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Discussion Paper

Malawi Case Study: Social Protection Measures and Labour Markets

November 2012

United Nations Development Programme

POVERTY REDUCTION





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Cover Image

ILRI/Stevie Mann, Malawi.

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List of Acronyms and Abbreviations

ADD	Agricultural Development Divisions	MASAF	Malawi Social Action Fund
ADMARC	Agricultural Development and Marketing Corporation	MVAC	Malawi Vulnerability Assessment Committee
ADP-SP	Agriculture Development Programme—Support Project	MYP	Malawi Young Pioneers
AISP	Agricultural Inputs Subsidy Programme	N	Nitrogen
ALDSAP	Agricultural and Livestock Development Strategy and Action Plan	NRDP	National Rural Development Programme
APIP	Agricultural Productivity Investment Programme	NSO	National Statistics Office
DEVPOL	Development Policies	OPV	Open Pollinated Varieties (maize)
DFID	Department For International Development (UK)	P	Potassium
DPP	Democratic Progressive Party	PWP	Public Works Programmes
ETIP	Extended Targeted Inputs Programme	RM	Reserve Bank of Malawi
EU	European Union	S	Sulphur
FFW	Food For Work	SACA	Smallholder Agricultural Credit Administration
GoM	Government of Malawi	SAL	Structural Adjustment Loans
GTZ	German Technical Cooperation	SP	Social Protection
HDI	Human Development Index	SFFRFM	Smallholder Farmers Fertiliser Revolving Fund Mechanism
HPI	Human Poverty Index	T&VE	Training and Visit Extension Approach
ILO	International Labour Organization	TIP	Targeted Inputs Programme
IHS	Integrated Household Survey	TLU	Tropical Livestock Units
IMF	International Monetary Fund	UDF	United Democratic Front
INGO	International Non-Governmental Organizations	UNDP	United Nations Development Programme
IRD	Integrated Rural Development Project	USAID	United States Agency for International Development
K	Phosphorous	WFP	World Food Programme
LDC	Least Developed Country	WMS	Welfare Monitoring Survey
MCP	Malawi Congress Party		
MDG	Millennium Development Goal		
MEGS	Malawi Economic Growth Strategy		
MGDS	Malawi Growth and Development Strategy		
MoAFS	Ministry of Agriculture and Food Security		
MPRS	Malawi Poverty Reduction Strategy		
MPVA	Malawi Poverty and Vulnerability Assessment		
MRFC	Malawi Rural Finance Company		

1. Introduction

Malawi is a Least Developed Country (LDC) with a predominantly rural population engaged in agriculture. The agricultural economy is dominated by small-scale farms (tended by people known as ‘smallholders’) that produce commodity crops (mainly tobacco, coffee and cotton) and food for subsistence (maize, pulses, roots and tubers). Most smallholders cultivate less than one hectare. Poverty is deep and widespread across the land. As a result of their weak asset base, low technology adoption, limited land and labour constraints, the majority of rural households are highly vulnerable to shocks, whether generalized (such as drought) or household-specific (such as death). This weak resilience has hindered the ability of smallholders to move out of poverty and of the country to develop rapidly. Despite these structural impediments, there is now quantifiable evidence that measures intended to reduce smallholder vulnerability have begun to pay off, resulting in a decline in relative and absolute poverty. The benefit seemingly extends to all strata of the Malawian poor, urban and rural. Strengthening small farms has contributed towards rapid economic growth within the agricultural sector and broader economy, whilst, at the household level, it has led to improved food security as well as asset accumulation (cash, livestock and durable goods).

This paper describes and analyses the impact that pro-poor programmes and social protection (SP) measures in particular have had on reducing poverty and mitigating the vulnerability of the Malawian poor. Social protection here refers to the broad range of measures designed and implemented by the state and its partners in development to reduce poverty and strengthen the resilience of the population to shocks. The case focuses on the agricultural sector and its labour market dynamics. Over the past 15 years, a range of SP measures has been instituted; the measures that have been most extensive in scale and scope, whilst having the greatest impact on poverty, are those that have sought to enhance the productivity of small-scale agriculture through input subsidies. The paper also examines the impact of these programmes and considers their potential to reduce poverty through providing decent work within the agricultural sector and through the role of agriculture as an engine of economic growth.

The research for this paper was desk-based, drawing upon the latest secondary literature (including reports and surveys) and primary data on crop production from the Ministry of Agriculture and Food Security (MoAFS). The findings are informed by the important national surveys undertaken by the National Statistical Office (NSO), in particular the 2008 national population census (NSO, 2008a), the 2008 Welfare Monitoring Survey (WMS) (NSO, 2008b), the Finscope report (2009) and the earlier Integrated Household Survey 2 (IHS2) (NSO, 2005). The research uses the comprehensive Malawi Poverty and Vulnerability Analysis (MPVA) (GoM, 2006), which describes in detail the causes and characteristics of poverty. The paper also refers extensively to the findings of an International Labour Organization (ILO) funded study (Durevall and Mussa, 2010) that examined the country’s labour market dynamics and recent economic performance.

2. Country Profile

Malawi is a central African nation of approximately 13.8 million persons. The country itself encompasses the lands of the southern and western flanks of Lake Malawi and much of this territorial water. Malawi is surrounded by the United Republic of Tanzania to the north, Mozambique to the east and south and Zambia to the west. Its topography has been fashioned by the forces that created the Central African Rift Valley. The main features include deep, wide valleys in the south that follow the course of the Shire River (which drains the Lake via the Zambezi River) and also characterize the Lake shore itself; highland plains that extend from the south to the north; and a high-altitude escarpment, whose features are most prominent in the north. The landscape reveals considerable diversity and is characterized by varying microclimates and ecological typologies. Across the territory, a range of farming systems has evolved to suit the varying agro-ecological conditions. The literature on vulnerability in Malawi places considerable emphasis on the influence of climatic factors, especially drought, as a cause of crop failure leading to food insecurity. However, the idea that drought is recurrent and severe is overstated. Rainfall data from the Directorate of Meteorology shows that, over the extended period from 1984–2007, the national average was 1058 millilitres (1028 millilitres in the Northern Region, 1110 millilitres in the Central Region and 1039 millilitres in the Southern Region), whereas the lowest recorded average rainfall was 737 millilitres in 1991–1992 (available from the Reserve Bank of Malawi (RBM) website). Malawi is indeed well watered in most districts and the respective agro-ecological conditions favour a diversity of commodity and grain crops. However, these various environmental conditions are not equally suited to the cultivation of tobacco and maize, the two crops at the forefront of the national political and development discourse.

The population is predominantly rural. The urban areas accommodate the vast majority of the formal labour force (which is dominated by civil servants) and the fast-growing informal labour force engaged in micro-enterprises and unregulated trading (Durevall and Mussa, 2010). Malawi's political and economic elite, along with the middle class, is urban-based. The most recent census, undertaken in 2007/2008, found that 85 percent of the population live rural lives and are engaged in agriculture and other livelihoods activities that use natural resources. The urban population is distributed between four cities and 27 district centres. The latter can best be described as no more than small towns that provide an administrative function and service industries. The geopolitical structure of the country strongly reflects its colonial heritage. Malawi became independent from the United Kingdom in 1964. The country comprises three administrative regions (the South, the Centre and the North) whose boundaries were inherited from the colonial era. There are six major tribal groups (of 500,000 persons or more) and another half dozen minor ones (NSO, 2008a). The independent government sought to shift the administrative heart of the country from the Southern to the Central region through positioning the capital at Lilongwe to promote greater regional integrity and mitigate political organization along lines of tribe. The power of tribes and their subsidiary clans remains strong, however, most notably in land administration (as most land is under customary tenure) and in supporting the administration to implement development programmes and SP measures.

In developmental terms, Malawi is classified as an LDC and is classed in terms of the UNDP Human Development Index (HDI) as having a Low Human Development—in other words, as having an HDI score below 0.5.¹ In 2007, the most recent period for which data is available, Malawi had an HDI score of 0.493, which reflects the relatively low level of life expectancy at birth of 57 years, an adult literacy rate of 71.8 percent and a Gross Domestic Product (GDP) per capita of USD 761. On the HDI 2007 ranking, Malawi was positioned at 161 of 182 countries for which comparative data was available. Against UNDP's Human Poverty Index (HPI-1), which takes into consideration the number of people living below the poverty measure of USD 1.25 per day, Malawi had an HPI-1 value of 28.2 percent (or roughly one third of the population subsisting on less than this amount daily), placing it in rank 90 among 135 countries.

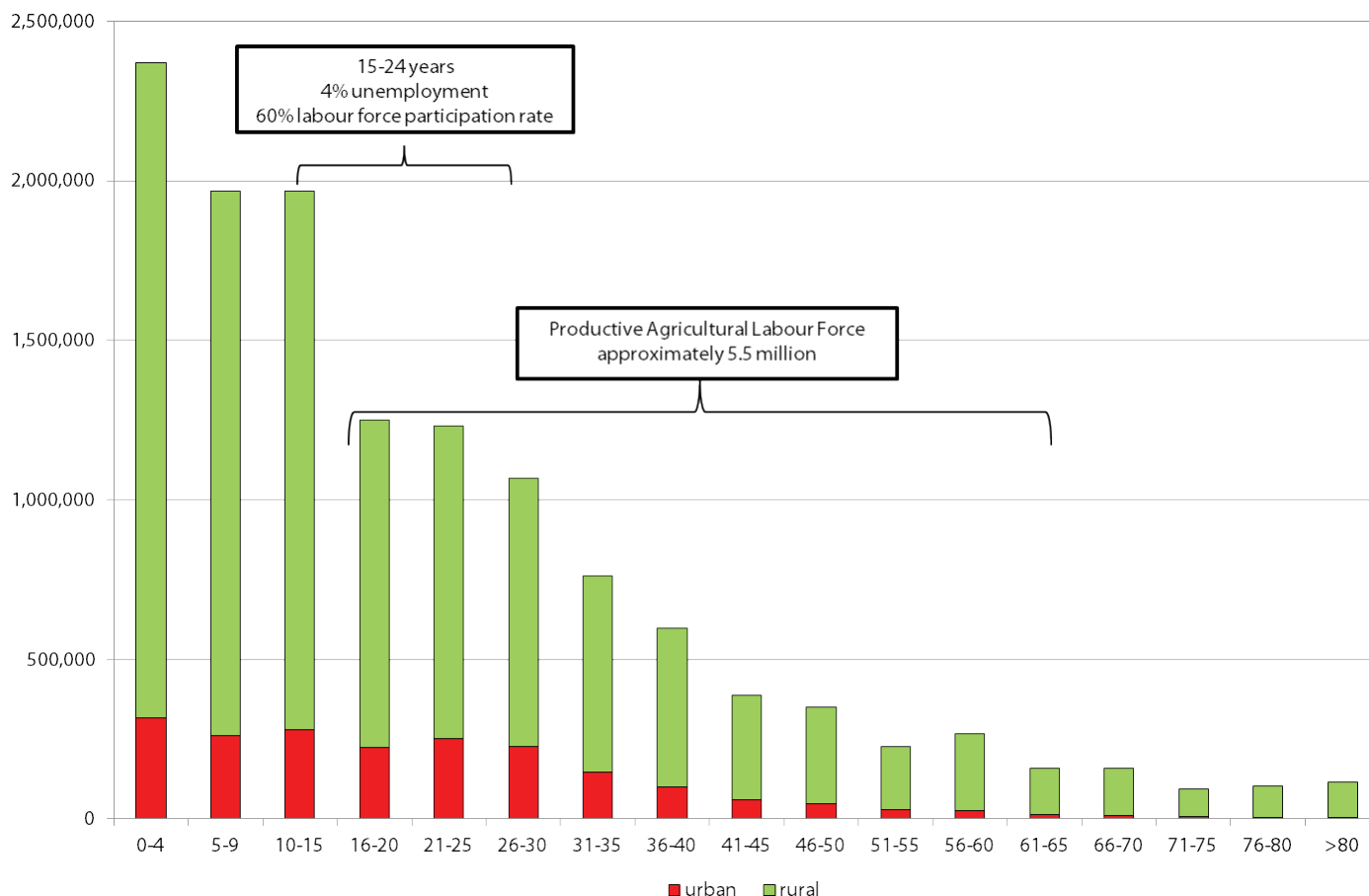
¹ Data from hdrstats.undp.org/en/countries/country_fact_sheets/cty_fs_MWI.html.

2.1. Demographic Profile

The 2008 census recorded a population of 13.07 million persons, an increase of over nine million persons since independence (NSO, 2008a). The population is currently increasing very fast; the inter-censal annual growth rate for 1998–2008 was 2.8 percent, whereas that of the previous period was 2 percent. Population density per square kilometre is 139 persons, though distribution is uneven and the density exceeds 200 persons per square kilometre in some districts, including those adjoining the major cities, whose populations have expanded at a very fast rate in excess of 4 percent per annum. Over time, the regional population distribution has shifted from the South towards the Central Region, which has now become the most populous and where the capital city, Lilongwe, is the epicentre of this rapid expansion. The rate of urbanization has surprisingly slowed since 1998, though. This trend reflects the comparatively better economic performance of the agricultural sector, and of small farms in particular, versus the manufacturing sector during this time-frame.²

The age structure of the Malawian population is highly skewed, with 48 percent under 15. The median population age is 17. The dependency ratio (0- to 14-year-olds plus over-65-year-olds to working population) has deteriorated over the last decade. The

Figure 1: Population Age Structure



Source: NSO (2008a).

