necessary for own-farm peasant or contract farming, such as small female-headed households or where male household members are already working elsewhere as migrant labourers (e.g. Lincoln 1994). In other cases, individuals combine waged work on contract farms or in processing plants with work on their own family holdings and thereby remain semi-proletarianised worker-peasants. (As noted in the plantation section above, some of the people who work in the sugar mills of Kenyan nucleus estates are also outgrowers.) This is possible with crops such as oil-palm that require most of their labour at peak times, which provides an unreliable seasonal income but does allow farmworkers to continue to cultivate their own holdings.

Another form of employment creation is the emergence as schemes mature of individual traders who deal in inputs or buy produce from independent farmers and sell it to the processing firm, or, conversely, sell contracted produce to external buyers. This could be seen as a positive example of entrepreneurship and knowledge transfer, but because it jeopardises the contractor's control over supply, trading activity is often frowned upon by the scheme managers and researchers. Brambilla and Porto (2005:7) report that cotton firms in Zambia tightened up operations, which 'helped eliminate most of the independent traders that contaminated the market'. Similarly, Kirsten and Sartorius (2002:523) call for measures 'to control rogue traders', and Grosh mentions 'cowboy' horticulture exporters in Kenya (1994:242). It is interesting to note that three observed forms of spillover —input diversification, emergence of competing cooperatives and independent trading — go against the interests of the contractor.

As regards spending, studies report that contract farming households spend part of their income on consumer goods, house improvements and investment in small businesses, which may benefit the local economy. Here the socio-economic profile of participants is significant, as there is some evidence that better-off farmers are more likely to (re)invest in business, although poorer households might also invest in micro-enterprises that are less visible to researchers (Buch-Hansen & Marcussen 1982; Glover & Kusterer 1990; Wegulo & Obulinji 2001). Income also goes on debt repayments, particularly when the farmers are paid infrequently and debt has accrued, and on school fees, which Glover & Kusterer (1990) interpret as an indication that farmers do not see their family's future in farming**. Indeed, there are few instances in the literature of contract farmers reinvesting their earnings in agriculture,** beyond wealthier individuals acquiring land or equipment such as tractors. In Kenya's sugarbelt, it is argued that outgrowers were discouraged from re-investing in their land by the poor quality of the soil (Graham & Floering 1984).

Thus, it is not clear that contract farming stimulates local agriculture either through technology transfer among non-participants or through reinvestment. Where there are infrastructural improvements such as better roads or sewerage systems that are introduced as part of contract farming schemes (e.g. Richardson 2010), it might not benefit other farmers unless further forms of support are provided. Glover (1984) argues that linkages are likely to occur only when the introduced crops and techniques are suited to smallholders and the local agro-ecological context, and ancillary services are also provided. One limiting factor might be what Simmons (2002) calls second-round effects, whereby companies renew contracts with the same farming communities over and over again, which can affect local income distribution and perhaps stifle spillover effects. It would therefore be interesting to review more research into the long-term economic effects of contract farming in particular locations. To date, most attention has been paid to Mumias and other sugarcane schemes in western Kenya, but even here the evidence is inconclusive: a 1999 study found that 'the income earned from sugar-cane cultivation has helped to increase the money in circulation within the Mumias area' (Wegulo & Obulinji 2001:239), but a recent report noted that Western and Nyanza sugarbelt provinces are still among the poorest places in Kenya (Waswa et al. 2012). **Sometimes contract farming can collapse quite dramatically** when the company suffers financial problems (see McCarthy 2010 on oil-palm after the south-east Asian financial crisis; or Minot & Ngigi 2004 on turbulence in Kenyan horticulture).

Access

When it involves farmers cultivating the crop on existing holdings, **contract farming creates fewer disruptions to local people's land access than does plantation agriculture** with its large-scale appropriation of land. But the situation is worse whencontracted farmers are allocated new plots as part of an irrigation or settlement scheme (e.g. Little 1994), conversion of community land is negotiated with local elites (e.g. Amanor 1999:94) or a nucleus estate is included. An example is the Indonesian *plasma* system for oil-palm outgrowing, where local people give an amount of community land (technically state-owned) to an oil-palm company for a nucleus estate, and in return are allotted 2ha smallholdings to grow oil palm. The inequalities and abuses of this system have been widely documented,

and include long delays in outgrowers being allotted their smallholdings (McCarthy 2010), smallholdings being given to migrants instead of villagers (Li 2011) and companies taking as much as 10ha of land for each 1ha of plasma smallholding, greatly reducing access to customary agroforestry areas (Friends of the Earth et al. 2008). McCarthy (2010) describes how local elites in Sumatra were able to acquire *plasma* and community land, similar to how better-off contract farmers in Chile began to appropriate community institutions for their own ends (*Box 3*). Thus the tenure status of the plots under contract is key— as is who the plots are registered to, the gender implications of which are explored below. In Ghana and Indonesia, women and youths who lost access to land turned to illicit harvesting of oil palm from nucleus estates at night, which is a way to resist as well as make money (Amanor 1999; Julia & White 2012).

Environment

There is a theory that because contracting companies do not own the cultivated land themselves they have no incentive to ensure its long-term sustainable management—a variation on the principal–agent problem from economics. As long as there are other farmers or other areas to move to, companies will not be deterred from introducing short-term practices that will lead to soil exhaustion on farmers' plots (Glover 1984; Randela 2005). Scarce evidence is available to test this theory; the environmental impacts of contract farming are rarely considered in socio-economic studies. However, there are piecemeal findings of: deforestation to make way for new plots and provide fuelwood for farmers and labourers (Mbilinyi 1991; Friends of the Earth et al. 2008); water shortages associated with irrigation (Little 1994; Singh 2002; Behrman et al. 2012); pollution from intensive pesticide and fertiliser use (Grossman 1998; Singh 2002); and a decline in agrobiodiversity (Wafula Netondo et al. 2010). Accounts such as farmers' land in Panama being left suitable to grow only sugarcane after regular application of chemicals (Clapp 1988), or the need for timber to smoke tobacco contributing to local deforestation in Tanzania (Mbilinyi 1991), suggest that the environmental impacts of contract farming are determined in part by the nature of the crop itself.

(c) Local impacts of commercial farming areas

Because commercial farming areas often attract settlers who come from outside the area, their proponents tend to argue that the benefits to the local area will come through positive spillover effects. Yet there are obvious risks that the presence of a block of medium- or large-scale mixed farms could adversely affect local people's livelihood activities and land access. Two such schemes where local impacts have been documented are Zambia's Mkushi Block and the development in Nigeria's Kwara State, where the local government invited Zimbabwean farmers affected by evictions in their home country to establish farms in 2005.

Most information on Mkushi comes from Sjaastad et al. (2012). The block was established in 1947 on 176000ha, split into 163 farms (average size:1080ha), with the aim of attracting European settlers. The farms were not nationalised after independence but the scheme has nevertheless been extremely dynamic, accommodating Greek farmers expelled from Tanzania, postapartheid South Africans and, since 2000, a number of Zimbabwean farming families. As these farmers have come and gone, the scheme has attracted native Zambians to acquire farms on the block or begin farming in the surrounding area. This **'magnet' effect** could be seen as a kind of positive spillover. The farms have also generated local employment. It appears that because successive farms have mostly been based on the original block, disputes over disruption to local land access have been minimal. However, the Zambians who established farms outside the block negotiated with local customary users and there were some disagreements over grazing access. Despite this the Zambian farms have endured longer than many of the larger-scale farms on the block, perhaps because they are not so **capital-intensive**. While benefiting from infrastructure provided by the state, Mkushi Block farmers have struggled financially, which Sjaastad et al (2012). attribute to inconsistent agricultural policy regarding large-scale versus small-scale producers, the introduction of a minimum wage for farmworkers, and a lack of security felt by white farmers in particular.

There are more signs of **positive spillover** from the recent Shonga Farms scheme in Nigeria. This public–private partnership involves just 13 farms, each 1000ha in size. Zimbabwean farmers were invited to the area after earlier attempts to stimulate the local economy disappointed, and indeed there have been some positive effects: increased demand for farmworkers; infrastructural benefits such as better electricity and water access; multiplier effects of the Zimbabweans employing local traders; and linkages such as plans for a milling company to set up production nearby and one of the dairy farms buying milk from Fulani pastoralists (Osodo 2009; Ariyo & Mortimore 2011; Dearn 2011). This case also provides rare evidence for **technology transfer**, with local farmers reported to have followed the Zimbabweans into growing soybean and improved their crop management. Also, the settler farmers teach at the local agricultural institute as part of their agreement with Kwara State. However, there are **local grievances over the land** that was appropriated by the state to establish the scheme. Initial protests by farmers and pastoralists appeared to have been assuaged after the authorities agreed on a buffer zone around villages and to compensate farmers for lost land. But it was recently reported that local farmers do not feel they have benefited from the scheme — established at great cost by the state — and are petitioning for the land to be returned (*The Insider* 2012). This again points to the fragility of large-scale settler agriculture. The Zimbabweans were already experiencing numerous financial, operational and agro-ecological challenges.

By considering these two cases along with a sample of the wider literature on medium and large farms in sub-Saharan Africa during the twentieth century, it is possible to make some general observations about the most common impacts of large-scale commercial agriculture on local communities.

(1) Commercial farming areas present an opportunity for local farmers to become involved in new value chains, either through participation as a member of a farming block or by adopting some of the crops and technologies introduced. However, **the capital and land requirements of commercial farming favour better-off members of the community** or perhaps hobby or weekend farmers who have access to off-farm income. The phenomenon of straddling is clearly in evidence, with indigenous commercial farmers drawing on salaries and reinvesting their profits into small-scale business. Jayne and Sitko (forthcoming) suggest that many of Zambia's emerging middle-class farmers are former public-sector workers who moved to rural areas after parts of the government were privatised in the 1990s. In such cases, local smallholders might be able to gain resources through kinship connections to these rural elites (Yaro, personal communication). Thus, **extra-economic sources of accumulation** have enabled farmers to join or establish commercial farming areas, from: capitalist cocoa farmers in Ghana supplementing savings from oil-palm with loans (Hill 1970; Amanor 2011); members of President Kenyatta's inner circle acquiring large-scale farms in Trans Nzoia (Gibbon 2011); and white settlers, teachers, bureaucrats and political elites all benefiting from external sources of income or preferential government policies to establish cattle ranches and mixed farms on blocks in southern Africa (Guenther 1977; Stocking 1983; Sjaastad et al. 2012).

(2) **Large farms tend to create jobs for farm labourers**, depending on the crop and livestock combination and level of mechanisation. Sample figures for the numbers of workers employed in commercial farming areas include 3000 labourers at peak period on the 13 mixed farms of 1000ha in Kwara State, Nigeria (Ariyo & Mortimore 2011); and 4000 full-time workers and a further 4000 employed seasonally on around 30 Zimbabwean-owned farms at Mkushi Block (Sjaastad et al. 2012).This can bring economic migrants to the area or present an opportunity especially for the poorest members of the community such as squatters or wage-dependent smallholders (FAO/ILO/IUR 2007) to earn a (low-paid) income. Over time, some farmworkers have been able to use their earnings to expand their family farms or to acquire new land or farm tenancies and use the skills they learned to become independent farmers (Mbilinyi 1988; Mabogunje 1989; Jaffee 1994; Moyo et al. 2000; Hammar 2010). In 1950s Tanzania, migrant workers on a tobacco farm block went on to become settled smallholders (Mbilinyi 1991). But in other cases farmwork offers little labour mobility and the workers are unable to accumulate enough savings or skills to get off the farm, perhaps cramped by restrictions on their outside activities or by socio-economic marginalisation, as with long-term San farmworkers in Namibia (Devereux et al. 2006; see also Foeken & Tellegren 1994; Dolan 2004). Such workers are not necessarily fully proletarianised, though; they might live off the farm and thus still access their household plot(s), or be given a small garden as part of their on-farm accommodation to grow food (Rutherford 1977; Moyo et al.2000). Farmers are ambivalent about training their workers, since this will increase the probability of their leaving to find better paid work elsewhere.

