



Future
Agricultures

Future Scenarios for Agriculture in Malawi: Challenges and Dilemmas

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1. Introduction: poverty, agriculture and the need for agricultural growth

Malawi is one of the poorest countries in the world with per capita gross domestic product of \$190, 30 percent of under-five children being malnourished and the infant mortality rate of 229 per 1,000 live births and a life expectancy at birth of 42 years (World Bank, 2001). Data from a recent household survey shows that about 52.4 percent of the population lived below the poverty line, with 22.4 percent barely surviving in 2004 (NSO, 2005). There are gender differences in food insecurity with 62.9 percent of female-headed households and 54.6 percent of male-headed households reporting inadequate food consumption. An illustration of the depth and intractability of poverty is given by estimates in Table 1 of trends in the nutritional status of under five children. Comparison of the 1992 and 2000 DHSs, where the methods are comparable and standards of measurement are believed to be robust, suggests no improvement occurred over 1992 to 2000. Comparison of the two IHSs, for 1998 and 2004, does suggest a more encouraging trend, although the evidence should be regarded as provisional until methodological and measurement issues have been fully studied, as the 1998 IHS estimates on child stunting are out of line with the other four surveys.

Agriculture plays an overwhelmingly important role in the economy. In the 2004 Malawi Economic Growth Strategy it is stated to account for 39% of GDP, 85% of the labour force and 83% of foreign exchange earnings. It is possible that these estimates overstate the role of agriculture, for example by understating activity in the rural non-farm economy, and over-estimating some categories of agricultural production¹, but even if this is the case the country is very heavily agriculture dependent. An additional consideration is that manufacturing is only 11% of GDP, but, of this, a full 26% is agro-processing (an estimate which excludes textiles, which uses some domestic cotton production). In recent years agriculture's share in GDP has tended to rise, although this is less a consequence of dynamism in the sector, and more the result of dismal developments in manufacturing.

Food insecurity problems are exacerbated by the widely changeable food prices particularly since the liberalisation of agricultural produce marketing and the removal of price controls on maize. When surveyed in 2004, 45% of rural households indicated that their economic well-being had deteriorated over the year prior to the survey and revealed that they had been affected badly by the rise in food prices (NSO, 2005).

Figure 1 shows that since 1990s maize production at national level has been variable and

Table 1. Trend in the Nutritional Status of Under-Five Children, 1992–2004 (Percent)

Indicator	1992 (DHS)	1995 (MIS)	1998 (IHS)	2000 (DHS)	2004 (IHS)
Stunting	48.7	48.3	59.1	49.0	43.2
Wasting	5.4	7.0	9.3	5.5	4.6
Underweight	27.2	29.9	29.6	25.4	22.0

Notes: DHS = Demographic and Health Survey, MIS = Multiple Indicators Survey, IHS = Integrated Household Survey

Sources: NSO (2002), Chirwa and Zakeyo (2003) and NSO (2005)

nominal maize prices have increased substantially between 1992 and 2004. Agriculture more generally performed well in the first two decades of Independence, but subsequently its performance has been increasingly disappointing. During the 1970s, the agricultural sector grew at an average rate of 6.6 percent per annum, but growth rates were lower in the first decade of structural adjustment, the 1980s, averaging just 3 percent per annum. The average growth rate of the agricultural sector declined further to 2 percent per annum in the 1990-94 period, and then tipped over into a contraction of 2.2 percent per annum in the 2000-04 period.

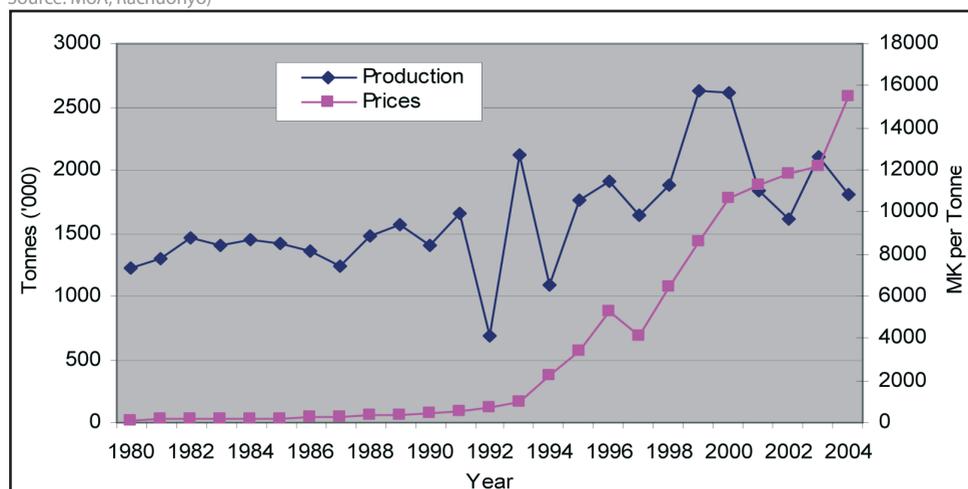
The main agricultural products grown by smallholder farmers are maize, tobacco, cassava, groundnuts, pulses, sorghum and millet, sweet potatoes and cotton, of which the main agricultural exports are tobacco, tea, sugar, cotton, rice and pulses. Tea, sugar, tobacco and coffee are traditional export products that are largely grown by corporations and large scale farmers. It has been estimated that food crops account

for about 70 percent of agricultural value added (World Bank, 2003). Over time, in food crops, estimates indicate that cassava and sweet potatoes are becoming important crops in the food production basket, but the extent to which has happened is controversial. In cash crops, there has been a reduction in groundnuts exports, the traditional exports of tobacco, tea and sugar continued their dominance while pulses have emerged as important non-traditional exports.

Internally, markets for agricultural produce and agricultural inputs are generally thin. The withdrawal of state-marketing in agricultural produce and inputs was expected to facilitate the entry of private operators but has been disappointing. Chirwa et al. (2005) find that of the two services that the former state-marketing agency provided, (a) produce purchases and sales and (b) input sales, input marketing has been the least attractive to the private sector. The efficiency of the private sector in the marketing of agricultural produce has been

Figure1. Maize Production and Prices (Nominal) in Malawi, 1980 - 2004

Source: MoA, Rachuonyo)



questioned (Fafchamps and Gabre-Madhin, 2001) and Chirwa et al. (2005) find that most of the private traders behave as local monopolists.

Malawi has few mineral resources that can be economically exploited and its key resource endowment is agricultural land and the abundant labour. In particular, land and labour are the critical assets held by rural households. A very effective route to pro-poor growth is to raise the returns to the assets of the rural poor: i.e. to labour which is rurally located and generally weak in formal education, and to land.

Apart from agriculture, the other critical segment of the economy is government. In recent years government spending has been almost twice its revenue², the balance being financed by aid grants and loans and domestic borrowing. Central government revenue has tended to run at about 16% of GDP, with expenditure roughly twice this, at about 32%. Thus "agriculture and government" together account for about 70% of GDP. But this summary probably understates the roles of "agriculture and aid" as the twin pillars of the economy as these are the main producers of tradable goods or, in the case of aid, of resources which allow purchase of tradables. Recent commentaries on the potential of the non-farm rural economy for livelihood diversification and economic growth (Ellis, 2000; Ellis and Ade Freeman 2004) need to be interpreted in the light of the overwhelming contribution of agriculture and government expenditure to aggregate demand. If, hypothetically, agriculture were to run into a severe crisis and/or government revenue were to be cut back strongly, then the small scale trading and service sectors in both rural and urban space would decline drastically.

Since Independence, with varying degrees of and differences in emphasis, development strategies have focused on

improving productivity of land and labour in the agricultural sector. There are a number of aspects to this challenge:

- (i) intensification (i.e. raising yields) of production of food staple (principally maize) which contributes directly to household nutrition and food security of rural households, and also keeps food prices relatively low and avoids the need for large scale food imports;
- (ii) smallholder production of cash crops cash incomes which provides incomes to farmers, to those they employ as labourers and to those who process and transport the crop³, as well as export earnings.

There is a positive interaction between objectives (i) and (ii) in that sustained intensification of the production of food staples should, over time, reduce the area planted to staples, as higher staple yields will allow more land to be planted to cash crops (tobacco, cotton, tea, sugar cane, pulses, paprika and chillies). Furthermore, rural households in annual net staple food deficit (the large majority at present) may begin to feel more confident specialising in cash crops and buying more staples from the market.

In recent years strands of "agro-pessimism" have permeated debates on Malawian development strategy⁴. Generally, there is a sense in some quarters that most smallholder agriculture is unviable, now or in the near future, due to ever smaller and fragmented land holding, declining soil fertility, inability of most households to access credit for inputs (and the inability of government and donors to reach a sustainable solution to failure of agricultural credit markets); low and volatile produce prices and an inability to keep up with the pace of international technological change in each crop. It is said that younger adults are more interested in non-farm activities, especially petty trading.

Thus, for some, policy should de-emphasise agriculture as a broad based engine for development and poverty reduction, and instead there should be support livelihood diversification away from agriculture. Some of the analysts who believe that agriculture cannot be relied on as the main means to poverty reduction nevertheless do tend to think that a more intensive commercially viable smallholder agriculture is possible, and highly desirable, but only after a process of concentration of holdings which would entail the majority of existing rural households ceasing to farm. But there is scepticism as to whether consolidation could occur at the pace which is felt to be needed and real concern that the economy will fail to grow if smallholder agriculture is prioritised.

There are strong strands of good sense in some of the agro-pessimist arguments. It is true that most cash crop prices are highly volatile around a long-term declining trend. Furthermore, since liberalisation, government has struggled unsuccessfully to find a policy framework for maize which would allow farmers to produce maize for the market with confidence. Liberalisation swept away a broad-based and largely successful (although subsidised) agricultural credit system, and has failed to find a sustainable alternative for any but a small elite of cash crop producing smallholders (mostly tobacco growers). The failure of broad-based agricultural credit markets to develop has held back input supply, which is dependent on a cash market financed mainly by migrants' remittances plus various phases of "supply push" from donors and government (e.g. the donor financed Starter Pack – Targeted Inputs Programme, followed by the recent government financed fertiliser subsidy programme).

Agro-pessimists are right to worry about soil fertility and ever smaller and more fragmented holdings. In Malawi a range of

sustainable agriculture technologies have been demonstrated which could restore soil fertility without requiring farmers to make annual outlays on fertiliser (http://www.icraf.org/national_programmes/malawi.html) but these are challenged by the very limited labour and land resources (i.e., high opportunity costs) which poorer smallholders have to undertake medium term investments. So far, despite promising early adoption of certain technologies, a "blockbuster sustainable agriculture technology" able to spread rapidly among poor farmers has been elusive.

