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Family farming in sub-Saharan Africa: its contribution to agriculture, food security and rural development

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By Sam Moyo

This publication is part of a series of Working Papers produced in the context of the International Year of Family Farming, helping to inform regional discussions and debates about the phenomenon worldwide.

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FAMILY FARMING IN SUB-SAHARAN AFRICA: ITS CONTRIBUTION TO AGRICULTURE, FOOD SECURITY AND RURAL DEVELOPMENT

Sam Moyo¹

1 INTRODUCTION: CONCEPTUALISING FAMILY FARMING IN SUB-SAHARAN AFRICA

The persistent agrarian crisis facing sub-Saharan Africa (SSA) and the recent food price hikes have provoked greater urgency among governments, civil society actors and development agencies to identify public policies that can accelerate agricultural transformation towards achieving food security and nutrition, as well as sustainable and inclusive rural development. Considering that 75 per cent of the SSA population is involved directly or indirectly in farming and related employment, the strategic role of family farms in such a transformation is increasingly being recognised by key actors (FAO 2013; 2014). There is less agreement on the nature of and prospects for family farms in SSA, the scope of their contributions to agriculture, food security and rural development, and the measures required to address their most critical challenges.

Family farms are pervasive in the economic life of the largely agrarian SSA region, and in general they shape the social organisation of life in its largely rural population. In addition to their significance in food production, they play a key role in social protection. Furthermore, family farming communities are a critical electoral constituency, which shapes political organisation in SSA. Consequently, the state of human development in SSA (e.g. poverty, food security and gender relations) largely reflects the socio-economic (mis)fortunes of family farms, even if their socio-political importance is not reflected in public policy priorities.

1. African Institute of Agrarian Studies. This Working Paper is dedicated to the memory of Professor Sam Moyo, who passed away in November 2015. Sam was a leading scholar on agrarian issues in Africa and the global South. Generations learned from his work and will continue to do so, as the themes he researched continue to occupy central space in the nations of the global South. He will be remembered for combining academic rigour with a commitment to social justice and tenacious activism.

Family farms comprise a diverse range of relatively small-sized socio-economic structures that use limited landholdings to pursue diverse agricultural, pastoral and natural resource management activities. Unlike other categories of farmers, they are largely managed by and rely mainly on the labour of family members, using their production for both self-consumption and sale. While there is no official or legal definition of family farming used in SSA, the terms 'small-scale farming' or 'smallholder farming' are commonly used by governments, civil society and scholars.² Conceptually, small-scale farms are indeed small-scale family farms that mainly depend on family labour and produce a significant share of their own food. Some of the family farm labour also applies to non-farm activities and wage labour.

In contrast, 'small-scale family farm' is a relative term, which differentiates them from large-scale commercial (capitalist) farms (LSCFs) and plantations. LSCFs are businesses managed by family-owners or corporations, who hire most of their labour. Historically, they comprise mainly European settlers found largely in Southern and Eastern Africa, and a scattering of 'indigenous capitalist farmers' with medium-sized landholdings, created since the late 1960s. Farming 'plantations' and ranching 'estates' are mostly foreign-owned transnational corporate entities located in enclaves, which produce tropical crops and permanent trees mainly for export.

Historical processes of land alienation and integration into world markets led to the extensive destruction of petty production in a few SSA countries and the creation of a limited scale of plantation enclaves in most of the other countries (Mamdani 1996; Moyo 2008). Agrarian change in SSA is thus characterised by a variety of accumulation paths (Amin 1974), including petty-commodity producers 'from below' and from above, including LSCFs and estates. Struggles over the control of land led by various independence movements and the peasantry since colonial times underlie the numerical and areal predominance of various forms of family farming systems in SSA. Indeed, family farms are reproduced within a context of popular struggles against land alienation and the related subordination of their labour to capital, represented by LSCFs, farming estates and unfavourable markets.

A heterogeneous range of family farms in SSA operate under diverse agro-ecological and economic conditions shaped by historically specific and variegated forms, through which the different countries were incorporated into a global system over the last century and a half (Amin 2012). What is relatively unique about the resilience of family farms in SSA is that their predominance derives from the persistence of customary land tenure and labour relations based on household lineage, given the rather limited history of 'feudalistic' relations in the region (Mafeje 2003). Ongoing waves of land alienation notwithstanding, formal land markets outside the towns are uncommon, particularly in non-settler SSA (Moyo 2008).

Small-scale farmers have generally been perceived pejoratively and labelled by many experts and scholars as 'traditional' or 'backward' 'subsistence farmers', inferior to the technologically progressive, profit-oriented LSCFs that are linked to financial inputs and commodity markets. They are often wrongly called 'communal farmers' working collectively on commonly held land without secure tenure. The failure of SSA to achieve globally comparable agricultural productivity levels tends to be attributed to various alleged maladies, which are believed to be inherent to family farming systems. Such ailments putatively include the insecurity of land tenure, a narrow subsistence orientation, and intra-family farm and systemic obstacles to economies of scale in production and marketing.

Rather, family farms are multi-functional production and consumption units, which meet a range of their consumption and income needs and engage wider markets. Their production is structured around individual family (household)-owned fields (often including extended family members), while their livestock rearing (of family owned herds) and natural resource management activities are mostly undertaken jointly on commonly accessible lands. Family farm members work together on their arable plots and in tending their livestock. They may focus on crop farming, mixed crop and livestock farming or pastoralism. Family farms generally exploit commonly owned natural resource reserves using ecologically sensitive collective management practices aimed at the sustainable reproduction of their land and natural resources.

Although most family farms in SSA are largely devoted to a high degree of production for self-consumption, they sell a limited but significant amount of staple food crops and cash crops harvested from relatively small areas. Their scope of production and productivity remains highly constrained, but this differs according to their varied social, agro-ecological and economic conditions, largely in relation to the uneven extent and varied forms of integration into different kinds of commodity and input markets. While most family farm members reside in the countryside, a large proportion of them straddle urban and rural areas, and part-time urban family farming is common.

Despite increasing urbanisation, the scarcity of non-farm employment and the prevalence of low wage incomes mean that many SSA families continue to struggle for access to land for their social reproduction (Moyo and Yeros 2005).³ Hunger and poverty in rural areas persist as family farm productivity grows rather sluggishly, due to inadequate policies.

2 CHANGING AGRARIAN STRUCTURES AND THE PERSISTENCE OF FAMILY FARMING

The evolving socio-economic character and internal logic of family farms in SSA, as well as the external forces that shape their long-term prospects, are often discussed in historically deterministic and linear terms, which expect their fate to be similar to family farming in Europe and North America. This trajectory of agrarian change is not generally reproducible, given that capitalist transformation on a global scale has been uneven but intertwined (Moyo and Yeros 2011). Indeed, there is an increased concentration of agrarian and related finance capital in a few 'developed' nations (see McMichael 2012).

In the Euro-American experience, widespread land concentration, proletarianisation, migration to colonies and the transfer of raw materials to Europe over some centuries was accompanied by protracted industrialisation, which led to the relative disappearance of family farms and the consolidation of LSCFs (see Moyo, Jha and Yeros 2013). This region retains family-owned farms that are largely profit-oriented, intensively use energy and inorganic inputs and are highly capitalised (see also Van de Ploeg 2013), although such family farms own a smaller proportion of the capital base of those agrarian structures. Corporate farming dominates agriculture, and the majority of all farm types are extensively tied to transnational agribusiness and dependent on state subsidies.⁴

The evolution of family farming in SSA is shaped by the region's more recent integration into global agricultural and food markets through colonialism—its late decolonisation having begun around 1960—and nation-building efforts that entailed its continued incorporation into

global capitalism during the era of the increased vertical concentration of capital. Although land alienation was effectively resisted in large parts of Western, Eastern and Central SSA, limiting the scale of plantations and LSCFs (Moyo 2008), “virtually all small producers practice more than subsistence production” (Mafeje 2003).

Furthermore, the economic structures of most SSA countries continue to be dominated by agriculture, albeit through a differentiated insertion of (transnational and domestic) capital. Agriculture contributes between 15 per cent and 40 per cent of gross domestic product (GDP), except in a few more industrialised and mineral-rich countries. The sector provides livelihoods for over 70 per cent of SSA’s population through family farming. The economically active population in agriculture doubled from 100 million people in 1980 to 212 million in 2013, despite the fall in the proportion of the working population in agriculture from 71.8 per cent to 57.2 per cent during the same period. Manufacturing plays a limited role in SSA’s economies, with non-agricultural employment occurring predominantly in low-wage informal-sector activities (ILO 2014).

The trajectory of agrarian change in most SSA countries appears to be converging around the creation of tri-modal agrarian structures wherein small-scale family farms predominate, alongside the gradual expansion of LSCFs and plantations. Some analysts believed that the SSA region was undergoing a transition leading to ‘disappearing peasantries’, since rural emigration and ‘multi-occupational’ survival strategies have flourished over the last 30 years (e.g. Bryceson et al. 2000, referred to in Moyo and Yeros 2005). Yet even the recent large-scale land acquisitions in SSA—occurring in response to rising external demand for land and high protein foods, following the world food-energy-climate crisis and higher levels of economic growth and urbanisation in the region—has not substantially replaced family farming, given also that demographic growth remains high.

The persistence of family farming in SSA reflects struggles over land and agrarian markets leading to deliberate public policy choices made by various colonial and post-independence states (Mkandawire 2013). From the 1980s onwards, the balance of power relations shifted against family farming in most SSA countries, as neoliberal agricultural policies reduced public support to family farms and increasingly exposed them to greater risks from land alienation (Moyo, Jha and Yeros 2012).

At one extreme, LSCFs are dominant in former settler colonies (e.g. South Africa, Namibia, Zimbabwe until 1999 and, to a lesser extent, Kenya). At the other extreme are the predominantly ‘peasant economies’ in which family farms own most of the land but are increasingly tied into commodity production circuits (Amin 1974). A number of countries fall in the middle, as many more LSCFs are being created (Moyo 2013).⁵ Regardless of their extent, LSCFs generally displace family farms from prime agro-ecological lands and water resources.

For instance, during the 2000s, South Africa’s 43,000 LSCFs controlled 80 per cent of the agricultural land area, and their average farm size had more than doubled to 2,000 hectares since 1980, despite the institution of land reforms. About 11 million black households mostly held less than one hectare each in the former rural homelands (Sihlongonyane 2005; Statistics South Africa 1999). The land ownership ratio between family farms and LSCFs is 1:100 hectares. Similarly, in Namibia, 4,456 LSCFs owned 45 per cent of the agricultural land in 2010, while the majority of households held largely semi-arid land (Moyo 2014). Zimbabwe’s land reform modified a bi-modal agrarian structure dominated by LSCFs towards a tri-modal structure

that combines a numerically dominant family farm path, alongside many new small to medium-sized LSCF and fewer corporate agro-industrial leasehold estates (Moyo 2011).⁶

The number of LSCFs and plantations has been rising in non-settler SSA due to land policies that enable the large-scale acquisition of family farm lands wrongly perceived by officials and investors to be 'un/underutilised' or even un-owned (Alden Wily 2012). In Zambia,⁷ the number of LSCFs holding long leaseholds had tripled to over 1,500 between 1975 and 1990 (Chinene et al. 1998). LSCF landholdings range in size between 200 and 5,000 hectares, compared to the average landholdings of medium-sized farms and family farms at 25 and 2 hectares, respectively (ibid.). During the 2000s, the number of medium-sized domestic LSCFs and plantations had risen substantially. This agrarian restructuring significantly reduced the land available to family farms in the southern and western provinces (Moyo et al. 2014).