(3) In addition to creating employment, large-scale commercial farms and their workforce might increase spending and investment in the local area. **Large-scale farms seem to create more local linkages than plantations** in terms of using upstream and downstream services, perhaps because they are not so closely tied to international agribusiness. Arguably, mixed farms with a dairy component create **more opportunities for local pastoralists than either plantations or contract farming**; hence the Fulani milk-suppliers mentioned above but also local Turkana people being employed to work with livestock on large farms in western Kenya (Foeken & Tellegren 1994). Large-scale farmers appear to reinvest more of their profits back into the farm than well-off small contract farmers (see Mbilinyi 1991).

(4) The development of large-scale farms is likely to **disturb local people's land access** to some degree. Expansion by rich farmers can affect the access rights of local smallholders and their own family members (Amanor & Pabi 2007; Amanor 2011). When it comes to planned commercial farming areas, the state may be complicit in alienating community land for farmers' use (Rutherford 1977; Lundahl 1990; Jayne et al. 2012:24). In Zambia, it is reported that the government has allocated customary areas for its farming block development programme and redefined them as leasehold land (German et al. 2011). In other cases the main displacement might have occurred several decades past, since many large farms, either individually or in blocks, are located on abandoned settler or state farms where the land has already been cleared. However, especially where the old farm has long since lapsed, the land might already be used by farmers, pastoralists, villagers or squatters. In such cases, whether they are able to continue accessing the land depends on the benevolence of the owner and/or the owner's ability to evict them (e.g. Haki Ardhi 2009). Local people can also be displaced if additional wealthy farmers adopt the crops or are drawn to the area by a scheme's magnet effect and acquire land, perhaps contributing to land concentration and social differentiation. Further research is needed on the implications for access. A handful of writers suggest that intensive agriculture on farming blocks has contributed to soil erosion, but further reading is needed on the environmental impacts.

(5) The widespread displacement of people in combination with measures to suppress their peasant production and force them into farm (or plantation) labour had the overall impact of **depeasantisation** during and beyond the colonial era. This was particularly

so in the settler economies; in South Africa, the peasantry was systematically destroyed (Burgess 1997).

(6) However, in less controlling circumstances there is a possibility that small farmers will adopt the new crops and **local agriculture will be stimulated** by commercial farming areas, particularly if the commercial farmers or government introduce supporting infrastructure. Sometimes large farmers offer ploughing services to smallholders or lend irrigation equipment in return for payment or labour (O'Laughlin 2000). Amanor and Pabi (2007) describe a case from Ghana in which the establishment of two state farms in the 1960s, followed by several large private farms and accompanying infrastructure in the 1970s, prompted nearby farmers to start using tractors and fertiliser. Farmers farther away did not experience technology transfer but did increase their yam and maize production in response to a growing demand from workers and traders. The difference here is that local farmers were in a much more supportive environment — they were provided with inputs and extension services, and their expansion was encouraged by the state, rather than suppressed.

(7) Local hopes for commercialisation schemes can be high (see Juergensen & Krugman 1997). But as the Nigeria example illustrates, if local people do not perceive to have benefited from large-scale farming, there is a high risk of **resistance**. During the colonial era, this often resulted in violence such as Kenya's Mau Mau uprising (Kanyinga et al. 2008) or pleas from farm owners for government intervention, as seen in 1930s Zambia (Vickery 1985). Since independence, local people's grievances are more likely to be taken seriously by the state and large-scale farms have been at great risk of expropriation (Poulton et al. 2008), most famously in South Africa and Zimbabwe. In addition, many large farms are reported to have collapsed due to unprofitability. When they don't have very strong preferential support by the state, the less efficient farms are precarious and vulnerable to takeover by agribusiness (Bratton 1977; Mbilinyi 1991; Von Blanckenburg 1994; Jeeves & Crush 1997). White farms in Malawi were all but wiped out in the 1930s by the global tobacco slump and a lack of access to fresh capital, leaving Malawian peasants to thrive. In the 1980s, a similar collapse in cocoa prices and an economic recession forced Ivorien cocoa farmers to retreat from the sector (Amanor 2011). This is one of the reasons for the cyclical nature of large-scale commercial developments. Recent Zimbabwean farmers starting anew in Mozambique have encountered multiple problems, including corrupt officials, a lack of lobbying influence with the Mozambican government and agro-ecological conditions that they are not used to (Hammar 2010). **Large-scale commercial agriculture therefore seems to be characterised by a certain amount of instability.**

5.4 Impacts within the household

(a) Intra-household impacts of plantations

Considering the impacts of plantations within the household is not the usual level of enquiry for plantation research. Mackintosh's 1989 study of the Bud plantation in Senegal is one of the few works that dig into household dynamics and issues of moral economy. Household-focused approaches such as gender studies and econometrics are more often applied to contract farming, and the impacts on migrant workers' families back home are rarely considered. It remains, then, to make some brief points about the effect of plantations on the households of resident workers and nearby smallholders.

The previous section noted that peasant households may suffer from the loss of members to plantation employment, particularly household heads, young adults or married men (Mackintosh 1989; Schoneveld et al. 2011). In addition, **wives, relatives and children** may be called upon to help men in plantation work, especially with the increasing shift from salaried payment to piece work observed in recent decades (Sajhau & Von Muralt 1987). Women are frequently employed in their own right, however, perhaps chosen for specific tasks that are thought too fiddly, detailed or physically lightweight for men (e.g. tea plucking, ILO 1994). Although their wages have often been lower than men's, plantation work has provided women with an independent income source. However, they have had to balance it with their existing workload, since men rarely share the burden of domestic duties according to the case studies reviewed here. In Senegal, Mackintosh notes that women solved the problem by sharing plantation work with other women in shifts. In one village where female wage labour was particularly high, they adjusted by taking in lodgers or by husbands moving into their wives' households. Female plantation employment also has health implications if the tasks women are assigned bring them into close contact with chemicals, such as spraying or applying pesticide, since women are reported to receive less training and to be less represented by worker unions then men (ILO 1994; Behrman et al.2012; Julia & White 2012). Reproductive health problems among women workers are widely documented (Sajhau & Von Muralt 1987; Loewenson 1992; Friends of the Earth 2005).

Child employment has been particularly common in Asia and Africa and on rubber plantations (ILO 1994). Information suggests that it continues. A 2005 study of oil-palm plantations in Malaysia, for example, found that children were widely used to help meet piece rates and that around 60% of the plantations lacked schools. Provision of education and childcare services increased among plantations during the 1980s as they were forced to take on a more paternal character in order to retain

workers (Gibbon 2001). By 1994 the ILO reported that primary school education was provided on most plantations worldwide, but it noted that children still might not attend regularly. An earlier review by Kirk (1987a) concluded that plantation education was both inadequate and custodial; Von Muralt and Sajhau (1987) found that the conditions of primary schools and crèches were usually, but not always, unsatisfactory.

A final observation concerns **land**. There may be gendered consequences of the alienation of land for plantations, with women at risk of losing access to usufruct land rights if male community members or the plantation company do not recognise their value, and the ecological changes from large-scale irrigated monoculture affecting women who collect water and fuelwood (Behrman et al. 2012; Schoneveld et al. 2011). It is also possible that plantation development will see the emergence of new forms of land ownership. In Malawi, estates owned by men represented a break from matrilineality (Pryor & Chipeta 1990), whereas in Ghana, the provision of land for plantation workers to grow maize has increased female plot ownership (Boamah 2011).

(b) Intra-household impacts of contract farming

Participation in contract farming can result in good earnings and an increase in household income. It is important to consider whether these gains are offset by an increase in the labour that farming households need to produce the contracted crop. For small family farms, the returns to labour from traditional non-contracted crops, perhaps in combination with off-farm work, can be much higher (Glover & Kusterer 1990; Little and Watts 1994:16; Minot & Ngigi 2004; Poulton 1998). Because of the labour intensity of some contract crops, Key and Runsten (1999) argue that contract farming is a sensible model for households that have surplus family labour due to a lack of job opportunities and no ability to expand their farm operations — in other words, poor households with large families and small holdings. This might apply in certain circumstances, but the literature does not give the general impression of pools of idle, underutilised family labourers being put to work by contract farming. Rather, many small farms start using more external hired labour once they enter into contracts. An alternative solution is to switch household labour from other tasks on or off the farm. Therefore **families that begin contract farming may need to reallocate their labour-power**, which can lead to tensions within the household (Buch-Hansen & Marcussen 1982; Carney 1988; Watts 1994). The 'household' is not synonymous with a single 'family farm' or 'smallholding'. In rural West Africa, for example, different household members might have differentiated access to more than one communal, household or individual plot.

The outcome partly depends on the ability of the household head to muster household members to work on contract crops. Particularly when payment is made through piece-work, male household heads might call on wives, relatives and children to help meet their contract targets. Cultural factors are also influential. In a case from Gambia, contracted rice was grown on a particular category of customary land that obliged all attached household members to work on it (Carney 1988). In contrast, farmers on a scheme in Ghana were often unable to work on their contract cotton plots because of conflicting demands to work on their extended household or 'compound' farm (Poulton 1998). Yet the introduction of cash crops and new patterns of labour can pull against such customs and lead to a fragmentation of reciprocal land and labour arrangements at household or community level (Mbilinyi 1988; Carney 1998; Amanor 2005).

The consequences for women can be quite negative. Local men might allocate land for contract farming that was customarily used by women, or muscle in on crops that were previously a female domain (English et al. 2004). Often, women, and other less powerful household members such as young men, are excluded from community discussions about contract farming schemes and have less chance of registering and participating. **When payment goes to male household heads**, it can reduce women's control over how household income is spent and result in the money being spent in ways that don't benefit children (see De Treville 1986:191; Glover & Kusterer 1990:66,Waswa et al. 2012). Although they might not be paid women often do much of the work of producing contract crops, and this adds to their existing labour burden as men are rarely documented to take on a share of women's household tasks in return (Glover & Kusterer 1990; Behrman et al. 2012).

There are times when women have been able to resolve conflicts in their favour and successfully renegotiate their household labour obligations. In Cameroon, Gambia, Ghana, Tanzania and elsewhere, **women have resisted exploitation** by withdrawing their labour-power from the household and either cultivating their own cash crops elsewhere or working for wages on neighbouring farms instead (Carney 1988; Mbilinyi 1988; Watts 1994; Poulton 1998; Prowse 2012). This can make it difficult for contract farms to achieve high yields without using hired labour, and may ultimately result in women securing access to land, compensation for their work or a share of the contract profits. In addition, women are not always excluded from contract farming; indeed, they are sometimes deliberately included in schemes, perhaps because women are preferred for certain tasks, because the scheme's donor has a pro-women objective or because there is a scarcity of male farmers in the area (Dolan 2004; English et al. 2004). Women also gain employment in processing and packing plants. Thus **contract farming provides women with independent income and a means of empowerment**.

These consequences are context-specific and it is difficult to say whether contract farming in general has a positive or negative impact on household members, particularly women. But it is possible to suggest factors that influence the outcome. First are the **contractual**

modalities of registration, payment and production prescribed by the company or donor, such as implicitly encouraging child labour through piece-work or, conversely, forbidding farmers from using child labour in line with legislation. Second are the **cultural norms** around land ownership, inheritance, gendered division of labour and participation in community discussions in the area where the contract farming takes place. These affect which household members can participate, how their livelihoods are affected and to what extent they can retain their plots. Third is the more general level of **conservatism and male dominance** in the community. In the Chipiwa sugarcane outgrowing community in south-eastern Zimbabwe the position of women seems to have been particularly bad, with isolated wives and female relatives forbidden from visiting each other for fear of being labelled as gossips (Mate 2001), whereas in the Rungwe smallholder tea scheme of Tanzania (Mbilinyi 1988), women were able to complain openly and even led strike action to campaign for better treatment by the contracting parastatal. A fourth and last factor that can affect the outcome is the **bargaining position of women** within the household and the wider community. In the cases of successful female resistance, they were able to withhold their labour because they had other farming activities, alternative land was available or there were nearby farmers who would hire them. These circumstances change over time, and it is possible that in future contract farming schemes in sub-Saharan Africa, there might be less land available for dispossessed women to turn to. But at the same time they may have more exposure to cash-crop production and alternative livelihoods that they can use to improve their bargaining position through their labour-power.