Finally, at least in international academic and aid circles, there is an emerging chain of argument from recent and influential analyses of African political economy. African politics is characterised as neopatrimonial and clientist and therefore antagonistic to the sustenance of a "developmental state" (van de Walle, 2001; Fukuyama 2004; summary and critique in Lockwood 2005). In contrast to East Asia, which has strong developmental states, this paradigm argues that in Africa the state is weaker and has more need for the political support of clients. The centre (usually the President) is in a more precarious position than in the authoritarian-corporatist East Asian state, and needs to buy off individuals representing various factional, regional and ethnic constituencies. One critical contrast between the East Asian authoritarian-corporatist state and the most contemporary SSA states is that the results of corruption are different. In the authoritarian state there is a strong orientation to ensure that most resources get invested in the "national project". In contrast, in SSA, rulers are less interested in channelling resources into the necessary investment and economic coordination for national development. Even if they wished to do so, they would have less power to enforce their will. Instead, resources are siphoned off from the state by

what are generally a small group of individuals and spent largely on consumption. So, it is argued that African states are less able to produce the necessary investment in health and education; in intelligent state intervention to deal with market failures; and in private investment in productive capacity. It is conceded that within African government ministries there are islands of “Weberian rational bureaucracy”, but these are thought to be small and vulnerable to political predation and therefore unstable.

In essence, “state pessimism” begets “agro-pessimism” because the experience of smallholder development in Malawi suggests over 1965 to 1985 suggests that much can be achieved with state support and the intelligent supply of public goods. But Malawi’s post liberalisation experience suggests that most smallholder agriculture cannot make progress without some state intervention, due to market failures (tobacco, tea, cotton and coffee smallholders are important exceptions). This leads to paralysis: most smallholder agriculture (particularly that of poorer farmers) cannot develop without state support, yet proposals for state intervention are dismissed as politically naïve, because state failure is held to be deeply embedded.

However, there are a number of powerful arguments against an agro-pessimist policy, if not against all agro-pessimist perceptions. The first is that agriculture is too important to be abandoned As Table 2 shows, the 2004 country-wide Integrated Household Survey shows that of the seven most frequent shocks which households face, two are demographic, while the other five, including the first two, are to do with agriculture. In other words five of the seven most frequently experienced shocks for Malawian households are: (a) spikes in food prices; (b) crop failure; (c) large falls in crop sales prices; (d) loss of livestock; (e) crop diseases and pests. While

it is possible to think of ways of dealing with (a) which do not require support to agriculture, nevertheless, the overwhelming impression is that presently upwards and downwards ratchets in peoples’ livelihoods are mainly to do with events in agriculture. This is a very powerful argument for giving strong emphasis to the agricultural sector, particularly smallholder agriculture, through: (a) designing and putting in

Table 2. Frequency of shocks at household level

Type of shock	Yes	No
Large rise in price of food	77.0	23.0
Low crop yields due to drought or floods	62.7	37.3
Illness or accident of household member	45.7	54.3
Death of other family members	40.6	59.4
Large fall in sales price for crops	38.0	62.0
Livestock died or were stolen	33.3	66.7
Crop disease or crop pests	23.6	76.2
Household business failure	21.9	78.1
Theft	19.3	80.7
Birth in the household	11.0	89.0
Dwelling damaged or destroyed	10.2	89.8
Break-up of the household	10.1	90.0
Loss of salaried employment or non-payment of salary	8.9	91.1
Death of working member of household	8.7	91.3
End of regular assistance, aid, or remittance	7.2	92.8
Death of household head	4.6	95.3
Other	1.4	98.6
Total	23.8	76.2

Sources: IHS2 Module AB

place an appropriate policy and institutional framework for smallholder agriculture; (b) supplying appropriate agricultural public goods; (c) a land policy which allows Malawi to accommodate a range of agricultural crops and systems, from those which from necessity need relatively large farms, to those which realise the fundamental competitive advantage of smallholders, which is low cost labour, and occupation and control over 70% of the agricultural land.

It was noted above, and is discussed further below, that smallholder tobacco farmers have been major beneficiaries from liberalisation. Later in the paper it is reported that reforms in the smallholder cotton sector have been slow by the standards of other countries in the region, but also that the experience of Zambia, Zimbabwe and Tanzania suggests that there may be viable future for an expanded sector as a producer of internationally competitive high quality cotton, even with the current very low prices. Although smallholders play relatively minor roles in tea and sugar in Malawi, prospects for both industries are looking.

A further counter to agro-pessimism is to ask what the alternative is, at this stage? Industry, mining and public sector employment face arguably less attractive prospects. With peace in Mozambique, some can settle across borders, although this would be to continue farm, albeit with larger holdings. Opportunities for longer distance labour migration are increasingly limited, with the collapse of the Zimbabwean economy and a very crowded market for unskilled labour in South Africa. Indeed, the crisis in commercial agriculture in Zimbabwe has disproportionately affected Malawian migrants.

While the arguments for state pessimism carry force, tentative initial impressions of Malawi's 2005/6 season fertiliser subsidy policies

perhaps lead us to be less pessimistic about the politics and the state? It appears that, in the face of considerable donor scepticism, the state has spent about \$34 million of (www.irinnews.org, report of 12 July 2005) its own very limited free resources to import fertiliser and distribute vouchers which would reduce the price of a 50kg bag of fertiliser by from \$24 to between \$8 to \$11. Combining this with the good luck of adequate rains in most but not all of Malawi, it presently appears that the maize 2006 harvest will be well above average. Although there is room for debate as to whether this is the optimal instrument for supporting smallholder farmers, from efficiency and/or distributional points of view, generally the story does not conform to the neopatrimonialist-clientist paradigm. The policy has its origin in a general election campaign in which all leading candidates promised support for smallholder agriculture. Then the policy was carried out, with tolerable effectiveness, by the state bureaucracy, under the instructions of the political leadership, not despite the leadership.

2. Large scale commercial agriculture

The estate sector is strongly focussed on export crops (tobacco, sugar, tea and, at a smaller scale, coffee and macademia). The estates plant very little maize, and, where they do, this is mainly for feeding their own workforce. Their lack of interest in maize is partly to do with the costs of securing the crop, which is easily accessible to neighbouring poor smallholders, but also because of volatile and generally unattractive output prices. (However, smallholders face the same market conditions and policy makers expect some of them to have produce surpluses for the sale!).

Prior to Independence, the estate sector was relatively small and entirely European

dominated. It expanded rapidly in the 1970s as Life President Kamuzu Banda took advantage of international sanctions on the UDI regime of then colonial Zimbabwe (Southern Rhodesia), to replace its position in the Virginia market and also to encourage international tobacco buyers to support the development of burley tobacco. New estates were opened on uncultivated or lightly cultivated customary land (i.e., land reserved for smallholders). These new estates were owned by Malawians and generally were capitalised by bank loans with little or no equity. Most of the new estate owners had strong political connections but little knowledge of business or commercial agriculture, although there are some exceptions in a small group of Malawian entrepreneurs whose capital came from expanding their farming rather than politics.

Zimbabwe had been specialised in flue-cured Virginia tobacco, a crop with substantial energy requirements in curing (which in the Malawian expansion phase was all too often supplied from felling the indigenous woodland on which estate leases were granted) and a need for experienced centralised management. Management was expatriate, often young European Zimbabweans who did not wish to fight in Ian Smith's army. With high initial capital costs, owners who were seeking to take an income from the business far too early, and poor alignment of incentives between owners and managers, the new flue cured sector succeeded in producing a large volume of tobacco, but also in losing a lot of money. Within a few years of their establishment control of most of the new estates slipped from their owners to the banks (Kydd 1985) although this was not the fate of Kamuzu Banda's own estates, which had both higher quality management and even easier access to development capital.

The story of burley tobacco expansion is different in important ways because the curing process does not require energy and is performed

in simple open-sided barns which are easily constructed by smallholders. There is less need for centralised management, although burley benefits from tight and knowledgeable control of grading. In the late colonial period burley production had begun on estates, using a form of sharecropping known as the "visiting tenant system" (McCracken date) which expanded rapidly post Independence under African control. Under "visiting tenancy", landlords helped tenants with extension advice, and by supplying on credit inputs, food loans and supervision of grading, but had monopsony powers over the produce. There was some nominal regulation of the system, but in practice many burley estates had more or less complete control over the terms of trade with tenants, paid tenants as little as they could get away with, and often realised large financial surpluses. The underpinnings of this system were the Special Crops Act, plus quotas, which prohibited smallholders from cultivating burley on their own land.

The Special Crops Act was repealed in the early 1990s and, after some years of experimentation with the institutional arrangements in the smallholder sector, competitive advantage for burley moved decisively to the smallholder sector. This liberalisation measure resulted in a substantial redistribution of income from estate owners to an elite for about 5 – 10% of the smallholder population. Furthermore, burley is a labour-intensive crop, so the wider geographical dispersion of its cultivation has probably been beneficial to rural labour markets. In summary, the liberalisation of burley tobacco has been a progressive step in terms of spreading the income generated by the tobacco industry.

Tea and sugar remain largely estate crops, with smallholder outgrowers making modest contributions to the overall volume of production. At the time of writing, prospects for both industries look brighter than for many years. Malawi's tea industry is the second largest in

Africa, but lives in the shade of its Kenyan competitor with a much lower market profile, lower investment rates and lower average quality and prices. However, in recent years investment has picked up, with replanting with high quality clonal varieties developed by Malawi's Tea Research Foundation, and there is a sense of guarded optimism. Furthermore, if policy and institutional constraints can be overcome, there is substantial scope for expanding smallholder production, through higher yields and new planting. Sugar is dominated by Illovo, which manages and part-owns two large irrigated operations, on the Lakeshore and in the Lower Shire Valley. Illovo is Africa's largest sugar producer with substantial operations in five other countries in the region. Illovo's strategy in Malawi and neighbouring countries has been to position itself as a low cost producer of less developed country sugar. Under an EU sugar subsidies reform agreed in 2005 less developed countries will have unlimited access to the EU market from 2009. The strategic value of Illovo assets is illustrated by the fact that, at the time of writing this draft, it was the subject to a take-over competition between a British and a French firm, both of these wanting control of Illovo to secure low cost raw material supply in the new EU sugar regime. This suggests that Illovo will have appetite and capital resources to invest in expansion of Malawi's sugar industry.

3. Agricultural policy: an historical overview

Since Independence in 1964, the agricultural sector has experienced a series of policy changes, and one major discontinuity in the institutional setup as a consequence of the liberalisation process which began in the mid-1980s. Up to the advent of liberalisation, there was strong emphasis on self-sufficiency in food production at household and national level. Life President Kamuzu Banda, who was Minister of Agriculture throughout his presidency, regarded national

food self sufficiency as a matter of political prestige. Kamuzu Banda's food policies had complex anti-poor and pro-poor elements. The anti-poor aspect was that food prices were often above import parity, so it would have been possible in some years to supply cheaper food to the majority of rural households who were in net deficit during this time. This is an important consideration because of the evidence of very poor nutritional status of a large majority of households (Table 1). The pro-poor aspects are that from the later 1960s an "integrated rural development" (IRD) model was pursued, as a series of large aid-financed projects. Under IRD, rural road infrastructure was much extended and a range of what had been crop-specific marketing boards were combined to form ADMARC. ADMARC had a monopsony over most smallholder produce. Furthermore, because it was tied in with the smallholder credit system, which was initially part of the IRD administration, it had an effective monopoly over the key inputs of seed and fertiliser. Although ADMARC did, in net terms, tend to tax the smallholder sector (and transfer the resources realised to invest in estates and other companies controlled by Kamuzu Banda) within this picture of overall taxation of smallholders it tended to moderately cross-subsidise the smallholder maize system (Kydd, 1985).