The tri-modal framework of land concentration has been reinforced in Malawi, Swaziland and Botswana since the late 1970s. About 16 per cent of Malawi's 7.7 million hectares of arable land is under LSCF and estate farming (Government of Malawi 2002), while between 1979 and 1989 the number of medium-sized LSCFs and estates increased from 1,200 to 14,671, covering 1 million hectares of arable land (Zuka 2013). By 2012, about 2 million family farms cultivated on average 1 hectare each, compared to the 30,000 medium-sized to large-scale estates, which cultivated 30 per cent of the cropped land, on average arable land sizes of between 10 and 500 hectares (ibid.).⁸ Average landholding sizes of family farms, LSCFs and corporate and/or state-owned agro-industrial estates in Swaziland are 2.75, 25 and 800 hectares, respectively (Mushala et al. 1998). Seventy per cent of Botswana's land is held by 130,000 family farms under customary tenure, while 25 per cent is state-owned land, and 8 per cent of it is freehold land held by 1,000 LSCFs (USAID 2010).⁹

In East Africa, colonial-settler land alienation was focused on the prime farming lands of the Kenyan highlands, leading to the creation of extremely large LSCFs. Post-independence land reforms in Kenya led to the creation of numerous medium-sized LSCFs. In Tanzania and Uganda, a few plantations had been established by 1960, but the agrarian structure was changed slightly through the expansion of state-owned plantations and the emergence of medium-sized LSCFs owned by nationals. More recently, numerous LSCFs and plantations owned by foreign capital have been established in this sub-region (Matrix 2012).

In West Africa, land alienation during the colonial era was the least successful. Nonetheless, a number of large-scale plantations (involving palm oil, coffee and cocoa) had been established by foreign capital in Ghana, Nigeria and Côte d'Ivoire by 1960 (Amanor 2008). A few state-owned estates were created in some of the countries during the 1970s, and since the 1980s a greater number of small and medium-sized LSCF landholdings have emerged. In Central Africa, the establishment of mineral and natural resource (e.g. timber) extraction enclaves was the main logic behind colonial capitalist incorporation in countries such as the Democratic Republic of Congo (DRC) and Cameroon (Amin 1974), but despite fierce resistance a few plantations were created in Cameroon.

The expansion of LSCFs owned by SSA nationals tends to involve non-rural indigenous capital emerging from the public service, private professionals and entrepreneurs, since the 1970s (Mkandawire 2013). They gain land mainly through leasehold tenure facilitated by central and local government authorities, but their landholdings are generally smaller than the colonial-settler LSCFs and foreign-owned estates, although they are substantially integrated into global agro-industry. The current scramble for agricultural land in SSA,

involving private and public corporate LSCFs from all parts of the world, has escalated due to the hyper-speculative logic of global capital (Moyo, Jha and Yeros 2012). The immediate objective is to capture growing food and biofuel export markets through integrated transnational agribusiness 'value chains'. These processes are not an endogenous process of accumulation tied to satisfying the home market, nor does the rural development strategy implied seek to strengthen family farming.

3 DIVERSE AND DIFFERENTIATED FAMILY FARMS IN SUB-SAHARAN AFRICA

The scale, organisational forms and the production focus of family farming in SSA has mutated significantly since independence due to various structural changes, including the creation of more LSCFs, rapid demographic growth and urbanisation, snail-paced technical shifts in agriculture, and the increased integration of family farms into global markets. Moreover, family farms are increasingly becoming stratified in accordance with various organic tendencies towards economic differentiation (Moyo and Yeros 2005), uneven territorial development and cultural heterogeneity (ROPPA, PROPAC and EAFF 2013), and other evolving social hierarchies derived from identity differences, including gender, generation, race and ethnicity (Moyo 2008).

3.1 THE NATURE OF FAMILY FARMS IN SUB-SAHARAN AFRICA AND THEIR CLASSIFICATION

Family farms in SSA are largely organic production and consumption social entities. As elsewhere, they are not a class in themselves, as in ideal conditions they reproduce themselves as capital and labour simultaneously (Moyo and Yeros 2005). Their labour is derived mainly from the family, and they are proprietors of capital, principally comprising land and (mostly non-motorised) implements. Family farms are mostly managed by the family and usually led by a male household head, although increasingly these are female. The ideal type of family farm rarely exists (for long) in reality, because the combination of capital and labour is not spread evenly between and within family farms, nor is the available labour constant in scale for various reasons (*ibid.*).

The fundamental factors that differentiate the largely undercapitalised family farms of SSA is the use of hired labour and likewise their possession of labour-saving draught animal power. Most family farms hire out their labour, while a few hire in labour from various sources. Some do neither. Furthermore, family farms are differentiated (socially and economically) according to the relative sizes and quality of their landholdings, and levels of capitalisation (e.g. mechanisation, equipment irrigation), which influence their operational scale and labour intensity. Such differentiation is reflected in (and reinforced by) their varied levels of cropped areas and livestock holdings, levels of productivity and outputs (including food surpluses) realised.

While most contemporary family farms sell a portion of their produce *vis-à-vis* what they retain for family consumption, some sell more than others. Most transact with traders in local markets. A few do so in vertically integrated agribusiness markets (Delgado 1996). Fewer family farms still obtain external financing through various credit circuits, contracts, wage income and remittances, and use this to procure inputs and implements and market their produce. However, the condition of family farms is unstable, as their resource base and productivity can often wane or improve.

The spectrum of family farms ranges from the 'better-off' family farms (sometimes called market-oriented or capitalist family farms) that employ more hired labour than family labour, and sell larger quantities of produce to markets. These family farms often live well above the poverty line (FAO, IWG-FF 2014). At the bottom end are the 'poor' family farms (or the near landless, semi-proletarian) that largely sell labour to other farm and non-farm entities and hardly produce enough to meet family food requirements, let alone to sell. These family farms fall below the poverty line and are often labour-constrained (DFID 2014), partly due to the itinerancy of some family members and/or other social deprivations (poor health, deaths etc.). In between is the middle family farm (sometimes labelled the 'semi-subsistence' family farm), which neither hires nor sells labour but produces most of its food requirements and sells some produce to meet a range of family needs.

Despite their limited numbers, the most politically significant category of the family farming system in SSA combines the 'middle-to-rich' small-scale family farm (or the 'market-oriented' and 'semi-subsistence' commodity producers) created by a combination of historical processes (Moyo and Yeros 2005). Many of them belong to the founding families of landholder communities or are local authority leaders, which tends to enable privileged access to land. In addition, many of them benefitted from selective public policies, which since the 1950s have targeted 'progressive farmers'. Others emerged from the limited but generic internal tendencies to social differentiation. From the late 1970s, these family farms were augmented by the parcelling out of public land or land resettlement schemes involving a variety of land leasehold arrangements. Some were strengthened by the formal registration of customary land rights from the 1990s.

During the post-independence era, this stratum of family farms faced contradictory policies, including trade protection, low producer prices, occasional input subsidies, produce marketing and extension support, and limited land reform. Forced to survive on their own after the economic liberalisation of the 1980s, these family farms diversified their investments into off-farm activities, and are increasingly tied to monopoly capital through contract farming. Capital directly controls their conditions of production without taking their land title or becoming embroiled in labour issues (ibid.).

The poor-to-middle family farms are the most prevalent, characterised by the complementary and contradictory tendencies of retaining and/or acquiring family plots for petty-commodity production (ibid.), while creating family-based processes of labour diversification and social protection on their farms. The 'poor family farms' among this combined group are the predominant category of family farms in SSA, given their diminishing land resources, among other scarce production factors. They hire out most of their labour to better-off family farms, LSCFs and other non-farm employers. This often entails migrating within rural areas and to urban centres (sometimes across international borders), and they work mostly in informal economic sectors. Under liberalisation, poor family farms have been augmented by retrenched workers and the wider underclass of displaced, insecurely employed and unemployed people (see Moyo and Yeros 2005).

While poor family farms comprise a surplus population that is not absorbed by the formal SSA economy, their condition is dynamic. It entails struggles for land and livelihood *vis-à-vis* the better-off family farms, LSCFs and other employers who hire them at wages below the cost of social reproduction (ibid.). Their contributions to agriculture, employment and social protection are limited by land and labour constraints, and inadequate agricultural resources

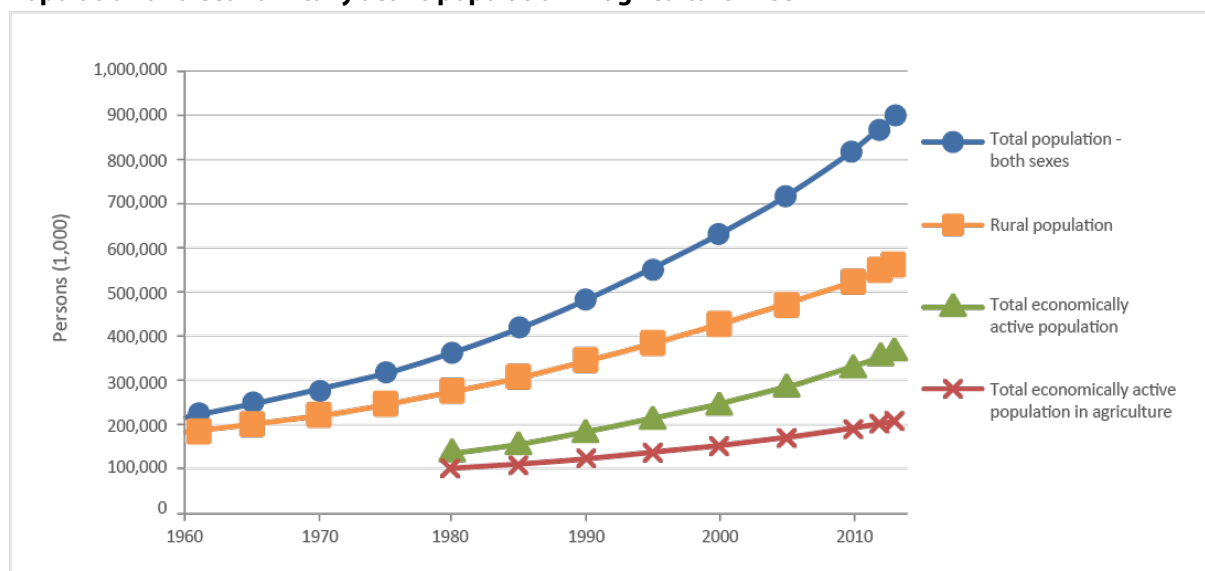
to use their land and family labour gainfully. In the extreme case of South Africa, land dispossession “...left the African population without enough land to sustain small-scale subsistence production...”, leading to declining national incomes between 1960 and 2005, since urban workers were unable to use rural–urban relationships to complement their wages with family farm production (Arrighi et al. 2008).