(c) Intra-household impacts of commercial farming areas

The literature on medium- and large-scale commercial farms, particularly those owned by African rather than foreign owners, seems to lack the kind of household-level research seen in the contract farming literature. Perhaps this reflects the low priority given to farmworkers by researchers and donors mentioned above. Further research is needed, but some brief points can be made.

The first is that, just as among plantation workers, households are likely to be affected by the **tendency for farm employers to increase the proportion of casual employment and piece work** over time. This could reduce the income security of existing workers but also offer additional income sources. In a case study from Zimbabwe, farmers helped meet their need for seasonal workers by recruiting the relatives of permanent residential male workers (Von Blanckenburg 1994). Piece work in particular encourages child labour, which can perpetuate the cycle of poverty in poor households by keeping children from school (FAO/ILO/IUR 2007).

A second point is that women are reported to represent a substantial part of the waged agricultural workforce (Oya 2010). That refers not only to 'invisible' women helping their husbands or male relatives without pay, but also to women who are specifically hired on the farm or in packing and processing plants. Women are preferred for certain tasks in horticulture, for example. This is significant for the distribution of income and labour within the household, as, again,**women tend to be paid less than men**. Yet the women who work on large-scale farms might be part of female-headed households. A review of agricultural labourers on a range of farm types in Mozambique found that 37% of the female workers were divorced, separated or widowed. The authors therefore posited a **correlation between lacking a husband and participating in farmwork**. While noting considerable heterogeneity among women workers, they write that in general, women have fewer possessions, are less educated and often do worse jobs on the farm than men, concluding that 'the great mass of female wage workers in rural areas exercised little real choice in their employment and marital conditions' (Cramer et al. 2008:4). This supports the suggestion that many plantation and farmworkers are pushed into the work through poverty, tenure insecurity and a lack of options. Given the presence of women in the workforce it is important to consider the norms and standards concerning maternity leave, the ability to breast feed at work, vulnerability to sexual violence on the farm compound and so on, which are regrettably low in this sector and appear to leave non-permanent workers particularly unprotected (FAO/ILO/IUR 2007).

Box 4. Food insecurity on Kenyan plantations

Adagala's 1991 study of tea and coffee plantations in Kenya's Central and Rift Valley provinces, owned by the multinational Brooke Bond and private owners, provides a rare insight into the life of residential plantation workers. Adagala found precarious living standards among workers and their families, described in following excerpt: 'The overemphasis on cash crops at the expense or total elimination of crops for domestic consumption meant food had to be bought in from elsewhere. The workers were sometimes given small plots for growing vegetables, but they were not allowed to plant maize, which was the staple food of most of them. Some of the workers … travelled to Nairobi every week for supplies of vegetables, fruit, legumes, and grains. A number of respondents, particularly on the tea plantations, depended on maize or beans supplied by their extended rural family. Meat was available, and those [in] Kericho could get fish, but they could hardly afford to buy as much as they needed. The long working hours also affected nutrition: apart from the fact that the workers had little time to cultivate or go looking for food, they had no lunch break, so the children had to fend for themselves or eat something prepared in the morning and left for them … Though they looked healthy because their diet included a lot of starch and carbohydrates, which put weight on them, the children had a number of health problems and mortality rates were high. … Scurvy was common' (Adagala 1991).

In the surrounding community it might be supposed that the development of large-scale farming has gendered impacts on access, just as with plantations and, to a lesser extent, contract farming. There are few discussions of this in the literature, but some studies of accumulation from below describe prosperous capitalist farmers acquiring land at the expense of family members' access and triggering household disputes (e.g. Amanor 2011). Of additional interest are the **impacts on migrant workers'** households, far away from the local area. Mabogunje (1989) investigated how rural African households have responded to the out migration of men going into waged work such as farm labour. To some extent women were able to manage by taking on the status of household head and minimising labour-intensive tasks that were traditionally done by men. She discerned a possible rise of the nuclear family, bolstered by remittances at the expense of the traditional extended family. But when communities were not able to control the extent of outmigration, there were serious consequences for local crop production, attendant nutrition levels and social institutions (see also Adagala 1991).

5.5 Impacts on food security

(a) Food security impacts of plantations

With wages often at or below minimum wage, **achieving food security is a challenge for plantation workers**. They obtain food from their employer as in-kind payment or on credit; through subsistence cultivation on plots on the plantation or in nearby villages; or by buying it from plantation stores and local food markets. Whether the first two possibilities are able to provide enough calories and variety depends in part on the behaviour of the plantation company; there are negative reports of companies failing to provide either food to cover workers' calorific expenditure or land with good enough soil to grow food crops (Nyanda 1989; Loewenson 1992). Again, permanent workers are more likely to be allotted land than casual labourers. With plantations often located in remote, thinly populated areas, company stores were sometimes a necessity. Where there are local markets, however, workers can buy food there although supplies may be patchy and more expensive than in urban areas (Loewenson 1992). Thus the **thinness of local food markets** and the **benevolence (or otherwise) of plantation companies** are key determinants of worker food security. An interesting detail from Loewenson is that the long hours of wage work on plantations in Zimbabwe meant that households had less time to cook nutritious food such as beans. *Box 4* provides more detail from a study of workers in Kenya.

There is little direct empirical evidence, but several authors suggest that **in surrounding areas, food security is threatened by the decline in peasant production** discussed in Chapter 5.3 above. With less subsistence production and reduced access for foraging, authors document an increased need to buy food, placing pressure on women in particular to find cash (Mackintosh 1989; Loewenson 1992; Amanor 2005; Kenney-Lazar 2011; Schoneveld et al. 2011; Veldman & Lankhorst 2011). Female villagers in Indonesia told researchers they were glad to receive a cash wage from oil-palm plantations, since monoculture expansion had depleted wild food sources, one respondent confirming that 'yes, everything should be bought now, there are no more vegetables obtainable in the forest' (Julia & White 2012:1011). This effect is exacerbated if the influx of workers into the area increases demand for food; in southern Zambia, migrant workers from a sugar plantation affected local communities by carrying out illegal fishing and hunting (Richardson 2010). It is also possible that through pollution and usage of water for irrigation, plantations affect the local availability of fish and clean water.

A decline in food production to make way for export or non-food crops was predicted by Lofchie as part of his critique of 'enclave' plantation economies (Jamal 1998), echoed in current concerns over the food security implications of biofuel land grabs (GRAIN 2008). An opposing argument is that waged employment and spillover effects from large-scale agriculture will stimulate rural development and thereby improve food ecurity. In the words of Graham and Floering (1984:13), 'one may grow fatter from rubber than from sweet potatoes'. In its 2011 report *Rising Global Interest in Farmland*, the World Bank suggested that '[large-scale] investments can affect local livelihoods and food security by generating jobs, providing social services, increasing knowledge and improving the asset base of the local population' (64). But further research may be needed to corroborate this statement. In only one of the reviewed case studies did the author argue that local employment on the plantation had increased food security, and that was partly attributable to the company providing land for locals to grow maize (Boamah 2011). Farther afield, Davies (1987) discovered chronic child undernutrition in areas that supplied migrant labour to Kenyan plantations, but noted that information was needed on whether nutritional status rises or falls when family members find plantation work, and, indeed, how that undernutrition compared with that of resident plantation workers. This review found no discernible differences over time or across geographical regions on the subject of food security.

(b) Food security impacts of contract farming

Discussions about the effect of contract farming on food security can be rather ideological. Starting with the Food First movement, critics have argued that contract farming, with its links to international agribusiness and emphasis on cash-crop production erodes food security and self-sufficiency (Oya 2012). There is some evidence to support that position—and some evidence against it. But there appears to be little evidence that contract farming actually improves food security, contrary to the

expectations of those who advocate commercialisation of smallholders in developing countries (Leavy & Poulton 2007). Some of the key findings are provided here.

Contract earnings are often paid to a male household head, even though they might be partly the product of women's labour. **This can unbalance the production and purchase of food within the household**, especially in sub-Saharan Africa, where women tend to be responsible for buying food and men have other spending priorities (Glover & Kusterer 1990:103; Randela 2005; Waswa,et al. 2009).Kennedy (1994) argues that this effect is due to the gender of the household head being male, rather than to commercial farming *per se* (see also Little 1994:228). Another issue is that as incomes rise, households may increase the proportion they spend on expensive food or non-food items, so that children's nutrition and health do not improve accordingly. Despite this, there are cases where the calorific consumption of contract farming households is recorded to have increased (Glover & Kusterer 1990:103; Bouis 1994; Kaminski,*et al*. 2009).

It is also argued that household food security is jeopardised when peasant farms re-allocate part of their land and labour-power from food cultivation to the new contract crops (Buch-Hansen & Marcussen 1982; Grossman 1998; Singh 2002). This is said to not only reduce the food available to rural households from subsistence production but also increase their reliance on unpredictable food markets. Through this re-allocation peasants are feared to become dependent on contract farming, vulnerable to a fall in prices or collapse of the scheme (Karugia2003).The impact then spreads to non-participants, **by reducing the net availability of food in the local area** (Porter & Phillips-Howard 1994). It may be compounded by loss of access to traditional foraging areas, a simultaneous rise in demand for food by contract-farmworkers and a resulting increase in food prices (Amanor 1999). Given that non-participants are likely to include the very poorest families, as argued above, this scenario is quite concerning. The best documented cases are the sugar outgrower schemes of western Kenya, where multiple studies since the 1980s allow us to build a picture of the effects on food security at a local level (Mulaa 1981; Graham & Floering 1984; Little 1994; Wegulo & Obulinji 2001; KESREF 2006; Waswa et al. 2009 and 2012). Here, the conversion of substantial areas of farmland to slow-growing sugarcane from the 1970s onwards led to **local food shortages**. The area became a net food importer, which had the unexpectedly positive spillover effect of creating opportunities for local people to start food-trading businesses. Maize prices in the Mumias contract farming zone became the highest in the region.

Similarly adverse effects on local food availability are reported from schemes incentral Kenya (Little 1994), Tanzania (Mbilinyi 1988) and India (Singh 2002). But elsewhere there is substantial evidence that **farmers often continue to grow food crops and raise livestock even after joining contract-farming schemes** (Buch-Hansen & Marcussen 1982; Korovkin 1992; English et al. 2004; Brambilla & Porto 2005; Leavy & Poulton 2007; Minten et al.2009; Bolwig et al.2009).This mitigates the potential for food insecurity and, although there does not seem to be much technology transfer taking place, there might even be synergy when contract and non-contract crops are grown together (Govereh & Jayne 2003; De Schutter 2011; see Poulton 1998 for an example). Bouis' 1994 review of four smallholder commercialisation schemes in Africa found that participating farmers produced more than half of their food on their own farms. It appears that **when schemes limit the acreage of the contracted crop or take-up by local farmers is limited**, smallholder food production endures (see Glover 1994:34,170; Little 1994:228; Minten et al. 2009). In Kenya's sugar belt, however, outgrowers dedicate at least 50% of their small plots to sugarcane and the strategies of farmers and regional planners alike have been heavily skewed towards sugar and maize, prompting the government to initiate an orphan crops drive in 2006. **Certain crops such as bananas, French beans or tea can be more easily accommodated on small holdings**, perhaps intercropped with food crops, and also dovetail with the calendar of staple crops grown by local farmers (Korovkin 1992; Grossman 1998; English et al. 2004). Unlike, say, oil-palm or jatropha, **food contract crops could also be sold in local food markets** if they miss the grade and are rejected by the contractor. But even where there is a clash over land and labour demands, **contract farmers might prioritise non-contract food crops**— at the risk of missing their contract yield targets —to ensure food security during times of drought, for example, or where there are cultural expectations that they provide food for their household (Graham & Floering 1984; Poulton 1998). In a Tanzanian outgrowing scheme from the 1960s, smallholders apparently exited their contracts when global tobacco prices collapsed and shifted into maize, boosting their food self-sufficiency (Mbilinyi 1991). As such, flexible contractual relations are key.