Over time, ADMARC's taxation of smallholder marketed produce was eclipsed by the costs of running the IRDs and the implicit subsidies which developed for smallholder credit, fertiliser and "transactions facilitation". In 1976, the IRDs became integrated into a nation-wide National Rural Development Programme (NRDP). The NRDP was subdivided into eight Agricultural Development Divisions (ADDs), which were partly project management authorities which had under them a new generation of small aid-financed IRDs. Under the IRDs there was valuable fixed capital formation, not only in roads but also in high grade secure market and storage

facilities, managed by ADMARC, which today generally remain serviceable and in fair condition. But in addition to capital expenditure, the original IRDPs and the post-1976 smaller ADD-managed projects shared the characteristic of undertaking of substantial expenditures of a recurrent type (e.g. salaries for extension and credit staff, the management of credit relationships through an administrative rather than banking system) sustained by aid finance. There even were cases where IRDPs had 20 years of aid support for a stream of mixed capital and recurrent expenditures.

When aid-support for the IRDPs began to dry up, as happened from the mid-1980s onwards, it became clear that there had been growing implicit subsidies to smallholder fertiliser, credit and the “transactions facilitation” tasks which extension staff had undertaken in forming credit groups and liaising between these groups and ADMARC for input supply and output marketing. The implicit aid-financed subsidies therefore had to transfer to the domestically financed government budget, thereby becoming transparent and triggering IMF and World Bank advice to cut these sharply. This led to a government commitment to phase out fertiliser subsidies (with a substantial aid cushion through a fertiliser revolving fund). Smallholder agricultural credit was placed on a commercial basis by transferring it to newly created bank, Malawi Rural Finance Company (MRFC). Although MRFC was capitalised with soft loans, its lending has been at commercial rates, and it has managed to survive through a strategy of concentrating of a relatively small elite, mainly of smallholder tobacco growers. So presently upwards of 90% of smallholders cannot get agricultural credit, whereas in the heyday of the IRDPs somewhat over 30% of smallholders were able to access credit, for a range of crops including maize.

The challenges of Malawian smallholder policy since the advent of liberalisation have been much more fundamental than simply

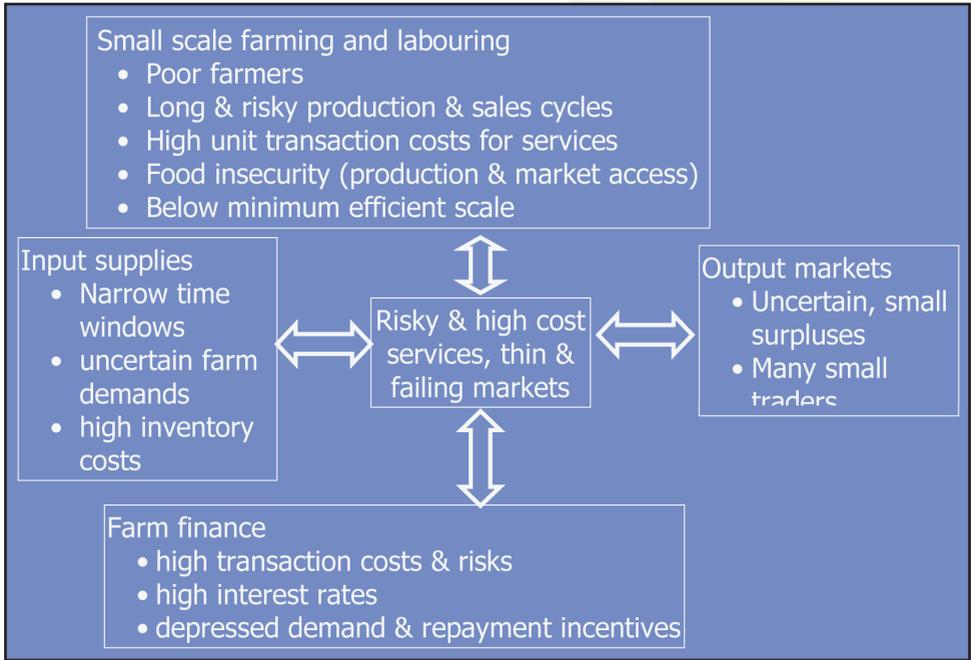
managing with much lower levels of credit and input subsidy, less recurrent funding to government research and extension. As noted above, there has been a major institutional discontinuity. The institutional arrangements for the smallholder sector prior to liberalisation had their roots in the late colonial period. What evolved in the course of the 1970s was a structure in which ADMARC, working with IRDPs, and benefiting from aid-financed subsidies to credit and fertiliser, to a substantial extent overcame market failures, notable in the credit market, while reducing risks for the minority of smallholder households who grew maize for the market as well as for subsistence.

4. Fundamental challenges of smallholder development

Those who advocated and drove liberalisation had a long, and entirely appropriate, list of sceptical queries about the policies and institutions of the early 1980s, including:

- Were the subsidy costs, built up non-transparently under IRDP projects, sustainable?
- Or, if not sustainable, were they capable of being reduced while maintaining the main features of the existing system?
- How could corruption in ADMARC be dealt with in the context of Kamuzu Banda’s highly personalised rule?
- Was not the monopoly of ADMARC in smallholder input supply a formula for inefficiency?
- Surely the agricultural credit organisation was being run as an administrative operation under the control of agriculturalists, not as a nascent “bank for the poor”?
- ADMARC’s monopsonistic position in smallholder produce markets surely allowed for exploitation of farmers, through low prices and corrupt buying officials?
- ADMARC’s “clunky” behaviour in supplying inputs to farmer groups and in buying produce meant that extension staff were

Figure 2. Agricultural & market development poverty trap



diverted from their core work of technology support, to “transactions assistance” - running between ADMARC and farmers - often in crisis management mode.

- More generally, monopoly state organisations in Africa tend to be grossly overstaffed and politicised, and why should ADMARC be an exception?
- Surely ADMARC was crowding out private investors, which could devise and roll-out more efficient business models for providing services (for credit, inputs supply and produce purchasing) to smallholders?
- In particular, in a country which was highly capital constrained, was not foreign capital being kept away by ADMARC, capital which might be much more effective than ADMARC in developing smallholder cash crop sectors?

Undoubtedly these questions had to be on the table, but what the analysis at the time that liberalisation was introduced failed grasp was the essence of the smallholder development challenge in Malawi and in similar rural areas in the region, illustrated in the “Agricultural and Market Development Poverty Trap” in Figure 2. The core problem/outcome is “risky and high cost services to farmers, and thin or failing markets”. This is a consequence of a number of interactive difficulties:

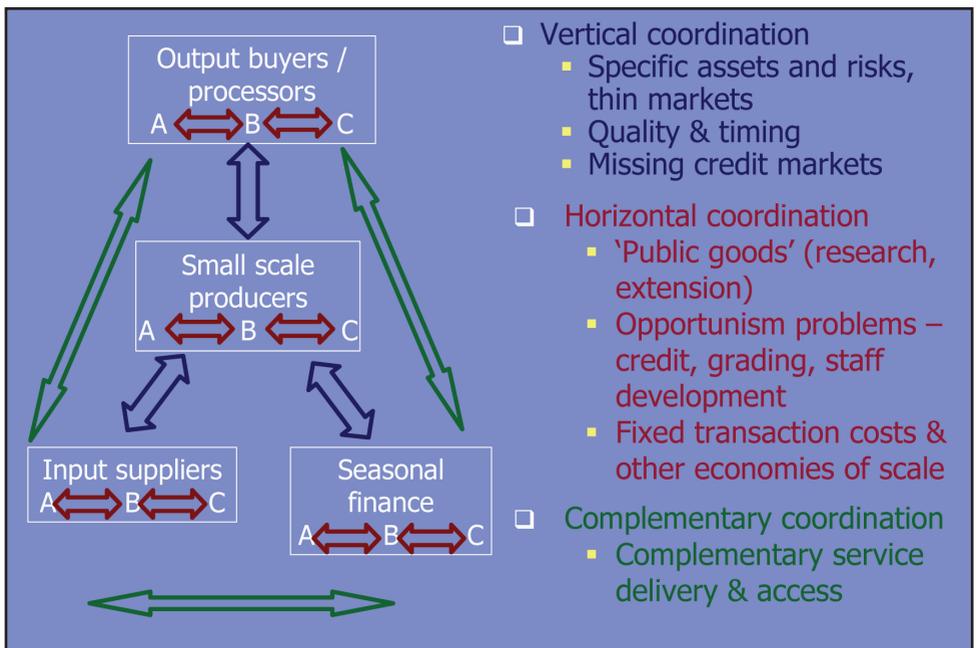
- Farmers are poor and face long (mainly annual) production and sales cycles. They face climatic and price risks as well as possible shocks from illness. The large majority of smallholders are normally in net food deficit. Thus, they have to obtain food from the market through cash crop sales and/or off-farm activities such as ganyu

(short agricultural piece work contracts), petty trade and activities such as beer-brewing. These strategies for satisfying household food needs can compromise production on households' own land: for example they may have to weed others' land for immediate wages rather than their own plots.

- Farm households away from major roads often experience a low density of commercial activity (thin markets) and may have to travel a considerable way to buy inputs and sell outputs, which is particularly difficult for women, who comprise the majority of the farm population. Thus, given the small scale on which households might be able to produce marketable products (e.g. vegetables and fruits in addition to maize and cash crops), unit costs of market access are very high, depressing returns to labour.

- Output markets are characterised by small traders with very limited liquidity. (There are exceptions, for example within the rural environs of urban Lilongwe traders harvest cassava on farmers' land, make payment and transport it by bicycle to the city, providing fairly "thick" markets despite limited liquidity).
- In input supply, which is mainly a matter of fertiliser, suppliers face narrow time windows for supply (fertiliser delivered late or overstocked has to be stored for another 12 months or so in humid conditions); and uncertain demand, as it is not clear how much farmers will be able to afford. Unpredictable government and donor interventions further complicate the estimation of the "cash market" for fertiliser. A private supplier will tend to err on the safe side by a cautious ordering and stocking policy.

Figure 3. What coordination is needed and when?



- **Vertical coordination**
 - Specific assets and risks, thin markets
 - Quality & timing
 - Missing credit markets
- **Horizontal coordination**
 - 'Public goods' (research, extension)
 - Opportunism problems – credit, grading, staff development
 - Fixed transaction costs & other economies of scale
- **Complementary coordination**
 - Complementary service delivery & access

- As noted, farm finance in Malawi “normally” comes from MRFC (for elite tobacco smallholders and a few others), migrants’ remittances and small surpluses gleaned from non-farm businesses. For the great majority of farmers there is no possibility of borrowing to finance the costs of inputs and labour. This much depresses the demand for inputs and agricultural yields.

Wider experience of economic development suggests that the Agricultural and Market Development Poverty Trap fades as an issue as the rural economy becomes more diversified and the density of commercial activity increases. But the key problem for most of rural Malawi is how to get to this point of diversified and denser commercial activity. The core of the problem is that investment is held back by the interaction of market failure, particularly for credit, and by the risks created by thin markets. The concept of asset specificity provides a key insight, which is that an asset’s value is related to its specific use (e.g. in processing cotton) and the likelihood of there being predictable demand for its use. Thus the value of an installed cotton gin is a function of the local supply of raw cotton, and onward demand for the processed product. Where markets upstream or downstream from an asset are thin and unpredictable, perceptions of investment risks rise very sharply, often to the point that there is little or no investment.