3.2 THE INCIDENCE AND DIVERSITY OF FAMILY FARMS IN SUB-SAHARAN AFRICA

We estimate that there are over 100 million family farms in the 47 countries of SSA. Their numerical growth is largely in consonance with the changing scale and density of the region’s rural population, particularly those active in the agriculture sector. While the proportion of SSA’s rural population fell from 84.5 per cent of the total population in 1961 to 62.4 per cent in 2013, the absolute number rose substantially from 188.4 million to 562 million people (see Figure 1). Assuming an average family size of six people, the number of families dependent on family farming may have trebled since 1961. The nature and extent of family farms in the various sub-regions and countries of SSA is heterogeneous, but their scale is poorly quantified (Lowder et al. 2014).

FIGURE 1

Population and economically active population in agriculture in SSA



Source: Author’s elaboration.

For instance, there are many more family farms in the densely populated sub-tropical regions of West Africa (e.g. Nigeria) than in Southern Africa. In absolute numerical terms, West Africa is followed by Central Africa and East Africa. The national incidence of family farms varies widely, from between 3 million and 10 million family farms in larger countries (in terms of both area and demographics) such as the DRC, Ethiopia, Mozambique and Nigeria. In a host of medium-sized countries, the number ranges from 500,000 to 1.5 million (e.g. Zambia, Senegal, Togo, Burkina Faso, Côte d’Ivoire, Malawi and Zimbabwe). Other demographically smaller countries (e.g. Burundi, Botswana) have under 200,000 family farms each.

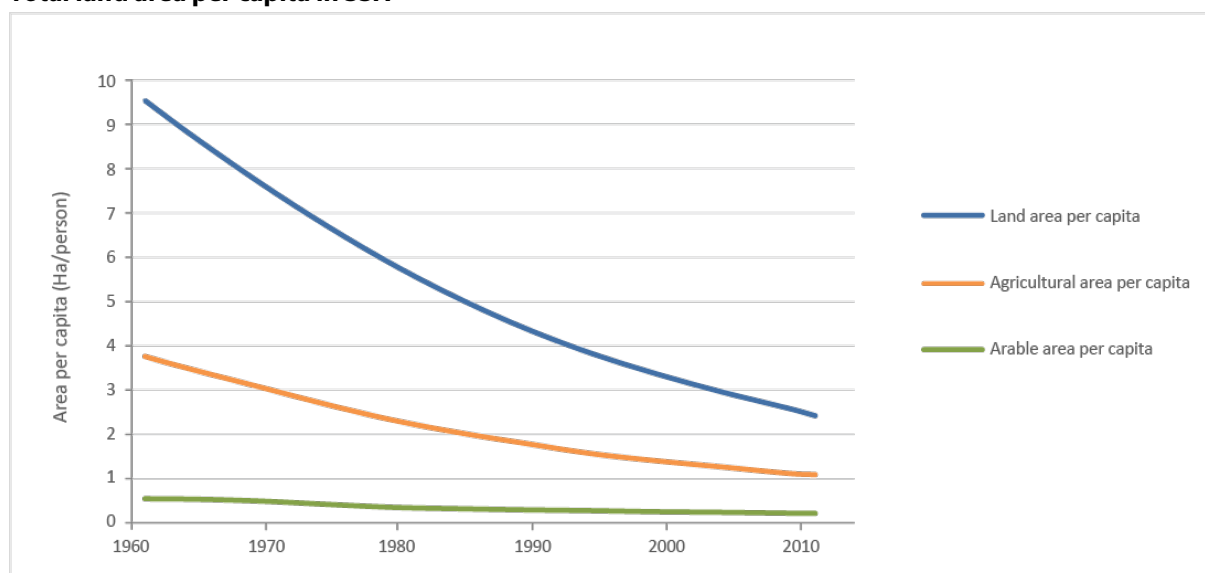
In the Sahel region, stretching across northern West Africa (from Senegal, Mali, Niger and Nigeria) and eastern SSA (e.g. Sudan, Chad etc.), the main form of family farming is agropastoralism. About 50 million people in SSA are mobile livestock rearers seeking optimal grazing resources across fragile and ecologically unstable dryland areas (ROPPA, PROPAC and EAFF 2013), mostly within nation states as well as across national borders. The relations between pastoralism and cropping can be synergetic, but the continued extension of cash cropping into pastoral rangelands, particularly across 'cattle corridors' used to traverse large areas has increasingly marginalised pastoralists (ibid.). Land- and water-related conflicts between family farms focused on cropping, mixed farming and pastoralism often degenerate into violence, particularly during periods of extreme weather (see Mamdani 2011).

3.3 FAMILY FARM LANDHOLDINGS AND THEIR DIFFERENTIATION

Access to arable land is decisive in defining the incidence, social reproduction and scope of family farming, but it is only partially decisive in shaping their differentiation. Average landholding sizes are commonly used as proxies of the differentiated scale of family farm production, because a miniscule proportion of the cropped land in SSA is irrigated, and fertiliser consumption is quite low. Despite SSA's large total land area of about 2 billion hectares, the arable land resources available are currently limited (see Figure 2). Around 193 million hectares of the 960 million hectares of agricultural land are considered arable (FAOSTAT 2014).

FIGURE 2

Total land area per capita in SSA



Source: FAOSTAT (2014)

Only 20 per cent of the arable land is suitable for cultivation because large parts of many countries are desert and rugged and/or have 'deficient' soils. LSCFs appropriate larger shares of high-quality arable land at the expense of family farms (Moyo 2008). A number of countries with relatively high population densities (e.g. Malawi, Rwanda and Lesotho) have limited arable land. Generally, the inequitable distribution of arable land is, therefore, more common than officially recognised.

There has been a slight increase in the arable land area, possibly due to the opening up of grazing lands and forests, including on marginal lands. In per capita terms, however, there has been a substantial fall in the arable land area (see Figure 2). This means that unless there is a demographic transition, whereby the rate of the rural population growth slows down faster, or there is a significant increase in farm productivity (yields), the availability of arable land to establish new family farms will soon end.

In practice, family farms possess rather small land sizes for residence (which includes a small area for vegetables and fruit trees), arable fields, and resource commons used for grazing and natural resources extraction by their 'community'. The family farms engaged in pastoralism gain access to land, water and forage resources within and across agro-ecological zones but face increased competition from sedentary farming. The available grazing lands in SSA face increased pressure from growing livestock numbers.

Family farm landholdings vary among SSA countries and different categories of family farmers. Dryland family farms in the SSA region have access to relatively small amounts of land, ranging in size from 1 to 3 hectares. Average per capita arable landholdings range from 0.1 hectares in Botswana to 0.3 and 0.4 hectares in most of the Southern Africa countries. In Malawi, family farms possess about 1.2 hectares per household, or 0.33 hectares per capita, although 33 per cent of these smallholder family farms own less than 1 hectare of cultivable land (Zuka 2013), compared to Zambia and Mozambique, both of which have more land. Between 1990 and 2000, about 77 per cent of the farms in most of the non-settler countries (e.g. the DRC, Lesotho, Malawi and Mozambique) had average landholding sizes of below 2 hectares, while over 95 per cent of the farms were below 5 hectares (Eastwood, Lipton and Newal 2010, citing FAO census data). In general, cropping plots in SSA tend to be fragmented.

Landholding inequalities among family farms arise due to increased informal purchases of untitled land (plots) in customary tenure regimes, leading to the expansion of 'rich family farms' and a rise in the number of land-short 'poor family farms'. For instance, in Malawi, purchased landholdings are on average 6.3 hectares in size, while the remaining plots under customary tenure, comprising 78 per cent of the family farm landholdings, stand at about 0.59 hectares (Chirwa 2008). In theory, customary land tenure systems prevent excessive land concentration by limiting the alienation of land to those who are not clan members. However, some elites frequently negotiate or compel the leasing of such lands to outside parties (Moyo 2008).

The concentration of landholding is highest in Southern Africa, where race and class inequities yield land Gini coefficients of above 0.70, compared to less than 0.40 in most SSA countries (Moyo 2014). Whereas the average small-scale family farm holds less than 3 hectares of arable land, medium-sized capitalist farms hold an average of between 10 and 200 hectares, while the LSCFs (including corporate plantations) hold between 300 and 3,000 hectares (Sitco and Jayne 2012). Thus, Southern Africa farm typologies are differentiated mainly according to large discrepancies in landholdings, alongside market orientation.

3.4 FAMILY FARM LABOUR RELATIONS AND THEIR DIFFERENTIATION

The scale of family and/or hired labour available to family farms is an important measure of their differentiation (Chambati 2013), although ownership of farming assets is also critical. Family farms predominantly use family labour, which can include a range of one to seven family members, and this generally amounts to a minimum of 65 per cent of the total labour

used (FAO 2013). About 35 per cent of the family farms in Southern Africa may use up to one permanent hired labourer, while about 60 per cent of them may use one to three seasonal labourers for weeding and harvesting (ibid.). Teenager soften provide labour, sometimes conflicting with their schooling.

At times, family farms participate in reciprocal and rotating labour-sharing groups for major farming tasks. Such labour is often derived from clan members and/or neighbours who assist each other mostly in return for goods (e.g. grains) and other reciprocal services such as lending animal draught power and transport equipment, rather than cash. Extended family labour can be excessively exploited through loose systems of 'personal dependence', given cultural norms of providing social protection to poorer relatives. In some countries, 'unfree labour' services are common. For instance, in the cocoa farms of better-off family farms in Côte d'Ivoire, various forms of labour bondage have been noted, sometimes involving young or extremely poor people in some pastoral regimes. Increasing land concentration, landlessness and poverty in SSA provide the structural basis for the flourishing of discriminatory forms of labour among some family farms (Moyo and Yeros 2005).

In contrast, LSCFs and estates hire large amounts of permanent and casual labour, and utilise more tractors, harvesters and irrigation facilities. Quite critically, they often compete for the labour of poorer family farms and other unemployed people with under-capitalised but 'better-off' family farms. In the LSCFs of South Africa and Zimbabwe, labour tied to residential tenancy is not uncommon (Chambati 2013), while the casualisation and feminisation of labour is common in LSCFs and estates. Most medium-sized LSCFs hire rather small amounts of labour (i.e. below five permanent workers) and have limited machinery; they also cultivate small areas, often through paternalistic ties (Chambati and Moyo 2004). As such, their farming strategies approximate those of better-off family farms, although they use more artificial inputs (fertilisers etc.) than the former. In general, where family farms have sufficient land and productivity rises, LSCFs face bottlenecks.

Similarly, the increasing capital intensity of LSCFs has led to decreasing levels of gainful agricultural employment through a rapid substitution of labour by mechanisation. For instance, South African farm labour represents only 5.3 per cent of the labour force, but the number of farm employees fell by about 25 per cent, from 1.4 million workers in 1979 to 0.9 million in 2010 (Liebenberg and Pardey 2012), despite overall unemployment rates being about 40 per cent (Leibbrandt 2010). Moreover, the share of agricultural earnings between capital (i.e. LSCF family owners) and labour is extremely unequally distributed (Liebenberg and Pardey 2012). Land concentration has thus limited the absolute numbers of rural self-employed family farms, rural artisanal work and wage labour.