This overview has focused on smallholder contract farming. The profile of participants is important: if they are already relatively commercial, they are more likely to replace other cash crops than cease food production (Glover 1994). We might surmise that the threat to food security is greatest for very small farms, which will have to allocate a larger proportion of their holdings to the new contract crops, or very poor farms, whose food yields are already likely to be marginal (Leavy & Poulton 2007). Discussions on the inclusion of poor smallholders within contract farming schemes should perhaps bear this in mind.

To conclude, contract farming poses risks to the food security of participating smallholders and non-participants in the surrounding community. Those risks could be minimised by ensuring that some of the pay goes to women,controlling land conversion and introducing a crop that does not clash with local food cultivation, while supporting local food markets. But it seems optimistic to expect contracting firms to behave in this way. Although some schemes in the past have limited the acreage or insisted that farmers also grow food (Tiffen & Mortimore 1990; Little 1994), companies

are said to deliberately seek out rural areas with weak or missing markets. As Simmons (2002) observes,by creating competition and limiting export-crop expansion, policies to promote food security can be bad news for agribusiness contract farming.

(c) Food security impacts of commercial farming areas

Unlike most plantations, large-scale commercial farms often produce food staples such as maize, wheat, cassava and dairy products for the domestic market (Gibbon 2011). One of the hopes for the new farming blocks is that, by introducing modern large-scale farming and, ideally, stimulating local agriculture, they will increase national food production and reduce reliance on food imports (Ariyo & Mortimore 2011; Hall 2012:828). In the past, white settler farms have, despite their negative social impacts, reportedly made an important contribution to national food production (see Von Blanckenburg 1994 on Zimbabwe)— although that must be balanced against the cost to peasant farming. And in the example from Ghana where local agriculture intensified as a spillover effect from the government's commercialisation scheme, the region became a major yam-producing zone (Amanor & Pabi 2007). However, Hall (2012) reports that, despite national food security rhetoric, the long-term strategic aim of several of the new farming areas sponsored by South African agribusiness is to produce fruit, sugar and poultry for the European market.

Focusing in on the household, it is also important to consider the food security of those who work on medium- and large-scale farms. Aside from the poverty-level wages, two elements of the employment relationship that particularly affect food security are **whether workers are paid in cash or in kind, and whether they grow or have access to food crops when they are not working**. In general, waged agricultural workers have been found to spend a high proportion (as much as 70%) of their cash income on food. They are thus disproportionately vulnerable to increases in food prices (FAO/ILO/IUR 2007). One might then conclude that it is preferable for the employers to pay part of the wages in food rations, in order to guarantee a minimum level of nutrition. However, **farmers appear to have exploited this payment system** by providing substandard food that is worth less than the cash equivalent (Cramer et al. 2008). On settler farms in southern Africa during the first half of the twentieth century the food was typically poor quality, insufficient in fat, protein and fresh vegetables (Jeeves & Crush 1997). The 1994 study from commercial farms in Trans Nzoia, Kenya, recorded monotonous, maize-heavy diets and stunting among workers' children (Foeken & Tellegren 1994). Whether workers would be better off by being paid 100% cash might depend on their local purchasing power. In Namibia, a survey discovered that farmworkers paid partly in food rations were actually better off than those paid wholly in cash, although the reverse was true in the more remote north of the country. The Labour Commission subsequently recommended that in-kind payment be outlawed (Devereux et al. 1996; Werner 2002). Regarding the second element of the employment relationship, it is significant that many workers, particularly permanent workers who live on the farm, are allocated garden plots by their employers, who recognise that wages are below subsistence levels but resist increasing them. Research could investigate the soil quality of plots, what is grown, whether the produce remains within the household and whether it adds to food security of different classes of waged worker. This would also be relevant to workers on plantations and contracted farms.

5.6 Macro-economic impacts

(a) Macro-economic impacts of plantations

Although plantations may have been designed as a macro-economic tool of resource extraction (Thompson 1941), and have often been theorized through a macro-economic lens, that is not the focus of this paper. However, it is important to counter-balance an interest in the local dynamics of plantations with consideration of their impacts on the domestic economy.

Plantations are reported to have contributed to GDP and agricultural growth in Malawi (tobacco and sugar), Côte d'Ivoire, Indonesia and Malaysia (all oil-palm) during the postcolonial era (Nyanda 1989; Pryor & Chipeta 1990; Widner 1993; Hall et al. 2011). This involves both private and public plantations. If one considers large horticulture operations, they can be added to the tea, coffee and pineapple plantations that have historically given Kenya a share in global export markets (English et al. 2004). Although the heavy use by plantations of imported inputs and machinery is a drain on a country's foreign exchange, it also provides the government an opportunity to raise import taxes. If the plantation owner is a corporation, governments can levy corporate tax; international investors inject foreign equity capital; and when the commodities are exported they generate further foreign exchange and customs revenue (Little & Tipping 1971). Epale (1985) also points out that in the first half of the twentieth century, formally employing people in plantations drew them into the tax sphere.

Acting against these benefits are the generous state subsidisation that plantations have received and the potential cost to other large-scale and small-scale producers (Kydd & Christiansen1982). Several other **negative impacts** have been documented. When the national agricultural sector is narrowly focused on a small number of export crops, it becomes vulnerable to fluctuations in the global prices of those commodities affecting the terms of trade. After riding high in the 1970s, Malawi's estate sector suffered during the 1980s when global tobacco and sugar prices fell (Pryor & Chipeta 1990). Tanzania's plantation sector, highly concentrated in sisal, had already been damaged by the decline in the global sisal market in the 1960s (Mbilinyi 1991). A second

problem is the expatriation of profits by international agribusiness concerns that own, operate or supply plantations (Mackintosh 1989). The flow of money leaving Zimbabwe in this way was increasingly channelled towards international input suppliers and finance providers as part of the intensification and industrialisation of agriculture (Loewenson 1992). Lastly, when plantations rely on foreign workers for salaried positions or for the labour force, there is less chance for the host country to benefit from savings, consumption and the transfer of skills and technology.

(b) Macro-economic impacts of contract farming

Macro-economic benefits reported for contract farming include **employment creation, an increase in national production of that crop and contribution to GDP.** The most significant effects occur when the scheme is very large, such as KTDA in Kenya, or when there are multiple schemes forming a sub-sector, as with Kenyan horticulture. In 2002, KTDA involved 360000 contract farmers who produced 60% of all the country's tea (Ochieng 2010). Kenya's horticulture industry is reported to be a substantial provider of jobs — directly employing 135000 people in 2004 — because of its particular demands for year-round workers and ancillary opportunities in packing and processing (English et al. 2004; Humphrey et al. 2004; Neven et al. 2009). The GDP rewards from contract farming are affected by its relative productivity. Some authors have found the yields achieved by contract farmers in crops such as sugarcane and oil-palm to be higher than what plantations could achieve (Hayami & Otsuka 1993; Papenfus 2000). But although this fits with the inverse productivity model favouring small farms, it is not universally the case (Oya 2012). Contract farming can suffer from inefficiencies and corruption, which hinders productivity. Staying in Kenya for the moment, a recent report found that subdivision of plots in the Mumias area is making sugarcane increasingly uneconomical for individual out growers, while money is being leached from the sugar sub-sector as a whole by extensive corruption within sugar companies, out grower institutions and ministries (KACC 2010).

Schemes that produce for international markets benefit the host government by providing **foreign exchange and export earnings**. The Zambia Sugar company, for example, which obtains some of its product from smallholder out growers, earned US$30 million in foreign exchange in 2007 through exports of sugar and ethanol (Richardson 2010). Schemes that produce for the domestic market, which includes many of the state-run schemes, benefit the economy through import substitution and saving foreign exchange. Again, there may be further rewards for the treasury through income taxes, corporation taxes and share dividends if the state has a holding in the contracting firm. As with plantations, however, governments sometimes agree to forego such gains, offering tax breaks and other incentives to ensure the scheme goes ahead. Particularly when international agribusiness is involved, **profits and linkages sometimes elude the host country and escape overseas**. Although its own production and employment creation is nationally significant, Zambia Sugar was able, with its South African owner Illovo, to suppress competition within the domestic sugar industry, and they awarded several servicing contracts to South African firms (Richardson 2010).

(c) Macro-economic impacts of commercial farming areas

It was not possible to review any economic assessments of commercial farming areas for this paper. Historically, the macro-economic contribution of large-scale settler farms in sub-Saharan Africa has varied with their level of commercialisation. As they replaced tenant farmers with hired labour, settler farms became what Binswanger et al. (2006) call Junker estates.[17] Although tenant farming remained popular in Senegal until the 1980s (Oya 2007), in east and southern Africa it was mostly phased out in the 1930s and 40s as settlers intensified their efforts to recruit cheap farmworkers (Jeeves & Crush 1997; Gibbon 2011). If the Junker estates survived the Depression and land reform, they became more capital-intensive commercial farms. In Zimbabwe, settler farms began to mechanise around the 1950s (Von Blanckenburg 1994).

Settler farms contributed to the colonial economy through commodity production, but observers are also interested in their macro-economic impact on other economic sectors, specifically their suppression of the African peasantry through land appropriation, rent-seeking and preferential policies.' Settlers contributed nothing to the exchange economy that existing peasant producers couldn't match or do better,' writes Vickery (1985) of 1930s Zambia. In the settler economies of Kenya, Zimbabwe and South Africa, large white-owned farms were able to operate within a kind of apartheid capitalism (Biermann & Kössler 1980; Njonjo 1981). The impact of South African farms was felt across sectors and borders. By lobbying for high producer prices, farmers forced up the costs that mining companies had to pay for food for their workers, while farms in neighbouring Malawi, Zimbabwe, Swaziland and Botswana found themselves shut out by protectionism from South African commodity and labour markets (Jeeves & Crush 1997).[18]

Such distorted support might seem irrelevant in a postcolonial world, but medium- and large-scale farms, whether foreign-owned or indigenous-owned, are reported to continue to receive preferential support such as cheap finance or input subsidies as part of settlement schemes and rural development initiatives (Mbilinyi 1991; Amanor & Pabi 2007; Sjaastad et al. 2012). The Zimbabweans were attracted to Kwara State at huge expense to the regional government (Ariyo & Mortimore 2011), which should be weighed against their future economic contribution. Also pertinent is the opportunity

cost of alternative efforts to support agriculture; in Kwara State, for example, the Zimbabwean settlement scheme follows a number of state-funded previous initiatives, including a local Back-To-Farm policy, which failed to take off (Dearn 2011).

According to a brief review of literature from throughout the twentieth century, the productivity of in-coming large-scale farmers, whether individually or as part of a block, is influenced by several factors, including: (1) their experience in commercial agriculture and the agro-ecological conditions; (2) whether they lobby collectively, and are successful in doing so, to protect the least productive among them; (3) how much of their land is left uncultivated; and (4) their longevity—since large-scale farms in Africa have been rather unstable, it jeopardises the likelihood that they will have a long-lasting macro-economic impact.

A final point is that when large mixed farms produce at least partly for the domestic market, they are expected to generate fewer export earnings for the state than plantations or export-oriented contract farmers. However, commercial large-scale farms still spend precious foreign exchange on imports such as machinery, chemical inputs and, in the case of the Zimbabweans settled in Kwara State, cattle from South Africa (Osodo 2009).

6. Analysis

6.1 A summary of the three farming models

One of the aims of this paper is to identify whether the three selected large-scale farming models could benefit the rural poor and, if so, under what conditions. It is particularly concerned with impacts at local level. This section draws some broad conclusions on this question, and highlights how institutional arrangements and (including the rules, practices and organisational forms of farming models) and contextual factors (including the forms and processes of production and reproduction in agriculture and within capitalism) affect how schemes play out.

(a) Plantations

It is difficult to be optimistic about plantations, for two main reasons. Firstly, plantations have historically provided extremely poor wages and working conditions. There have been improvements over the past fifty years, partly thanks to legislation and union pressure. But this is tempered by a trend towards casual employment, while increasing mechanisation reduces the net employment gains. One area of debate is whether plantations should be seen as a poverty trap or a refuge (Lansing et al.2008). People are often forced into plantation work by distress-push factors, and it could perhaps be argued that plantations serve a useful function by offering employment and, sometimes, accommodation, health services and childcare to the very poorest members of society (Davies 1987; Von Muralt & Sajhau 1987; Cramer & Pontera 1998).