Asset specificity can be reduced by coordination, i.e., actions which provide some assurance to investors in specific assets, or, put another way, have the effect of reducing asset specificity. In principle, this can be done by: (a) large private investors; (b) the introduction of new markets such as insurance markets; (c) government intervention; or a mix of all three. The institutions and policies which underpinned the Green Revolution in South Asia, and aspects of the IRDP-ADMARC framework in Malawi prior to liberalisation, can be characterised as coordinating interventions.

Research on coordination and industrial policy in developed countries (Hall and Soskice date) show that successful coordination tends to involve a sensitive blend of private, local government and central government activity. In smallholder development in Malawi, a schematic illustration of the coordination activities required is shown in Fig 3. Three categories of coordination are identified:

- Vertical coordination along the supply chain, which is needed to reduce the risks of asset specificity. As has already been discussed, missing credit markets are a critical challenge, because upstream and downstream their absence inhibits investment in areas such as input supply and in produce buying storage and processing.
- Horizontal coordination, i.e., that affecting units in the same category (e.g. smallholder farmers, input merchants and providers of finance). There are a number of motives for engaging in horizontal coordination. One example is where suppliers have advanced inputs to farmers under interlocked contracts, under which farmers have to sell produce to the supplier at a price which allows the supplier to make a profit. These contracts can fail if farmers defect and instead sell their produce to an independent party (known in Malawi as “side selling”). In most countries of the region, the smallholder cotton industry is based on interlocked contracts (Poulton et al, date) and horizontal coordination between cotton service companies is required to make the system work. Another example is the activities of farmer organisations, which may combine to achieve economies of scale in transport, or perhaps to monitor grading activity by private buyers (NASFAM in Malawi does both of these). Finally, the classic agricultural public goods (research, extension, irrigation infrastructure) are a form of horizontal coordination.

- Complementary coordination arises where there are economies of scope for particular organisations, public or private, to provide a number of different services to farmers. For example, in the example just given of interlocking, it may sometimes be efficient to integrate the supply of inputs and finance and the purchase of output. This is a very common pattern in service provision to smallholder cash crop farmers, although less so for food crops, because food may be consumed by the household rather than marketed. This point yields an insight into the particular challenges of servicing smallholder food producers. They are less amenable to complementary service delivery, although this can sometimes be achieved through organisations which encompass cash and food crops. (This was one of the strong rationales for creating ADMARC out of a number of crop specific boards: understood at the time by practical agricultural service people, but not by economists!).

To conclude this review of the fundamental challenges of smallholder development, it can be seen how the IRDP-ADMARC model provided some solutions to the fundamental problems which have not been yet provided under liberalised markets (again with exceptions for tobacco and some other cash crops). But the IRDP-ADMARC as it existed in the mid-1980s was itself defective in many ways and probably financially unsustainable. If broad-based smallholder development is to occur in Malawi, it will require new policies and institutions which respond with intelligence and insight to the fundamental challenges and learn from the historical experience of the pre and post liberalisation periods.

5. Agriculture and social protection in the Malawian setting

A parallel paper to this examines agriculture and social protection from a general system perspective. In Malawi, there have been a number of aspects to social protection and agriculture:

- (i) Where people suffer chronic or transitory severe poverty, then a common policy response is to transfer resources to them, motivated purely or mainly by a concern to relieve immediate poverty. Direct food handouts; mother and child feeding programmes; and food vouchers are aspects of this. This was one of the range of motivations for Starter Pack and more especially for its successor the Targeted Inputs Programme. Polemically the argument was made: “people will need food handouts which will be expensive to import. Is it not more efficient and respectful of human dignity to import and distribute fertiliser and high yielding seeds, so that they can grow the food?”
- (ii) Modern social protection measures are more ambitious: they seek to provide safety nets which catch people in circumstances in which their asset base might ratchet downwards, preserving the household asset base by forms of social or private insurance. In principle this is a more desirable way to deal with shocks and, it has the ambition to reduce the sense of risk in the economic and social environment of poor people, thereby encouraging investment. In this sense, the presence of credible social protection measures, even if they do not have to be deployed every year, can allow people to try more risky but potentially higher return activities. There are clear conceptual connections to the agriculture and poverty trap arguments summarised in Fig 2.

Another common theme in modern rural social protection literature is a search for private arrangements, or at least arrangements independent of the state (Hazell date), rather than social insurance (which implicitly will have a state dimension). At the root of this is probably a sense of the “state pessimism” discussed above. However, it is likely that for poor rural people individual insurance contracts will only be viable, if they are viable at all, in the context of encompassing complementary coordinated arrangements of the type illustrated by Fig 3. This is because encompassing rural service organisations economise on information costs: i.e., organisations which supply inputs and finance and buy produce from the same rural households will be in a better position to know how and why their crops failed. Maybe these organisations can retail insurance provided wholesale by a third party, perhaps blended into an existing product such as seasonal loans? There are obviously major incentive issues to be worked through. But the central point is that large encompassing (or “complementary coordination”) organisations are likely to have significant entanglement with the state, in terms of subsidy and support, even if they are not formally state organisations. (For example, the NASFAM, the National Smallholder Farmers’ Association of Malawi, which might be a candidate for an encompassing organisation has operated with substantial donor support).

To turn back to the search for modern mechanisms for social protection to recent experience in Malawian agriculture, recent interactions between agriculture and social protection have included:

- (i) as mentioned above, Starter Pack / Targeted Inputs Programme (this also attracted a number of other justifications, including technology extension, and input supply development)
- (ii) Food vouchers in the current (early 2006) difficult food security situation. Agricultural

issues here include how the maize is procured and stored, and whether the timing of interventions can be optimised to maximise its helpfulness (e.g. by reducing the need to seek ganyu work).

- (iii) Possible productivity enhancing safety nets (PESTs). “Fertiliser for work programmes” have been tried and appear appropriate in certain situations. More generally, in the case of “food for work” there are the familiar challenges of setting an appropriate wage rate, and ensuring that socially useful work is done.
- (iv) The framework for maize intervention could have the characteristics of social insurance, if the government could credibly cap food prices in a season of shortages by sales from publicly financed storage. This is an important issue addressed in a forthcoming article in Food Policy by Poulton, Kydd, Dorward and Wiggins.

To conclude, it is worth reminding ourselves that, in common with most other countries in Southern Africa, that prior to the mid 1960s the great majority of the smallholder area of Malawi was a “labour reserve”. In a Southern African economic system based on labour migration, customary land was a critical safety net, able to absorb workers when unemployment rose, or at the end of their time as workers in mines, urban areas and commercial farms. Thus the institutions of customary land areas were guided and controlled by colonial authorities to maximise the safety net function. This included maintenance of usufruct forms of land tenure and encouragement to chiefs and headmen to conserve traditional values of community solidarity in sharing food and labour. When colonial authorities intervened in the local agricultural economy, it was often to, as they saw it, buttress food security. For example in the early 1950s, following the devastating 1949 Famine, chiefs were instructed to require people to plant

cassava gardens as an insurance against failure of the maize crop.

An important issue here, dealt with in more detail in the parallel paper on agriculture and social protection, is that many observers of and stakeholders in Malawian agriculture favour a rapid evolution of the institutions of customary land, in the direction of private land tenure and (implicitly) less reciprocity within extended families. If this is to happen in the future, the consequent acceleration in landlessness and the decline in local social solidarity is likely to stimulate a demand for substantial rethink of social protection with, surely, an expanded role for the state?

6. Recent development strategies and government priorities

Recently, Government has been preoccupied with the formulation and production of development strategies. Chirwa (2006a) notes that since 1994 Malawi has developed at least five policy documents in which agricultural development is critical in moving the country out of poverty. These policy documents include the Framework for Poverty Alleviation Programme (1995 -), the Malawi Vision 2020 (1998 -), the Malawi Poverty Reduction Strategy (2002 - 2005), the Malawi Economic Growth Strategy (2004 -) and the Malawi Growth and Development Strategy (2005 -). Compared to early development policies of the 1960s and 1970s which lived their planning horizon, recent policy documents have not lived their planning horizon and all the policy documents have overlapped. This has created policy uncertainties and it has therefore been difficult to achieve policy coherence.

The Malawi Poverty Reduction Strategy (MPRS) also emphasizes the role of agriculture in poverty reduction. Jenkins and Tsoka (2003) note that prior to MPRS the poverty plans that were formulated in the 1990s were based on strategies and policies that were without

prioritisation, costing and outcome-orientation. According to GOM (2002b), the MPRS has four core broad elements known as pillars, believed to be central to sustainable poverty reduction. Sustainable pro-poor growth is the core strategic pillar in the MPRS. There are two main goals in sustainable pro-poor growth: promoting sources of growth (sectoral) and creation of an enabling environment. With respect to sources of growth, six sectors have been identified as potential sources of pro-poor growth comprising agriculture; natural resources; micro, small and medium enterprises; manufacturing and agro-processing; tourism and small-scale mining. Addressing the credit constraint experienced by poor or smallholder farmers is given the greatest attention among strategies in agriculture, followed by extension services and access to markets. The problem of land is ranked seventh among the nine issues that are required for pro-poor growth from the agricultural sector, yet adequate land may be a necessary condition for achieving other objectives in agriculture in the MPRS. Moreover, addressing land shortages is one of the strategies that are new among the nine strategies.⁵ The MPRS strategy on the question of land points to two policy issues: guaranteeing the security of customary land and facilitating the redistribution of land to 3,500 households on a voluntary basis.

However, the translation of strategies and policies has been less satisfactory. The government's own annual review of the implementation of the MPRS reveals the lack of commitment to implementation of strategies. For instance, GOM (2003) notes that the resource allocation in the MPRS are more comprehensive than in the budget and that the 0.1 percent growth due to the implementation of the strategy has not come from sectors that are pro-poor. In addition, the allocation of resources to pro-poor activities in the budget does not reflect the priorities articulated in the MPRS. For instance, improving agricultural production through research and

extension services is ranked second in the MPRS while small scale irrigation scheme is ranked fourth, yet in the 2002/03 budget these activities got 36 percent and 170 percent of their MPRSP allocations, respectively (GOM, 2003).

Prior to the end of the planning horizon for the MPRS, the government started formulating another strategy, the Malawi Economic Growth Strategy (MEGS) on the basis that the MPRS focus on smallholders and small scale enterprises which many stakeholders regarded as incapable of generating the target growth rate of 6 percent per annum (GOM, 2004; Tsoka, 2006). The basis assumption in MEGS is that the country needs to focus on growth of the economy and poverty reduction being an outcome of economic growth. The agricultural development strategies in MEGS focus on identified agricultural sectors with the highest potential to generate growth. The emphasis is on outward-looking and export-oriented agricultural strategies for large-scale and smallholder farmers, through increasing productivity and commercialisation among smallholder farmers (GOM, 2004). Four agricultural crops were identified as growth sectors including tobacco, cotton, tea and sugarcane. Of these, only tobacco and cotton are the crops in which a large proportion of smallholder farmers are involved in production. Otherwise, tea and sugarcane are dominated by large-scale commercial estates which are vertically integrated with processing facilities. Other export potential crops include cassava, pigeon peas, groundnuts, beans and rice.