A small proportion of the family farms in SSA (i.e. the 10 per cent that are 'better-off') tends to approximate 'capitalised family farms', comparable to the smaller-sized owner-operated farms within the Euro-American agrarian structures (Moyo, Jha and Yeros 2013). Nonetheless, in most SSA countries, family farms are categorised according to the animal traction equipment and size of cattle holdings possessed. Indeed, such assets are closely associated with the scale of cultivation and intensity of labour used, and to a limited extent, the attenuation of some drudgery typical of family farming. For instance, in the Malian cotton zone, better-off family farms possess two or more pieces of animal traction equipment and a herd size of 10 or more cattle, while those with less than one piece of animal traction equipment and/or which only use manual labour are the poorest. Those in between have one piece of animal traction equipment and less than 10 cattle (see FAO 2013).

In Kenya and Uganda, family farms that rely on permanent off-farm employment are distinguished from those whose wealth derives from cash crops, while these better-off family farms are differentiated from the resource-poor households who are mostly employed locally by better-off family farms. In the middle are those who are food self-sufficient with a median level of productive resource endowments, who partially rely on part-time non-farm labour activities (ibid.).

The seasonal flexibility of labour allocation in the dryland family farming systems of SSA and its structural association with wage-income diversification at the farm level provide opportunities for the supply of labour and employment within the wider labour markets of the sub-regions (Mortimore 2003: 66). Most poor family farms survive on labour allocation strategies that combine farming and non-farm activities (Raikes 2000: 68), such as petty trading, craft-making and artisanal mining, while intensifying struggles to access land in both rural and urban areas (Moyo and Yeros 2005). This process also entails optimising the use of underemployed labour on family farms, especially among those with lower productivity levels.

Nonetheless, the diversification of labour allocation and rural out-migration have not led to full employment in the non-farm sector, let alone to permanent urbanisation, as it entails the spreading of risk in adverse circumstances (ibid.). De-industrialisation and retrenchments since the 1980s have instead led to a degree of 're-peasantisation' in some countries, based on various land-bidding tactics and in the context of rising low-wage employment in the informal sector (Moyo, Jha and Yeros 2013). These contradictions highlight the importance of strengthening the actual and potential employment capabilities of family farming through the provision of productivity-enhancing technologies.

3.5 FAMILY FARMING AND GENDER INEQUALITIES

The marginalisation of women in access to and control of land, labour and farming resources within family farms is being increasingly recognised as an impediment to the progressive development of the family farming system. Since the combination of land and other forms of capital and labour within family farms is spread unevenly within single households, family farm labour also tends to be differentiated, largely according to gender and generation. Generally, the clan and family farm patriarchs control the means of production in SSA, while women and children mainly provide production and reproductive labour (Tsikata 2012).

The management of family farms is largely divided along lines of gender and generation, with men being dominant in decision-making. In Southern Africa, over 55 per cent of the family farms are managed by a male head of household, while the rest may be female-headed households. However, this proportion varies within and among countries, in the context of short- and long-term migration processes. The hiring of managers in family farms is uncommon, although relatives (brothers, cousins of the male head of household) may provide management or supervisory support. The incidence of child-headed households (partially supervised by relatives) is also reported to have risen in some countries with increasing numbers of HIV/AIDS-related orphans.

In most SSA countries, women only own or control limited forms of property, including land for vegetable gardens, some livestock and a few implements. Customarily and statutorily defined patriarchal social relations, including land tenure rules and procedures of land allocation and inheritance, are the key source of gender inequalities among family farms

(UNDP 2012). In Zambia, for example, over 74 per cent of rural women depend on their family links—and thus clan authorities—to gain access to land, because markets play a limited role in land transfers (ibid.). In matrilineal family farming societies, however, such as in parts of Malawi, women often have effective control over land and related agricultural resources.

The marginalisation of women in the ownership of and access to other means of production limits their control over and access to the products and incomes from family farming. Women's decision-making, productivity and access to credit are all constrained by weak land rights, which in turn undermine food production and child nutrition (UNDP 2012). In Chad, for instance, the gendered leadership of households and draught animal power possessed by family farms is often used as a classifier (FAO 2013). Female-headed family farm holdings which mostly use manual labour are the poorest, while male-headed households with their own and/or rented animal-drawn draught power tend to be better-off (ibid).

The division of family farming labour along gender lines is also quite common. Often, tasks such as weeding and harvesting are often female-dominated, while ploughing tends to be performed by men. However, this division of labour is increasingly less rigorous than is assumed, especially where draught power is commonly used, where labour hiring associated with cash cropping is greater, and where male or female labour migration has taken root. Family farm leadership and the division of labour become more complex. These gender inequities are a critical source for the undervaluation of family farm production, while inequitable rewards for labour undermines their productivity.

More generally, self-employment on family farms generally reflects unremunerated labour, especially in relation to the reproductive labour undertaken mainly by women. Moreover, the limited incomes achieved by family farm members due to low productivity and limited returns arising from the comparatively higher farm gate costs of inputs and the lower share of commodity prices realised by family farms is a critical source of labour undervaluation. This explains much of the official blindness about the importance of family farms as a key source of labour and employment. Overall, the unequal ownership of assets such as land, livestock and various productive inputs among family farms favours the better-offs, who achieve a disproportionate share of agricultural production, food and the incomes derived from family farming. This is the major source of the differentiated capacity among family farms to produce, in terms of cultivated area, productivity and crop diversity, as will be explored further.

4 CONTRIBUTION OF FAMILY FARMS TO AGRICULTURE

Family farms are the major actors in agricultural and food production, as well as in the farm input and output markets of SSA, except in countries where LSCFs predominate. However, the value of family farming in terms of the volume and financial value of the different types of foods, cash crops and livestock they produce, and how these contribute to GDP, food security and employment, is largely unquantified and underestimated. Many policymakers and analysts do not even recognise these contributions of family farms, particularly those of pastoralism. Moreover, family farms produce a variety of food products used extensively across the four SSA sub-regions, in accordance with their diverse agro-ecological potentials and varied degrees of integration into different types of global input and commodity markets.

Meanwhile, the agrarian transformation of SSA, in terms of the purpose of farming, the nature and scale of the commodities produced, slowly rising productivity levels and the dynamics of market integration, continues to be tilted in favour of agricultural exports, at the expense of food production geared towards better-functioning home markets. In particular, investments in farm production technologies to increase food crop productivity among the majority of family farms suffered under the neoliberal policies of the 1980s, while the costs of inputs and agricultural commodity prices in SSA have remained unfavourable for most of the post-independence period (FAO 2014). These challenges affect the diverse family farms differently but highlight key opportunities to strengthen the family farming system as a whole.

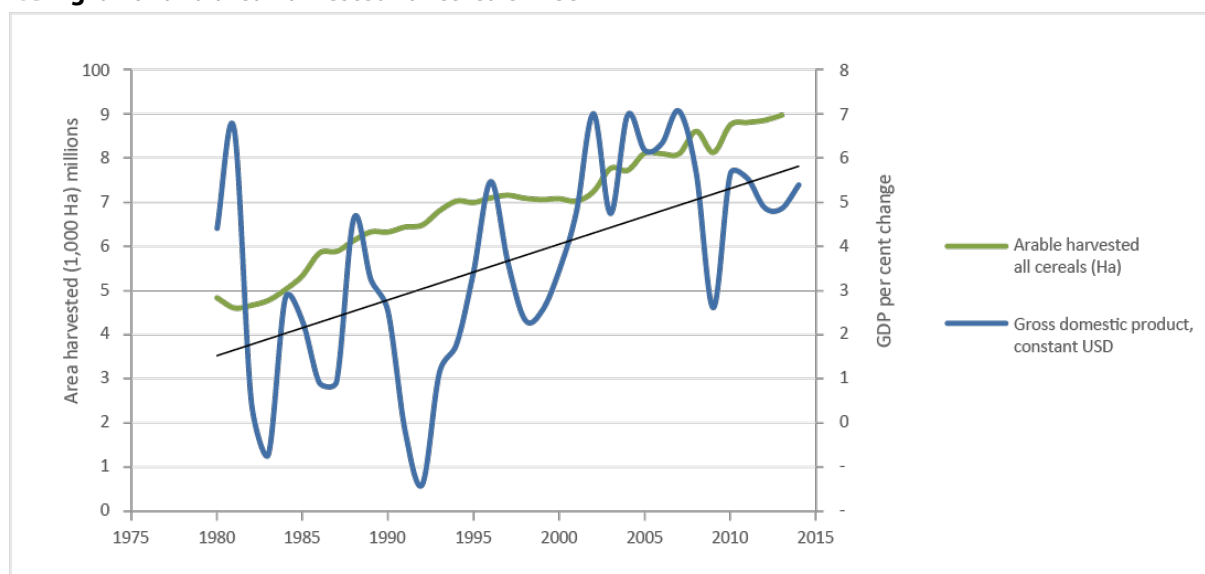
4.1 OVERALL CONTRIBUTION OF FAMILY FARMS TO THE SSA ECONOMY

GDP in SSA declined sharply from the early 1980s, following the global economic crisis of the mid-1970s and the resulting structural adjustment policies, and then stagnated in the 1990s (see Figure 3). In the 2000s, growth recovered to a level of 7 per cent following a commodity market boom, and it has remained at around 5 per cent since the global economic crisis of 2008. While Africa's GDP growth rates during the 1990s and 2000s stood at 2.1 per cent and 4.8 per cent, respectively, annual agricultural growth was only 3 per cent and 3.2 per cent, respectively (FAO 2014: 4). In West Africa, agriculture on average contributes 30 per cent of GDP, while in a number of East and Southern African countries, the sector contributes less than 20 per cent.

It is interesting that the area cropped to cereals in SSA followed a similar upward growth trend from 1980 to 2013 (Figure 3), although the trend in cropped area does not conform to the dips in GDP growth. This emphasises the point that the cropped area rises steadily, in tandem with demographic growth and the associated expansion of family farms, despite external shocks such as poor weather and oil prices, which engendered volatile patterns of growth. It also highlights the fact that family farms invariably apply their family labour to farming, and in doing so provide over 60 per cent of the formal and informal employment in SSA.

FIGURE 3

GDP growth and area harvested for cereals in SSA



Source: FAOSTAT (2014).

Furthermore, it is estimated that 85 per cent of the investments, in terms of monetary savings and the labour value applied to agriculture in SSA, are made by family farms (ROPPA, PROPAC and EAFF 2013). Such investments entail land development and soil maintenance, the enlargement of livestock herds, procurement of machinery and equipment, construction of farm structures and the establishment of tree crops. Pastoralism is estimated to contribute over 40 per cent of the GDP of most countries in the Sahel region, and in Kenya, for instance, it was estimated to be worth USD800 million in 2011 (*ibid.*, citing African Union/IBAR). These investments yield a variety of tropical and other types of products for use in SSA and/or export.

4.2 THE SCOPE OF CROP PRODUCTION AMONG FAMILY FARMS

In general, the production strategies of family farms in SSA are shaped by the objective of meeting diverse dietary requirements structured around mass energy staples, pulses and vegetables, with frugal supplies of animal protein. Most family farms allocate most of their land and family labour towards producing their main staple foods, rather than cash crops, although a small proportion of them specialise in the latter. Moreover, the area cultivated by family farms tends to be dominated by staple food crops, compared to the 'minor food crops' such as pulses and vegetables. Furthermore, livestock provides meat and dairy products as well as manure and draught power to the family farming system.

The scope of agricultural commodity production by family farms in SSA, however, tends to reflect a division of labour between better-off family farms and LSCFs and estates, on the one hand, and the rest of the family farms, in terms of the type of commodities they produce, on the other. This largely reflects the value or position of the products in commerce, as opposed to mass consumption by family farms and other working people.