² There is a small manufacturing sector in Malawi that is mainly concentrated in agro-processing activities, especially in tobacco, tea and sugar. Import substitution manufacturing is in decline, but includes the manufacturing of detergents, candles, and basic pharmacological commodities. The clothes industry has largely collapsed and, as Malawi is a landlocked country, access to export markets is severely constrained.

demographic structure of the population (urban versus rural), categorized in lustrums, is shown in Figure 1. The ratio of youth (>18) to working adult population (18 to 64) will impact labour market dynamics once these persons reach working age. It is questionable whether the rural labour market will have the capacity to absorb all of these new workers in agricultural endeavours, let alone provide them with decent work; while the possibilities of being absorbed in other sectors are very small, given the concentration of formal sector employment in services, communications and mining, each of which demands highly skilled labour.

Malawi has approximately 2.8 million households, comprised of immediate family members and relatives and sociologically ordered according to housing (NSO, 2008a). A household typically comprises several dwellings clustered together as an autonomous unit. The structure and composition of households frequently change, temporarily and permanently, through death, migration and resettlement and in response to exogenous and idiosyncratic shocks. The flexible composition of households reflects the strong ties of extended family and the culture of reciprocity, which, whilst strongest among families, extends to fellow members of the clan and in matters of politics across the entire tribe. The majority of households are male-headed, in cultural, though not necessarily legal, terms, as there are matrilineal and patrilineal customs amongst the different tribes. There are about 790,000 female-headed households, defined in sociological terms as the person whom members regard as the 'head', equivalent to about one third of all households. Female-headed households have come about as a result of separation, male migration and death. The census recorded more than 830,000 orphans (< 18 years). At the same time, only 67 percent of children live in a household with both parents; a number of children (11.73 percent) (roughly equivalent to the number of orphans) reside with other relatives or a single parent (predominately the mother).

The population, as a whole, has received little education. Among persons older than five years, 2.6 million people (25 percent) have attended primary school, but only 249,019 persons (2 percent) have attended secondary school and a mere 8,877 people (0.08 percent) have attended university. At the time of the 2008 census, about 3.8 million persons in the over-five population were deemed illiterate, whilst only 18 percent of this same cohort was recorded as literate in the official (English) and the main non-official (ChiChewa) languages. Young male and female Malawians, however, are better educated than their parents, with the rate of literacy among 15- to 24-year-olds at 85 percent for males and 80 percent for females, though the goal of universal literacy remains elusive, as only 57 percent of children aged 10 to 14 are considered literate (NSO, 2008a). Apart from young persons attending school, the labour market participation rate is high. The 2008 WMS, for instance, reported that, among the adult working population (above 15 and below 65 years), labour force participation was 86 percent (96 percent among urban residents), implying that most Malawians were either working or actively seeking employment.³ About 3 percent of the population is recorded as being incapable of performing work due to infirmity. Most of those recorded as not working are in fact engaged in various household duties, including childcare. Among the economically active population, 88 percent of women and 72 percent of men reported working in agriculture for themselves (in other words, as self-employed smallholders). The WMS data (NSO, 2008b) reveals that 2 percent of men and 1 percent of women report their main source of remuneration as payment from casual labour or 'ganyu', as it is known locally. This is significant, as it confirms that the overwhelming majority of smallholders derive their main income from on-farm (own) agricultural activities and not paid labour, whether formal or informal. There are few formal employment opportunities within Malawi (with only 8 percent of the labour force receiving monthly payments in wages or salaries) and few non-formal opportunities outside agriculture.

Whilst the rural population is substantially engaged in farming activities, the demand for labour varies at different points in the season, resulting in labour shortages and seasonal or temporary unemployment. The MPVA Report (GoM, 2006:41) argues that the main challenge of the labour markets is (seasonal) underemployment corresponding to the fluctuation in labour intensity across the agricultural season, which peaks during the periods of land preparation, planting, harvesting and post-harvest crop management. Scholars argue that, as a result of the high demand for labour during this time, the poor are often enticed (or compelled, if food-insecure) to take up casual labour employment. Though this decision may have impact on their home production, the decision

³ The WMS defines labour force participation as the proportion of the population 15 years and above who are employed and unemployed (looking for and ready for work).

has been shown to be perfectly rational, as the returns from casual employment can exceed the on-farm productivity gain from tasks such as secondary weeding (Orr, et al., 2009). The MPVA (GoM, 2006) estimates that approximately 5.2 percent of the adult male population can be considered to be time-poor, i.e., exhaustively engaged in agricultural endeavours (working more than 70 hours per week), whereas 15 percent to 20 percent of the same population are regarded as underemployed (i.e., working less than 10 hours per week on an annual basis). On average, working adults aged 15 years and above work varyingly between 33 hours to 43 hours per week across the year (GoM, 2006:42). Seasonal unemployment is considered to disproportionately affect individuals within the poorest quintile of the distribution of consumption income per capita (GoM, 2006:41). The MPVA report considers that, for adult women, seasonal underemployment is less evident due to the gendered nature of household labour, wherein women undertake the largest share of domestic work, including child rearing. This characterization of seasonal unemployment, though difficult to quantify, potentially undervalues the engagement of the rural population in non-agricultural and livelihood activities, such as house construction, natural resource harvesting, trade and family-related reciprocal duties that can sustain high rural labour demand and minimize unemployment.

2.2. Macroeconomic Trends

From the late 1970s to the mid-2000s, the Malawian economy grew slowly, with GDP per capita (in constant terms) fluctuating annually and the major downward swings of 1992, 1994 and 2001 corresponding to years of drought. Since 2004, the Malawian economy has grown rapidly. Annual production increases in maize, the country's main food crop, have contributed significantly towards GDP growth (Durevall and Mussa, 2010:55) and, at the household level, had a positive income effect (see Dorward, Chirwa, et al., 2008). Over the period 2004 to 2009, Malawi outperformed its LDC neighbours, Mozambique and Zambia, in maize productivity enhancement, performing nearly as well as the large-scale commercial farmers in South Africa. Smallholder in Malawi enhanced their production in response to market incentives (and took advantage of the favourable growing seasons). Data from FOASTATS shows that, over this time, Zambian maize production rose by 8 percent, Mozambican by 14 percent, Malawian by 58 percent and South African by 64 percent. Because the increases in Malawi correlate with a period of sustained input subsidization, this achievement correlates with a period of input subsidization, as did the similarly enhanced output achieved in the period 1998/1999 to 1999/2000. In both periods, the common denominator was the transfer of cheap fertilizer and higher-yielding seed to small farmers, though rainfall had an important role as well.

GDP rose (in constant 2005 prices) from USD 2.76 billion in 2005 to USD 3.74 billion in 2009, a growth of 35 percent (RBM, 2009 and RBM, 2010). Crop and animal production provide the largest subsector contribution towards GDP. Smallholders account for the bulk of agricultural output in all sectors apart from sugar, tea and flue-cured (Virginia) tobacco, although smallholders produce over 90 percent of burley (air-cured) tobacco. Smallholder output has significantly increased in this time and, although this growth has been uneven between seasons, the evidence over the long run shows a rate of expansion that exceeds population growth. The contribution of crop and animal production to GDP has risen from 27 percent in 2005 to around 32 percent in 2009 in constant terms. The second-most important subsector is wholesale and retail trade, which accounts for roughly half of this level. The growth in the economy has translated into higher Gross National Income (GNI), which rose from USD 170 per person in 2004 to USD 280 per person in 2008. Over this period, inflation fluctuated on a downward trend to about 7.5 percent in 2010.

Several economic drivers have contributed towards this seemingly impressive macroeconomic performance. Foreign direct investment rose substantially from 2004 onwards, led by a single mining investment (Malawi is poorly endowed in mineral resources). There were also significant improvements in the price of agricultural commodities, including tobacco (Malawi's main export) and tea (Malawi's third major export), thus bolstering the government's revenue position. The production (in volume terms) of tobacco and tea reached a high point in 2009. Although some commodity prices (notably tea) are currently in a downward cycle, burley tobacco prices improved from 2007 benefiting government revenue and smallholder producers. Tobacco exports accounted for 67 percent and 65 percent of the total value of domestic exports in 2008 and 2009, respectively. In both years, agricultural commodities (counting tobacco, sugar, tea, coffee, cotton and legumes) accounted for approximately 80 percent of the value of exports.

Malawi was afforded debt relief under the Highly Indebted Poor Countries/Multilateral Debt Relief Initiative in 2006 (International Monetary Fund (IMF), 2006). Debt relief has significantly relieved pressure on the revenue account and enabled the ruling wa Mutharika government to undertake far-sighted policy interventions, notably provision of productivity enhancement support to smallholders. Still, the country remains heavily dependent on direct donor funding and programmes. In this respect, the government's revenue position has benefited from a continued inflow of grant funding into the health and education sectors, for food security/SP measures, and as balance of payment support. Grant funds accounted for approximately 26 percent of total government revenue in 2005, 28 percent in 2006, 41 percent in 2007, 21.2 percent in 2008 and 17.2 percent in 2009 (RBM, 2010); the diminished figure in 2009 reflects the withholding of disbursements as donors awaited IMF approval of a new programme for Malawi. Foreign aid has increased from roughly USD 500 million per annum in 2004 to USD 900 million in 2008 (Durevall and Mussa, 2010:90). The present government has largely abided by its commitments to the IMF to maintain fiscal discipline, adhere to budgets and maintain parliamentary oversight. Its record of prosecuting corruption within the civil service, preventing the subversion of development programmes by the political elite,⁴ and addressing the process of 'quiet corruption' that hinders doing business in the country is much less impressive.⁵ Grassroots opposition to the wa Mutharika government intensified from circa 2010 in response to foreign exchange shortages, rising fuel costs and high unemployment. In 2011 wa Mutharika expelled the British High Commissioner, as evidence of his criticism of the Malawi government became public via WikiLeaks, resulting in the suspension of donor aid. As the country's economic situation rapidly deteriorated from this point, the wa Mutharika government was confronted with nationwide protests and opposition from within the ruling party. Wa Mutharika passed away in April 2012 and was succeeded by the suspended vice president Joyce Banda. The impact of this crisis of leadership and allied fiscal instability on the agricultural sector and smallholder output is outside of the scope of this paper.

The Malawian macroeconomic profile also contains structural weaknesses and expenditure dependencies. The economy relies heavily on agriculture. Shocks to production and profitability—such as drought, rising input prices or falling commodity prices—have a major impact on growth and livelihoods. Over the past two decades, the negative impact of drought on GDP is evident, especially in 1992, 1994, 2001 and 2004. The country has a large trade deficit, driven through growth in consumption and an increasing dependence on imported foods in certain categories (such as wheat) that the smallholder sector is unable to produce. Since 1994, local manufacturing capacity has weakened in all sectors, apart from the provision of electricity and water and mining. In the food, beverages and tobacco subsector, the index of industrial production (1984 = 100) plummeted from a level of 165.4 in 1994 to 68.4 in 2006. In contrast to manufacturing, the economy has been aided from rapid growth in mining and quarrying, information and phone communication, financial services and services relating to the provision of education and health care (RBM, 2010).

Whilst broadly committed to strengthening the market, the current government has sought to intervene in its operation at various levels to reduce price volatility and to improve market inefficiencies. In recent years, for example, it has adjusted upwards and sought to fix prices for strategic crops, including tobacco, maize and cotton. Whilst these actions have in some instances achieved popular results, they have also had unintended impacts, such as causing buyers in the private sector to withdraw from markets (cotton) and raising transaction costs (on fertilizer distribution) (see Dorward, Chirwa, et al., 2010). Private-sector agribusiness in most crop sectors, bar tobacco, is still weakly positioned, having been excluded from markets during the Banda era, when parastatals monopolized the supply of inputs and crop sales. The development of private fertilizer distribution into remote districts was gradual and free input and input subsidy programmes were seen (from industry perspective) as an opportunity to develop and a threat through which distribution was again monopolized by state companies. Another area of concern relates to the overvaluation of the kwacha against the US dollar, causing foreign exchange shortages (Durevall and Mussa, 2010:84–86). Since 2006, the government's

4 The president's decision to exhaust the country's limited foreign exchange reserves in order to procure a presidential jet is one example of these failings. See en.wikipedia.org/wiki/Bingu_wa_Mutharika.

5 The International Finance Corporation's 'Doing business 2011' report notes that Malawi has made important steps towards improving the business environment through easing the process of property transfers and improving opportunities for the enforcement of contracts in lower courts (2010:139), but barriers in some sectors (such as construction permits) are onerous by global comparison.

monetary approach has pegged the value of the kwacha to the dollar through controlling foreign exchange sales to the private sector; the rationale has been to reduce inflation and prevent the occurrence of price spikes, which would happen if the kwacha were to devalue. The strategy has helped to reduce the cost of inputs (especially fertilizers) and enabled consumers to sustain their dependence on cheap imports of food and consumer goods. But the risks of these measures on long-run economic development are considerable. A recent ILO study warns that the overvaluation will ultimately harm domestic industry as a consequence of the natural resource curse, leading to job shedding, whilst the comparatively high rate of inflation will erode the profit on exports over time (on the pitfalls of this strategy, see Berry, 2008). The small size of the manufacturing sector, at this point, lessens the scale of the immediate danger from currency overvaluation.