Following changes in the Government in 2004, there was uncertainty as to which policy document is to guide development in Malawi. The new Government changed its focus to growth-led development and placed more emphasis on the MEGS relative the MPRS. This uncertainty led to the debate on the need to integrate the two policy documents. This process of integrating the MPRS and MEGS began in

2005 and will lead to the production of the Malawi Economic Growth and Development Strategy (MEGDS). In any case, the major challenge in development strategies remains the capacity and political will to translate strategies into policy actions. Malawi is known to produce good policy documents, but implementation is a serious problem.

Food security remains central to the policy agenda in Malawi, given the recurring food insecurity problems. While this does not appear explicitly in the MPRS and MEGS, recent policy actions on agriculture have sought to increase food production, particularly maize production. Since the late 1990s, the government with the support of bilateral donors introduced a series of safety net programmes for resource poor smallholder farmers to increase food production. These agricultural based safety net programmes include the Starter Pack programme which provided free inputs to resource poor farmers from 1998/99 – 1999/2000 (Levy, 2005); the Agricultural Productivity Improvement Programme (APIP) funded by the European Union which provides inputs on credit to resource poor farmers in 1998; and the successor to Starter Pack, the Targeted Inputs Programme funded by the Department for International Development which provided free inputs to resource poor farmers including cereals seeds, legumes seeds and fertilizer. In the 2001/02 season, the number of beneficiaries of APIP was reduced to 41,800 from 160,000 in 2000/01 season due to the high default rate among smallholder farmers (NEC, 2002). In the 2005/06 agricultural season the government re-introduced a fertilizer subsidy through the voucher system, in which smallholder farmers with vouchers had a 70 percent subsidy on fertilizer market prices at designated markets.

7. Challenges and Dilemmas

Land: Sizes, Fragmentation, Distribution and Tenure

Land in Malawi is a critical resource for most rural households, but its distribution is not equitable. In 1997/98 it was estimated that one third of smallholder households was cultivating between 0.5 and 1 hectare of land (GOM, 2001). Recent estimates indicate that 55 percent of smallholder farmers have less than 1 hectare of cultivatable land (GOM, 2002c). Others such as Alwang and Siegel (1999) estimate that 70 percent of Malawian smallholder farmers cultivate 1.0 hectare with the median area cultivated being 0.6 hectares, and devote 70 percent of the land to maize, the main staple food.⁶ According to World Bank (2003) about 1.8 to 2.0 million smallholder farmers cultivate on average 1 hectare of land compared with 30,000 estates cultivating 1.1 million hectares with an average landholding of between 10 to 500 hectares. Access to land is also linked to poverty in Malawi. For example, in 1998 the average per capita cultivated land area was 0.22 hectares, with the ultra-poor holding 0.16 hectare per capita and the non-poor holding 0.28 hectares per capita (NSO, 2002). According to NSO (2002) the mean production of maize (main staple crop) per capita was 48.5 kilograms for the ultra-poor, 63.3 kilograms for the poor and 115.8 kilograms for the non-poor. Chirwa (2006b) also find that land size is a binding constraint to commercialisation of maize among smallholder farmers in rural Malawi. Most of the land under smallholder cultivation is under customary land tenure, whose security is informal in which rights on disposal are restricted, but over time this customary land has become smaller and fragmented through family sub-divisions.

The policy challenge is how to bring the issue of land reform as an integral part of a meaningful agricultural growth strategy. There is evidence in Malawi that adoption of agricultural productivity-enhancing technologies is positively

associated with the size of cultivatable land (Green and Ng'ong'ola, 1993; Zeller et al., 1998; Chirwa, 2005). Limited efforts have been made to redistribute the land to the landless. The only resettlement schemes that existed were involuntary in which most of the settlers were graduates from Malawi Young Pioneers training course and in some cases this led to the displacement of local population without compensation and in some cases land holdings were even smaller. These schemes were small-scale irrigated operations and have not been sustainable.⁷

The challenge in land matters is to work out how to allow an evolution which permit, over time, the conversion of customary land to market-based tenure system.⁸ The authority over the division of customary land is vested in the traditional leaders and land in the rural areas is the remaining power base for traditional leaders. Recent studies find that the frontiers of land available for allocation from the traditional chiefs have declined and presently most land is inherited from parents (Bosworth, 1998; Chirwa et al., 2003). The complexity of the issue is indicated by the fact that in the 1970s the World Bank financed a large scale consolidation and titling programme in Lilongwe District, with, as yet, few obvious results. Central government will have to balance a growing feeling among many Malawians that market-based tenure is essential, with concerns about accelerating the growth of a rural landless class, and the possible implications for rural-urban migration. Also, as the HIV pandemic ranges, there is concern about the preservation of the land rights of orphans, which perhaps may be stronger under traditional tenure.

Food Security: Food and Cash Crops Promotion

Malawi faces the challenge of achieving self-sufficiency in food production and in ensuring that there is an adequate national food balance. In the 1960s and 1970s, with active state support

Malawi was mostly food secure. However, the period of structural adjustments has been characterized by severe food insecurity, particularly in drought years. Harrigan (2005) notes that there are two options for addressing the food insecurity problem in Malawi, self-sufficiency in food production or reliance on food imports. The challenge in achieving self-sufficiency in food production hinges on raising the productivity among smallholder farmers. Barahona and Cromwell (2005) assert that the intensity of maize cultivation in Malawi is low, and this has negative consequences on food security and livelihoods. Others argue that in order to increase productivity to achieve national food security complementary and other policies are required. These complementary policies include appropriate technology transfers, free inputs, extension services, infrastructure development, credit schemes and market development, subsidized inputs and attractive prices for agricultural output (Harrigan, 2005). The second option is to increasingly rely on imports of food commercially or through food aid. However, as Harrigan (2005) notes, commercial food imports require massive foreign exchange earnings which can be achieved by promoting export-oriented cash crops or through export-oriented industrialization. This option needs to be supported with efficient product markets and cash incomes to purchase imported food.

The other issue is the question about the change in the food basket in Malawi. Maize is the main staple food and national food security has traditionally been defined in terms of adequacy of maize production. For most Malawians maize is life (Smale, 1995) and maize meal forms the typical diet among rural households (Chirwa and Zakeyo, 2003). The policy dilemma is therefore the balance between promotion of food crops and cash crops and the challenge of diversifying away from maize as the main food.

Irrigation

Malawi agriculture is based on rain-fed cultivation. Very little irrigation farming takes place in Malawi, and in most cases such irrigation farming is done by large scale farmers and smallholder farmers on government or non-governmental organisations schemes. Only 7,404 hectares of land in total (of 9.4 million hectares of total land) was under irrigation between 1960 and 1990 (GOM, 2001). Although, the potential for irrigation farming along the lakeshore and the Shire River basin is high, the country has not fully utilized its water resources for irrigation agriculture. More recently, there has been a drive to promote irrigation by treadle pumps, motorized pumps and river diversion irrigation. There are questions about the efficiency of large and small scale irrigation: large scale schemes absorb subsidy for the benefits of small numbers of farmers while, on the other hand, treadle pumps are questioned as an appropriate technology for smallholders as the man-power demands to operate such pumps are enormous.

Infrastructure Services

Infrastructure and infrastructure services are critical in facilitating agricultural development through reduction in transaction costs. The role of infrastructure has also been asserted in rural livelihood systems. Ellis (2000) notes that roads have multiple effects of reducing the spatial cost of transaction costs in resources and outputs; facilitate the movement of farmers between places offering different income-earning opportunities; create markets; and serve as an important vehicle for the transfer of information in the absence of telecommunication facilities. Investments in rural infrastructure and rural services are often not under control of rural households, and are typically provided by the government as public goods. Nonetheless, the quantity and quality of social and economic infrastructure and rural services make a big difference to the viability of rural livelihoods.

Empirical studies provide support for the vital role of infrastructural services in agricultural development. Zeller et al. (1998) in a study of smallholder agriculture in Malawi find that the household's transaction costs in accessing the nearest state market outlet for agricultural inputs and outputs have a negative influence on the share of area cropped with hybrid maize and conclude that access to agricultural markets and related improvements in rural infrastructure and marketing institutions are essential for adoption of new technology and transformation of subsistence-oriented smallholder agriculture. Obare et al. (2003) find that inadequate road infrastructure imposes significant burdens on cost-minimising smallholder farmers; and farmers faced with high farm-to-market access costs commit less land, fertiliser and machinery resources to production in Kenya.

The development of infrastructure in Malawi, particularly in rural areas is far from being optimal. The most of the rural road network is in a poor state. Of the total designated road network of 7,718 kilometres, 33 percent is paved and 67 percent is unpaved; and 33.5 percent of the total road network is in poor condition and 34.9 percent is in fair conditions while the rest is in good condition. The situation for rural roads is even worse, with 33.8 percent of 7,494 kilometres of the rural road network in poor conditions. Access to other infrastructural services such as telecommunications, electricity and potable water remain limited in Malawi. The second integrated household survey shows that only 2 percent, 0.2 percent and 0.9 percent of rural households have access to electricity, fixed line telephones and mobile phones (NSO, 2005). The challenge is to achieve high accessibility rates for infrastructural services among the rural population given the low base.

Targeted Inputs and Subsidy

In the past decade, the government has experimented with several productivity enhancing

interventions in the agricultural sector targeted at smallholder farmers. Since the structural adjustment programs and the removal of fertilizer subsidies and price liberalisation in the 1980s and 1990s, the cost of inputs particularly fertilizers has increased sharply in Malawi. DFID Malawi (2005) observes that fertilizer prices in Malawi have been 20 to 50 percent higher than her other landlocked neighbours. The central concern in these targeted programs has been the need to increase food production, particularly maize, among smallholder farmers. The 'Starter Pack' program that provided free seeds and fertilizers targeting the poorest smallholder farmers has been experimented at different scales and has generated varying impacts (see Levy, 2005). The 'Starter Pack' program also raised issues relating to targeting of beneficiaries (Chinsinga, 2005) and their ability to transfer technology and contribute to sustainable agricultural development (Barahona and Cromwell, 2005).

As noted earlier the new Government introduced for 2005/6 a targeted subsidy on fertilizers to boost maize production and other cash crops such as tobacco, amid the acute food shortages following poor harvest in the 2005/05 season. The re-introduction of fertilizer subsidy has brought unease among orthodox economists who believe that subsidies are likely to introduce distortions in the input markets and thwart the developing private sector input traders. Government holds the view that if the subsidy produces intended results, then it will become one of its agricultural policies. Questions remain about the efficiency of the voucher system in reaching the target farmers and the impact the subsidy has on the private input marketing system. If fertilizer subsidies are the future of agricultural growth policy in Malawi, the challenge remains how to sustain such subsidy levels in the long-run given an economic environment with high transportation costs and a volatile exchange rate market. Many private

sector input suppliers, generally were in favour of the subsidy on fertilizers but believe that their participation in the program could have fostered the development of the private sector (Chirwa et al., 2006).