Family farms tend to produce most of the region's staple cereals (maize, millet, sorghum) and staple tubers (cassava, yams), as well as most of the groundnuts, roundnuts, beans and sweet potatoes. Family farms produce limited amounts of higher-value cash and food crops such as tobacco, oilseeds (such as soybeans), fruits, sugar, tea, coffee and marketed beef and dairy, as well as wheat, which mostly requires irrigation. Furthermore, most of the cotton in SSA is produced labour-intensively by family farms. However, in terms of the aggregate volume of output, family farms dominate domestic agricultural production in SSA, despite the higher financial value per unit of product of the cash crops produced mainly by LSCFs and better-off family farms. The exceptions are South Africa, and to a lesser extent Zambia, where LSCFs produce most of the cereals.

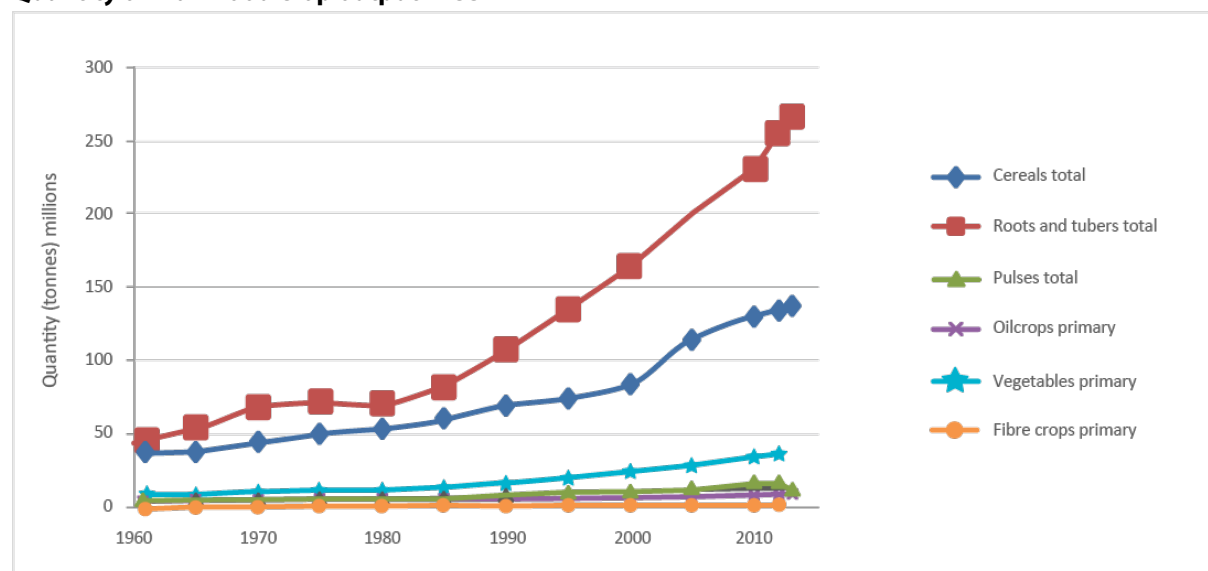
That said, most SSA countries rely on under 20 per cent of their total number of farmers (including the 'better-off' family farms, LSCFs and estates) to produce the high-value products destined for domestic and export markets. In the case of South Africa, about 15 per cent of LSCFs produce over 80 per cent of all the marketed agricultural output, on less than 30 per cent of the land owned by LSCF farmers (Mazibuko 2011). In Zambia and Zimbabwe before 2000, LSCFs and estates dominated the agricultural earnings in most cash and export crops (such as sugar, oilseeds, horticulture), while small producers were dominant in the lower-valued food grains (maize) and labour-intensive cotton (ASI 2012; Sitco et al. 2011). In Botswana, LSCFs dominate livestock and cash crop sales, despite representing less than 1 per cent of all the farms and using 8 per cent of the total land area (USAID 2010). In Malawi, Tanzania and Kenya, relatively large numbers of family farms are involved in cash cropping, although farm productivity constraints limit their earnings and employment capacity. In West Africa, better-off family farms produce most of the export crops.

Since the mid-1990s, agribusiness and big corporate farming entities have been engaging more small-scale family farms in producing cash crops such as tobacco, maize, seed, potatoes, bananas, pineapples, beans, flowers, barley and sugar, increasingly on contracts that tie input provision to the markets they control. Whereas land reform restructured the distribution of landholdings and agricultural production and market relations (as in the case of Kenya, Zimbabwe and limited areas of South Africa), the concentration of cash crops and/or agricultural export production among a minority of LSCFs has declined significantly.¹⁰ Similarly, large-scale, export-oriented agro-estates are increasingly collaborating with family farms through outgrower contracts to produce sugar, tea, fruit and biofuels, despite the continued control of the core estates and agro-processing by the corporations.

This division in the production of high-value crops is mainly due to unequal access to farm technologies, as well as input, output and financial markets. It also largely reflects the predominance of dryland farming among family farms, given the scarcity of irrigation facilities available to them. Meanwhile, crops with low financial returns such as domestic cereals destined for low-waged domestic markets and which compete unfavourably with cheap imports on global markets, as well as labour-intensive crops such as cotton, have not attracted the attention of LSCFs.

Regarding production trends, the output of most food crops in SSA grew substantially between 1960s and 2013. In absolute terms, tubers and cereal output grew significantly between 1985 and 2010, while the production of pulses, oilseeds and vegetables was relatively lacklustre (see Figure 4). In contrast, production has declined significantly in per capita terms (see FAO 2014).

FIGURE 4

Quantity of main food crop output in SSA

Source: FAOSTAT (2014).

Currently, SSA's cattle population is mainly owned by family farms, although many keep cattle for other people, rather than owning them outright. In general, the numbers of livestock in SSA have grown substantially, despite the relatively low off-take rates and concerns with the quality of beef produced by family farms. Indeed, the production of 'marketed' meats and dairy

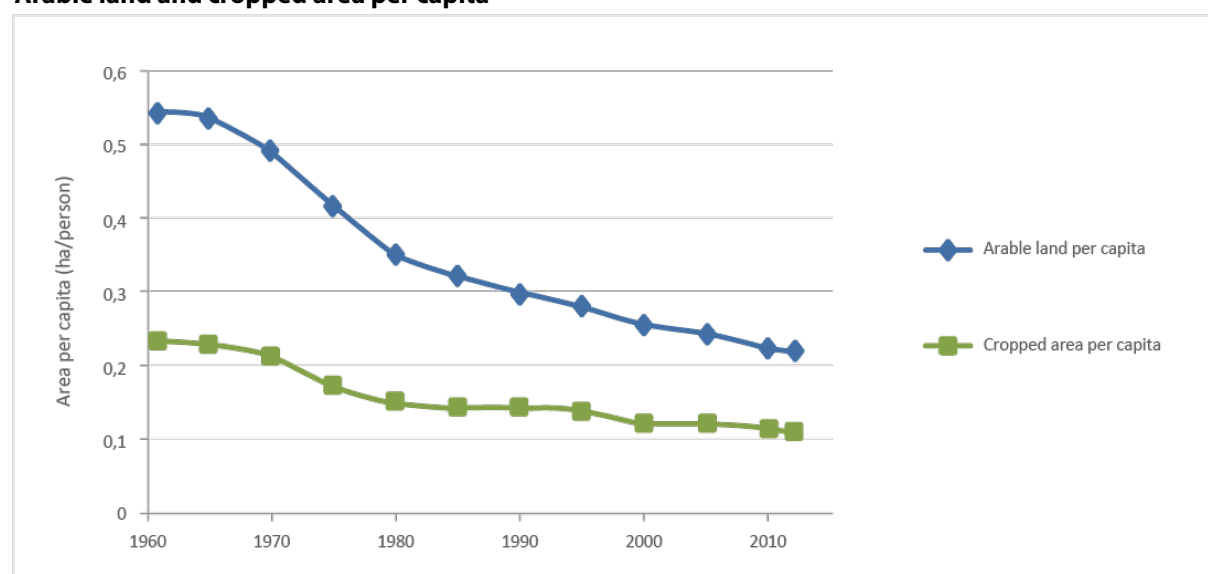
products in SSA has been relatively low, as is reflected in the region's poor nutritional statistics, and in comparison to production trends in other emerging and developing countries. It can be expected that as domestic demand for meat in SSA (and in world markets) rises as urbanisation increases and incomes grow, there will be greater competition between food and livestock production. Already the production and consumption of feedstocks in SSA appear to be on the rise in a few countries (South Africa, Kenya, Zambia, Zimbabwe) but it is notable that feedstock imports have been rising.

4.3 EXPANSION OF FAMILY FARM PRODUCTION THROUGH THE EXTENSION OF CROPPED AREA

The rise in family farms' crop output and livestock numbers has largely been driven by an expansion of the land area used and the limited adoption of hybrid seeds, rather than the increased use of inputs such as fertilisers and irrigation. The agricultural production activities of family farms are largely structured around individual family- and/or household-owned fields (often including extended family members), while the rearing of family-owned livestock herds and natural resource management are mostly undertaken jointly on common lands. While mixed crop and livestock farming is prevalent in SSA, pastoralism is dominant in the Sahel region of West Africa and the northern parts of East Africa.

FIGURE 5

Arable land and cropped area per capita



Source: Author's elaboration.

In aggregate terms, family farms cultivate the bulk of the area cropped in SSA, except in the case of South Africa. However, individual family farms rarely crop more than 3 hectares each per annum, whereas LSCFs cultivate larger cropped areas. Thus, as new family farms are created intergenerationally, the cropped area expands. Moreover, less than 3 per cent of the cropped area in SSA is irrigated (FAO 2014), and this proportion becomes much lower when we exclude South Africa, where irrigated farming by LSCFs is the most extensive.

The gross cropped area in SSA increased by 85 per cent from 52.6 million hectares in 1961 to 97.4 million hectares in 2012 (see Figure 5). This constituted 43 per cent of arable land area in 1961, and 50 per cent in 2012. Although a larger proportion of the available arable land is now being cropped, in per capita terms the level of the cropped area declined significantly, from 0.24 ha/person in 1961 to 0.11 ha/person in 2012. The arable land available per capita declined sharply from 0.54 ha/person in 1961 to 0.22 ha/person in 2013 (which represents approximately 1.3 hectares per family), indicating that the ratio of arable land to cropped area per capita has also been narrowing sharply since 1975.

The implication of this is that as population grows, a higher proportion of the available arable land is being cropped per capita, and the existing available arable land comes closer to being fully utilised, while per capita access to arable land has declined. Meat and dairy production can be expected to increase mainly through the extension of grazing lands, as well as the increased use of food crops for feedstock. Considering the low level of inputs used on the continent, the scope for expansion of family farms on the basis of extending the cropped area is increasingly limited, unless much larger capital investments are made to expand arable areas and improve access to them in remote areas.