2.3. Poverty

As Malawi is a predominately rural nation of subsistence farmers, the character of poverty there has been shaped by the structural features of the rural economy: over 90 percent of households produce their own food on small landholdings using traditional farming methods; the majority of rural households derive their main source of income from crop sales; the population is very young and fast-growing, burdening households with a high dependency ratio; and poverty is deep and widespread, with the income gap between the poor and non-poor fluctuating seasonally so that households periodically move into and out of poverty.

The World Bank and the Government of Malawi (GoM) commissioned in 2006 a state-of-knowledge investigation into poverty and vulnerability, drawing upon the most up-to-date data from the NSO IHS2. One of its main conclusions was that 'poverty is pervasive and not merely the situation of the lowest economic groups'. It found that the poverty level (using NSO benchmarks) had not improved in the period between 1998 and the assessment (c. 2004). However, it recognized that poverty is a fluctuating dynamic, with two thirds of all households having at some point moved either into or out of poverty over the course of the decade after democracy. Their definition of poverty focused on total annual consumption expenditure per capita, taking into consideration an individual's food requirements and other non-food consumption needs. It should be noted that the IHS definition is not weighted by age structure, which is significant, given the large share of the population that comprises children.

Employing a regression analysis of per capita consumption, the MPVA identified these main correlates of poverty: household size, education, access to non-farm employment, access to irrigation, proximity to markets and trading centres and tarmac roads, landholding size and engagement in cash crop production. Female-headed households were correlated with lower consumption levels. It found, contrary to past assumptions, that the presence of orphans within the household had no pronounced influence on poverty levels, a finding that has since been confirmed in other studies (Devereux, Baulch, et al., 2006:53). It found that larger households are poorer than smaller households, with consumption declining by about 5 percent for each additional child. Households whose head had completed primary education had higher per capita consumption (12 percent on average), as had households that operated off-farm businesses. The average landholding size per household, as reported in the IHS2 survey, was 1.2 hectares, equivalent to 0.33 hectares per capita. Land is held under communal tenure and all land that is not cultivated is (in effect) available for common grazing; the main large livestock that use the commons are cattle and goats. There are significant regional variations in landholding size. Landholding size diminishes in the Southern Region, whilst individual landholdings are slightly larger in the Northern Region. The non-poor have larger landholdings; however, as the MVPA points out (GoM, 2006:xviii), even cohorts in the highest consumption deciles have relatively small landholdings, which are significantly smaller than the average size of tobacco estates (12 hectares to 20 hectares) held by the elites under leasehold title.

While larger landholdings could be correlated with a slight improvement in household consumption per capita (4 percent per additional hectare) (one reason for the small increase is that larger landholdings include inferior arable land), access to wetlands/irrigated lands for winter cropping was considered to have an even more significant impact. These wetlands enable smallholders to produce vegetables and maize for household consumption without mechanical irrigation during the dry season (when rain-fed cultivation is not possible), which extends from May to October. The assessment found that the proximity of smallholders to

Country Profile

trading centres and transport infrastructure is correlated with poverty, with household consumption declining over distance. These determinants have not changed significantly since 2004. What has changed, as we discuss below, is the scale of the influence of cash and food crops. The MPVA report notes that “cash crop production is an important path out of poverty”, whilst the per capita consumption of smallholders who produce tobacco is 6 percent higher on average.

Table 1: Indicative Features of Poverty

	Ultra-poor	Poor	Non-poor
Scale c. 1998–2004	22%	30%	48%
Scale c. 2005–present	15%	25%	60%
Household head	Female (as well as Male)	Male (some Female)	Male
Land	No access to wetlands Landless Landed, but extremely low productivity levels	Landed, but low productivity levels No or limited access to wetlands	Access to wetlands Larger/more fertile landholdings
Labour	Predominantly household	Household, plus extended family	Household, plus extended family Casual workers are employed in peak season
Assets	Minimal	Minimal	Minimal 3% of households have oxcarts 62% of households have radios
Education	Household head limited schooling	Household head completed primary school	Household head completed primary school
Household size	Large household	Smaller household	Smaller household
Geographical factors	Far from trading centres/roads		Close to trading centres/ tarmac roads
Cropping focus	Food crops	Food crops, with some investment in cash crops	Maximum investment in cash crops, minor investment in food crops
Off-farm economic activities	Piece-work and resource harvesting	Piece-work and trading	Trading and small enterprises

Source: Based on MVPA (GoM, 2006) and IHS2 (NSO, 2005) findings.

The MPVA report distinguished between ultra-poor, poor and non-poor households, a distinction made in the first IHS (NSO, 2005:138). The socio-economic characteristics of these cohorts are described in Table 1. In the IHS2, poor households were defined as those whose annual per capita consumption expenditure was below USD 0.50 per day (MK 16,165 per person per year), which was considered to be an appropriate poverty line.⁶ Within the poor population, ultra-poor households were defined as households whose total annual consumption expenditure on food and non-food items was lower than the minimum food expenditure deemed necessary to sustain a person’s existence on the basis of the recommended daily calorie requirement. The survey set a poverty line of MK 10,029 per person per year as the cut-off. The IHS2 determined that, in 2004, 52 percent of Malawian households were poor, whilst 22 percent of the total population of households—in effect, just under the half of the poor—were ultra-poor. This state of household poverty at the national level mirrored the findings of the first IHS, undertaken in 1998, which estimated that 53.1 percent

⁶ This benchmark is considerably lower than the UNDP poverty line of USD 1.25 per capita per day.

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of households were poor and 23.6 percent were ultra-poor. In 2004, the average person had an income about 63 percent of the poverty threshold in terms of adequate per capita consumption requirements; the income shortfall, according to the MPVA, equated to about 16 percent of GDP (GoM, 2006:234).

The NSO reassessed the scale of poverty (in terms of consumption expenditure per capita) annually from 2005 to 2008 through its Welfare Monitoring Surveys. The 2008 WMS reports a reduction in the proportion of poor and ultra-poor. It found that the number of poor households within the total population had declined on a yearly basis: according the latest survey, 40 percent of households were poor, with the rate of decline sharpest among the urban population. A reduction in poverty was also evident among households in the lowest income quintile (i.e., the ultra-poor). It reported that the proportion of ultra-poor households had annually declined from 22 percent to 15 percent. This reduction in poverty was evident in all three regions, although the rate of decline in poverty has been comparably slowest in the Central Region, the heart of the tobacco economy. The reduction in poverty in the Southern Region can be least attributed to tobacco (only 9 percent of households grow tobacco), so the path out of poverty must owe to food crops (maize and pulses) and off-farm income. The absence of piece-work opportunities on tobacco farms may possibly account for the comparatively slower decline in ultra-poverty within this region. In contrast, the availability of these work opportunities in the Central and Northern Regions may explain the far lower proportion of households in the ultra-poor cohort who thus benefit from seasonal work.

Table 2: Proportion of Households That Own Selected Assets (2004 vs. 2008)

	Household Assets								
	House (owned)	Bed	Table	Radio (wireless)	TV and VCR	Bicycle	Ox cart	Hoe	Axe
IHS2, 2004									
Urban	42	64	55	50	18	20	0	59	42
Rural	86	26	32	55	2	38	2	95	65
1st quintile	91	16	22	46	0	28	1	96	60
2nd quintile	89	20	26	50	0	33	1	95	63
3rd quintile	87	24	32	55	1	37	1	94	64
4th quintile	81	31	37	58	2	40	3	92	64
5th quintile	64	48	47	59	12	39	3	82	59
WMS, 2008									
Urban	41	78	82	87	35	33	1	62	45
Rural	91	35	42	62	7	49	3	96	66

Note: Proportion of households owning selected assets. The MVPA reports that asset depletion is an important coping strategy for households affected by shocks. The 2008 FINSCOPE study found that 74% of adult respondents are saving in cash or kind. The study found that 1.15 million Malawian (19%) are banked.

Source: IHS2 (NSO, 2005); WMS (NSO, 2008b).

The IHS and WMS collected data on assets that, although not comparable across expenditure quintiles, reveal a narrow gradient in asset ownership between the poor (1st quintile) and non-poor (5th quintile); the data is shown in Table 2. In most of the assets under consideration, the difference between poor and non-poor is negligible. The WMS reveals that the household asset position of the rural population improved from 2004 to 2008 in all assets (apart from axes); non-productive assets (furniture, radio/TV and bicycles)

increased the most, improving from a low base. The number of households with ox carts (a proxy for farm productivity) remains very small and highlights one of the obstacles to further enhancing agricultural output and accessing markets. The low level of farm technology presents a similar hurdle.

Apart from assets, most smallholders have some form of savings, although most do not bank but retain cash reserves. The Finscope survey (2009) found that 74 percent of adult respondents were saving either in cash (62 percent) or in kind (38 percent), such as investing in livestock or purchasing farm inputs. The respondents said that their main reason for saving was to reduce the impact of shocks, especially illness and death. Despite their intention to save, 80 percent of the respondents claimed that there were times of the month during the year, especially towards the end of the dry season, when there was no cash in the household, a finding that highlights the high levels of vulnerability amongst the poor.

The 2008 WMS reported an improvement in the nutritional status of children under the age of five since 2004. This achievement is partly attributable to increased household food availability and partly to the scaling up of nutritional programmes. The report shows that the proportions of underweight, stunted and wasted children have decreased. There remain major challenges in terms of food insecurity, poor nutrition and low income. The MPVA deduced that the cause of malnutrition could not be attributed to the depth of poverty alone, as chronic malnutrition was observable in all consumption quintiles. Moreover, landholding size was not demonstrably positively correlated with malnutrition, whilst less stunting was found in female-headed households. Poor nutrition reflects inadequate diet (and micronutrient deficiency), a problem that seems most pronounced in households of undiversified farming systems. Despite recent improvements in national maize availability, there are still food-insecure households, some as a result of livelihood shocks specific to certain geographical localities or the food price spikes that precede each maize harvest. But the weight of evidence suggests that household resilience across all wealth quintiles — excluding the destitute — has strengthened.

2.4. Vulnerability

The periodic vulnerability of rural Malawians to hunger and chronic food insecurity has attracted global attention, most recently in 2001 and 2002, when hunger was widespread. There is an extensive body of literature on this topic. The prevailing view is that the Malawian poor are caught in a worsening 'poverty trap' (Devereux, Baulch, et al., 2006; World Bank, 2007).⁷ It is thought that the vulnerability of the poor has, over time, been ratcheted upwards (Dorward and Kydd, 2004); the ratchets include failure of markets, labour scarcity, land shortage and a rising household dependency ratio. One scholar contends, "Malawians are more vulnerable today than in the past because hazards appear to have increased — rainfall and food production are erratic, HIV/AIDS is spreading, markets are weak and prices are volatile — and their ability to cope has declined — livelihoods are dangerously undiversified, repeated shocks have eroded assets and savings, informal networks are less willing or able to provide assistance" (Devereux, Baulch, et al., 2006:14).

Livelihood shocks occur annually to some portion of the population, as a result of their geographic location (situated in a flood or drought locality) or impoverished position and thus inability to overcome a minor deviation in, for example, rainfall distribution. These shocks are referred to as covariate shocks (following the tradition set by Binswanger and McIntire, 1987). Households are also vulnerable to individual or idiosyncratic shocks that affect the family alone, such as death, disease or indebtedness. Shocks to smallholder livelihoods, whether covariate or idiosyncratic, can cause non-poor households to move 'in' to poverty or the poor to become ultra-poor for so long as it takes them to recover their position. The process of moving 'in and out' of poverty is now well recognized in the Malawian literature (see GoM, 2006; Devereux, Baulch, et al., 2006).

The IHS2 sought to quantify the extent of vulnerability within the population. The survey found that the majority of households had experienced some form of severe livelihood shock in the preceding five years. Table 3 details the most commonly reported shocks. There is a general consistency in the nature of the shocks experienced across income quintiles (GoM, 2006:60). These shocks affect

⁷ It should be noted that the notion that the poor are unable to make rationale economic decisions between labour market participation (and other forms of off-farm income) and on-farm production, as part of this entrapment, has been dispelled (see Orr, et al., 2009).

households in two respects. One set of shocks, those relating to prices and production, undermined the ability of the household to meet its food needs, which, in turn, affected its welfare and income. The other set of shocks, those relating to illness and death, had a direct impact on household income, requiring an expenditure outlay. It should be recognized that the original survey was undertaken at a time of declining maize production, falling tobacco prices and fluctuating maize prices. Household vulnerability to food insecurity had intensified. At this time, household concerns over health were also at a high point because HIV prevalence seemed to be on an upward trajectory. The fear of death and illness at that time would be understandable.

Table 3: Proportion of Households Affected by Severe Shocks, c. 2004

Shock	All	Urban	Rural	Male-headed	Female-headed
Rise in food price	77	61	79	78	75
Reduction in crop output (drought/flooding)	62	16	69	61	68
Illness of household member	46	27	48	45	47
Death of family member	41	29	42	40	41
Fall in the price of crops	38	5	43	40	31
Crop disease/pest damage	24	5	26	24	24
Livestock loss	33	5	37	34	31

Source: IHS2 (NSO, 2005); WMS (NSO, 2008b).

A more recent survey undertaken in 2007 found that most of these shocks remained relevant. But a new concern now topped the rankings: about one third of the respondents reported being affected by the shock or stress of low crop yields due to poor soil fertility (see Dorward, Guenther, et al., 2008). This can be interpreted as their uncertainty of access to inorganic fertilizers. The IHS2 survey investigated the strategies that households had used to overcome shocks. Sixty percent of households did nothing at all, but managed to survive the crises without undermining their livelihoods. The most common coping strategy (37 percent) was to intensify their labour on-farm or elsewhere. About one quarter of households survived through reducing consumption and adopting asset-depletion strategies such as spending cash savings, selling assets and animals and borrowing money from relatives (NSO, 2005:137). The MPVA reports that the most common ex ante strategies at this time were income diversification, crop diversification and migration (GoM, 2006:xxvi).⁸ Labour migration has historically been an important strategy for the poor to cope during crisis (livelihood shocks) and a medium-term strategy to accumulate household assets and income. The main regional destination for Malawian migrants is South Africa.