Secondly, plantations are associated with expropriation of land and consequent disruption to livelihoods and food production. This still goes on today. The most common positive spillover seems to be an increase in local food cultivation and trade, driven by demand for food in the context of a more cash-centred economy — but this can easily result in food insecurity instead. The most encouraging of the reviewed cases is a jatropha plantation established in northern Ghana by a Norwegian company in 2008 (Boamah 2011). Plantation workers and local villagers were able to meet their food needs because the company set aside some of its acquired land for maize cultivation, a condition of a bank loan. Following NGO pressure, the company also offered free ploughing services and allowed workers to intercrop the jatropha with maize (Boamah, personal communication). Arguably, the benefits are not attributable to the plantation per se but to the fact that maize has been introduced to an area previously dominated by shifting cultivation — the long-term impacts of which will be interesting to monitor.

(b) Contract farming

When it comes to contract farming there are at least favourable reports of high incomes for participating farmers and a rise in local spending (Boesen & Mohele 1979; Grosh 1994; Wegulo & Obulinji 2001; English et al. 2004), satisfied farmers renewing their contracts (Grosh 1994; Poulton 1998; Singh 2002; Minten et al. 2009) and local non-participants being eager to join schemes (Clapp 1988; Tiffen 1995; Amanor 1999). However, it often seems to be the case that participating farmers become dissatisfied over time, perhaps with producer prices, the contract terms or the behaviour of the contractor. This dissatisfaction is expressed through, for example, protests and side-selling. Participation offers access to credit and inputs but indebtedness among farmers is a big problem, and in that context the close control that some employers exert over the cultivation of crops, which has been criticised for de-skilling or alienating peasants, can be beneficial in helping the farmers to maximise yields and thus repay their loans. Contract farming also presents opportunities for local elite capture. This model is likely to involve better-off members of rural society than the people who become plantation workers; researchers should therefore consider the implications for socio-economic differentiation. In their review of smallholder initiatives including contract farming, Leavy and Poulton (2007:8) make the point that 'in practice, relatively few are able to participate in what, on the whole, tend to be niche markets. That only the top few per cent of smallholder farmers can actually benefit highlights the limitations of conventional thinking if it is decoupled from support for [food] staples development.'

Theoretically, contract farming should not greatly disturb local people's access rights, since it is generally

Table 8. Comparison of favourable and unfavourable contractual terms from two contract farming schemes

	Lecofruit, Madagascar	Mumias Sugar Company, Kenya
Crop	French beans, some other vegetables	Sugarcane
Payment	Weekly during annual harvest	Lump sum up to 2 years after planting
Deductions	Inputs (seeds, fertiliser, pesticide)	Inputs (seed-cane, fertiliser), extension, machinery (ploughing, harrowing, furrowing), transportation, harvesting, council rates e.g. for road improvements, other levies
Collection	Company sends trucks to farmers' villages	Farmers pay for transport to sugar mills via weighbridge. Complaints of corruption and spillages
Competition	No monopsony, rejected produce may be sold on local market Many farmers able to obtain seeds independently	Monopsony in who contracted farmers can sell sugarcane to (although unofficial side-selling goes on) Company supplies all inputs and services itself
Sanctions	Mild. Defaulting farmers cannot work with the company again	Company has the right to take over farmers' land and charge farmers for the work. Farmers must make land available for 3–6 years
Extent and impact on food production	Farmers are expected to commit 0.01 ha to the crop Crops account for <5% of total area cultivated by household. Farmers continue to grow other food and cash crops Rejects may be sold on local market or used for own consumption	Farmers are expected to commit at least 1.2 ha to the crop Sugarcane accounts for 53–56% of total land owned by respondents Decline in food-crop production
Extension	High level of extension, farmer visits and training	Strict but inefficient management. Farmers have called for better extension services and field schools
Buyer standards	Child labour not allowed; pesticide application closely monitored	/

Sources: Minten et al.2007, 2009 (Madgacascar); Mulaa 1981; Buch-Hansen & Marcussen 1982; Graham & Floering 1984; Glover & Kusterer 1990; Wegulo & Obulinji 2001; KESREF 2006; KACC 2010; Waswa et al. 2012 (Kenya).

expected that the land to be cultivated is already owned by the contracted farmers. In practice, land acquisition and expropriation does take place in contract farming schemes that involve (re)settlement or the creation of new plots, and when schemes expand over time, encouraging further acquisition and concentration of land. One of the recommendations of Porter and Phillips-Howard's 1997 review of contract farming was that schemes that require the appropriation of community land should be avoided. Then there are nucleus–out grower models, whose 'estate' components threaten access rights just as plantations do. This is one reason to be wary of nucleus–out grower schemes. Another reason is that having a central processing plant puts the contractor under pressure to ensure adequate output from farmers, which can make the scheme financially vulnerable and encourage expansion at the expense of other crops. Also, the parastatals and firms that run nucleus–out grower schemes tend to be particularly autocratic (Grosh 1994). Still, such schemes can bring infrastructure and the potential for landless estate workers to eventually become smallholders, as has been recorded in Indonesia (McCarthy 2010).

The main observation of contract farming is not that it is an inherently pro-poor farming model — which is certainly not supported by the literature — or that it is inherently harmful to the rural poor, but that the outcomes of contract farming schemes are highly variable and depend on key determining factors that are not always fully explored in research. During there view, three schemes stood out as positive examples of contract farming, in as much as the negative outcomes typically associated with contract farming were absent or minimal. A brief discussion of them here illustrates the influential, occasionally fortuitous, role that contextual factors play. The first is a private organic coffee scheme in eastern Uganda, surveyed in 2006 (Bolwig et al. 2009). The participants in this scheme earned good incomes because of the premium paid for organic coffee, and yet were in a relatively strong position because there were local (non-organic) coffee markets preventing the company from establishing a monopsony. Because it

was organic farming and the use of inputs was minimal, deductions and therefore indebtedness were probably minimised. The second case, also majority owned by a private firm, is the Arachide de Bouche peanut scheme in eastern Senegal (Warning & Key 2005). Here, the fact that peanuts were already grown locally had several beneficial implications for participating farmers (mostly men), for instance:

- the farmers were familiar with the crop so there was lower uncertainty and risk for them in participating;
- there were fewer barriers to entry for poorer farmers as they already had inputs and did not need to invest in fixed capital;
- the company did not need to give extensive training which reduced its costs of working with multiple small farms;
- it increased the farmers' bargaining position with the company since they could exit the contract without having to invest in new assets and could use the same assets for other crops (i.e. low asset specificity); and
- because there were already peanut markets locally the company could not operate a monopsony.

Crop characteristics also had a bearing on the third case, a scheme involving around 10000 smallholders in Madagascar (Minten et al.2007, 2009). Again, there were already competing local markets for the contracted crops (mostly French beans), and the farmers were able to continue to grow other food and cash crops on their smallholdings alongside the contracted crops during the off-season or on other plots. In addition, the company, a domestic horticulture business, internalised many of the operational costs and responded to inflation by raising the producer prices it paid to farmers. The benevolence of the firm appears to have been influenced by the strict quality and ethical standards enforced by its European buyers, and by its need to maintain good relations with powerful village elites. As a caveat, it should be noted that all three studies lack analysis of class dynamics, inter-household impacts and any consequences for land rights.

Some of the most worrying cases of contract farming from a rural poor perspective are the oil-palm and sugarcane nucleus–outgrower schemes of Indonesia and western Kenya. Here, a constellation of some of the worst possible conditions has shone a dim light on participating farmers, estate workers and local villagers. This paper has discussed the impacts for access and food security. In Indonesia, elite capture and political collusion have been a particular problem; in the Kenyan sugarbelt, a key issue has been the monopoly control of the sugar companies. How this control is manifested in the contractual terms for participating farmers is illustrated in *Table 8*, which compares some key characteristics of the Mumias scheme with the more favourable terms that are reported from the scheme in Madagascar.

A striking conclusion is how often the interests of contractors and farmers diverge (De Schutter 2011). From the farmers' point of view, it seems to be preferable when the company does not have a monopsony, as the presence of alternative markets to sell to gives farmers bargaining power and may push up the price paid for contracted crops (Warning & Key 2005; Bolwig et al. 2009). Farmers also benefit from the flexibility of exiting contracts to grow other crops. However, this is not so good from the firm's point of view, and it is possible that the inability to enforce contracts could prompt firms to retreat to plantations and large farms (Jaffee 1994; English et al. 2004). Similarly, the peanut case demonstrates that the advantages for farmers when special investments and inputs are not needed, yet for the firm, asset specificity helps to tie the farmers to the contract (Kirsten & Sartorius 2002). Companies profit from an absence of rural markets and services, and from the low shadow price of self-exploiting peasant farmers (Key & Runsten 1999; Warning & Soo 2000), which casts in doubt the prospect that contractors will help to stimulate local agriculture. There are great tensions within contract farming, for which the solutions often appear to be a role for third parties such as cooperatives and governments that dilute the contractual purity of the original model.

(c) Commercial farming areas

One argument in favour of commercial farming areas is that they sometimes develop without top-down government or donor direction — although that does not mean that elite capture and local dispossession does not take place. Nor does it mean that they are wholly unsupported. A key aspect of commercial farming areas—spontaneous or planned — is the role played by the state. Especially during the colonial period, settler schemes and the large-scale farm sector in general were heavily subsidised, at the expense of peasant producers. In countries such as Kenya and Côte d'Ivoire, many politicians had a personal interest as large landowners themselves. Recently, national and regional governments have been pivotal in providing political and financial support for farming blocks, as in Zambia, or refusing to endorse them, as in Mozambique (Hammar 2010). Indeed, the settler model seems unlikely to become widespread in sub-Saharan Africa because of the political ambivalence in many countries towards settlers. And yet, this paper raises the possibility that commercial farming areas are more likely to create local linkages and stimulate local agriculture than either contract farming or plantations. The fact that medium- and large-scale commercial farms in the postcolonial era tend to: (a) lack monopoly or monopsony power; (b) produce a range of food crops and livestock products rather than high-value crops for export; and (c) have comparatively weak links with international agribusiness, all create conditions that are more conducive to attracting smaller capitalist farmers, involving local suppliers and processors along the supply chain and perhaps allowing technology

transfer to take place. An additional factor is the infrastructure that the state typically provides as part of its support for in-coming farmers. An aspect to consider is the conditions and labour mobility of waged farmworkers, as with plantations. It may be a concern that some of the new commercial farming areas involve farmers from South Africa and Zimbabwe, where the employment culture has been paternal and repressive (Du Toit 1994; Rutherford 1997; Sjaastad et al. 2012).

The risk with commercial farming areas is that even if they do have beneficial spillover effects they will be short lived as this farming model has proved vulnerable to bankruptcy and land reform. Establishment of medium and large farms is associated with land expropriation, but also *de jure* trespass and squatting. When settlers take over existing farms rather than clear new land, there may be smouldering local grievances over prior loss of access rights that can flare up into political opposition. The Shonga Farms case from Nigeria provides an illustration. Nigerian legislation allowed the state to appropriate land over which local people had weak tenure, but local protests did force the state to provide compensation and community projects. As the scheme progressed, the regional government has provided a supportive environment not only for the settler farmers but also for wider agricultural commercialisation. Nevertheless, local small farmers claimed they have failed to benefit and there are reports of some farmers refusing access (Ariyo & Mortimore 2011) or 'acting like a colonial force' (*The Insider* 2012). Following the departure of the politician who had pioneered the scheme local people have re-ignited their protests.

6.2 Key determining factors that affect the outcome of the three models

The previous section highlighted some of the conditions that determine how the schemes affect small farmers, workers or non-participants in the local area. This section goes further, to suggest six key determining factors that strongly affect the outcome of schemes across all three farming models — plantations, contract farming and large-scale commercial farms (as a proxy for commercial farming areas) — to a greater or lesser extent. The results underline the importance of studying agricultural models in conjunction with their institutional setting, understood in relation to the longer-term history of agrarian relations under capitalism.