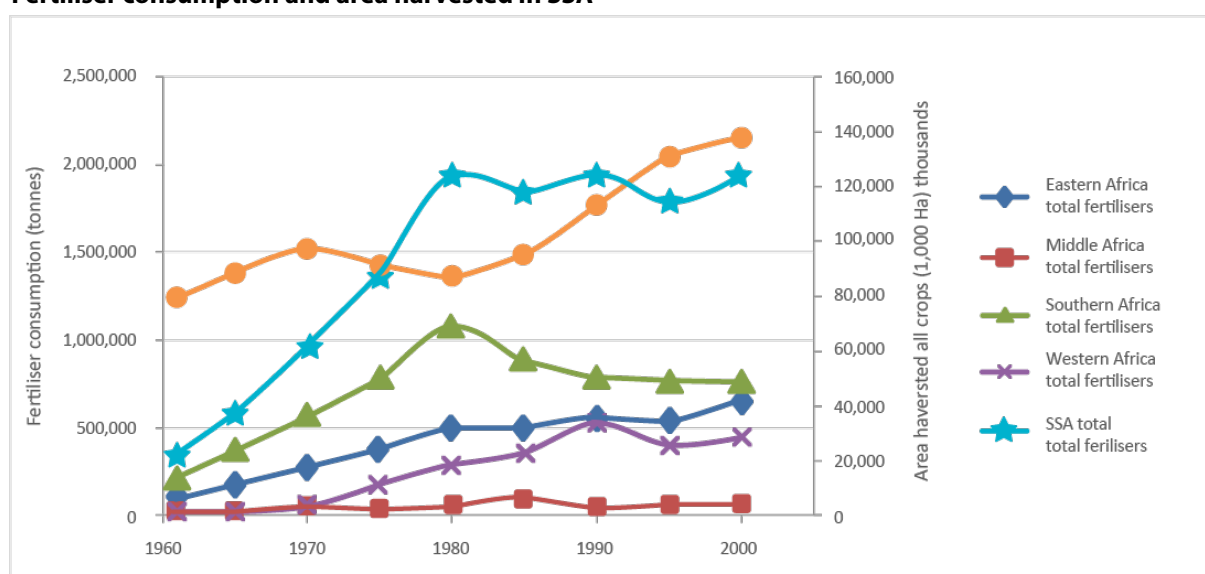
The production strategy of family farms tends to maximise plant diversity, partly in search of diverse sources of food from land and nature, and to enhance natural resource sustainability. This does not always represent a strategy of agro-ecological farming, although the indigenous knowledge systems underlying family farming emphasise this value. The limited finance available to family farms for procuring 'improved' inputs has shaped the practice of using fewer inorganic inputs (fertilisers) per hectare. Although the use of livestock manure is an important value of the family farming system, many family farms do not own significant numbers of cattle from which to derive manure and animal draught power. Moreover, the increasing scarcity of arable land per household limits the practice of land and crop rotation.

The stark reality is that current cereal yields are as low as 1 to 2 tonnes per hectare in SSA—less than half as much as in Asia and Latin America—while the use of fertilisers per hectare is much lower even than it is in those regions (FAO 2014). Low agricultural productivity among family farms reflects declining per capita use of fertiliser and low volumes per hectare, as discussed below. Nonetheless, some success has been achieved in increasing yields, mainly with staple food production. This occurred in maize through the adoption of improved varieties in East and Southern Africa, and cassava in West Africa (*ibid.*). This is also the case with cotton in Mali and Burkina Faso, tea and floriculture in East Africa (*ibid.*, citing Haggblade and Hazel 2010). There has also been a diversification from crops to dairy in Kenya and export beef production in Botswana (FAO 2014). The paucity of farm-level data on cropped areas and yields, in relation to weather-induced harvest failures, however, means that rather crude measures are used to gauge SSA productivity trends, masking sub-national productivity gains.

The key impediments to productivity on family farms in SSA are access to improved inputs, the volatility of output in the absence of irrigation facilities, and a variety of market constraints, which limit the returns for investment in land use intensification. Small-scale family farmers mobilise family and kinship labour and other local resources, and they invest their savings particularly for social reproduction and risk insurance (Mafeje 2003). However, the scale of such investments is inadequate for the substantial expansion of arable land and productivity or for significantly large-scale capital formation (*ibid.*). Yet family farms have maintained agricultural production despite the decline in state support to farming and social services from 1980 (*ibid.*).

Fertiliser consumption in SSA rose steeply (by at least six times) from 315,532 tonnes in 1961 until 1980, when it reached a plateau at 1.9 million tonnes but recovered slightly from 2000 (see Figure 6). In per capita terms, the use of fertiliser per hectare shrank by about 40 per cent of the levels reached in 1980, before increasing marginally in the 2000s (FAOSTAT 2014). Southern Africa is responsible for much of the fertiliser consumption in SSA, mainly because of the input intensity of LSCFs, alongside the higher rates of fertiliser use by family farms. However, even here some countries use more than others.¹¹ East Africa also experienced a steady increase in fertiliser consumption between 1965 and 2000. However, West Africa only started experiencing an increase in fertiliser consumption from 1970 onwards, with Central Africa constantly maintaining the lowest level of fertiliser consumption.

FIGURE 6

Fertiliser consumption and area harvested in SSA

Source: FAOSTAT (2014).

The level of agricultural tractorisation in the SSA region varies by country but is generally lower than on other continents. Ox-drawn traction and hand-and-hoe ploughing and weeding dominate farming practices. Some demographically smaller countries are highly tractorised (Moyo 2010).¹² This mechanisation pattern again reflects the diversity of SSA's agrarian structures, as well as the differentiation of family farming in the region. Family farms in some countries are more dependent on hoe-and-hand cultivation than on animal draught power which has increased significantly over the last three decades (Mafeje 1999).

The slow rise in cropped area and the highly variable rise in total agricultural output indicate that the variability of rainfall and the frequency of droughts continue to undermine output among family farms in SSA. The proportion of irrigated cropped land in SSA is on average 3 per cent (FAO 2014), with a range from 2 per cent to 31 per cent.¹³ The absence of irrigation facilities and limited public investment in such facilities is thus a critical constraint to family farming productivity in SSA. The fact that smaller amounts of the arable land in SSA are cultivated under irrigation than the potential allows—as well as in comparison to other regions—is exacerbated by the inequitable access to irrigation resources by family farms

(Swatuk 2008). Such inequality underlies the relatively low levels of high-value crop production and productivity among family farms. The uneven development of irrigation facilities among SSA countries and sub-regions also shapes the diversity of crop production in general.

Southern Africa is the extreme case, with a few LSCFs and transnational corporate estates dominating the irrigation resources (Swatuk 2008). For instance, South Africa, Zimbabwe and Namibia irrigate 10 per cent, 4 per cent and 1 per cent, respectively, of arable land (Svendson, Ewing and Msangi 2009).¹⁴ In Zimbabwe, LSCFs and estates controlled 74 per cent and 23 per cent, respectively, of existing irrigated land by 1999, with family farms controlling the rest, focusing on sugar and horticulture (Mazingi and Kamidza 2011).¹⁵ Over 60 per cent of the total irrigation potential of Swaziland (50,000 hectares) is developed, but South African-owned and parastatal sugar cane estates account for over 95 per cent of these resources (World Bank 2011). In Zambia, over 70 per cent of the irrigated lands are devoted to sugar cane, mostly through African firms. Few family farms irrigate their crops in Tanzania and Mozambique, despite the emergence of irrigated sugar estates from the mid-1990s.

Nonetheless, it is interesting that family farms have been resilient and continue to increase their cropped areas, despite the frequent periods of extreme drought (and unfavourable prices) (Mortimore 2003). For instance, family farms in the Sahel region have adapted successfully to larger changes in average rainfall (of 25–30 per cent between 1931 and 1960 and between 1961 and 1990) than is predicted by current climate change scenarios (ibid.). Family farms are adapting their agricultural and food production practices and increasing output through the extension of cropped areas based on the increased numbers of family farms, rather than through a land use intensification process. However, the increasing reduction in arable land per capita is a cause for concern in the context of climate change.

Yet, the overall preparedness of SSA for the anticipated negative effects of climate change on family farming is a key concern, given the declining amount of developed arable lands in regions with suitable agro-ecological potentials to produce certain foods. The adaptation of seeds to counter the reduction or lengthening of growing seasons in future, and the adoption of measures to counteract water losses, are lagging behind needs. Mitigating this will require much more public investment in research and development than is currently being undertaken (see FAO 2014).

4.4 THE INTEGRATION OF FAMILY FARMS INTO MARKETS

Family farming in SSA has often been wrongly viewed as a different 'mode of production' tending towards 'autonomy' from markets (Moyo, Jha and Yeros 2013; see also Van de Ploeg 2013). Moreover, as a social formation, family farms in SSA were often viewed as an historically peculiar form of socio-economic 'backwardness', arising from the persistence of neo-patrimonial societal relations (e.g. 'tribalistic' and 'communitarian' values), lacking 'modernistic' values such as private property rights in land (see Mafeje 1999; Hyden 1986). Family farms are, however, firmly embedded in the generalised system of commodity production, and oligopolistic financial and trade regimes which are poorly mediated by hierarchically ordered nation states (Moyo and Yeros 2011).

In practice, family farms are deeply integrated into global agricultural commodity and inputs markets controlled by transnational monopoly capital, as well as by an expanding range of domestic actors. The former involves intertwined inputs and commodity agribusiness entities, largely headquartered in North America and Europe. Family farms are largely exposed

to normal (global) economic crises, including the vagaries of world agricultural markets, which are increasingly affected by unusual weather events, as well as the diversion of food products to agro-fuel production (Moyo 2010).

It has been argued that a 'quiet revolution' related to increased urbanisation has been occurring in SSA over the last 30 years, resulting in more diverse and complex trading, wholesale, processing and retail (e.g. supermarket) structures (Reardon et al. 2013). This view highlights the fact that 50 per cent of the total food consumed and 60 per cent of all food marketed is targeted at urban SSA (ibid). *A priori*, this does not mean that competitiveness has improved along all legs of these value chains. In some countries (e.g. South Africa), the concentration of transnational agrarian capital has led to uncompetitive and collusive behaviour in input and output markets, and this reverberates negatively onto the sub-region's food markets and family farming production (Moyo 2010).

It also ought to be emphasised that family farms are the dominant food supplier to most of these central and decentralised urban markets, as well as of local and household-based markets, and that these markets are poorly serviced in terms of infrastructure and regulations. As such, family farms achieve extremely low margins due to high input prices (FAO 2014), and because traders divert a large share of the average commodity prices away from them (Delgado 1996). The dispersal of bulky grain markets and absence of scale economy is often attributed to this malaise, rather than highlighting the abdication of investment into rural infrastructure by governments and international donors. Furthermore, the ineffectiveness of input and output markets in SSA in relation to the limited state support to small-scale family farming markets has placed them at a disadvantage *vis-à-vis* farmers in leading food-exporting countries.

The integration of family farms into markets is widely differentiated. Some family farms are integrated because of their better resource endowments and/or due to their accumulated benefits from past public support. Even the locational situation of family farms tends to differentiate access to markets, given infrastructure deficits and limited access to motorised vehicles. In West Africa, for instance, the most commonly observed categories of family farms are: market-oriented family farms with a cash crop specialisation; those which balance the production of cereal and cash crops; and those with only subsistence cereal holdings (Toulmin and Gueye 2005). In general, about 20 per cent of small-scale family farms in Southern Africa are market-oriented producers of both food and cash crops, and in the middle are the semi-subsistence producers focused mainly on producing food crops. Yet the socio-economic differentiation of family farms reflects the differentiation of their landholdings, possession of draught power and livestock ownership, as well as the uneven rise of wage-labour relations relative to various specific historical differences within and among countries.