Despite improvements in national food production since 2004, the threat of food insecurity remains a major source of vulnerability for the rural population, especially those households that are (partially) reliant on food purchases. Throughout the past decade, the price of the main food staple, maize, has exhibited a seasonal fluctuation, responding to supply and demand conditions (MoAFS market price data). In the months after August, when household food supplies begin to run low, to January, when the first green maize of the new season enters the market, food-insecure households are vulnerable to the shock of steep rises in maize prices. A

⁸ Migrants provide an important source of income to their families, transferring funds within the country and from abroad. The scale of remittances through formal financial institutions from outside the country is relatively small, estimated at about USD 1 million per year (Durevall and Mussa, 2010:38). The Finscope study found that half of the Malawians who held bank accounts (about 20 percent of the adult population are banked) needed such accounts to receive remittances. Around 15 percent of Malawians reported that they either receive or send money within the country each month (Finscope, 2009).

sharp increase in maize prices will affect the ability of households, especially that of poor households, to meet the balance of their food requirements from conventional markets. If other sources of food are not obtainable through non-formal markets and intra-family reciprocity, this situation can result in a shortfall in household food entitlements, ending in hunger and nutritional deficiency. Maize prices in 2008, for example, more than doubled from USD 0.23 per kilogram in May to USD 0.50 in February 2009 before the first new crop entered the market. The Malawi Vulnerability Assessment Committee (MVAC) has identified tens of thousands of households as being food-insecure—in terms of missing household food entitlements—in the two previous seasons. In the 2008/2009 season, MVAC quantified the food-insecure population as up to 275,000 persons, whereas, for the 2009/2010 season, the MVAC determined the figure to be 1.1 million persons, or 8 percent of the population (FEWSNET, 2009; MVAC, 2010). In both seasons, their findings have led to a call for a resumption and intensification of food aid in the form of free food distribution and other measures to provide a more substantial 'safety net'.

3. Social Protection

Over the past two decades, initially in response to the strategic recognition that structural adjustment policies could not redress poverty (see Harrigan, 2003), measures have been instituted to reduce the vulnerability of the rural population to external shocks. The evolution of the current array of SP interventions was influenced from two directions: from one side, policies were shaped by the necessity to implement safety net measures, especially food aid, in support of humanitarian relief; from another side, the policies and programmes were shaped by the long-term development objective of enhancing growth within the agricultural sector and, in particular, of improving the capacity of smallholders. On both sides, protagonists contested the nature of SP and its role in reducing poverty and strengthening resilience, resulting in frequent changes to policy and the rearticulation of programmes. The contestation over SP has continued into the present time and it is therefore important to locate current programmes within their historical and political contexts.

3.1. Historical Shifts in Development Policy

Agricultural policy and government strategies for rural development have undergone significant changes since independence. The major institutional actions that have shaped SP in Malawi over time are summarized in Table 4. Whilst these shifts reflect various other economic and political influences, most policies have been influenced (to different degrees) by the president, first President Banda (1964–1993), who led the country to independence, then President Muluzi (1994–2004), who spearheaded the transition to multi-party democracy, and President wa Mutharika (2004–2012). The changes in policies and refinement in strategies are thus categorized by presidency. Throughout this period, the shifts have been affected by three ideological considerations. First, there was the gradual recognition (among the Malawian political class) that the position of independent small farmers is central to agricultural growth and poverty reduction, which required a redirection in policy emphasis away from large enterprises and resettlement schemes. Second, there was the gradual recognition (among the donor community) that neo-liberal remedies could neither achieve agricultural growth nor poverty reduction and that direct support to small farmers was necessary to achieve green revolution goals. Third, there was the contestation between government and donors (and among donors themselves) over policy, with donors seeking to micro-manage programmes to achieve equity and efficiency, but causing ongoing programme redesign and reversals.

The Banda Era (1961–1994)

Upon Malawi's gaining of independence, President Banda sought to redress the marginalization of the indigenous peoples and serve the class interests of the ruling Malawi Congress Party's (MCP) main constituents, comprising civil servants and urban wage earners; whilst urban, both stakeholders held strong interests in farming. There were four main aspects to the strategy he directed to achieve this objective.⁹ First, the government sought to develop large-scale agricultural schemes to enable smallholders to produce crops under intensive farming systems; these were supported by World Bank-funded Rural Development Projects. Second, it alienated large landholdings that were then awarded to parastatal agribusiness entities to produce select commodities (tea and tobacco). Third, it sought to provide opportunities for the middle class and political elites to acquire private landholdings ('estates' under 99-year lease hold tenure) on which to produce tobacco, a crop that smallholders were not permitted to grow. The area under estates grew from about 79,000 hectares in 1970 to about 1,180,000 hectares in 1998 (Olney, et al., 1998:4). Fourth, the state sought to restrict private-sector opportunities to trade consumables and agricultural commodities, allowing parastatals (notably ADMARC) to dominate input and output markets.

⁹ This subsection draws upon the writings of T. Mkandawire (1997), J. Harrigan (2003), W. H. Masanjala (2006) and P. E. Peters (2006).

Table 4. Timeline of Key Institutional Actions for Social Protection

1964	Malawian Independence
1968/1969	Integrated Rural Development Projects in Lilongwe, Shire Valley and Karonga districts
1978s-1990s	National Rural Development Programme; first of four World Bank-funded programmes
1971	The Agricultural Development and Marketing Corporation (ADMARC) established by an Act of Parliament and mandated to market inputs and crops for smallholders.
1986	State of Development Policies (DEVPOL); revised rural development strategy for the period 1987–1996, which ended in 1995
1988	The Smallholder Agricultural Credit Administration (SACA) was established as an organization within the Ministry of Agriculture to supply smallholders with agricultural credit; scheme collapses c. 1992
1994	Change of government: United Democratic Front
1994	Malawi Rural Finance Company established as an independent legal entity to provide farming input credit to smallholders, thus replacing SACA
1995	Agricultural and Livestock Development Strategy and Action Plan (ALDSAP) launched
1995–present	Malawi Social Action Fund (MASAF) established as the major social protection instrument to mitigate social aspects of adjustment, funded through World Bank loans
1998–2000	Government implements Starter Pack Programme
2001–2004	Government implements the Targeted Inputs Programme (TIP)
2000	Government launched the National Safety Nets Strategy
2002	Government initiates a National Safety Nets programme under the World Bank-supported Malawi Poverty Reduction Strategy (MPRS)
2004	Change of president: Dr. Bingu wa Muthrika
2005	Government implements the Agricultural Inputs Subsidy Programme (AISP)
2006	The Malawi Growth and Development Strategy (MGDS) 2006–2011 launched as the successor to the MPRS. Policy specifies objectives to achieve social protection and disaster risk management as a specific developmental theme. Government commences the Agriculture Sector Wide Approach (ASWAp)
2009	Government launches a Social Support Strategy

The Banda strategy was successful in fostering rapid economic growth. In the period between independence and the late 1970s, the economy (GDP) grew at 5.5 percent per annum, propelled through the rapid expansion of the estate sector (which grew 17 percent per annum) and gradual reorientation within the smallholder sector towards commodity production (which grew at 3 percent per annum) (Harrigan, 2003:848). By the late 1970s, the government had settled on an overarching strategy for promoting growth within the smallholder sector, as articulated in the first DEVPOL. The strategy was based on the transfer of green revolution technologies (higher-yielding seeds as well as mechanization), the establishment of a pan-territorial infrastructure to provide agricultural extension services, credit support for commodity producers, and market access through ADMARC. The success of this strategy was to be measured, politically, in terms of maize production. The World Bank channelled funding (approximately USD 179 million) towards these objectives through successive National Rural Development Programmes. Whilst the Breton Woods institutions had

bought into aspects of this strategy, it simultaneously used Structural Adjustment Loans (SAL) to reduce the role of the state and promote price reforms, aggressively pursuing a neo-liberal agenda. The country obtained SALs in 1981, 1984, 1986 and 1988 in a period that one scholar has described as enforced adherence to the principles of ‘pricism and state minimalism’ (Harrigan, 2003). The most contentious aspect of these reforms was the requirement for the staggered removal of fertilizer subsidies, to which the government grudgingly agreed. At this time, fertilizer subsidies primarily benefited the estate sector and non-poor smallholders, largely those organized in commodity club structures (cotton, coffee).

The second DEVPOL commenced in 1987. The new development strategy was set against the backdrop of a major production shortfall in maize and stagnating national economic growth, due in part to the impact of the civil war in Mozambique. Unlike in the earlier DEVPOL, the government in this phase was better able to resist the pressure for further liberalization, not least because strategists at the World Bank had begun to recognize that the poor sequencing of price reforms and lessening of state support for smallholder agriculture had, in fact, hindered growth (see Harrigan, 2003:849). In 1987, under President Banda’s direction, the government reintroduced the provision of fertilizer subsidies (22 percent below market price) and increased maize prices (raised by 36 percent). It was subsequently agreed to prolong the process of subsidy removal. According to the terms of the fertilizer subsidy removal programme under the 1998 SAL, smallholder producers were expected to meet the full costs of inputs by 1998. In order to cushion the anticipated negative impact, the government sought to extend seasonal credit from 16 percent of smallholders to between 25 percent and 33 percent of all smallholders through the mechanism of the Smallholder’s Agricultural Credit Administration (SACA). SACA initially succeeded in this goal, though its fortunes were tied to those of the ruling MCP and the service collapsed in 1993 (on the eve of political transition) as a consequence of wide-scale loan defaulting.

A more pro-poor agricultural development strategy began to emerge, ironically, as the power of the Banda era started to wane. The need for smallholders to be afforded more substantial support and better access to markets was underlined during the 1992 drought when maize production fell to a low point and hunger was widespread. The resulting humanitarian crisis was mitigated through the provision of food aid and distribution of agricultural inputs packages (maize seed and fertilizer) to smallholders. At the same time, the government was pressured by the IMF/World Bank to undertake further liberalization reforms, including (most significantly) reduced barriers for smallholders to grow tobacco.

The Muluzi Era (1994–2004)

The MCP was defeated at the 1994 multi-party elections. Bakili Muluzi, a wealthy businessman and trader, headed the new government. The political heartland of the United Democratic Front (UDF) and its allies were the urban poor and marginalized smallholders in the Southern and Northern Regions. It had no allegiance to the urban elites and the tobacco estate owners who had become the main power base of the MCP. The UDF sought to appeal to these constituents through a populist, pro-poor rhetoric and by instituting policies that would provide modest welfare gains for all Malawians in primary health and education as well as transfers of agricultural inputs and free food.

The Muluzi government has been described as pursuing a strategy of neo-patrimonialism through financially rewarding its clients and supporters. Its failings in governance are well noted (Chinsinga, 2007); during this era, corruption became pervasive within the civil service, whilst their performance in carrying out their duties deteriorated quickly. The government’s control of the macroeconomy was weak, resulting in rapid inflation and accumulating debt. Similarly, the senior leadership lacked capacity (and will) to shape policy, allowing donors to determine key policies for agriculture. This era has been described as a period of policy discord. Despite these criticisms, the UDF leaders were politically attuned to the welfare needs of the rural poor and sensitive, in particular, to their ambitions to move out of poverty and live better than their forefathers had under President Banda. The mood for self-improvement was captivated in the government’s support for Vision 2020 (National Economic Council, 1998), a strategy adopted in 1999. Within the framework of this vision, ordinary Malawians desired to see themselves better-clothed, better-educated, better-advanced and wholly non-poor.

The Muluzi government's initial strategic intention was set out in the ALDSAP. This development plan sought to overcome the dualism in Malawian agriculture through positioning smallholders at the centre stage of agriculture support services (MoALD, 1995). Its main pillars were to enhance maize productivity, significantly extend opportunities for smallholders in tobacco, and reform institutions, thus providing greater scope for private-sector involvement in input and output markets. As a consequence of these changes, smallholder output in tobacco and maize increased at a significant rate after 1994 (although the latter with unevenness), whereas estate-sector output went into decline. Whilst smallholders did benefit from market openings, the scale of government support towards the sector did not match the ALDSAP objectives. From 1986 to 2002, expenditure on agriculture from the revenue account (i.e., recurrent expenditure on operational costs) steadily fell from a high of USD 430 million in 1989/1990 to USD 373 million in 1998/1999, whilst expenditure from the development account (i.e., investment in programmes and infrastructure development) fell significantly between 1994 and 1998 (Charman, 2004:46–53). The decline in investment was felt most sharply at the Agricultural Development Division (ADD) (i.e., sub-regional) level, where specialist services were effectively discontinued. Moreover, investment in the main institution responsible for training field extension officers decreased from USD 962,254 in 1990/1991 to less than USD 250,000 in the late 1990s, with the college then closed down temporarily. Against this backdrop of sharply declining resources, the donor community was able to strengthen its hand in policy-making, using the resources they could muster as bargaining chips. Weak leadership within the Ministry of Agriculture permitted numerous donor programmes (notably those of the European Union (EU), the United Kingdom (DFID), the United States of America (USAID) and Japan) to pull in different directions, each seeking to shape and influence agricultural policy in its own fashion.