Key determining factor 1: The terms of contracting or employment

The experience of contract farmers and waged agricultural workers is affected by particular detailsof their employment such as the payment arrangements or conditions of participation, which also have repercussions for other household members and the changes that take place in the wider community. Specifically:

- **The balance between permanent, casual, seasonal and piece work is key**. On farms and plantations, permanent workers typically enjoy more benefits, greater security and better pay than casual workers. Paying piece rates could equate to higher pay overall than a fixed daily wage but encourages long hours and exploitation of family labour. A seasonal workforce is flexible but fragmented or dispersed, which inhibits collective action.

- The pattern of spending within the household and in the local economy is influenced by **who is paid, how often and how much of the payment is in kind**. Lumpy payments made to a male household head are associated with indebtedness (Glover & Kusterer 1990). A number of conditions specific to contract farming, such as the level of deductions, whether there is a quality grading system and how the produce is delivered to the contractor, all affect the farmers' relationship with the contractor and the scope for exploitation and farmer resistance.

- The **socio-economic profile** of those who participate in contract farming schemes or plantation and farm work affects the subsequent distribution of income and debt within the local area, and is a function of any exclusion criteria or other barriers to entry imposed by the scheme.

- A related point from contract farming which might also apply to commercial farming areas is **whether there is any limit on the acreage or volume of the contracted crop that can be grown**, either within the contract or as stipulated by a local authority. When the opposite occurs and take-up and expansion are widely encouraged, this has implications for livelihood dependence, food production and therefore food security in the local area, and for soil exhaustion.

- Several authors suggest that **outcomes are better for workers and contract farmers when they have the freedom to do additional livelihood activities outside their contracted work** (Glover & Kusterer 1990; Porter & Phillips-Howard 1997). That might include waged residential agricultural workers being allowed to grow their own food crops, or contract farmers having enough freedom or bargaining power to exit contracts or even renege on their agreements. Such autonomy enables people to better respond to price shocks and exploitation by the employer, as well as supplement their income.

- **The type of farmwork** and sophistication of husbandry can be important. If people gain skills, they might be able to use them in future employment or peasant enterprise. Nonetheless, it can be difficult for poor small-scale farmers to transfer skills and set up independently (Leavy & Poulton 2007) — their ability to do so is constrained by the institutional environment and monopoly behaviour of the commercial employers themselves.

Key determining factor 2: The behaviour of the employer

It is an obvious but necessary observation that the outcome of commercial agriculture schemes is influenced by the behaviour of the contractor at the head, be it a parastatal, international agribusiness firm or independent farmer. It is often at their discretion whether, for example, local people are considered for employment, squatters are expelled or local people are allowed to continue to access newly acquired land.

There is often an uneasy mix of profit-seeking and paternalism in employers' behaviour. Among private operators in particular, their concern to minimise costs is manifested in, inter alia: inadequate compensation for alienated land; poverty wages for agricultural workers; inadequate provision of training, housing, protective equipment and so on; a squeeze on contracts; and a readiness to move to a new location if productivity falls. The exploitative treatment contributes to low motivation and high turnover among participants. **Yet some actions taken by employers with the aim of maximising profits or minimising risk have beneficial consequences for participating farmers and workers or the wider community**. For instance, employers might offer ploughing services to local smallholders as an incentive to work for them, or provide regular extension visits in their efforts to ensure high-quality produce. The more benevolent actions displayed by employers are also attributable to local protests, the introduction of welfare legislation or the recent trend in agribusiness of corporate social responsibility (Sender & Johnston 2004; World Bank 2007:137; Gibbon 2011; Schoneveld et al.2011). Companies and settler farms are not monolithic entities and the outcomes of harsh sanctions can be mediated by individual behaviour, such as farm advisers acting as go-betweens, farmers' wives offering subsidised milk to underpaid workers or parastatal field staff overruling participation criteria (Von Blanckenburg 1994; Porter & Phillips-Howard 1997; Ochieng 2010).

At a local level, companies that operate contract farming schemes might try to achieve a monopsony, which would affect how closely farmers stick to their contracts. But even when there are alternative local markets, companies could exert control through the surveillance of farmers and by either sub-contracting services such as crop-spraying or keeping them in-house. Across all three models, the chances for technology transfer, downstream linkages and local competition are lessened if the employer has a monopoly on services, as in the Mumias sugar example. **Monopoly behaviour is demonstrated by international agribusiness, parastatals and farmers' consortia alike**, and —with the support of marketing boards— can extend to production or price-setting. In addition, the use of sub-contracted service providers or middlemen such as labour contractors might generate employment linkages but also seems to widen the scope for bribery and exploitation.

Key determining factor 3: Crop characteristics and farming practices

Reviews of the impacts of plantations and contract farming that have been published in the last twenty years or so do not usually highlight the characteristics of the crop itself as a key determining factor. Perhaps academia has distanced itself from a kind of crop determinism that was used to justify tropical commercial agriculture in the past (Pryor 1982; Watts 1994; Hayami 1996; Hall et al. 2011). However, when individual case studies are considered, it is clear that outcomes are affected by which crop or crops are grown, and how they are grown. This is especially so for contract farmers but it also affects wage workers and how schemes impact on the local economy and environment. **There are two main aspects: one, the qualities of the crop; and two, how it combines with food and cash crops that are already grown locally**.

There are several facets of a crop's character and each can be influential. For example, on a plantation or large farm, the crop grown affects working conditions, the seasonality of labour and who the workers are, reflecting employer and cultural preferences. In contract farming, the choice of crop influences how much fertiliser and pesticide farmers must buy on credit, how often they are paid and how the produce is weighed and collected by the contractor. The key variables are: seasonality and intensity of labour (which affects labour demand and employment multipliers); how long the crop takes to mature and how quickly it must be processed after harvesting (which is important for contract farming schemes); input intensity (which affects contract deductions, workers' exposure to chemicals and local pollution); asset specificity and capital intensity (affects barriers to entry into contract farming and subsequent dependence of participants); and the crop's value (affects income and differentiation). Note that many of these characteristics are not biologically inherent to the crop. Rather, they are determined by the varieties and farming practices chosen by the employer under the influence of supermarket buyers, agribusiness input suppliers and international donors (Grossman 1998).

Depending on how well the new crop dovetails with existing farming practices, there is the potential for synthesis or disruption at local level. A crucial question is whether the new scheme will divert labour from other food or cash crops. Subsistence and peasant commodity

production can be neglected if people are drawn into in contract farming or wage work. Conversely, employers may be faced with labour scarcity or contract farmers that fail to meet productivity targets if there are competing priorities for people's time. It is therefore important to consider the labour demands at different times of the year for both new and existing crops and the potential for intercropping. In the scheme in Madagascar, French beans could apparently be grown without disturbing other food and cash crops.

The peanut example from Senegal shows that if the contracted crop is already grown locally, it can hinder the company from establishing a monopsony and increase farmers' bargaining power. Other things to consider are **if livestock is also involved** and the **extent of irrigation and mechanisation**. Irrigation can improve yields at a cost to local water users. The use of machinery is associated with technology transfer but also soil degradation, workplace accidents and, in certain cases, low job creation, which is significant for plantations, where mechanisation often increases over time (Cotula & Vermeulen 2007).

Key determining factor 4: Legal and policy institutions

Life for workers and smallholders who participate in commercial agricultural schemes can be much enhanced if there is **supportive legislation and a chance for collective action**. For plantation and farmworkers, union representation and legal minimum standards can improve their bargaining power and result in better pay, working conditions and housing. Through cooperatives or farmers' organisations, contract farmers are probably better informed and have a means to campaign against company abuses or for improved contractual terms. Also for local people who use land targeted for commercial agriculture, the presence of national requirements for impact assessments or community consultation has the potential to result in better outcomes regarding compensation, grazing rights and so on.

However, legislation is not always enforced and collective action not always effective. In the past, unionism has been challenged by the seasonality and geographical remoteness of agriculture, and by ethnic divisions among workers that employers are happy to encourage (ILO 2008; Oya 2010). The worst farmers' organisations simply introduce another layer of bureaucracy and corruption. Supportive legislation can be undermined by legal loopholes and a lack of capacity among implementing agencies; sometimes legislation goes against workers and smallholders by facilitating, for example, land acquisition or a shift to casual employment (Amanor 1999; Friends of the Earth et al. 2008).

Governments can play an important role by injecting political will and intervening in the operation of commercial schemes to protect the interests of the poor. For instance, there are examples of government action to ensure smallholder inclusion in contract farming, encourage permanent employment, limit mechanisation and write off farmers' debts (Korovkin 1992; Marini 2001; Richardson 2010). Supportive governments can also create the kind of rural infrastructure that enables positive spillovers to occur.

The policy environment in general heavily influences the outcome and longevity of large-scale agricultural schemes. Settler farms, plantations and contract farming may well have benefited from preferential policy support. Yet this support can wax and wane with the political cycle. For example, privileged large-scale farms (indigenous-owned or settler-owned) have also suffered in the past from land reform, a reorientation of pricing policy to favour smallholders, and the removal of fertiliser subsidies as part of structural adjustment reforms (Amanor & Pabi 2007; Sjaastad et al. 2012; Killick 1979). Governments' involvement in commercial agriculture is typified by ambivalence, and the outcome for workers and contract farmers may depend on power relations between government ministries or between national and regional governments, and on the influence of international agribusiness and farmer lobbying groups (Hammar 2010; Richardson 2010).

In addition, **other third parties** can play a determining role. International donor agencies have been involved in large-scale schemes for decades, and their advice does not always favour the rural poor. Increasingly, the design and outcome of large-scale commercial agriculture schemes also seem to be influenced by civil society and EU standards, as with the Ghanaian plantation example (Boamah 2011; see also Minten et al.2009; Nhantumbo & Salamão 2010).

Key determining factor 5: The local context

Plantations and contract farming schemes are often located in remote areas with underdeveloped markets. There might be economic or welfare reasons for this, but it can have negative implications. Thin local food markets might be unable to respond to increased demand from labourers; infrastructure needed to support technology transfer might be missing. Local participants are vulnerable if they lack experience with commercial agriculture or alternative options for accessing markets, inputs and so on (Porter & Phillips-Howard 1997; Amanor 1999). In particular, poverty and a lack of options is a strong distress-push factor in plantation and large-scale farm employment, driving individuals into wage work and constraining their freedom to leave. When local peasant production is healthy or people have alternative income sources, they are in a stronger position and employers might need to offer incentives to recruit farmers or workers. Therefore **the local political economy and what Havnevik (2000) calls the indigenous institutional pattern affect who participates, and on what terms**. The extent of socio-economic differentiation is important, as this affects the pace of further differentiation occurring as schemes progress.

Although one of the hallmarks of large-scale agricultural schemes is that they are introduced to an area rather than being a bottom-up development, **local people affect how they play out**. Those with influence in the community — often male elites — might have a say in negotiations over compensation,allocation of land or deciding who is recruited. Therefore it is important to consider village-level processes of consultation and decision-making, and the potential for elite capture (McCarthy 2010; Prowse 2012). People who have less voice within the community and lack the support of local politicians are more likely to be adversely affected. Outcomes are also mediated by **values and norms** concerning, for example, the acceptability of working on a neighbour's farm or the kind of work that women are allowed to do. There might be community institutions that guard against differentiation or the individualisation of labour. Widows and divorcees can be pushed into landlessness and wage labour by patriarchal systems (Adagala 1991). However, institutions themselves could be affected. Reported local outcomes of female empowerment, changes to systems of inheritance and depletion of customary chiefs' power are all examples of the catalytic effect of large-scale agriculture (Carney 1988; Mbilinyi 1988; Pryor & Chipeta 1990).