Food and Cash Crop Services and Markets

The liberalisation of markets and state withdrawal in various markets has led to the erosion of complementary services necessary for the promotion of agricultural growth. These complementary services include extension services, provision of agricultural finance and interventions in product and input markets. Prior to reforms the various markets and services were coordinated through the active participation of the state in the agricultural sector. For example, through the state marketing corporation – the Agricultural Development and Marketing Corporation (ADMARC), smallholder farmers had access to agricultural finance (input credit) and easy access to product and input markets. These services were complemented by an extensive network of agricultural extension services. As Garforth (2005) notes during the 1990s, there has been a progressive reduction in the budget towards extension services resulting in the erosion of technical expertise. Similarly, funding towards agricultural research has substantially declined in recent times.

According to NSO (2005), only 13.1 percent of households in Malawi had received advice from extension staff in 2004/05, with variations in access according to gender. About 14.7 percent of male-headed households compared to 8.3 percent of female-headed households had access to extension services. In addition, there were district variations in extension services ranging from 1 percent in Mulanje district to 45 percent in Chitipa district. Although farmer organisations have emerged in the 1990s, they have not been able to coordinate these complementary services and many face constraints in their outreach and operations

(Kachule et al., 2005). The impact of the erosion of extension services is evident in cash crops. For instance, Chirwa and Kydd (2005) find that the collapse of the state extension services have contributed to the low productivity among smallholder tea farmers and remarkable differences have emerged between farmers that deal with commercial estates that offer extension services and farmers that deal with a state processing factory that does not offer extension services.

Product markets and input markets for agricultural growth are not functioning. Many smallholder farmers are not integrated into the market system. Transaction costs remain high due to low economic activities, low traded volumes of agricultural produce, inputs and agricultural finance (Dorward and Kydd, 2004). There is variable access to input markets and output markets are less favourable to smallholder farmers. Access to agricultural finance is also limited among smallholder farmers, particularly since the collapse of the smallholder credit scheme within the coordinated structure of ADMARC. Commercial banks and microfinance institutions consider lending to the agricultural sector as a risky investment due to the seasonality of the income stream and the unpredictability of the natural environment particularly for rain-fed agriculture that is practiced in Malawi. Thus, most financial institutions are willing to lend to non-farm activities. The recent government actions on produce and input markets indicate the desire to revive the role of ADMARC in the purchase and marketing of smallholder agricultural produce.

The major challenges are how to coordinate the complementary services for the promotion of agricultural growth in a liberalised market in which most markets are still thin and working imperfectly; how to develop the private sector and to ensure that it operates efficiently; how to achieve scale in the product markets for export crops and the role of the state in the

market. The other challenge is how to restore agricultural credit given the past repayment problems. The new Government is promoting a MK5 billion rural credit scheme targeting off-farm activities – the Malawi Rural Development Fund (MARDEF). However, it is not clear whether such a facility can support agricultural activities.

Appendix I: Opinions and priorities from stakeholder workshops

This summarises of the presentations and discussions from the three workshops held in March 2006. The next section summarizes presentations and discussions from the tea sector meeting. Section 3 presents a summary of discussions from the cotton sector meeting and section 4 presents a summary of presentations and discussions of the agriculture sector meeting.

2. Tea sector stakeholder meeting

The meeting drew participants from the smallholder and the commercial estates sub-sectors, the government and the Tea Association of Malawi (see List of Participants in Annex A). The meeting was chaired by Professor Lewis Mughogho who is the Desk Officer for the National Smallholder Tea Development Committee (NSTDC) in the Tea Association of Malawi. Professor Kydd briefed the stakeholders on the objective of the Future Agriculture Consortium and the purpose of the consultation meetings.

2.1 Summary of Presentations

Dr Ephraim Chirwa presented a paper which was based on research on smallholder tea carried out in the course of 2004/05 agricultural season on farmer organisations for market access. It was observed that tea is one of the sectors in the agriculture sector that has been singled out as having growth potential in recent government policy documents. It was, however, noted that

events in the sector are moving fast, and some developments observed during the research have already been outdated.

The core issues from the presentation include:

- (i) The fact that smallholders already have substantial area, all of which is planted to good quality clonal tea. This is a key asset which all stakeholders in tea sector wish to fully exploit. However, there is also ample land that is used sub-optimally for other crops that do not do well in the area by smallholder farmers.
- (ii) The services offered by state institutions to the smallholder sector – provision of credit, extension advice, access to seedlings etc – have been in question in recent years. The Smallholder Tea Company (STECO), a state-owned processing company, has run into severe management and financial difficulties particularly since 1994. It has been rescued and restructured under the privatisation process, but very recently it has been forced to close operations again. The consequence has been declining farmer investment in maintenance (one example being gaps in tea gardens), inadequate fertiliser application and periods in which farmers have experienced delayed payments and prices which are probably lower than should be indicated by export prices.
- (iii) Commercial estates have filled the gap created by the problems with STECO buying green leaf from neighbouring smallholders, organising collection, and also some assistance to farmers in terms of extension and seedlings.
- (iv) Farmer organisations have emerged from a crisis in state services but these growers' organisations have tended to fracture. A group has remained loyal to STECO, but have not been rewarded by good service from the company, and presently have no option but to sell green leaf to the estates.

- (v) In the short term the situation is manageable. But there are real questions about whether it will address the long-run challenges of the smallholder sector because:
 - a. There is currently excess capacity in tea processing, which makes it attractive for estates to buy leaf to maximise capacity utilisation.
 - b. The capacity constraints in processing look likely to appear fairly soon, as the estates are presently undertaking a replanting programme with high yielding (and higher value) clonal tea. As the clonal tea comes into bearing, some estates may not be able to take smallholder leaf unless there is further investment in processing facilities.
 - c. There is scope for substantial expansion of the smallholder tea area, through existing smallholders planting more of their land to tea which they are currently sub-optimally using for other crops that do not do well in the area, active infilling on existing tea plots and also recruitment of new growers. From the point of view of national economic development and poverty reduction it is important that this expansion in smallholder planted area takes place (unless tea prices were to collapse). If there are processing capacity constraints, then there will be less impetus towards expansion.
 - d. Thus, the future operation of the existing STECO factory, located at Mulanje, is a key issue. As this factory is remote from Thyolo smallholders, it may eventually be desirable to construct a further factory at Thyolo but all will depend on achieving critical threshold production levels to support the efficient operations of a processing factory.
- (vi) With respect to processing, on present projections, it is essential for the STECO factory to be brought back into operation in the next two or three years, although there is no immediate crisis due to the existing excess capacity in commercial estates.
- (vii) It appears that the smallholder tea sector needs the commitment of:
 - a. A development finance institution willing to work long term to help: expand smallholder planted area, revive extension, and provide working capital to the existing MATECO factory. In the longer term, financing will be required for a possible Thyolo factory.
 - b. Commercial management, and possibly commercial equity participation, to ensure efficient operation and expansion.

2.2. Issues Raised by Stakeholders

Stakeholder observed that there have been several changes in the sector since the research was conducted. These changes include the non-operation of STECO due to financial problems that government is trying to address in order to put STECO back into operation by injecting more funds, the self-liquidation of a grower-leased and managed tea factor, and the formation of the National Smallholder Tea Development Committee. The following issues were discussed in the meeting:

- (i) The highest priority should be given to expanding volumes of smallholder tea. Increased capacity by smallholders to supply green leaf will “drive the solution” for the processing side. This is because if there is a strong supply capacity from the smallholder side then the economics of a factory dedicated to smallholders will look attractive. Presently the smallholder factory (when it

- is in operation) is handicapped by low capacity utilisation.
- (ii) There has been no consistent government policy for the tea sector since 1994. The reform processes that have taken place in the smallholder sector have been less satisfactory and have disempowered smallholder farmers in the running of STECO. The reforms have addressed short-term problems without looking at the necessity of holistic restructuring in the medium and long-term. Smallholder farmers are still not certain about the intentions of government on the future development of the smallholder sector.
 - (iii) Nevertheless, most participants wanted self-regulation for the sector or, at most, light-touch government regulation. Most participants wanted the sector to guide its own evolution.
 - (iv) Regarding the smallholder tea sector specifically, most participants felt that there was a continuing need for an institution to coordinate its development. Smallholder farmers have proposed to government to establish the Smallholder Tea Development Authority to coordinate activities in the smallholder tea sector.
 - (v) Some smallholder representatives feel that STECO should be closed and other operators should be introduced who are able to raise volumes to make STECO to operate efficiently – and provide attractive returns to private sector partners.
 - (vi) Concerns were voiced about the role of the Tea Research Foundation (TRF). It is an important organisation, but its budget is very limited (financed by commercial estates) and it is longer able to train farmers. It was felt that smallholders need training in both agronomy and business.
 - (vii) A related issue is that there is lack of knowledge about the production economics of smallholder tea, and also about costs of processing and transportation. This handicaps investors, policy makers and those charged with discussions on prices paid to smallholders for leaf in informed discussions about the sector. Furthermore, there is inadequate knowledge on the extent to which smallholder yields and incomes could be increased. A related question is what is the minimum efficient scale for smallholder tea production in Malawi? In Kenya it is thought to be 1 hectare – but, smallholder tea survey showed mean size for Malawian smallholders to be 0.6 hectares.
 - (viii) There was concern about environmental degradation in the highlands surrounding tea estates, with damage including siltation of rivers and dams. Thyolo mountain has been very badly damaged, and there is concern to preserve Mulanje mountain.
 - (ix) Smallholder representative stated that over the years there had been discussion about transferring their land from customary to leasehold status (i.e., to obtain title). They wanted progress on this issue as they felt this was essential to encourage investment and inhibit fragmentation.
 - (x) Finally, it was noted that reforms in the smallholder tea sector had been less effective than in smallholder coffee. Are there lessons to learn or is this simply to do with the techno-economic characteristics of the product? Probably it is the case that capital intensive activities cannot be best run by farmer organisations, and that the capital intensive parts of the tea supply chain need to be managed by the private sector.

2.3. Possible Areas for Research

Three possible research themes were suggested:

- (i) An input into designing a policy and institutional framework for the tea sector to get volumes and investments up, drawing on the experiences elsewhere.
- (ii) Economics of production – this could be an area for a productive long-term collaboration with the University of Malawi.
- (iii) In support of the earlier two themes, a review of the experiences in smallholder tea in other areas outside Malawi?

3. Cotton sector stakeholder meeting

The meeting drew participants from the smallholder farmers, farmer organisations and input suppliers in the cotton sector and the government (see List of Participants in Annex A). Unfortunately, all the cotton buyers invited to the meeting were not able to attend. The meeting was chaired by Mr. Patrick Zimpita who is the Deputy Director of Monitoring and Evaluation in the Ministry of Economic Planning and Development. Professor Kydd briefed the stakeholders on the objective of the Future Agriculture Consortium and the purpose of the consultation meetings.

3.1. Summary of Presentations

The research team made two presentations: one by Colin Poulton on the experiences of the cotton industry in East and Central Africa and another by Ephraim Chirwa on farmer organisations for market access in the cotton industry.