Disagreement over policy between government and donors (and among the donors themselves) continued throughout the Muluzi era. One of the main areas of disagreement concerned the role that parastatal bodies should fulfil in the agricultural sector, including the function of ADMARC, the National Food Reserve Agency (NFRA) and the Smallholder Farmers Fertilizer Revolving Fund Mechanism (SFFRFM), all of which government sought to sustain, but, lacking the financial means, was unable to do. The donors agreed that these institutions (notably the food reserve) were costly to maintain and that the emerging private sector could fulfil its role in input/output markets more effectively and with greater cost benefits for consumers. The discord was tempered after 2001 as a result of a moderate food crisis, when maize production fell and the institutional mechanisms intended to ensure maize availability and household accessibility were found wanting. The experience of the subsequent 2001–2003 period demonstrated the case for maintaining a strategic grain reserve and the ADMARC regional network of farm gate markets. From the government's perspective, the experience also justified the role it had taken in 1998 to implement a national inputs subsidy programme that provided a 'starter package' (comprising fertilizer and maize seed) to all smallholder households, enabling them to enhance maize production. The downscaling of this programme in 2001, on donor advice that the measure was unaffordable, demonstrated the importance of input subsidies to smallholder output. However, the Muluzi government had become fiscally (and intellectually) too dependent on donors to refashion policy into a strategy that could build on these lessons.

From about 1994, the rural population began to benefit (more systematically) from a range of 'project' interventions focused on improving livelihoods through wealth transfers and technical support. Although the scale of these interventions was ultimately modest, excluding the majority of households, their impact over the long term (up to the present) has probably been greater than often recognized. These interventions reflected a new recognition among donors of the need for SP, not least because of the failure of structural adjustment to achieve growth that would benefit the poor. The World Bank, for example, funded a Poverty Alleviation Programme (PAP), commencing in 1994. PAP established a mechanism for wealth transfer through public works programmes (PWP) involving food and cash transfers. Although these measures were conceptualized as safety nets for the ultra-poor and destitute, the occurrence of large-scale shocks, such as droughts, highlighted the livelihoods vulnerability of even the non-poor. These episodes underlined the need for agricultural productivity enhancement measures and extension support on a large scale.

By about 2002, the government had elevated food security from a function of disaster preparedness to a central pillar of its agricultural policy. The new thinking on agricultural development (and marking the consensus that had been achieved on this topic between government and donors) was expressed in the World Bank-/IMF-funded Malawi Poverty Reduction Strategy (MPRS). A

medium-term development strategy to leverage growth towards the Vision 2020 objectives and progress towards the Millennium Development Goals (MDGs), the MPRS comprised four strategic pillars. Under the pillar of sustainable pro-poor growth, the MPRS provided a safety net blueprint (National Safety Nets Programme) to improve the “quality of life of the most vulnerable”. The strategy had several elements, including the provision of free agricultural inputs (fertilizer and seed) to targeted smallholders with spare land capacity, but facing capital constraints. Furthermore, it recognized that “some sections of the population [...] will need direct assistance” through providing “moderate support to the transient poor and substantial transfers to the chronically poor” (GoM, 2002:64).

The wa Mutharika Era (2004–2012)

President Muluzi was succeeded in 2004 by Bingu wa Mutharika. The new president was a former technocrat, brought into politics to lead the UDF. After one year in power, he left the UDF and established the Democratic Progressive Party (DPP). His main rallying cry in assembling political support for the DPP was the promise to eliminate corruption and the commitment to sustain fertilizer subsidies to smallholders. In leadership style, President wa Mutharika sought to emulate aspects of President Banda’s leadership, thus personally taking over supervision of the key Ministries of Agriculture and Education and reimposing discipline within the civil service. President wa Mutharika’s main (positive) contribution towards agricultural development was his determination to sustain input (fertilizer) subsidies. Whilst this strategy draws from the experience of the Banda and Muluzi eras, wa Mutharika pursued this policy with a single-minded determination. His Agricultural Inputs Subsidy Programme (AISP) would be recognized, politically, for its contribution towards the achievement of record maize yields and above-average production for the period 2005–2010. This would enable President wa Mutharika to survive politically (in his first term) and consolidate his once tenuous hold on power. Later in this article, we analyse the impact and development implications of inputs subsidies.

President wa Mutharika was initially successful in holding out against donor demands for (further) liberalization of agricultural markets and reforms to strategic parastatals. Apart from safeguarding the role of ADMARC, the NFRA and SFFRFM, the government’s agricultural policy built upon the MPRS foundations and sought to enhance the provision of agricultural extension and subsidies to small farmers. The policy direction was articulated in the 2004 Malawi Economic Growth Strategy (MEGS) and then taken forward in the 2006 Malawi Growth and Development Strategy (MGDS). There were, at this point, varying degrees of donor support for this direction. Although the donor community (including the World Bank) recognized that input subsidies (along with free inputs) had benefited small farmer agriculture growth, their major concern focused less on the mechanism itself than on its scale (and hence costs), the impact of parastatals on market development and the absence of evidence of welfare benefits. The evidence in 2006, as articulated in the MPVA, was that enhanced maize production had not reduced the depth of poverty or lessened vulnerability. The MPVA report recommends that, if the government is to introduce subsidies, then these should be ‘market smart’, meaning that such interventions should enhance the development of private-sector fertilizer markets (GoM, 2006).

The MGDS, which covers the period 2006–2011, outlines the current development strategies. These include measures to enhance agro-processing in the main export crops (tea, tobacco and sugar); measures to improve smallholder productivity through technology uptake, infrastructure development; measures to improve extension services (including training field advisory staff); and measures to ensure national food security. The latter include maintaining the strategic grain reserve, using public works programmes as safety net measures and enhancing government capacity to manage food aid interventions. The MGDS also includes an SP strategy, intended to safeguard the most vulnerable groups from shocks and to strengthen livelihoods. The details of this strategy have since been clarified through the National Social Support Policy, issued in 2009. The Policy sets out four major objectives of social support: first, to provide welfare to the “very poorest members of society” through predictable transfers; second, to protect the assets of poor and vulnerable households from depletion and erosion through PWP and social insurance schemes; third, to increase the productive capacity of poor and vulnerable households through a range of measures, including input subsidies, cash transfers, PWP, promoting village savings and micro-finance programmes, and conditional cash transfers; and, fourth, to foster stronger linkages between ministries and to harmonize actions.

3.2. Interventions and Impact

Since the early 1990s, SP measures have fulfilled an important role in smoothing consumption for vulnerable households, especially those that have had to confront covariate shocks, such as food crisis. In this time, the range of SP measures has evolved from classic short-term safety net measures to more long-term development-oriented actions. The main SP mechanisms that have been used and their scope are summarized in Table 5; the number of beneficiaries and costs are no doubt an underestimation of the true scale. The World Bank undertook a study in 2006 to review the effectiveness of measures then in operation (World Bank, 2007). The study sought to address questions of scale, impact at the household level and cost-effectiveness. It found that, in the period 2003–2006, annual project costs for SP (including input subsidies) were about USD 134 million (equivalent to about 15 percent of

Table 5: Social Protection Interventions, Estimated Beneficiaries and Accumulated Costs, c. 1994–2010

Intervention	Target	Beneficiaries (including multiple beneficiaries)	Cost, million USD
Food transfers (maize)	Food-insecure households, both transient and chronically insecure Ultra-poor, female-headed households and households caring for orphans	26,233,958	174,740
Food and cash transfers	Food-insecure households, both transient and chronically insecure Ultra-poor, female-headed households and households caring for orphans	< 5,050	
Food for work	Transient food-insecure households, able to work	< 92,292	< 10
Cash for work	Transient food-insecure households, able to work	< 1,587,004	< 273
Targeted Nutrition Programme	Children under five Expectant and lactating mothers The chronically ill	6% of rural children under five	
School Feeding	Primary school children	Approx. 28% of school children	
Relief transfers	The destitute and households unable to work	1,225	9
Cash transfers	Female-headed households; ultra-poor households	< 300,000	
Starter Pack/Targeted Inputs Programme	All smallholder farm families; resource-poor smallholders with land and able to farm	13,091,724	127
Input subsidies (AISP)	Resource-poor (and non-poor) smallholders with land and able to farm.	< 6,250,000	< 542.8
Inputs transfers	Resource-poor smallholder with land and able to farm	< 3,701,350	< 49.5
Inputs for work	Transient food-insecure households with land, able to work	< 238,857	< 27.4

Source: 1994–2003: Charman, A. (2004), 2003–2006: World Bank (2007), MASAF website.

the annual government budget). The costs per beneficiary, it noted, varied significantly between different instruments. The least cost-effective interventions were relief cash, in-kind transfers, food transfers and cash for public works programmes. The most cost-effective interventions were unconditional cash transfers, input subsidies and input transfers. Later in the analysis, we consider the potential cost-effectiveness of food aid versus input transfers and input subsidies to address the ongoing challenge of missing food entitlements.

Food Aid

The greatest expenditure on SP (corresponding with the broadest historical impact) has been on the transfer of food, principally maize, to food-insecure households, be they either transient or chronically insecure. The World Food Programme (WFP) was required to provide food aid to smallholders in 1987–1989, 1990–1991, 1992–1993, and from 1994–1995 to the present. Between 1987 and 2001, the total volume of food aid (mainly cereals) supplied through donors for drought relief and targeted safety nets was 1,413,850 metric tons, at a cost to government and donors of USD 174 million; the food component alone cost USD 73 million (Charman, 2004:9 and 59). The 2001–2002 food crisis brought into question the high costs and non-sustainability of food aid, given the state of vulnerability within the rural population and weak response to market liberalization (see Levy, Barahona, et al., 2004; Levy, 2005). Although the scale of this crisis was much politicized, it required a significant humanitarian intervention to stabilize household consumption.¹⁰ In the 12-month period from June 2002, the resulting Joint Emergency Food Aid Programme distributed 184,317 metric tons of maize, 19,331 metric tons of pulses, 23,7700 metric tons of corn soya blend and 1,827 metric tons of vegetable oil to over 23 million beneficiaries and a further 1.5 million school children benefited from supplementary feeding.¹¹ The total volume of maize imported over this period (commercial and food aid) has been estimated at 788,538 metric tons at a cost of approximately USD 201 million (almost the value of the 2002 tobacco exports) (Charman, 2004:64–65). The immense cost of the required food aid programme (and commercial imports, which compelled the government to borrow on the domestic market through issuing bonds) emboldened the case for providing a universal input transfer programme for smallholders.

The primary lesson from the 2001–2002 crisis was that it was more cost-effective to subsidize inputs for food production, on the basis of the Starter Pack experience, than to import maize and distribute food aid (see Levy, et al., 2005). The argument in favour of productivity enhancement as an alternative (and sustainable) agricultural development pathway drew support from government, some of the donors and international non-governmental organizations (INGOs). But whilst there was agreement on the need for subsidization of inputs to stimulate smallholder production growth, there was no consensus on the scale of the investment required. The leading donors (including the World Bank) were at that time unwilling to entertain increased expenditure on subsidization and would, in fact, argue for downsizing of the subsequent Targeted Inputs Programme (TIP). In the 2001/2002 TIP, the number of household beneficiaries was reduced from about 1.4 million households to about 1 million, thus benefiting less than half of all farm families.

Targeted Transfers

In policy discussion on SP, there was consensus (post-2002) that long-term transfers were required for particular cohorts. The beneficiaries were to include female-headed households, households with a high dependency ratio, households caring for orphans and the destitute. For these groups, food (maize) would be provided through targeted interventions such as PWP (food for assets), supplementary feeding for school children and orphans, and therapeutic feeding programmes targeting children under five, expectant and lactating mothers and chronically ill persons. The establishment of the MVAC and enhanced institutional capacity

¹⁰ The 2001/2002 crisis was not simply a case of diminishing resilience. Maize output in 2001/2002 was low, but did not amount to a national crop failure and was consistent with the previous 10-year average. This has led analysts to point to the institutional and market failures that impacted on household access to maize. See S. Devereux (2002), S. Devereux and Z. Tiba (2007) and A. Charman (2004).

¹¹ In the reports from the WFP, this means that food aid was provided to 23 million clients, with some individuals receiving food aid regularly for several months.

to monitor household food security in specific regions across the country now enabled geographical targeting. This allowed the government and its partners to identify and categorize the degree of risks among subregions and to highlight geographic areas facing particular crises as a result of local shocks. The identification of households requiring support within these regions was then to be undertaken through a process of community-based targeting whereby the community members themselves were required to specify individuals deserving support on the basis of nationally agreed social and economic criteria (MVAC, 2005:217). These have tended to give greater weight to social criteria (such as orphan-containing households) rather than subjective measures of food insecurity or income status (i.e., proxy means tests).

Since the country has become nationally self-sufficient in maize (c. 2007–2009), the case for generalized food distribution has diminished. The achievement needs to be understood within a particular historical context (within a period of good rainfall, high commodity prices, and increasing fertilizer use among small farmers). It does not mean that food crises will no longer affect the majority of smallholders. Safety net programmes are likely to be still required, not least for the very poor, but also for households undergoing transitory crises in specific localities where crops fail through flooding or erratic rainfall. In providing social protection in these situations, the government (along with donors and INGOs) recognizes that direct cash transfers or cash-for-work programmes can address the needs of food-insecure households with equal effectiveness and indeed cause the least disruption to markets and future output.¹² Among local development practitioners, the effectiveness of food transfers in reaching the most food insecure has, for several years, come under question. There is concern that community-based targeting, despite its participatory character, is subject to manipulation and inclusion and exclusion errors. The MVAC study, for instance, reported that the “targeting of food aid to the poorest households appears weak” (GoM, 2006:218). The challenges of effective targeting in food aid are no less than those of alternative SP modalities, such as cash-transfer programmes. This has meant that programmes have had to invest considerable resources at the outset of any intervention in targeting, registration and identification costs.