Regarding land, some authors suggest that when contract farmers, plantation workers or farmworkers have secure, independent tenure, it makes them less dependent on the employer and less vulnerable to eviction. It is not clear from the literature if evictions often take place. However, independent tenure does seem to strengthen participants' bargaining position and give them flexibility in growing crops (Porter & Phillips-Howard 1997; Grossman 1998; Marini 2001). Additionally, having secure tenure, whether *de jure* or *de facto*,reduces the chance of local people losing their land if the scheme expands or attracts land speculators. Thus, **local land institutions and markets** are key. Generally, outcomes for the rural poor are better if surplus land is freely available. Another variable is whether the scheme uses already-alienated land, as with most contract farming and some farming blocks, or is a greenfield development, such as plantations and settlement contract farming schemes.

Key determining factor 6: Migrant employment

In several case studies, the outcome of large-scale agricultural schemes has been affected by their employment of migrants, either from within the country or from abroad. This especially applies to plantations and large-scale commercial farms, which made heavy use of migrant wage labour throughout the twentieth century (Graham & Floering 1984; Moyo et al. 2010; Oya 2010; Li 2011). Contract farms might also use migrant labour and in some cases the farmers are incomers themselves if the scheme allocates plots for settlement rather than contracting farmers to grow the crops on their existing holdings (Dolan 2004; Sender & Johnston 2004).

In some cases the migrant workers are skilled or experienced and are able to negotiate on wages. But in the main, migrant wage workers are reported to be easily exploited, and their presence within the workforce can inhibit unionisation or depress local agricultural wages (Kirk 1987a; Sajhau & Von Muralt 1987; Loewenson 1992; Foeken & Tellegren 1994; Sender & Johnston 2004; Oya 2010). Many other impacts on the local area have been documented — often negative, such as local tensions between villagers and transmigrants over land and labour in Indonesia (Friends of the Earth et al. 2008; Li 2011), and an increase in prostitution and HIV infection rates when migrants travel alone, without their families, in Cameroon and Zambia (Epale 1985; Richardson 2010). Migrants may increase spending in local markets, but money also leaves the area in the form of remittances and savings to be reinvested back home, which has further implications for agriculture and the rural structures there. Proletarianisation might be expected to be greater among itinerant migrant workers than local workers (Mackintosh 1989), which is why it is important to consider if they have access to smallholdings on the site or in the villages where they temporarily stay.

6.3 Further cross-cutting implications for policy and research

The analysis concludes with some cross-finding observations that could inform the design of future research into large-scale agricultural schemes and contribute to discussions over the most appropriate aims, institutional arrangements and beneficiaries for rural development interventions. This requires a note of caution. Having an awareness of institutional arrangements need not translate into recommendations for alien or inappropriate institutions to be created, as has been a tendency of governments and development agencies in the past (Byres 1982; Berry 2002; Sender & Johnston 2004; Havnevik 2000). But it does call for sensitivity towards the existing institutions that should be either preserved or accommodated in planning.

(a) Working conditions might be better on plantations than small-scale farms

One observation is that although the record of plantation firms as employers has been criticised, the wages and conditions for workers can be better or perhaps *less bad* on foreign-owned plantations than on large farms and smallholdings. There is evidence to suggest a spectrum in wages, with the worst pay on non-participating small farms at one end, improving on medium-scale and large-scale mixed and contract farms, somewhat better pay on modern horticulture contract farms and estates, and ending with the highest wages on specialised, foreign-owned plantations (Mackintosh 1989; Glover & Kusterer 1990; Foeken & Tellegren 1994; Porter & Phillips-Howard 1997; Dolan 2004; English et

al. 2004; Cramer et al. 2008; Neven et al. 2009; Oya 2010; Richardson 2010). This is relative, of course — even the best wages might be below the national minimum wage (Cramer et al. 2008).

Some authors suggest that the difference in wages is due to the higher productivity of larger operators or to the greater scrutiny paid by governments and civil society to agribusiness employers in particular (Neven et al. 2009; Oya 2010). In contrast, smaller domestic farms are less visible to the state and might be able to ignore minimum wage legislation (Glover & Kusterer 1990:7; Tiffen & Mortimore 1990; De Schutter 2011). Their owners, including smallholder contract farmers, are left to organise and manage their own workforce, and might exploit social connections or power asymmetries within the household to obtain cheap labour (Clapp 1988). Just like larger employers, smallholders might turn to piece-work rates or delay payment until the end of the season. Whereas rural workers face severe challenges to joining trade unions, there may be unionised workers on plantations and other large-scale operations where labour relations are more formalised (Sajhau & Von Muralt 1987; Tallontire et al. 2005; ILO 2008).These kinds of conclusions support the body of theory, mentioned in Chapter 3, which highlights self-exploitation and poor working conditions on rural smallholdings in developing countries.

Analysing several studies of rural workers, Oya (2010:26) found evidence for a scale effect in agricultural employment, with large-scale agricultural employers —'usually large plantations, sometimes foreign-owned, featuring greater crop specialisation and strong links with global markets' — providing better working conditions than smallholder employers. However, this does not always hold true. It might be recalled that Adagala (1991) uncovered numerous problems with workers' job security, housing and rights on a Kenyan tea plantation owned by the TNC Brooke Bond, including health problems from long hours picking tea in heavy rains. In the Rwandan sugarcane case, workers preferred labouring on outgrowers' farms than the plantation because they could ask for a wage advance and might be allowed to intercrop (Veldman & Lankhorst 2001). Agricultural workers might also weigh up potential benefits against the opportunity cost of, for example, not being able to continue self-employed agriculture or other livelihood activities off the farm or plantation, back home. Nevertheless, the possibility that other agricultural employers could be worse than foreign corporate plantations should be borne in mind as we search for farming models that can benefit the rural poor. Before accepting the argument that contract farming, for instance, can reduce poverty because 'small farms are generally owned and operated by the poor, often using locally-hired labour' (Prowse 2012:23), we should consider the wages and conditions that those hired labourers will face, as well as other dynamics that affect local labour patterns, such as the use of migrants or cultural attitudes towards working on a neighbour's farm (Mulaa 1981; Singh 2002).

(b) Women

Women emerge from this review as an essential area for analysis. Large-scale agricultural schemes in developing countries can affect women in many ways, good and bad. This deserves careful study, not only because women have proved to be especially vulnerable to a range of negative consequences from large-scale agriculture, but also because the gender-related changes that occur within rural households lead, in turn, to changes inagricultural production and patterns of labourat the local level (see Sajhau & Von Muralt 1987 on Papua New Guinea; Julia & White 2012 on Indonesia). To a lesser extent, the impact of schemes on single male youths is also significant in terms of, for example, landlessness and out migration (Amanor 1999; Mackintosh 1989).

This paper has argued that, very often, female agricultural workers are paid less than men and suffer from health and fertility problems; that in contract farming men can take over traditional female crops while women are under-compensated for their work; and that when land is acquired on a large scale for farms or plantations, women risk losing access to firewood and usufruct rights. At the same time, this does not mean that women cannot benefit from having a new income source, or use the new situation to defend or renegotiate control over land and their own labour-power. Inter- and intra-household shifts occur not only in the areas local to schemes, but also in the home villages of migrant workers, such as those that experience extensive male out migration.

The outcomes for women are greatly affected by legal and policy institutions, and the local context. This includes: the customary inheritance system, gender divisions of labour and crop cultivation, women's existing tenure security and use of marginal lands, the educational disparity between men and women, and the broader policy environment concerning land, agriculture and gender equality (Behrman et al. 2012). When predicting outcomes it would be useful for researchers to consider the cultural norms held by villagers, as well as employers and policymakers, concerning women's right to participation and information and the kind of tasks that women and men may do (Mate 2001; Oya 2010; Julia & White 2012). 'Women' are presented as a fairly homogeneous category in this paper, but there will be differences among women that influence how they participate and are affected by large-scale agricultural schemes (Carney 1988; Mackintosh 1989), such as class, education, ethnicity and marital status. Notably, poor women, perhaps from female-headed households, who have few alternative earning sources, are often described as a captive labour pool for farms and plantations (Mbilinyi 1988; Loewenson 1992; Devereux et al. 1996; Cramer & Pontara 1998; Lansing et al. 2008; Hayami 2010).

(c) *Dynamism and differentiation*

Another theme to emerge is the **dynamism and instability of large-scale agricultural schemes**, not just in sub-Saharan Africa but also in Latin America and south-east Asia. There are four main causes of this: land issues, internal financial and management pressures, external forces and political opposition. The paper has emphasised the vulnerability of large-scale settler farms to bankruptcy and takeover, from the Great Depression through the postwar and post in dependence periods to farm seizures in southern Africa during the 1990s and 2000s and the short-lived resettlement of South African and Zimbabwean farmers. Many large farms and plantations have been subject to squatting, which often created the impetus for more forceful occupation and subdivision of the owners' land (Epale 1985; Pryor & Chipeta 1990; Kanyinga 2000; Li 2011). Vallely (1992) describes thousands of landless labourers occupying apparently unused plantations in southern Brazil, and eventually securing land title through the courts after violent struggles with the estate owners.

Corporate plantations and contract farming schemes have also proved vulnerable to risk and poor planning (Prowse 2012), and the strategic manoeuvring of their owners often leads to change. Profit-seeking has led to a greater use of mechanisation, a tightening of contracts and the shift to casual labour. Labour requirements of plantations might fall once land has been cleared (Friends of the Earth et al. 2008). In addition to a trend towards vertical reintegration, companies are reported to have changed location, refused to purchase output or selected new producers in response to financial pressures (see Minot & Ngigi 2004 and English et al. 2004 on the volatility of Kenyan horticulture). This is relevant to the current land-grab debate, since it suggests that proponents of agricultural projects that promise extensive employment or to contract with smallholders might change their strategy over time.

All three farming models have been disrupted at times by external factors, such as the rise or fall of global commodity prices, climatic shocks and civil war (Little 1994). Some companies respond to disappointing yields by shrinking or temporarily suspending operations (Porter & Phillips-Howard 1997). There are also destabilising forces closer to home: Boamah (2011) describes the apparently successful jatropha and maize schemes in Ghana being derailed by a combination of destructive rains and NGO activism. Some deals are cancelled by governments or nervous investors before they are even operationalised. Even the long-lasting contract farming schemes of KTDA and Mumias Sugar, established in 1964 and 1972 respectively, have undergone political struggles, new forms of outsourcing and changes in ownership structure.

Given all this, it might be useful to look more carefully at how participants and non-participants alike have responded when schemes have failed or investors have left an area, and supporting services such as inputs or credit have been suddenly withdrawn (Randela 2005). Planners and researchers should consider the consequences of possible collapse for the local and migrant farmworkers affected; for exposed lending banks; and for local farmers who have been encouraged to adopt cash crops and would therefore be vulnerable to the same price shocks that affect large-scale commercial operations (see Mabogunje 1989; Amanor & Pabi 2007). After the farm seizures in Zimbabwe, thousands of black farmworkers were displaced; some found their way to Mozambique (Hammar 2010). In the Ghanaian case, ex-plantation workers returned to seasonal farm work or migrated to nearby towns, while spillover trading ceased (Boamah 2011). Describing the failed Bud Senegal plantations of the 1970s, Lincoln (1994:574) writes, 'apart from the personal trauma of unemployment, the affected workers were collectively worse off than they had been before the agribusiness arrived and exposed them to the risks of international commodity trade.' There may also be ecological consequences: Wunder (2001) reports that many workers who had been laid off by banana estates in Ecuador during the 1970s and 80s remained in the area and began farming marginal lands. As for how smallholder farmers have coped with the withdrawal of contract farming schemes, there are reports of both dependence and adaptability: authors describe local farmers returning to old food crops or shifting into new crops or livestock production, often with less labour-intensity or input-intensity (Korovkin 1992; Amanor 1999; Wunder 2001; Brambilla & Porto 2005; Hammar 2010:406, footnote 46).