Colin Poulton reviewed post-liberalisation experience in Tanzania, Zimbabwe, Zambia and Mozambique. Distinctly different models have evolved in each country, each representing different strengths and weaknesses in responding to the challenges of the sector. It

was observed that concentrated sectors (i.e. those dominated by 2 or 3 main ginning companies) such as Zimbabwe and Zambia have been better at providing inputs and extension advice to producers and maintaining quality. They have therefore achieved the highest yields. On the other hand, competitive sector such as Tanzania have delivered higher seed cotton prices to producers but have been unable to achieve higher yields.

Capacity utilisation appears to be a strong influence on firms' pricing policy. However, whilst moderate capacity utilisation could provide firms with the incentives to invest in and expand their supply base, the very low levels of capacity utilisation current achieved in Malawi (20-25%) could act as a drag on profitability thereby impede ability to pay high seed cotton price to producers. Poulton estimated that in 2003/4 Malawi cotton farmers received 60% of the fob export price as payment for their seed cotton. Of the countries mentioned above, this was the joint lowest with Mozambique.

Overall – in land abundant economies it is hard to say which is a better system for farmers. However, Malawi's concentrated system is probably appropriate for a land scarce economy where achieving high yields is a top priority. But the price offered by these players should be monitored to check that it is competitive with those offered in neighbouring countries.

Ephraim Chirwa presented the results of recent research on the roles of farmer organisations in the cotton sector in Malawi. This was an overview of the sector with special attention paid to the role played by the farmers' organisation BASFA in Balaka. It was observed that the cotton industry is highly concentrated on the buyer side with two major companies with ginning facilities Clark Cotton and Great Lakes, and two smaller buyers that are also investing in their own ginning facilities. Key issues which

came out of the presentation included the role of the Cotton Development Association (CDA), which is dominated by the two major buying companies. Set up with support from DFID, it coordinated a programme of subsidised treated seeds and chemical supply to producers and also provided a forum for negotiation of seed cotton prices between buyers and National Smallholder Farmers' Association of Malawi (NASFAM).

However, it was noted that the CDA has not been very cohesive. With ending of the phase of DFID funding in 2005, there are major question marks over its future. There were important questions about the CDA's role in pricing. Implicitly, at least, the CDA has been trying to limit price competition by standardising prices for seed cotton, but allowing companies to compete on the basis of the quality of services offered. The aim of the CDA was to have all seed cotton buyers participate in the provision of subsidised inputs to producers and the agreed output price was designed to recover the costs of the input subsidy. However, this common approach was not achieved with the two smaller buyers providing neither subsidised inputs nor observing the agreed output price. The smaller buyers were offering higher prices than the CDA agreed price.

There have been two types of farmer organisation involved in the cotton sector in recent years. Some old ADD groups have been involved in credit supply from buyers, although it is estimated that only 10% of farmers have had access to credit in Balaka (figures for Lower Shire Valley are not known at this stage). Most of the farmers purchase their inputs on cash basis and this has adversely affected the intensity of input use and hence productivity among cotton farmers.

Secondly, in Balaka BASFA has played an active role in extension provision to cotton producers and has also bought seed cotton on behalf of either Great Lakes or Clark Cotton.

Farmers' views of BASFA are mixed: they appreciate extension, ethical weighing and less aggressive grading (although the latter is very probably not in their longer-run interests). However, farmers felt that BASFA had not done enough to achieve better prices for them and did not communicate sufficiently with them particularly with respect to the timing of price information prior to production or marketing.

3.2. Issues Raised by Stakeholders

Several views emerged from stakeholder consultations:

- (i) It was pointed out that cotton has been singled out as a priority development sector by the President and recent development strategy document. This led on to questions about the role of the government: should it be involved in monitoring and setting prices? However, there was little support for government involvement in price setting, but there is a perception that the price has been too low, and this raises questions as to what, if anything the government should be doing.
- (ii) Another key issue related to industry structure – there are only four buyers two of which are dominant players. Should the government seek to influence industry structure, including zoning cotton concession zones?
- (iii) There has been a substantial increase in area planted to cotton in 2004/5, attributed particularly to availability of subsidised inputs. This has fallen back in the current season, albeit still above 2003/4 levels due to the ending of the CDA inputs subsidy and the poor seed cotton prices paid in 2005.
- (iv) There was substantial discussion about the potential of a new cotton technology package being promoted by Farmers' Organisation Ltd. This has ambitions for Malawian farmers to achieve yields very much higher than those being achieved

elsewhere in the region. The key new elements in the package are: (i) a much higher application rate of seed treatment than practised by CDA; (ii) application of herbicide immediately after planting; (iii) use of foliar fertiliser (which is cheaper than granulated fertiliser); (iv) soluble tablet-based pesticides. There have been demonstration plots on 24 farms over 3 seasons and average yields have been around 2 tons per hectare, compared with a sector average of 600 to 800 kg per hectare.

3.3. Possible Areas for Research

Several interconnected issues emerged as areas of further research in the cotton sector.

(i) What output market should Malawi aim for?

There are two broad choices: Either Malawi should seek to expand lint volumes and quality to a level at which they are of interest to international lint traders. In our view this is challenging but possible, and would need at least a doubling of area, substantial increased in yields (given Malawi's land constraints) and major efforts on quality.

Or, aim to process locally most of what is produced – either for domestic textiles (raising issues of protection against imports) or for international export markets, probably through AGOA.

(A well informed cotton sector consultant is needed to examine these options).

(ii) A second key issue is how to achieve support package to producers for high yields for cotton in Malawi. Possible routes to this are:

(i) strong reliance on farmers organisations;
(ii) service provision provided by ginning companies – this would only happen in a concentrated market structure that is coordinated.

So, the dilemma is: should Malawi go for: (i) local/regional companies which may have

a stronger interest in local processing but may lack the technical and financial capacity for support services for producers to achieve very high yields; or, (ii) international companies which may have expertise and capital but whose incentive to invest in Malawi would be entirely concerned with export of commodities (no interest in selling at lower prices to local processors).

If there were farmer organisations strong enough to organise farmers for credit and provide technical advice, then these could interface with an output market which is more local and more competitive. Is NASFAM able and willing to perform this role? It was noted that presently NASFAM is unwilling to guarantee credit – but some organisation may have to do this.

(iii) The third area of research relates the economics of cotton and the optimal farm size required for cotton to have effective poverty reducing effects. There is therefore need to study the cost structure of cotton and returns from cotton production in order to gauge its poverty reduction potential.

4. Agriculture sector stakeholder meeting

The meeting drew stakeholders from farmer organisations, research institutes, government and the donor community. The meeting was opened and chaired by Dr Winford Masanjala of Chancellor College, University of Malawi. This was followed by a briefing by Jonathan Kydd on the work of the Future Agriculture Consortium and the purpose of the workshop, which was to identify critical and researchable policy issues in agricultural growth and social protection in Malawi.

4.1. Initial Presentations

Ephraim Chirwa and Andrew Dorward presented a team paper setting out some initial suggestions regarding critical issues in agricultural growth and social protection in Malawi. This started from a summary of the challenging current rural and agricultural position facing Malawi (with continuing high poverty rates, increasing land pressure and fragmentation, chronic and presently acute household food insecurity, variable and insecure national food security, widely changeable food prices, thin rural and agricultural markets, and largely stagnant smallholder and commercial agriculture). Malawi has developed a number of policy statements with a strong emphasis on pro-poor agricultural development, but with the exception of the recent fertiliser subsidy to boost maize production and improve food security, has found it difficult to develop and implement policies which are consistent and coherent over time.

Issues in Agricultural Growth

Agricultural growth is important as a significant contributor to peoples' incomes, in providing a financial base for services and investment, and (as a producer of food and tradables) in driving economic growth. There are a number of long standing policy issues in the promotion of agricultural growth. A core problem inhibiting smallholder agricultural growth in poor rural areas is the need for complementary coordination in the provision of input supply, finance and produce marketing services, together with insurance and extension services. Possible solutions to this problem will vary between food crops and different cash crops, and often involve trade-offs between the benefits from competition and coordination among service providers.

Farmer organisations have potential in assisting with this, but have had mixed success and face a number of challenges. There are a number of important questions about appropriate roles for private sector activity, and means for developing this. Particular problems are faced in development of produce markets to meet national and international demand, with, for example, the need for achievement or maintenance of sufficient scales of national production to make the Malawian industry viable in export crops such as cotton. High levels of price variability pose different problems in food and cash crop production, with conflicting producer and consumer interests in food crops. There is an ongoing debate about the benefits and problems involved in input subsidies.

Further challenges to agricultural growth which require policy action concern land policy (to address fragmentation and tenure), the relations between smallholder and estate agriculture, poor and high cost transport services, agricultural research, the role and promotion of irrigation, and improvement of soil fertility. Opportunities and policy options may be affected by changes in international trade regimes. Agriculture policy also needs to encourage people to exit agriculture on favourable terms, and support rather than undermine processes for social protection and for development of the non-agricultural sector. Agriculture growth requires good macro-economic management, institutional development and, to address the issues raised here, strengthened processes for increased policy coherence (this is particularly important in government / donor relations).

Issues in Social Protection

'Social protection' encompasses a range purposes and instruments but may be summarised as 'encompassing measures to

manage risk and reduce vulnerability to shocks to maintain peoples' welfare and enhance their ability to participate in society and in the economy'. A number of issues arise in social protection policy. These include difficulties in defining the objectives of different instruments; in identifying multiple impacts (both positive and negative); the sensitivity of these impacts, and of cost effectiveness of instruments, to the way that they are implemented (in terms of targeting, timing and triggers); difficulties posed by dispersed and/or remote populations with very high rates of poverty incidence and vulnerability; policy coherence; fiscal sustainability; choice of different types of instrument, and the roles of market and non-market instruments; and scale and threshold effects.

Links between Social Protection and Agricultural Growth

There are close links between social protection and agricultural growth and hence between policies promoting them. Synergies arise through social protection's contributions to asset maintenance and building, to infrastructural development (in public works programmes), to potential contributions to market thickening and development, and through reduced vulnerability and risk aversion. Conversely agricultural growth can strengthen capacity for informal social protection within rural communities, reduce vulnerability through increased asset holdings, provide fiscal resources for social protection expenditure, and in some low potential areas the promotion of agricultural growth may itself be a cost effective form of social protection. However there are often thresholds in these relationships, and social protection is seldom a sufficient condition for growth – it is only effective in promoting growth in association with other policies directly promoting growth. There are also potential conflicts

between social protection interventions and agricultural growth: some social protection interventions may, if poorly implemented, distort incentives and discourage investment in agriculture; there may be competition for scarce fiscal resources between social protection and agricultural programmes; different land policies may have ambiguous impacts on growth and livelihood security; and the promotion of agricultural growth as a form of social protection may lock people and national policies into inefficient agricultural activities.

4.2. Issues Raised by Stakeholders **Identification of Issues by Stakeholders**

Participants were asked to identify 3 key problems in agriculture and 3 key problems in social protection. The results are presented in the table below. The central issues for agriculture are centred around factor and product markets and inputs, specifically access to and provision of inputs, credit, labour, and land; production and sales problems such as market access and low and volatile prices; and rain-dependence. However, incoherent policy and weak implementation were also critical issues. Social protection issues also included problems of policy design and implementation, most importantly around political economy, targeting and sustainability but also problems of policy coherence. Participants also expressed worries about negative effects of policy, such as dependency. The key issues underlying social protection needs concerned basic social services; high and volatile food prices (in interesting contrast to agricultural producer concerns); inequality (particularly between genders); resilience to shocks; and an over-reliance on agriculture, for example due to a lack of wage labour opportunities, in the context of agricultural market and service failure.