Public Works Programmes

After the 2001/2002 crisis, the use of PWP proliferated, with these mechanisms seen as a cost-effective safety net mechanism. A strategic paper prepared for the World Bank, for example, advocated PWP as a “highly suitable countercyclical intervention” for regional and self-targeting (Smith, 2001:25). The bulk of subsequent PWP interventions, building upon the MASAF experience, used a minimum wage as a self-targeting mechanism and required the beneficiaries to perform specific tasks such as road clearing on the basis of national task rates.¹³ The approach has since been refined, aligning it with district development plans and conditional aspects incorporated with the aim of bridging consumption shortfalls. It is thought that, because of their brevity, these interventions have brought little improvement to (permanent) household income, though they have reduced the need for asset depletion. The average project was implemented within one year; some were extended for longer, but few have run for three years or longer (World Bank, 2007:31). The IHS2 found that only 5 percent of households reported benefiting directly from PWP in the period 2001–2003 (NSO, 2005). In those localities where PWP were implemented, about one fifth of adult men and women reported having attained employment. The targeting of beneficiaries has been imperfect geographically and within communities. There is evidence that, in practice, PWP recruitment is done on a ‘first-come, first-served’ basis determined by knowledge and accessibility to the project opportunities (Chirwa, Mvula, and Dulani, 2004). PWP have also been criticized as a food security strategy because the period of need usually corresponds with the rainy season, when conditions are unsuitable for performing infrastructure works and would in any case draw labour away from the agricultural sector (World Bank, 2007:25).

¹² There is disagreement on the scale of the impact of cash transfers on maize markets; some scholars argue that these programmes have inflated food prices, thus worsening vulnerability.

¹³ In reality, PWP undertaken by INGOs tended to offer much higher wages.

Cash Transfers

PWP are unable to address the requirements of the chronically poor and people unable to work. The 2008 census recorded a population of 498,122 disabled persons, of whom 133,000 had visual impairments and about 108,000 had lower limb disabilities. Many of these individuals—along with a portion of the population affected by communicable disease (840,000 adults living with HIV, of whom 290,000 are in need of antiretroviral treatment, and 42,447 persons affected by tuberculosis)¹⁴—are unable to work. On this basis of this limited evidence, there could be as many as 300,000 households whose ability to work is severely constrained through illness or disability. These individuals and households need sustained wealth transfers to accumulate sufficient assets and to build capacity. Since about 2002, INGOs, along with donors, have begun to lobby for a shift from PWP to direct cash transfers in certain contexts, targeting the ultra-poor. A cash transfer pilot programme was initiated in Mchinji district (Southern Region) in 2001/2002 to test the practicality and effectiveness of this approach in Malawi. The pilot distributed three kinds of transfers (cash, vouchers and a commodities package) to targeted beneficiaries in 54 villages (Devereux, Baulch, et al., 2006:85). The project highlighted the influence that high food (maize) prices could have on the scale of benefit in situations where maize was in short supply (as happens seasonally), thus undermining their purchasing power to acquire maize on local markets. The apparent success of the intervention, nevertheless, has resulted in the use of cash transfers as short-term safety net measures to assist vulnerable households fulfil their food entitlement, given the availability of food (at affordable prices) as a consequence of input subsidies/transfers.

Other experiences with cash transfers have confirmed the finding that these measures are most effective in reducing food insecurity where food markets are stable and if the transfer is linked to some form of agricultural productivity-enhancing measure, such as enabling the beneficiaries to procure inputs (see World Bank, 2007:62; Ntata, 2010). In the case of the Dowa Emergency Cash Transfer programme, it was found that sizable multiplier effects extend to small enterprises (Davies and Davey, 2008; RHVP, 2007a). A further pilot in cash transfers was initiated in Mchinji in 2006 through a joint UNICEF–government project containing an element of conditionality. The transfer was increased with family size, from USD 4 to USD 13 per month, whilst an additional amount (stipend) was paid for children attending school, though this aspect is not monitored. The pilot has since been broadened in scope and scale and has become positioned as the ‘primary poverty-reduction tool’ targeting the country’s ‘most destitute households’. In 2009, the project was extended from the pilot stage to 23,651 households and 92,786 beneficiaries in seven districts. Although there were plans to scale up the intervention to target 300,000 households per year by 2010, this has not been implemented (Miller, et al., 2010:483) and (www.unicef.org/infobycountry/malawi_56675.html). Early assessments of impact conclude that cash transfers provide an effective instrument to reduce seasonal shocks, raise consumption and lessen poverty. There is evidence, though preliminary, of associated gains in adult health, child education, labour availability, food security and asset accumulation (Miller, 2009). The positive food security result is also evident in the Cash and Food for Livelihoods Pilot project, an organizational collaboration between the WFP and INGOs. The project had three transfer mechanisms: food (50 kilograms of maize), cash (sufficient value to purchase 50 kilograms of maize) and a mixed food and cash transfer modality. An investigation of the project impact found that the cash transfer modality was the most cost-effective of the three mechanisms in terms of increasing household food security by 1 percent against a baseline value (Audsley, et al., 2010).

While the use of cash transfers has gained much organizational support, the start-up costs have tended to exceed the cost-benefit of traditional food transfers and PWP. The need to reduce targeting errors requires a substantial investment in beneficiary identification. There are also significant logistical challenges to disbursing cash in a country such as Malawi, where formal banking institutions are only operational in the cities and major district centres. Although measures such as mobile cash vending facilities have been introduced to overcome these barriers, the service remains inadequate (many beneficiaries have to walk a considerable distance to access these mobile banks) and costly relative to the size of transfer.

14 Data from 2008 Report on the global AIDS epidemic, UNAIDS/WHO, July 2008. Annex 1: HIV and AIDS estimates and data, 2007 and 2001 and WHO Report on Tuberculosis 2008.

Impact

The impact of food and cash transfers has been modest in terms of generalized poverty reduction or in strengthening the resilience of households, but they have been fairly successful in providing a safety net to facilitate the recovery of households from covariate shocks and food insecurity crisis in the period 1994–2004. The MPVA report (GoM, 2006) concluded that “the sum total of these various safety net activities has not been sufficient to reduce the overall levels of poverty and vulnerability”. The minor changes that these initiatives have brought, it is argued, are attributed to the difficulty that SP programmes have experienced in targeting (World Bank, 2007; Devereux, Baulch, et al., 2006). Across the breadth of projection measures under review, the majority of programmes have been subject to inclusion and exclusion errors, benefiting the non-poor and neglecting sections of the ultra-poor or those in most dire need of assistance. The MVPVA concluded that targeting problems beset all SP measures, resulting in the exclusion of about half of the poor and inclusion of about 40 percent of the non-poor (GoM, 2006:230).

Some programmes (including the recent cash transfer measures) have sought to reduce the scale of these leakages through strengthening their methodologies, introducing, for example, community-based, multi-stage, participating approaches. There is insufficient evidence to judge the effectiveness of these approaches. Yet the reliance on community judgement poses many socio-cultural challenges. Within communities there are local perceptions and interpretations of ‘need’ (i.e., poverty) that do not accord with programme intentions and the focus on the ultra-poor. As the Malawian scholar Blessings Chinsinga notes from his investigation of targeting in the TIP winter maize programme, “[T]he recurrent argument against targeting, encountered in this study [from the informants], is that it makes no sense to target when the welfare of most rural households is essentially the same” (2005:297). An important counter to targeting is the strength of cultural practices of reciprocity through which households are required (and expected) to redistribute wealth/food (through direct transfers) and opportunity (access to land and employment) to marginalized households. These practices have ensured a degree of trickle-down to the ultra-poor, because and in spite of the benefit afforded to the non-poor. Whilst targeting remains a concern to development practitioners, given the financial constraints on programme means, the consequences of inclusion errors are probably less significant than the impact on the very poor through exclusion. This logic was initially applied in the Starter Pack programme.

The main weaknesses in the impact of SP measures are not mistargeting, but their scale (too small and too brief) and crisis-oriented approach (providing safety nets). In contrast, measures to enhance small-farm productivity through input transfers and subsidies have had a wider social reach, in absolute terms and in targeting the poor. In addition, these measures have been more sustained in implementation over the past decade and, as such, have enabled the beneficiaries not only to recover from crisis situations, but also to accumulate assets and to build household resilience. We now examine in detail their impact.

4. Raising Small-farm Productivity

4.1. Input Subsidies

Smallholders were slow to adopt ‘green revolution’ technologies. In the mid-1980s, the government increased its investment in the efforts of research institutions to develop seed and planting material that would be more readily adopted. In the case of maize, research focused on higher-yielding maize varieties suitable to smallholders, meaning that the plants had to be open-pollinated rather than hybrid. Numerous appropriate maize varieties were developed, though these were not widely used with most smallholders continuing to plant local varieties with the seed recycled annually. After the 1991/1992 and 1993/1994 droughts, the need to raise maize productivity became of paramount concern. The major agricultural development concern that then dominated strategic thinking was the issue of declining soil fertility. The solution, argued technical specialists, was the greater use of inorganic fertilizers (in concert with improved land husbandry practices). Research had proven that good returns from the application of nitrogen fertilizer could be expected (Rockefeller Foundation, 1998). But encouraging smallholders to invest in expensive inputs would require a new approach. Up until this point, fertilizer subsidies had only benefited the better-off small farmers, especially commodity producers; at the high point of SACA operations in the early 1990s, less than one quarter of smallholders (approximately 350,000 beneficiaries) had access to input loans.

The Ministry of Agriculture set about the task of finding a solution for resource-poor farmers, with donor support, through establishing a Maize Productivity Task Force. Its role was to frame recommendations for the optimal use of fertilizers by smallholders, taking into consideration the country’s different agro-ecological zones. The emphasis on fertilizer use efficiency led the task force to consider various strategic options for achieving the overriding mandate (higher yields), but also to provide specific recommendations for smallholder conditions (Rockefeller Foundation, 1998). One option was the provision of an input package. The effectiveness of this option had been demonstrated in the period 1994–1996, when maize seeds and fertilizers (plus root and tuber cuttings) were distributed to about 800,000 households, thereby contributing towards the stabilization of maize output in the areas involved (Harrigan, 2008:242). The task force also investigated and made recommendations on the viability of using ‘green’ technologies, including crop rotation, inter-planting and agro-forestry.

The outcome of its research was a ‘best-bet’ strategy that could serve the various criteria for facilitating widespread fertilizer adoption in Malawi. At this time, there was little debate around the possible dependency on input transfers; the strategy was based on the assumption that improving productivity would raise on-farm income and reduce food insecurity, which was rightly considered to be an important first step towards poverty alleviation. Their strategy was to provide a small inputs package to all households, across the territory, to enable them to plant an additional 0.1 hectare of maize. The package was to contain hybrid seed and appropriate fertilizer. It was expected that this would enable the beneficiaries to produce sufficient extra maize to feed their families for one month, equivalent to an additional 280,000 metric tons to national output, and thus addressing, at the household level, the missing food entitlement between seasons. The cost of the initiative was estimated at USD 18 per household, requiring a budget of USD 32 million per annum. The Muluzi government immediately bought into the proposed strategy, in recognition of its dual political and economic potential, aligning with its pro-poor rhetoric. The country’s donors, on the other hand, were more cautious, recognizing the potential conflict between input transfers and efforts to rebuild rural credit markets and farmer finance institutions. Similarly, there was also concern that the measure would impact on private-sector input markets, discouraging growth (as a result of displacement) and firm investment in expanding distribution networks.¹⁵ The World Bank (at first) and the United States Agency for International Development (USAID) would not commit financially towards the concept; DFID (UK) agreed with the need to provide smallholders with subsidized inputs and would contribute funds, though it saw the strategy as an emergency measure (i.e.,

15 SP and TIP would justify the continued existence of ADMARC at a time that the IMF/World Bank were pushing for complete privatization of input markets.

safety net) rather than as a long-term solution. The EU embraced the rationale, but was committed to the Agricultural Productivity Investment Programme (APIP), an initiative in partnership with the private sector that advanced fertilizer (on favourable loans) to creditworthy smallholders.¹⁶ Against the weight of donor opinion, the Muluzi government went ahead with the 'best-bet' proposal, providing 'starter packs' to 2.8 million smallholder beneficiaries in 1998 and 1999, effectively covering most farm households throughout the territory. The cost in 1999 was reduced to USD 25.2 million, which was carried by the GoM (USD 12.5 million), DFID (USD 4.3 million) and the World Bank (USD 7.2 million) (Harrigan, 2008:245).