Despite these constraints, family farms in SSA have demonstrated their capability to adapt to increasingly globalised markets and have continued producing despite the collapse of the prices of agricultural export crops such as cocoa, coffee, palm oil and kernels, cotton and groundnuts (Mortimore 2003: 62). They have switched between selected crops and have adapted technologies and production systems under severe constraints, while gradually shifting away from export commodities towards domestic food markets (ibid.). Family farms are increasingly involved in inputs markets, particularly in relation to a selected range of vertically integrated commodity markets (see Delgado 1998; Moyo 2012).

Family farms have the capability to compete on global markets, as shown earlier by the sustained periods of production growth in some crops at a time when commodity prices were declining (Mortimore 2003), and in the context of 'unfair' global trade practices arising from huge subsidies from the Organisation for Economic Co-operation and Development (OECD). Given the low agricultural commodity price levels around 2002, it has been argued that without increases in the prices of key traditional export commodities, SSA's agricultural production is unlikely to rise significantly (*ibid.*). That said, the undervaluation of family labour, particularly of women, has enabled continued production among family farms, despite their low returns associated with the comparatively higher fertiliser prices.

Since 2005, the significant rise in world food prices may have provided new opportunities for those family farms that are net sellers of food, but it has certainly disadvantaged many net food buyers, and substantially increased national food import bills (see citations in Moyo 2010). Moreover, the shift of family farm production towards the market is also associated with the increased consumption of a wider variety of foods and other consumer goods, which are not produced by family farms. For instance, the consumption of 'white' maize and long rice, as well as of wheat, which are mostly imported, has increased significantly, changing the production and market dynamics of family farms.

More generally, family farms' access to agricultural finance in SSA has been limited, leading to insufficient access to credit, investment partnerships and subsidies. This has constrained the role of family farms in producing high-value crops, and in their efforts to increase food crop yields through the use of inputs obtained in markets. The exclusion of family farms from private commercial credit facilities is often attributed to various risks associated with land tenure insecurity, market dispersion and weather-related uncertainties. On the other hand, it reflects the result of the selective financing of LSCFs and better-off family farms through private networks linked to agribusiness and private banks. While contract farming has partly 'mitigated' the effects of discriminatory agricultural financing on family farms' efforts to produce high-value crops, 'unfair' pricing often leads to contract failure.

Agricultural earnings among family farms are highly differentiated according to their access to financial markets, wage labour resources and larger landholdings. For instance, the top land ownership quintile of smallholder family farmers in non-settler countries such as Zambia tend to earn about 31 per cent of their sales revenue from high-value crops (Jayne et al. 2010). The land-short bottom quintile (owning on average 0.16 hectares) earn 70 per cent of their household income from labour and other non-farm work (*ibid.*). Moreover, only 3 per cent of the maize farmers are net producers of surpluses for sale, and these households can earn about USD7,624 per year from about 7 hectares of land. The predominantly 'subsistence' family farms (37 per cent) earn about USD756 per year from 1.1 hectares of land, while the remaining 40 per cent earn an average of USD1,272 per year from about 2 hectares (*ibid.*).¹⁶

Agricultural inputs, output and financial markets became less rewarding for family farms, and access to them increasingly uneven, when public finance through farm input subsidies and state marketing boards was reduced in the 1980s. Reduced public investment in rural and agricultural infrastructure, such as rural transport facilities and bulk food storage facilities as well as ancillary services such as electricity, stemmed from the rise in productivity of family farms and their access to competitive input and output markets (FAO 2013).

New agricultural technologies are not being generated fast enough because of limited public and private investments in science, research and development, and extension (FAO 2014).

The real reduction in public financing for rural development, including social welfare transfer systems and wage compression arising from structural adjustment policies, led to the overall deflation of rural incomes and wages in developing countries (Patnaik 2008). This lowered the effective demand for food supplies from family farms, and eventually entrenched the reduction of investment in them. The rising dependence on underdeveloped private input and output markets led to the decline of family farm margins and reduced farm incomes and investments, further contributing to the cycle of low agricultural productivity.

The important contributions of small-scale family farms to GDP and employment in the gradually diversifying SSA economies and their leading role in promoting food security in their families and local markets, as well as their competitiveness under adverse conditions, are noteworthy. Even so, their long-term viability will require higher yields per hectare as well as decent and gender-equitable labour conditions, enabled by the increased utilisation of irrigation resources, a sustainable increase in the use of inputs and mechanical draught power, and access to more rewarding and effectively regulated input and output markets.

This presumes policies that encourage increased investment in family farms, primarily by the family members themselves, and by adequately regulated domestic small and medium-sized enterprises (SMEs) in rural SSA, the protection of family farms through effective trade regulations, as well as the revival of state support to agriculture and wider rural development. The absence of sustained policy advocacy, due to the limited capacities of farmer organisations and rural civil society organisations can lead to the neglect of policies that respond to the requirements of family farms' food crop productivity and suitable food markets (FAO 2014).

5 FAMILY FARMING, FOOD SOVEREIGNTY AND RURAL DEVELOPMENT

Family farming underpins food security and rural development in SSA (Wiggins and Keats 2013). Over 600 million rural people derive their main source of income, work (livelihoods) and food directly from living, cultivating and/or grazing on family landholdings. Family farms contribute about 70 per cent of the total food supply in Africa, if not more when South Africa is excluded (IAAS 2009). They feed most of the urban populations through diverse formal and informal markets. However, agriculture in SSA fails to ensure the availability and accessibility of enough food for everyone. Malnutrition stands at 25 per cent, with 239 million undernourished people (FAO 2012) living mostly in rural areas. Despite the important contributions of family farming to food security, low food crop productivity and animal protein supplies have resulted in high levels of food imports and aid dependency (Mortimore 2003).

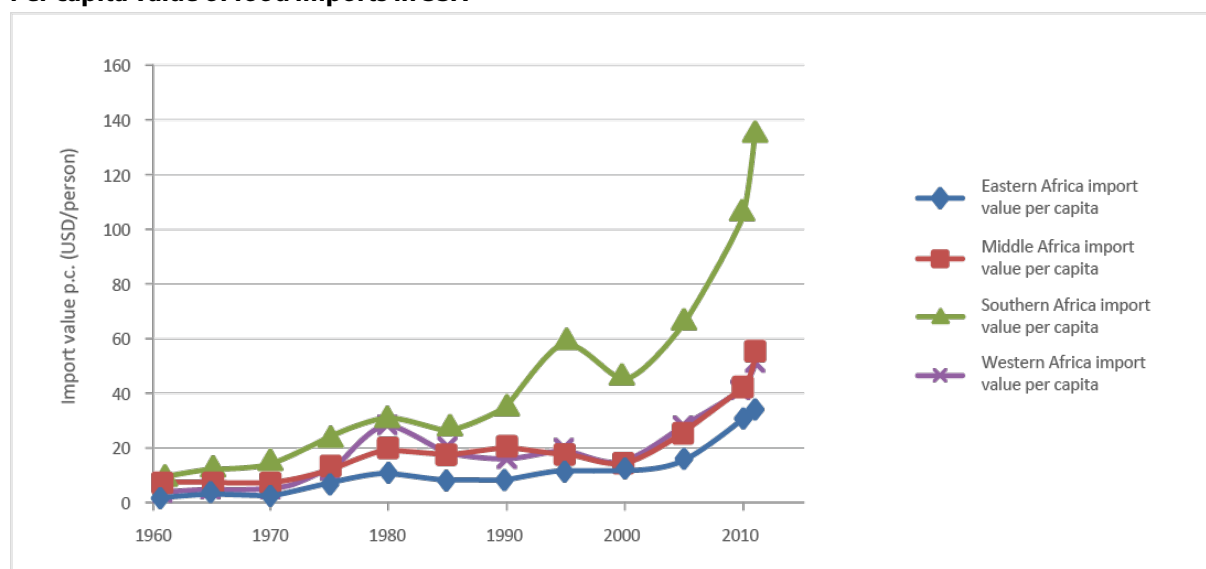
Agrarian and rural development policies, which empowered family farms in SSA, were abandoned during the 1980s on the premise that the State distorted prices and existing agro-industrial structures were not competitive enough (Mkandawire and Saludo 1999). Agricultural exports were touted as the best specialisation to pursue, and productive farmers were encouraged to produce non-traditional export crops (World Bank 2002). Rather than investing in cereal production to achieve food self-sufficiency, grain could be imported from countries with a 'comparative advantage' in producing them (Moyo 2010).

LSCFs were considered the most capable agents to lead agricultural transformation (Mafeje 2003), and land titling tenure reforms were encouraged in the 1990s to promote market-oriented land transfers (Moyo 2008).

The rural development strategy became focused on enclaves with greater potentials for cash or export crop production, while neglecting their hinterlands, which served as labour reserves (Mhone 2007). Public investment focused on promoting productivity-enhancing technologies among 'better-off' family farms and LSCFs to extend cash crop areas. The 'integrated rural development projects' of the 1960s and 1970s which had focused on poorly developed sub-regions and poor family farms were abandoned. Selective but limited interventions to improve soil and water maintenance, limited input subsidies and free food transfers in areas affected by harvest failure, and a few micro-irrigation schemes were permitted. Technology generation became dispersed, and the pace of innovation slowed down (Monty Jones, cited by Dugger 2007). Public investment in rural infrastructure and water development was also largely curtailed.

This approach entrenched food importation, and the disarticulation of domestic agro-industrialisation and de-industrialisation ensued. The synergies that are normally derived from family farm production for self-consumption and for local markets, as well as their inter-linkages with employment, which could have expanded and increased agricultural productivity, were undermined. In contrast, the volume of food imports, however, grew exponentially between 1961 and 2011. Rice and wheat imports saw an over twenty-fold increase (FAOSTAT 2014). Vegetable oil imports grew even faster.¹⁷ The sharp increase in the value of imports at the turn of the century was due to increased food prices. In per capita terms, the value of food imports increased from USD4 per person in 1961 to USD19.8 in 1980, and then USD50 in 2011 (see Figure 7). This trend was induced by trade liberalisation and currency devaluations, which enabled the demand for imported food, although importing countries could no longer meet this level of cost with revenues from the traditional agricultural exports that neoliberal policy encouraged them to specialise in (Mortimore 2003).

FIGURE 7

Per capita value of food imports in SSA

Source: FAOSTAT (2014).

Southern Africa saw the highest increase in per capita food import value from 2000 to 2011, when it stood at USD135.8 per person, compared to USD32.6 per person in East Africa.¹⁸ While West Africa had the highest absolute value of imports at USD15.7 billion in 2011, in per capita terms this figure is substantially lower due to the large population of the region. Commercial food importation also varies widely across individual SSA countries. Larger quantities of food are imported in Nigeria and Côte d'Ivoire, while food aid largely occurs in the Sahel region and large sections of East and Southern Africa. However, much of the food imports are destined to feed the better-off urban classes.