Problems in Agriculture	Number of responses
Poor access to inputs	7
Poor climate/dependence on rainfed agriculture	5
Market access problems/infrastructural problems	5
Land pressure/small land size	5
Low production/productivity	4
Poor/inconsistent/mis-targeted policies	4
Poor access to credit/finance	3
Food price instability/too low	2
Land tenure system	2
Sickness and death contributing to low production	1
Lack of food reserves	1
Commodity pricing	1
Land and environmental management for sustainable agriculture	1
Improved technologies unaffordable to smallholders	1
Divided research communities	1
Weakness in export	1
Too much reliance on smallholders	1
Problems in Social Protection	Number of responses
Targeting/political economy	6
Basic social services (especially health and HIV/AIDS)	6
Food price instability/too high	5
Sustainability/financing of programmes	4
Gender based inequality	3
Resilience to shocks	3
Choosing intervention type	3

Dependency risk	2
Lack of policy coherence/framework	2
Over-reliance on agriculture	2
Agricultural service/market failure	2
Negative effects of food aid	1
Lack of paid work	1
Early warning systems not area specific	1

Smallholder Production for Growth

Discussion started with the question of whether, given increasing land pressure and fragmentation and changing technologies, smallholder farming can be the engine of growth in Malawi. Smallholders represent $\frac{3}{4}$ of the population in Malawi and their future is crucial. On the one hand, a set of arguments was put forward about the limitations of smallholder production. To meet increasing quality demands and scale for export and investment, large farms are likely to be most appropriate for some crop types. In addition, many smallholders are not able to be food self-sufficient, and their lack of purchasing power seriously compromises their ability to meet this shortfall through buying from profit-making estate farmers. This pressure is increasing as land progressively fragments, especially because everyone in Malawi (including urban workers) owns some land. Alternatives to unsustainable smallholder production, therefore, are critically needed. What are the exits for smallholder farmers? Education is likely to be crucial to this. On the other hand, education policies must be linked to employment opportunities to avoid creating a large pool of educated unemployed. More positively for smallholder agriculture, this year's fertiliser subsidies (and previous inputs programmes) have demonstrated that with sufficient inputs, smallholder production can be substantially increased. Furthermore,

Malawi's only world-leading crop, burley tobacco, is grown principally by smallholders.

Two important issues are bound up with this debate: the design, implementation, and impact policy; and diversity in the agricultural sector. These issues are pertinent in both agriculture and social protection.

Policy Issues

Various problems emerge in both the formulation and analysis of policy. First, there is a need for a detailed understanding of the (direct and indirect, or multiplier) effects of and interactions between policies (in outcomes and in terms of political economy). For instance, estate policies have arguably increased Gini coefficients in land ownership. Fertiliser subsidies have contributed to national production but have not guaranteed household food security, and it is not clear that they currently effectively target smallholders through the current system of village chiefs' choice. Given their social protection (but also growth) objectives, this is a significant concern. However, it may be difficult to draw clear conclusions from the Malawi experience because very few policies have been implemented as designed. This in itself might be a lesson for policymakers. These considerations raise political economy questions. Whilst it may be relatively easy to target groups who cannot work (the elderly, infirm, etc.), targeting groups to 'graduate' out of poverty is much more difficult. If social protection measures are to be designed to be both ameliorative and developmental, this problem must be addressed.

Second, agriculture (and social protection) in Malawi has suffered from a lack of policy coherence in terms of policy coordination, clarity, and sequencing. Indeed, unstable government policy may have acted as a significant constraint to agricultural growth. Whilst there may be a role for the government in influencing prices and stimulating (or providing) demand, policymakers must understand that it

is not clear, in general, that government policies have contributed to agricultural growth, given their potential for blocking the development of and crowding out the private sector (similar issues arise in social protection). The spending on subsidising inputs suggests that resources are available; it is vital to use them appropriately. There are strong political considerations driving government interventions in food and input markets.

Third and especially given that point, there must be an examination of whether policies are sustainable. Fertiliser subsidies, for instance, may raise production for 1 or 2 years, but without any effective credit markets, will there be a sustainable impact on growth rates? There is concern that no one is actually graduating from safety nets; are they in fact merely 'death nets'? Issues in combining social protection and growth need to be revisited to resolve this. Finally, since the magnitude of vulnerability seems to be increasing (through price volatility, drought, and so on), the magnitude of social protection measures needs to be considered.

Diversity in Agriculture

Debates about moving agriculture forward and moving out of agriculture must take account of the diversity of both rural producers and potential crops that they can produce. First, arguments about the 'crisis of smallholder agriculture' must be contextualised by an appreciation of the diversity of smallholders. Whilst some smallholders undoubtedly are in chronic food shortage, others are not. Why is this and what are the salient differences between these groups? Some groups already derive substantial non-farm incomes, but it is not yet clear as to who these groups are and what they do. Furthermore, providing inputs such as fertiliser assists smallholders for whom a lack of agricultural inputs is the principal constraint, but how far does it help the many smallholders who are land or labour constrained. Second, a key

perceived challenge is to find alternatives that reduce reliance on maize. However, it may be more appropriate to diversify into a range of products that reflect the diversity of producers. It is not yet clear as to what these products may be.

4.3. Agriculture & Social Protection Research Priorities

Participants were asked to identify the three main research priorities in agriculture and in social protection. The following tables summarises the issues identified in descending order by the number of responses received.

Research Priorities in Agriculture	Number of responses
Increasing smallholder productivity with interventions targeted at different categories of smallholder	6
Labour markets	4
Comparative advantages of different agricultural crops	4
Constraints for irrigation	3
Commercial management to overcome credit market failures	3
Robust policy frameworks	2
Maize price management	2
Macroeconomic management and institutional development	2
Good exits from agriculture - what activities offer best returns	2
Smallholder capacity	1
Returns to investment of different organisations in achieving agricultural policy	1
Private sector involvement in maize production	1
Possible impact of contract farming - more products and capable smallholders	1

Political engagement in critical agricultural markets	1
Policy reversal on agricultural market liberalisation	1
Land availability	1
Lack of repayment of credit	1
Intensification vs diversification	1
Infrastructure development	1
Implementation of policies since 95	1
Food production in large farms	1
Environmental management	1
Complementarity and substitutability between growth and social protection	1
Access to market	1
Research Priorities in Social protection	Number of Responses
Do we really need social protection measures?	3
Politics and policy processes of social protection and how to develop coherent policy	3
Social protection and growth linkages especially in relation to exit strategies	3
Smallholder heterogeneity	2
Long-term financing issues	2
Targeting challenges	2
Cost-effectiveness of different social protection measures	1
Researching indirect effects of social protection measures (e.g. on labour markets)	1
Understanding the real impact and effects of social protection programmes in the past	1
Explore affordable exit strategies from input subsidy programmes	1

Some of the research priorities identified by participants and summarised in the tables above were selectively discussed in a plenary session and the main points of this discussion are summarised below.

Labour Markets

We need to understand better how labour markets work in all their diversity and their interactions with food security, entitlement and growth. There is little basic knowledge on wage rates, wage uses, supply and demand and how important wage labour is for food security and growth. It is also important to explore wage differentials within the agricultural sector and between different sectors, particularly in relation to different types and levels of skill and education. Research also needs to explore the intra-household dimensions of the labour market including distributional outcomes and should be integrated with research on land markets and how these are changing over time. Questions in land and labour markets are closely connected, for instance how are new contractual forms in the labour market (e.g. interlocked labour and input markets in sharecropping) connected to developments in the land market?

Comparative Advantage

To assist production diversification in the agricultural sector and to avoid over-dependence on maize and tobacco, there needs to be better understanding of which crops are best suited to different parts of the country and where Malawi is likely to have a comparative advantage. Bunda College conducted substantial research in these areas in the 90s which the Ministry of Agriculture has recently updated and which any further research should build on.

Institutional Challenges

Public policy is insufficiently informed by accurate, up-to-date data due to weak institutional

linkages. These involve for example linkages (a) between research/extension and actual agricultural practice and (b) between research outcomes and policy processes.

HIV/AIDS

More research is needed to understand the effects of HIV/AIDS and its implications for social protection and agricultural growth. This would represent a fundamental dimension of any study of land and labour markets in Malawi.

Negative Effects of Food Aid

There has been growing concern, in particular among NGOs in recent years, about the negative effects of food aid on food markets and national food security and its potential contribution to dependency at the household level.

Policy Processes

To be meaningful and add real value, any research on agriculture must consider policy processes, including how policies evolve and are implemented. This is critical to ensure that research outcomes and recommendations are relevant and adapted to the reality of the policy formulation and implementation process, and are not hi-jacked by short-term political interests or donor agendas.

Traditional Social Protection measures

More research is required to understand the interactions and relationships between formal and informal/traditional social protection measures, and how the latter have evolved over time and why. In particular, we need to explore the interactions between traditional measures of social protection and state/NGO interventions, including when and how formal transfers displace private protection measures. What implications does this have for growth and development? Further work should build on DFID-funded research into coping strategies in Malawi in the late 1990s.

Practicality and Relevance

Any research should lead to concrete and practical policy recommendations which can be implemented in the real world of challenging policy processes and weak implementation capacity. How can the Consortium ensure the research outcomes do not contribute to yet another chapter of incoherent policy processes?

End Notes

¹ For example, the 2004 Malawi Economic Growth Strategy, Table 1.3, estimates that the value of cassava production in the smallholder sector was equivalent to 86% of the value of maize production. This appears to most observers to be a huge over-estimate, and so there is a possibility that the National Accounts data is substantially overstating the performance of one of the growth sectors of agriculture – the cassava sub-sector. This could introduce an upward bias into estimate of the overall contribution of agriculture.

² Malawi Economic Growth Strategy, 2004, Vol II p 4.

³ Tobacco is the most important smallholder cash crop and it provides employment not only in production but also in curing, grading and packaging.

⁴ The paragraph summaries a range of agri-pessimist views expressed by some participants at a stakeholder workshop in Lilongwe for the Future Agricultures Consortium, 10 March 2006.

⁵ Many of the strategies and strategic actions for increasing agricultural incomes have existed since Independence or are being revived after being less emphasized during the adjustment period.

⁶ Kydd and Christiansen (1982) and Lele (1989) note that per capita maize output from smallholder farmers

⁷ The Malawi Young Pioneers movement was part of the single party machinery which

collapsed in 1994 following the introduction of a multiparty system of government. These resettlement schemes, similarly, collapsed. Chirwa (2002b) finds that small-scale irrigated schemes are characterized by high turnover, seasonal variation in patronage, under-utilization facilities and inputs.

⁸ However, studies in Malawi show that even under the existing customary land tenure system land is secure and there is no evidence that customary tenure creates disincentives to investment (Place and Otsuka, 2001; Chirwa et al., 2003; BDPA, 1998). Once customary land has been allocated to the family or lineage under the customary tenure, such land is perceived as the property of the family in perpetuity (Bosworth, 1998).

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