The Starter Pack programme had a dramatic positive impact on national maize output and household food availability. Despite this outcome and the case for sustained input transfers, the government remained dependent on donor support. Its revenue base was under pressure, partially as consequence of currency devaluation and partly from rising debt. So, in 2000, it heeded donor advice and reduced the number of beneficiaries by half to 1,430,000 households. The government contribution towards the costs (and thus its influence on the programme) began to progressively decline with the costs carried by DFID, the EU and the Norwegian Government (NORAD). The programme was renamed 'TIP' and the inputs package was amended, with open-pollinated maize seed varieties (OPVs) replacing the hybrid seed and the quantity of fertilizer reduced from 15 kilograms per pack to 10 kilograms. In the 2001 version, the number of beneficiaries was further reduced to 998,499 households, whilst a legume crop (soya) was included in the packs. The beneficiaries of TIP were identified through a community poverty-targeting approach that relied heavily on the administrative support of village-level traditional leadership structures. It is unsurprising that targeting was problematic, resulting in inclusion (non-poor) and exclusion (deserving recipients) errors and causing acrimony between beneficiaries and non-beneficiaries. Although the intention was to refocus on the very poor, including female-headed households, almost 40 percent of the beneficiaries were actually non-poor. The IHS2 survey reported that the portion of household in the fifth wealth quintile (i.e., non-poor) benefiting from TIP rose from 23 percent to 28 percent between the 2001 and 2004 versions, whilst not more than 50 percent of households in the first (i.e., ultra-poor) quintile were targeted (NSO, 2005:102). In food security terms, the impact that TIP had on household production was modest, delivering a net increase of 35 kilograms of maize per household (Charman, 2004:52). The programme's limitations were soon exposed in the 2001/2002 food crisis, with critics attributing the poor maize harvest to the dramatic reduction in the scale of programme.

After 2001/2002, the TIP continued for two more years. Its impact on productivity, however, steadily diminished. The donor community were beginning to turn away from this strategy, arguing that the programme was an unsuitable strategy for raising national maize production, given its targeting of resource-poor farmers who (it was thought) had little potential to increase agricultural output because of their land and labour shortage. Some donors began to argue for alternative (non-productivity) forms of social protection for the very poor, including sustained food aid, supplementary feeding and wealth transfers. With respect to the situation of smallholders, a new wave of programme thinking had entered donor circles that held that the solution to agricultural development required greater attention to institutional development¹⁷ (including farmer organizations and promoting the capacity of private service providers) and strengthening markets and building agro-industrial linkages. It was thought that the market (and not the state, via input transfers) should drive the process of modernization on farms. There was (justifiable) concern about smallholder dependency on free inputs (farmers were delaying their input purchases, awaiting hand-outs), whilst the absence of an evidential poverty reduction impact was worrisome to funders. Malawian NGOs and INGOs sought to sustain the case for fertilizer subsidies, based on their field experience of the success of Starter Pack/TIP,¹⁸ though their political leverage had begun to wane as food security recovery programmes (which enhanced their power) began to tail off. The wavering of donor support for input transfers happened at a time of considerable political debate on agricultural policy between the main contending parties in the

16 Several donors, including the EU, simultaneously supported INGOs to advance low-cost input solutions for poor smallholders.

17 In terms of the existing institutional architecture, the leading donors (World Bank, DFID and the EU) were pushing for 'rationalization', reducing state services to their 'core function' and allowing the private sector to replace the state as the main channel for technology transfer.

18 At the same time, numerous INGOs were advancing a wholly different approach, focusing on raising on-farm productivity, placing the emphasis not on inorganic fertilizers and hybrid seeds, but on low-cost, adaptable and renewable technologies. For one articulation of this counter-argument, and its current relevance to the situation, see Grain (2010).

Raising Small-farm Productivity

run-up to the 2004 election. The main political contest was between a revived MCP led by John Tembo, a former aide to President Banda and doyen of the indigenous tobacco estate class, and the UDF, then under the leadership of Bingu wa Mutharika. Both parties sought to stake their claim as pro-smallholder through their promise to provide subsidized inputs universally (Chinsinga, 2008). After the 2004 election, President wa Mutharika was under pressure on two fronts: from donors, who demanded improved fiscal discipline if Malawi was to attain debt relief, and from the opposition bench, which demanded that he deliver on his word to support inputs subsidies. The opposition dominated the Parliamentary Committee on Agriculture and called for a universal fertilizer subsidy.

The government made the bold decision to go alone into an Extended TIP (ETIP), providing a more comprehensive input package (26 kilograms of fertilizer and 5 kilograms of maize seed) to 2.8 million beneficiaries, almost all of whom were once again farm families. The inputs were to be provided through a voucher system. As there was no donor stake in this programme, the government decided to manage the importation of fertilizer and its distribution through parastatal entities, excluding the private sector whilst forcefully demonstrating its commitment towards reviving the institutional framework of the Banda era. As the government had made its decision to finance ETIP fairly late, there was insufficient time to import the inputs and to manage their distribution before the commencement of the new agricultural season. The late delivery of the packages and an unfavourable rain season resulted in relatively poor maize yields, though the packages themselves gave President wa Mutharika a strong political dividend through proving that he was committed to the policy of input subsidization.

The dip in maize production in 2004–2005, which necessitated further food aid, again posed the question of whether production enhancement was not a more cost-effective solution than procurement from international markets. It was generally recognized that the poor maize harvests could be attributed to the operational setbacks of the programme (plus unfavourable weather), rather than to the measure itself. As the new government had begun to demonstrate its seriousness to maintain macroeconomic stability, donors were again willing to finance input subsidies (recognizing the potential cost-effectiveness of productivity enhancement over aid), though on terms that ensured that private-sector inputs suppliers and distributors would be afforded a role. The president remained under significant domestic political pressure, with the opposition advocating a universal inputs subsidy for maize and tobacco. Their demands were largely met through the introduction in the 2005–2006 season of the Agricultural (Farm) Inputs Subsidy Programme (AISP). AISP did not amount to a universal subsidy, but instead provided the majority of smallholders with vouchers that entitled them to purchase two 50-kilogram bags of fertilizer at a significant discount—in other words, the programme provided a price subsidy. It so happened that the introduction of AISP coincided with a particularly favourable season, with rainfall distributed evenly across the country throughout the season. As a result, there was a record-high maize yield. Food security was attained at the national and household levels. The productivity gain stabilized the inter-seasonal maize price, thus enabling the food-insecure to acquire maize at affordable prices, with national reserves rising to a level sufficient to permit exports.

The initial success of AISP gave Malawian political interest groups—the government and the opposition—a policy victory over donor conservatism. The breadth of cross-party political support for subsidies has ensured that this strategy has continued to the present. Donors have since provided finance towards the programme, strengthening their influence over its design and funding monitoring and impact assessments. The original model entailed the distribution of vouchers (coupons) to farmers, subsidizing the input costs for maize and tobacco. The vouchers were issued to farmers via traditional leadership structures and then were redeemable at ADMARC/SFFRFM depots (and subsequently at private vendors). The value of the voucher was equal to about two thirds of the market price, a very sizeable discount. The maize subsidy covered 50 kilograms of 23:21:0:4 (N-P-K-S) (plus maize seed), whereas the tobacco voucher was for 50 kilograms of calcium ammonium nitrate and 50 kilograms of D compound (8N-14P-7K) (Dorward, et al., 2010:15). The model has been refined over the past four seasons: the inputs package, distribution and redemption system, for instance, have all been amended. These changes enabled farmers to use the package for a wider range of crops (including legumes, cotton, tea and coffee, whilst beneficiaries could choose between hybrid maize or OPV seed) through a wider choice of vendors, including private companies. The approach to targeting has been revised, supposedly to provide a fairer allocation per farm household, using data from a central register maintained by the MoAFS. For the 2009/2010 season, the government has had to scale back the programme due to its inability to sustain the high costs. In this season (2009/2010), the MoAFS will provide vouchers only

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for maize production, thus no longer providing subsidized inputs for tobacco and other cash crops (Holden and Lunduka, 2010b:33). The expectation is that smallholder commodity producers (along with the tobacco estate class, who had originally led the political demands for these subsidies) will procure inputs for non-maize crops at market rates, using their savings and increasing household asset position.

The costs of AISP escalated from USD 51.4 million in 2005/2006 to USD 284.6 million in 2008/2009, reflecting the escalation in the programme size and implementation costs; the latter figure equates to about 74 percent of the total MoAFS budget (Dorward et al., 2010:22). Experts consider that its main design weaknesses were the difficulty of selecting beneficiaries and the logistical complexity of procuring, distributing and validating the vouchers. The vouchers themselves present an opportunity for theft and fraud, representing a value of 10 percent of the annual household income of about 40 percent of the population regarded as poor. There is evidence that some of the beneficiaries resold their vouchers (though the extent of this practice was relatively small) and benefited through income rather than increased productivity. It may be argued that the informal resale of coupons was correcting mistargeting, with the transfer value thus divided between the seller (the poor) and the buyer (non-poor). Some of the initial criticisms of the voucher system have been overcome through experience and refinements to the approach, though the role of traditional leaders in selecting beneficiaries remains an obstacle to transparency and accountability. There are objections that the programme has not benefited the ultra-poor (many of whom are unable to meet the unsubsidized portion of the input costs), although, over this period, the position of these households has improved, suggesting a strong trickle-down effect.

Impact on Crop Production

The government claims that AISP is a success. In terms of maize production (output) and productivity (return on investment), there is evidence to support this claim. Whilst these achievements have resulted in much political backslapping, there are legitimate academic concerns about the validity of the national maize yields (with commentators accusing the government of 'sexing up' the results).¹⁹ But it should be noted that the manipulation of crop statistics is not new and has probably taken place for much of the past two decades, sometimes upwards and at other times downwards, to serve different agendas. This will remain a challenge into the future so long as accurate data is difficult to acquire, given the methodological complexities of measuring non-marketable crops, grown under smallholder farming systems. We can nevertheless be fairly certain that AISP resulted in bumper maize harvests and above-average yields in several crops from 2006/2007 through to 2009/2010. We now consider the evidence from maize, tobacco, and roots (cassava), tubers (sweet potatoes) and legumes.

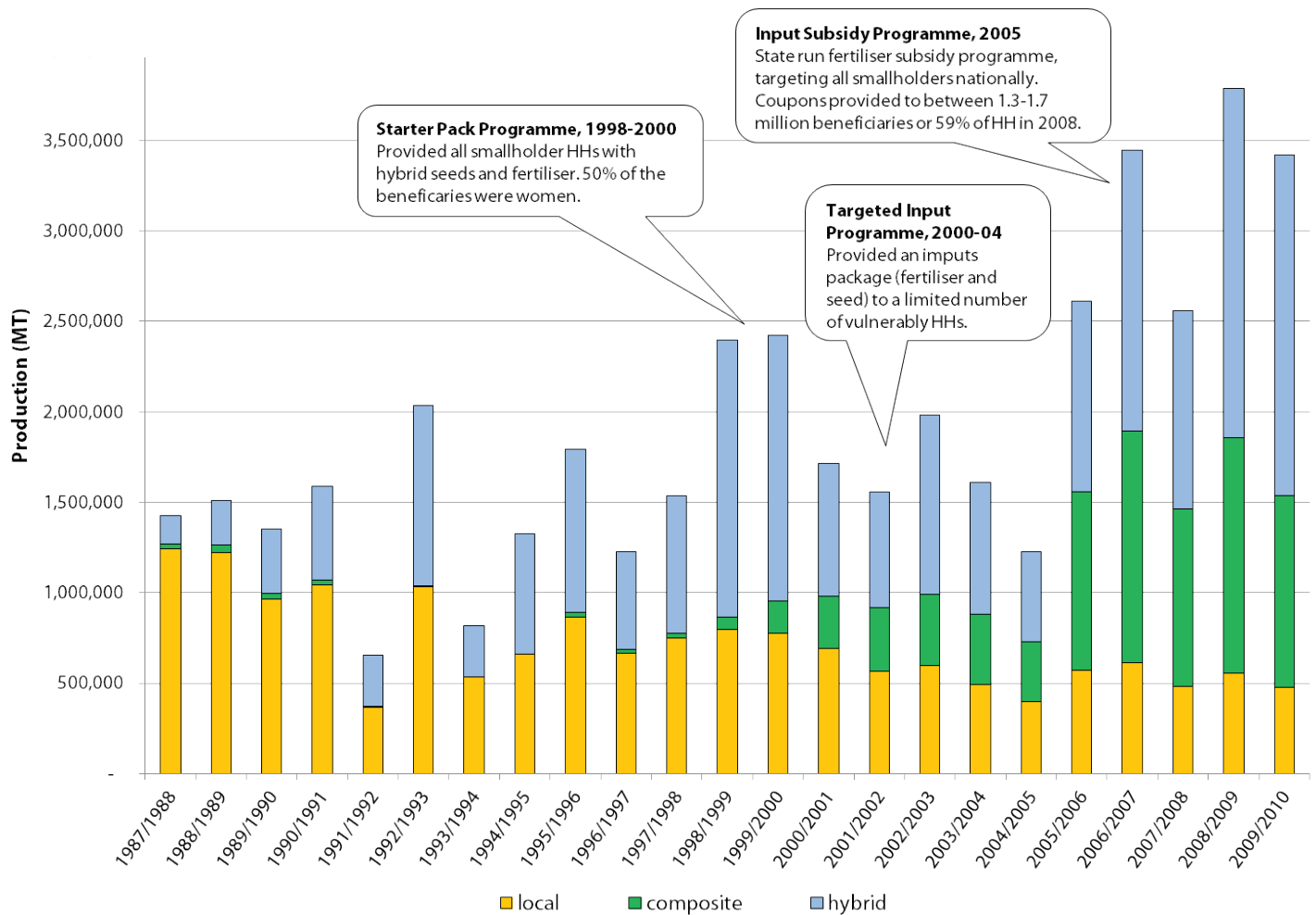
Maize

Maize is symbolic of national agricultural ambitions and food security. The importance of maize is acknowledged within the iconography of the MoAFS through the incorporation within its logo of a maize plant and maize granary. The government (along with donors) articulates national food requirements in terms of maize. This has been described as the "politics and mass patronage of maize self-sufficiency" (Dorward, et al., 2008). The importance of maize as a food staple for smallholders was quantified in the IHS2. The survey found that 97 percent of rural households grow maize; so, too, do nearly all urban households through rural gardens/fields cultivated by tenants or relatives (NSO, 2005:95). The aim of achieving household maize self-sufficiency has become internalized as a desirable objective among smallholders across the territory, regardless of wealth or geographic location (and despite agro-ecological suitability to produce maize).