In this context, absolute rural poverty is closely related to food insecurity and malnutrition, which are largely associated with the vulnerable lifestyles and the unpredictable and low yields attained by most family farms. Although poverty levels in SSA declined from 56 per cent in 1990 to 49 per cent in 2010, about 400 million people still live in extreme poverty. Poverty levels vary widely, however, ranging from 5 per cent in South Africa to about 90 per cent in Niger (FAO 2014). Low income levels among poor family farms limit their purchasing power, especially of food and the agricultural inputs required to improve sustainable land use. Many poor family farms depend on limited amounts of food, cash and social welfare services, and are bypassed by agricultural extension services and the recent generation of inputs subsidies (e.g. in Malawi and Zambia; see Moyo et al. 2014).

Rural development and agricultural productivity have been undermined by the failure of most SSA countries to allocate at least 10 per cent of their national budgets to agriculture (FAO 2013). During the 2000s, the welfare thrust of development and aid policy in SSA shifted to supporting the diverse livelihood strategies of resource-poor family farmers (Moyo and Yeros 2005), without attending to the food supply side, particularly from poor and 'semi-subsistence' family farms. Promoting the integration of the better-off family farms into markets (da Silva and Tavares 2008), especially their entry into vertically integrated (high-value weight niche) commodity markets (Delgado 1996) became the mantra. However, deflationary policy regimes drove peasants into disparate 'diversification' strategies, occupying their labour with minor rewards. Rural-to-urban remittances decreased as wages were compressed, and other resource exchanges between family farms and migrant family members provided limited palliative measures. Reduced social and physical investment led to worsening income inequalities and accentuated conflict (Mkandawire 2001).

As elsewhere, rural development in SSA entails combined and uneven development among and within countries.¹⁹ Low densities of rural roads, railways, electrification and dams are typical. Infrastructure development is focused on a few enclaves where natural resource extraction (for minerals and oil, timber, wildlife reserves) and LSCFs operate, connecting them to the capital city to facilitate exports. The recent expansion of LSCFs through foreign land ownership is creating many more enclaves. While urbanisation remains spatially concentrated, many more small commercial, administrative and mining towns have emerged, expanding the urban food markets (Reardon et al. 2013), but millions of family farms isolated from these markets face predatory input and output prices, and lack any meaningful capacity to meet the rising demand for diverse foods.

6 CONCLUDING REMARKS AND THE WAY FORWARD

The apparent consensus is that family farmers in SSA are central to “a sustainable future for agriculture, eradicating hunger and poverty, achieving social cohesion, employment and sustainable use of natural resources” (FAO 2013). This position affirms the perspective that family farms are multi-functional and culturally rooted production and social structures that make important contributions to economic and social life in SSA. Their capabilities, and the markets that serve them, need to be enhanced to transform agricultural productivity towards reducing food insecurity and malnutrition, limiting costly food imports and enhancing social protection in the context of sustainable rural development. Realising this goal requires inclusive policymaking processes that recognise the role of women and young people in agriculture, and build the organisational capabilities of small-scale family farms (ibid.).

The critical question regarding strengthening family farms in SSA is how to promote a transition from farming based mainly on the extension of cropped area towards a more intensive but sustainable land use system which accommodates family farms’ incessant demand for land. This transition requires much higher levels of productivity, and the diversification of food production, based on more protective and rewarding markets served by better rural infrastructures. Improving the viability of family farms will require much higher public investment in productivity-enhancing technologies, including irrigation, markets that are more accessible and increased rural infrastructure. *Inter alia*, this continues to require the allocation of at least 10 per cent of SSA’s national budgets to agriculture, and ‘directing’ 10 per cent of agricultural GDP to research and development (ibid.), to catalyse investment in public agricultural goods. Since the countries of SSA have diverse agrarian structures, policy interventions should be tailored to suit national specificities (ibid).

African Union leaders proposed an agricultural development strategy that seeks to increase domestic food supplies (FAO 2014), building on the contributions of smallholder farmers, as well as corporate farmers. The strategy is to improve the functioning of food markets through the promotion of an enabling environment for domestic private investment, focusing on the binding constraints to productivity growth. Specific targets proposed include: ending hunger by increasing per capita food output—including cereal yields—by 50 per cent (to 2–3 tonnes per hectare), largely by increasing fertiliser use to 50kg/ha compared to 5kg/ha in the 1960s, and expanding the irrigated cropped area from 3 per cent to reach comparable least developed country (LDC) levels of over 15 per cent, while reducing food aid imports (FAO 2014).

There appears to be some ambivalence over focusing on promoting family farms versus the potential role of corporate farming. In reality, the scramble for control over agricultural land in SSA threatens the reproduction of family farming, without offering alternate sources of employment, income and food for poor households (Moyo, Yeros and Jha 2012). The equitable distribution of land and secure land tenure (not necessarily as private property) is a *precondition* for the reproduction of pre-existent and nascent family farms. In fact, the increasing scarcity of arable land without trebling productivity threatens their future. Appropriate land, fiscal, agricultural trade and rural development policies that support family farms, rather than those that support large-scale production mainly for export, are critical if family farms are to become more innovative and meet the rising demand for food in SSA and beyond.

Strengthening the capabilities of family farms to improve their productivity requires support on the production side, as well as market institutions that enhance the internal accumulation of capital and increased investment in family farming. The improved integration of family farms into input, commodity and financial markets requires much better regulation, alongside increased public fiscal support and incentives for domestic SMEs to improve their investments in family farming. The continued dumping of cheap cereals, dairy and meat products from OECD and some middle-income countries, which undermines investment in family farming, needs to stop.

Governments in SSA could use various approaches to intervene in food markets to create incentives for investments that improve the productivity and diversification of family farms. Promoting food supplies to local markets could be enhanced through public procurement programmes, including for various social institutions (e.g. school feeding, clinics etc.), while augmenting direct social welfare transfers to family farm members. Building collective action for family farms to aggregate inputs and outputs will be critical.

National agricultural and rural development strategies ought to integrate the home market and enhance food sovereignty at the regional level, based on qualitatively higher levels of consumption and social reproduction (including higher-value foods). The unique advantages of family farms, including their labour absorption, versatility in production, low energy requirements and regard for ecological balance, could be enhanced through public support that enables small-scale family farms to realise their employment potential, and hence to synergise dynamically with domestic wages (Moyo and Yeros 2005).

Agricultural intensification and diversification are ultimately essential for an agrarian transition that also supports economic diversification, including appropriate forms of industrialisation. The technical upgrading of agriculture requires public support for investments into electricity, irrigation and marketing infrastructure, as well as social services in rural areas. This agenda should promote a balance between rural and urban areas, and the sustainability of agriculture and ecosystems in the context of climate change.

Building more progressive small-scale family farms for the future will only be possible when gender relations within family farms and society are equitable (*ibid.*). Since land has productive and reproductive functions for diverse urban or rural communities, access to and the control of agricultural resources, as well as all forms of public support, have to become equitable in gender and generational terms. This requires social protection systems that enable the sharing of reproductive services and cover more of this cost, while building the knowledge base and capabilities of women and young people to manage dynamic family farms.

The challenge is to secure the autonomy and capacity of the countries of SSA to undertake agrarian reforms and rural development strategies in support of family farms, in collaboration with popular social forces. This requires building the capacity of the bureaucracy and autonomous public institutions, while promoting cooperative producer structures to mobilise inputs and finance to upgrade their technological capacities and aggregate their outputs, while supporting the collective articulation of their vision of family farming in the future.

Regional cooperation through the African Union and its regional economic communities could accelerate the pace of agrarian transformation by promoting the better coordination of national and regional policies, and enabling increased intra-regional trade in agricultural input,

commodities and service markets. This requires substantial investment in research and information systems to strengthen regional cooperation activities, involving state and non-state actors, as well as upscaling regional advocacy for the more equitable regulation of global trade, aid and investment. Building a more coherent rural development strategy will require substantial public investment, which may have to come from non-traditional sources.

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NOTES

2. The term 'peasantry' is mainly used in sections of the scholarly literature. Its meaning is akin to the definition of family farms used in this paper.
3. Family farming in SSA is not an 'unconditional choice' (see van der Ploeg 2013), free from the logic of capital and States, which primarily serve capital.
4. The character of family farms in SSA cannot be equated to contemporary family farms in the developed world, given their location in a hierarchical world economic structure, based on unequal international power and trade relations (Moyo, Jha and Yeros 2013).
5. For instance: Sudan, Zambia, Ethiopia, Tanzania, DRC, Mozambique and others. Various countries in SSA had created LSCFs through land appropriation after independence when developmentalism flourished until 1980 (see Mkandawire 2012). These were gradually privatised to national and international capital.
6. About 4,500 (mainly white) farmers owned 45 per cent of the agricultural land, with average farm sizes of about 2,200 hectares by 1999, while over 1 million rural households held below 3 hectares of arable land each, mainly in agro-ecologically marginal areas, and 25 per cent of the rural population was landless (ibid.).
7. Zambia had nationalised about 500 LSCFs owned by white settlers, around 1975.
8. Approximately 2.6 million hectares of Malawi's land is considered to lie idle (see Zuka 2013), indicating substantial scope for the expansion of family farms.
9. By 2008, Botswana had about 1,000 LSCFs (compared to 500 in 1996) whose average landholdings were about 150 hectares, with a few being as large as 100,000 hectares (ibid.).
10. For instance, the contribution of small-scale family farms and medium-sized farmers to agricultural exports, food production and employment in Zimbabwe has increased and broadened recently (Moyo 2011).
11. South Africa, Zimbabwe and Malawi are relatively higher users of fertiliser (at 49kg/ha, 30kg/ha and 23kg/ha, respectively) than Tanzania, which uses 13kg/ha, and Zambia, which uses a little less, while the rest of the countries use 5kg/ha or much less (see Moyo 2010).
12. For instance, the Seychelles had 400 tractors/100 km² of arable land, while Swaziland and Botswana had 222 and 159 tractors, respectively, per km² around 2009. The next group of countries with a median tractorisation level includes Zimbabwe at 75, Angola at 31, Lesotho at 61, South Africa at 22, Namibia at 39 and Mauritius at 37 (World Bank 2008). Yet the DRC had only 4 tractors/km².
13. It ranges between 20 per cent and 31 per cent in Madagascar, Mauritius and Swaziland, and as low as 2 per cent to 4 per cent in Angola, Malawi, Zambia and Mozambique (World Bank 2008).
14. Zambia has an irrigation potential of 423,000 hectares, but less than 100,000 hectares are developed (Chinene 1996), while Botswana and Malawi have developed very little of their irrigable lands.
15. In Zimbabwe, 30 per cent of the irrigated area under sugar has been used by outgrowers since the land reform (Moyo 2010).
16. Generally, similar trends are found in Malawi and Mozambique (ibid.).
17. The value of food imports in SSA had grown relatively slowly between 1961 and 1999 but jumped steeply from 2000 onwards (Figure 7). Between 1960 and 1970, the value of food imports was low, but it increased fourfold between 1970 and 1980, only to stagnate between 1995 and 2000.
18. The steep incline in Southern Africa from 2000 largely represents the extreme regional weather events between 2001/2002 and 2006/2007, and the effects of Zimbabwe's economic crisis on family farms' cereal production. The steep increase in this region's food imports during the early 1990s is also associated with similar droughts (Moyo 2010).
19. The development of LSCFs at the expense of family farming in Southern Africa is an extreme example of uneven rural spatial development. Enclaves of extreme income and wealth inequality exist in various mineral- and oil-rich countries, where family farming is constrained by monetary imbalances and infrastructural gaps. It has been argued that urbanisation is becoming deconcentrated.



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