A general observation is that **agrarian change is not necessarily unilinear or irreversible**. Alongside farmers shifting from cash-crop production back to staples, one might see, for example, migrant workers returning to family farms (Bernal 1991; Oya 2010) or small farmers reducing their reliance on hired labour in response to a fall in producer prices (Amanor 2005). Observing growing numbers of people in developing countries who combine own-account farming with wage employment, Bernstein (2010b:111) writes, 'The social locations and identities the working poor inhabit, combine and move between make for ever more fluid boundaries and defy inherited assumptions of fixed and uniform notions of "worker", "farmer", "petty trader", "urban", "rural", "employed" and "self-employed"'. It is not only orthodox Marxist political economists who have pondered the agrarian question of why, despite increasing commoditisation and commercialisation, smallholders have persisted with semi-subsistence farming and stopped short of full proletarianisation (Sangmpam 1995; Bouis 1994; Leavy & Poulton 2007; World Bank 2007). The endurance of semi-subsistence farming in sub-Saharan Africa, a characteristic that is widely documented in the case-study literature, should be incorporated into the planning of commercialisation schemes.

This observation could also inform the debates on livelihood diversification and the future of the peasantry. The review found that plantations, commercial farming areas and particularly contract farming can accelerate

the process of socio-economic differentiation, whereby some small farmers prosper while poorer farmers must increasingly rely on cash or waged income. Considering that differentiation is often associated with widening social inequality, should this process be encouraged? Or rather, is it possible for rural differentiation to take such a form that it encourages the emergence of capitalist agriculture and rural linkages without the accompanying creation of a poor underclass? Opinion varies on the challenges, opportunities and structural transformations that differentiation involves. It raises important questions about, for example, the relative contributions that self-employed farming and wage labour make to poverty reduction (see Poulton et al. 2008) and whether an increase in social inequality necessarily leads to impoverishment (see Oya 2010). But being aware of the fluidity of rural livelihoods allows us to ask the broader question of whether the outcomes are really so clear-cut as the two-tier or three-tier class differentiation that is commonly reported in the literature, or whether outcomes — and people's experiences — of large-scale commercial agriculture are rather more reflective of a diversity in social relations that goes beyond class.

(d) Research gaps

During this review, it became apparent that there are several aspects of large-scale agricultural schemes and interconnected rural societies that could potentially be important but were given relatively little coverage in the literature. It would help to increase the understanding of schemes and their outcomes if more research were done in these areas. The paper is just a snapshot of the extant literature and any perceived gaps are quite likely to be due to biases and limits in the review process. That said, the following areas appear to deserve closer attention:

- There has been little interest in the environmental impacts of different schemes, and how they might affect agricultural operations and nearby resource users. If there are such studies, they have not been integrated with the economic and agrarian political-economic interests that dominate the literature.

- There is a notable lack of material from an access and property rights angle. For example, several studies focus on the participants of schemes and do not mention the implications and possible exclusionary effects on local land users. Land issues are often underreported and it is common for studies to neglect to clarify the land tenure status of the farmland that has been acquired and cultivated for commercial agriculture. This situation might be changing with the emergence of critical literature on large-scale land deals from a land rights perspective (e.g. Borras & Franco 2010). Also, some of the work that has been done by researchers and NGOs on oil-palm in south-east Asia offers a different approach (e.g. Friends of the Earth 2007; McCarthy 2010; Hall et al. 2011). As well as documenting company and government abuses, they address such issues as land conflicts, environmental impacts and tensions between locals and economic in-migrants, which are often neglected in studies of plantations and contract farming elsewhere.

- In addition to considering outcomes for local resource users, it would be valuable to explore in more depth the positive and negative impacts of large-scale agriculture on nearby capitalist farmers. Discussing the plans for a commercialisation scheme for South African farmers in the Republic of Congo, Hall (2012:828) suggests that 'their entry will arguably affect those local farmers already supplying [the local] market'. But although there are plenty of theoretical approaches to understanding wider economic impacts, ranging from multiplier effects to socio-economic differentiation and access theory (Ribot 1998), empirically it seems to be a neglected area. It is difficult to find rigorous research into linkages from contract farming (Wegulo & Obulinji 2001 is a notable exception), which is disappointing given that linkages are often given as justification for such schemes.

- Several authors call for more research on waged agricultural workers who are drawn into large-scale schemes. This should consider workers on smallholdings as well as the large plantations and contract farms, and related work in packing houses and processing plants. It is important to continue to contribute to the increasingly nuanced understanding of rural structures and livelihoods by exploring who engages in large-scale farm labour, why, and for how long. There is also scope for more information on migrant workers and the effects of their participation on their families, households and rural production back home, as Kirk (1987a) pointed out in his review of plantation workers over twenty years ago.

- Lastly, one issue might be that research is often carried out while schemes are still at an early stage, when consequences for households, communities and economic regions, either in the surrounding area or farther afield, are still being shaped (Little & Watts 1994:15). Quantitative, economics-led case studies often hypothesise about likely impacts, as opposed to gathering and reporting empirical evidence, which requires them to make assumptions about labour intensity, consumption patterns in rural areas and so on. But also, beyond economics, several authors guess at likely environmental impacts, for example, in absence of systematic ecological data from project sites. Often, information is missing from research on how easily farmers can exit contracts and other such details.

7. Conclusion

The intense current interest in land deals and agricultural commercialisation in sub-Saharan Africa provides an opportunity to revisit some old debates and apply them in new contexts. This paper has discussed long-established theories concerning rural transformation,socio-economic differentiation and small-scale and large-scale farm efficiency which continue to drive policy and thinking on African farmland development (Borras et al.2010; Deininger & Byerlee 2012). New cases of agricultural investment also give researchers an opportunity to address some empirical blindspots that are evident from the literature. This paper uncovers a much more varied rural landscape— literal and figurative—than is suggested in simple models of dualistic African agricultural sectors, polarised into large-scale enterprises and smallholdings. Large-scale agricultural schemes involve multiple interest groups, including actors that are sometimes under represented in policy and research such as pastoralists, farmworkers, mid-size entrepreneur farmers and female-headed households. The paper suggests that these different actors contribute to a change in the rural landscape over time, as agriculture develops in a cycle of investment, adaptation or collapse, retreat and rehabilitation. The pattern of change varies from country to country, partly reflecting differences across Africa in colonial settlement and economic activity, and postcolonial trends in agricultural policy, land law and rural accumulation.

Responding to debates over appropriate business models and institutional arrangements for agricultural development in sub-Saharan Africa, the paper presents a typology of three farming models: plantations, contract farming and commercial farming schemes. There is variation within each model — and some areas of overlap between them— but they are distinct enough in terms of their labour requirements, land use and so onto be significant for the local people involved. Whatever form they take, commercial farming developments are not stand-alone business enterprises. Rather, they are supported by, and intertwined with the interests of, states, local leaders and international donors (the World Bank has been especially influential). In combination with contextual factors, this tends to result in mixed outcomes for the local economy. Though it is difficult to separate from wider processes of change, commercial agriculture can have a transformative effect on livelihoods and intra-household relations, perhaps creating new winners and losers or widening inequality in income and land ownership. However, blanket claims that commercial agriculture will stimulate local agriculture seem unfounded. Poor wages and monopolistic tendencies of agribusiness and parastatals have sometimes prevented positive spill overs from taking place. There is potential for rural linkages from commercial farming areas, but in contract farming the interests of the contractor are often at odds with those of local farmers, which calls into doubt the assertion that contract farming can have win-win outcomes. Too often, agricultural schemes have exploited local people's resources without sharing the benefits—more of a win-lose scenario than win-win (Deininger & Byerlee 2012). Hence, several analysts call for third parties or regulationto govern and monitor land acquisition and contractual arrangements (e.g. Porter & Phillips-Howard 1997; Deininger & Bylerlee 2012). In practice, developing countries often lack the capacity and will to implement good governance at local level (Poulton 2012). The paper shows that advances have been made in improving agricultural worker conditions through legislation and purchasing standards— but in some cases, this has had the unforeseen consequence of employers turning to mechanisation or less secure employment contracts. This illustrates how difficult it is to predict and control the outcomes of commercial agricultural schemes.

A common theme of the many commercial agricultural developments to have emerged in sub-Saharan Africa is that they have all been supported by received wisdom and political rhetoric about what is best for the African peasantry (in all its forms). At any given time, farm owners, agribusinesses, governments and donors have held clear views on employing local people, what local farmers are capable of, what they should be allowed to do and how they should be protected. In the early twentieth century, colonial social engineering prevented peasants from competing in cash-crop markets and forced them into labour reserves. More recently, contract farming schemes have controlled which farmers are included and what cultivation practices they must follow. Peasants have often been suppressed or dispossessed in the name of rural development. Yet many survived, shifting in and out of contracts and wage employment, accessing alternative markets through traders or cooperatives, and finding independent, sometimes illicit, sources of income, farm inputs and credit. Some resisted socialist policies or incursions by foreign capital and attained entrepreneur status, concentrating land and dispossessing others. Others became squatters and were able to sustain their access to land and local social networks. Today, the dominant policy vision for African peasants is a commercialised, upwardly mobile smallholder sector alongside increasing numbers of wage workers (Havnevik et al. 2007; Amanor 2011). Future research can investigate how this vision is being realised and resisted as new forms of large-scale commercial agriculture unfold.

End Notes

[1] These 'models' are not exclusive or fixed. Understanding them requires exploring their institutional origins, current forms and wider context, locating each within a particular located reading of agrarian change.

[2] For some definitions of 'plantation', see Boeke 1953; Pryor 1982; Kemp & Little 1987; Kirk 1987; Sajhau & Von Muralt 1987; Tiffen & Mortimore 1990; Loewenson 1992; Hayami 2010; and Gibbon 2011.

[3] Plantations planned for recent land deals may be larger still. Three cases studied for this paper measured tens of thousands of hectares in size (Nhantumbo & Salamão 2010; Kenney-Lazar 2011; Schoneveld et al. 2011).

[4] See Eaton and Shepherd (2001) for some sample contracts.

[5] See also Tiffen and Mortimore (1990:84) on tenant settlers on developed land.

[6] See Watts 1994:44, table 1.6, for a list of contract crops in Africa at the time of publication.

[7] Simple contracts that specify the price and outlet upfront (Maertens & Swinnen 2007).

[8] For example, Hinderink and Sterkenburg (1985) distinguish between entrepreneur farmers, commercial peasant farms and private farms acquired by African elites, based on their respective processes of commercialisation. Bernstein (2010a) distinguishes along class lines between emergent capitalist farmers, or rich peasants, and medium farmers, or middle peasants, whom he equates with yeoman or progressive farmers.

[9] The distinction made by McCarthy (2010) between exogenous and endogenous drivers of agrarian change in Indonesia is useful here.

[10] As illustrated by the references to Kenya and Zambia in Chapter 2.3, national governments have their own definitions of what constitutes a 'small farm' in hectares.

[11] Boeke (1953) himself acknowledged that the local impacts of plantations were not always beneficial.

[12] For the sake of simplicity, this paper uses modern country names throughout, even when referring to a stage in history when the countries were known under a different name.

[13] The literature suggests that horticulture contract farming in Kenya has received less state support and involved less suppression of competitors than contract farming in other sectors (Jaffee 1994; English et al. 2004) —note that the consequence of this might be a retreat to plantation production.

[14] These are commonly stated objectives of contract farming schemes and recent farming blocks; see for example Buch-Hansen & Marcussen 1982; Carney 1984; Poulton 1988; Wegulo & Obulinji 2001; Warning & Key 2005; Amanor & Pabi 2007; Nhantumbo & Salamão 2010; Ariyo & Mortimore 2011.

[15] Buying/selling contracted produce is also known as poaching, output diversion or extra-contractual marketing.

[16] Or urban migration: see Vallely 1992; Lansing et al. 2008.

[17] 'Junker estate: A large ownership holding producing a diversified set of commodities operated under a single management with hired labor. Laborers do not receive a plot of land to use for their own cultivation as part of their remuneration, except perhaps for a house and a garden plot' (Binswange et al. 1996:2661).

[18] Conversely, mass recruitment by South African mines up to the mid-1970s forced up the labour costs for estate owners in Mozambique and Malawi (Lucas 1987).

[19] See Carney (1988) on IFAD pushing for women's rights in Senegal, and Ochieng (2010) and Oya (2012) on the World Bank pushing for smallholder exclusion and the abolition of cooperatives in Kenya.

[20] The term 'migrant' is used as a catch-all in this paper for people not living locally and could be disaggregated.

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