At present, the national maize requirement to satisfy Malawi's food security needs is approximately 2.5 million metric tons (FEWNET, May 2010). Over the past five seasons, smallholder output has clearly exceeded these requirements. Though (as indicated above) the precise scale of this achievement is uncertain, there is no doubt that a significant output increase has occurred since 2005. The

¹⁹ For example, 'Malawi sexed up the maize estimates—US study: maize supplies may be depleted before harvest time; point at inaccurate crop estimates as the main cause' (www.tinyurl.com/malawi-maize).

Figure 2: Maize Production, Disaggregated by Variety, 1987–2010



Source: MoAFS Final Crop Estimates

production trends in maize (distinguishing between seed varieties: local, composite or OPV, and hybrid) from 1987 to the present are shown in Figure 2. It should be noted that the significant growth in maize output from 2005 correlates with a decline in poverty (over the same period) and, given that maize is the main smallholder crop, the attribution is strong.

In the decade from 1987, smallholder maize production began to falter, reaching its lowest point in 1991/1992 with a total output of 657,000 metric tons. The main causes of this decline are thought to have been degrading soil fertility through poor husbandry practices, low input uptake and the limited scale of green technology adoption. In 1991/1992, the influence of these factors was compounded by low rainfall. As a response to that crisis, the government (through World Bank funding) distributed fertilizer and hybrid maize seeds to all smallholders. Production swiftly recovered in 1992/1993, with approximately half of the total output grown from hybrid seed. The resilience of smallholders remained weak and, against the backdrop of the political turmoil of the transition process in 1993/1994 and drought, production again collapsed. It took four seasons before the pro-poor agenda of the new government was translated into a universal maize productivity enhancement programme. In the intervening period, a combination of free input programmes, the liberalization of the seed market and technology promotion²⁰ helped to sustain the

20 One of the most 'successful' initiatives in promoting OPV seed was the GoM/EU Promotion of Soil Conservation and Rural Production Project (PROSCARP), a national intervention through the agricultural extension service.

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shift from traditional seed technologies (seeds with no research input) to higher-yielding varieties (derived from research output), whose value to smallholders had now been demonstrated. Under the conditions of declining soil fertility—a consequence of poor agronomy and small landholdings—productivity gains could only be achieved through the application of fertilizer inputs, especially nitrogenous compounds. The finally achieved enforced removal of fertilizer subsidies in 1996/1997 (along with currency devaluation) resulted in a dramatic decline in smallholder consumption of Urea, with national consumption falling from 38,167 metric tons in 1995/1996 to 1,438 metric tons in 1996/1997. This experience provided the evidential foundation for the introduction of a fertilizer subsidy for the non-poor along with a free inputs transfer programme targeting the poor. The latter came into effect in 1998/1999.

The replacement of the Starter Pack programme with the TIP saw maize yields decline. Total national maize production (also) fell considerably after 1999/2000 and continued along a downward curve over the course of the five subsequent seasons. The decline has been attributed to the reduction in fertilizer uptake and market influences. The exclusion of the non-poor in the TIP undoubtedly affected output. There is evidence (in the historical consumption of fertilizer and in tobacco data) that the non-poor chose to rationalize their resources through focusing on tobacco over maize. Smallholder uptake of fertilizers for maize (urea and 23:21:0:4S) rose, though unevenly, throughout this period (as shown in Table 6), with uptake rising fastest from 2002/2003 onwards. Input transfers/subsidies evidently did encourage greater use of inorganic fertilizer and higher-yielding seeds. This is most noticeable in the shift from local maize seeds towards higher-yielding varieties, hybrids and OPVs alike. The inclusion of OPVs in the inputs package gave smallholders an experience of the potential benefits of higher-yielding technologies, with these composite seeds able to produce almost double the yield of local varieties. Since this time, OPVs have progressively displaced indigenous low-yielding varieties, which now account for less than one third of output, though they are still popular for the palatability of the maize.

AISP had an exponential effect on maize production. The dramatic reduction in input costs made maize more competitive with marketable crops, encouraging farmers to produce surplus. The programme significantly increased the total level of fertilizer consumption, even though it displaced sales through private vendors. The scale of this displacement effect was between 30 percent and 40 percent in 2006/2007 (Dorward, et al., 2008), prior to the introduction of programme changes that have strengthened the role of the private sector. From a low base point, the volume of urea consumption rose to 115,505 metric tons by 2006/2007 (latest data), whilst the consumption of 23:21:0:4S rose to 102,682 metric tons. In the case of the latter input, smallholder consumption grew 377 percent over the course of the decade after 1994.

Table 6: Maize Fertilizer Consumption, in metric tons, 1996-2007

Fertilizer	Year										
	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
Urea	1438	39450	42116	41150	35044	36719	60539	57481	71556	99442	115505
23:21:0:4S	27189	35145	33188	41120	36713	38467	52478	53232	78085	96291	102682

Source: RBM (2009).

Although AISP included the non-poor within its target, the impressive growth in maize production owes much to the endeavours of the poor. Though the non-poor had a role in increasing production, the scale of their investment in maize was constrained by their simultaneous expansion of cash crop production, notably burley tobacco. AISP originally provided subsidized inputs for these crops. Most smallholders in the higher consumption quintiles had access to neither unused land nor surplus labour to expand maize production; in most cases, these resources (land and labour) were stretched in the pursuit of cash crop opportunities. Instead, the main drivers of the increase in maize production were poor smallholders, i.e., those households with available land and surplus labour, who used the inputs subsidy to increase the area under cultivation while enhancing their productivity through using higher-yielding seeds and fertilizer. AISP enabled these producers to achieve increased household maize production with less labour,

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which, in turn, permitted them to sustain their efforts in crop diversification and in the pursuit of off-farm income opportunities. It is noteworthy that the increase in maize production in this period was achieved on roughly the same size land area as had been planted to maize at the start of the decade. However, among the land-poor, research has shown that input subsidies (and ASIP, in particular) have enabled smallholders to reduce the area allocated to maize (currently an average of 0.71 hectares on 1.17-hectare farms), thus effectively releasing land for other crops and allowing for improved soil management practices (see Holden and Lunduka, 2010a).

In the 2008/2009 season, about 65 percent of farm households received one or more fertilizer coupons. The targeting process was said to be biased towards households that were engaged full-time in agriculture and had more land and more assets, thus reducing the proportion of benefiting households amongst the ultra-poor (Dorward, et al., 2009:20). The marginalization of the poor, especially those with land and labour, is a strategic error, given the higher productivity of small farms (see Conclusion).

Burley Tobacco

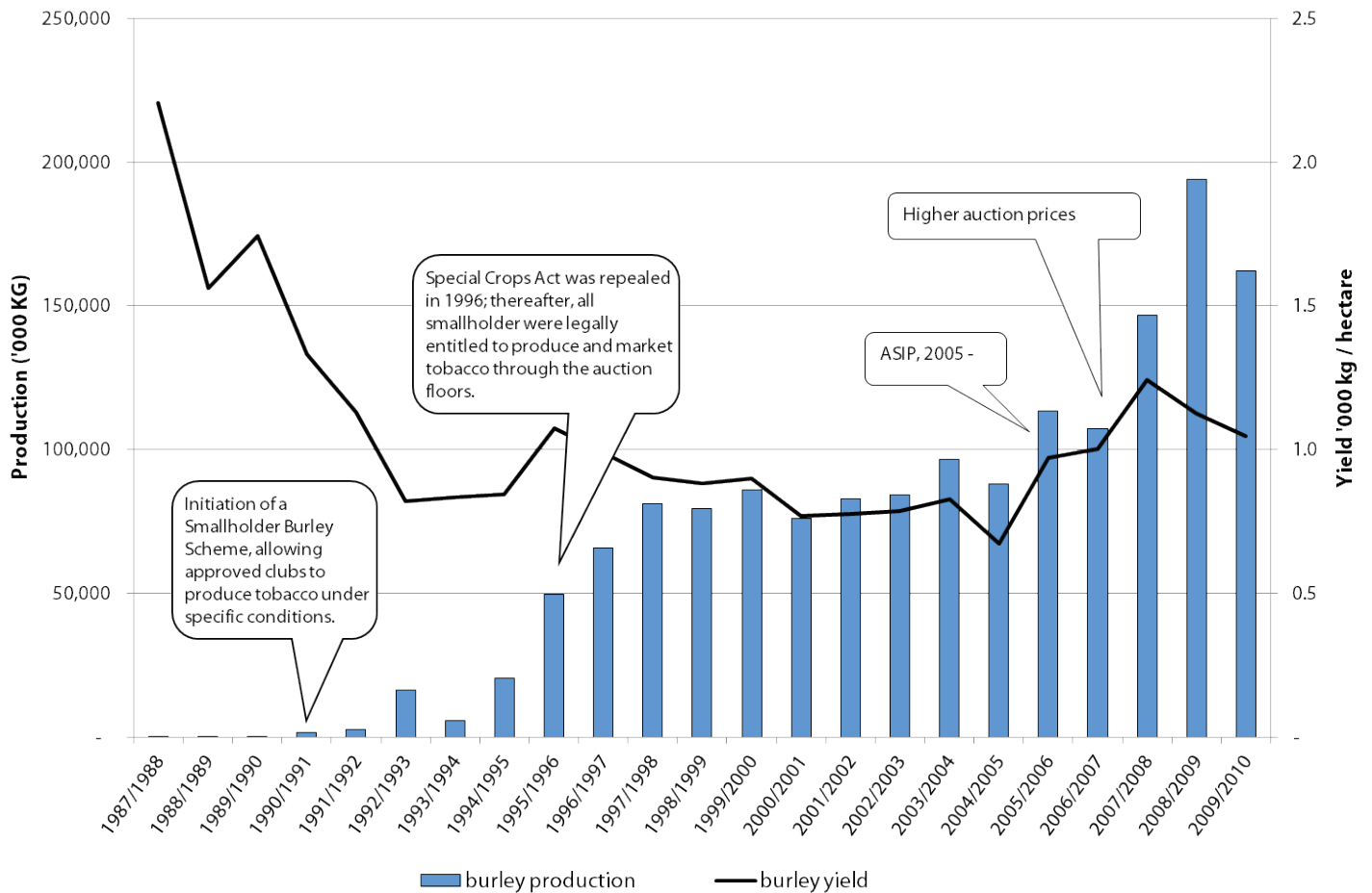
The Banda government excluded smallholders from growing tobacco; this decision was made to preserve opportunities in the tobacco sector for the estates owners, who thus needed (cheap) labour. It has been argued that the MCP rulers did not want competition from smallholders and would not have been able to alienate land and secure labour, had smallholders been afforded the same opportunity (see Weyl, 1991). Tobacco production requires a substantial investment in fertilizers and sustained labour input for nine months. Under SAL pressure, the government initiated a smallholder burley (air-cured) tobacco scheme in 1990 whereby a small number of smallholders were permitted to grow tobacco under specific conditions. The scheme was gradually expanded, though the relatively low prices on offer through ADMARC (which monopolized market access) dampened the smallholder response. After 1994, two developments would provide new opportunities for smallholders to produce burley. First, the establishment of the Malawi Rural Finance Company provided a mechanism through which smallholders could obtain loans for inputs issued through group structures. Second, the repeal of the Special Crops Act (de facto in 1995) meant that all smallholders, regardless of their situation, could not only produce tobacco, but also market their crops on the auction floor. Smallholders responded to these opportunities in large numbers, raising burley output significantly; the trend and yield is illustrated in Figure 3.

From the late 1990s, smallholder production began to exceed estate production. The number of tobacco growers and producer clubs rapidly multiplied, aided in part through the support of a farmer organizational development programme. By 2004, there were approximately 18,288 registered tobacco clubs, representing more than 300,000 individual smallholders (Koester, et al., 2004:88). Since this time, the number of individual growers has continued to multiply, with a significant portion now engaged as 'freelance' producers neither belonging to small farmer clubs nor individually registered with the tobacco authorities; many of these smallholders fall within the socio-economic category of the poor. The provision of AISP subsidies to tobacco growers spurred growth in smallholder burley output, resulting in a sharp improvement in tobacco yields and hence in productivity. Total output increased from 2006/2007 to 2008/2009, rising from 107,309 million kilograms to 193,911 million kilograms. It is important to note that the smallholder response was strongly influenced by favourable (i.e., higher) auction floor prices, showing that smallholders have the capacity to raise output when incentives are strong and costs low. Since the input subsidies for tobacco were ended (also taking into consideration higher labour costs), the price incentive has diminished. The reduction in the AISP package for commodity producers since 2008/2009 has evidently impacted yields and output, though the trend is too short to draw a firm conclusion on the impact.

Roots, Tubers and Legumes

In maize and tobacco, smallholder output is inextricably tied to fertilizer distribution and/or subsidization. In other food crops, such as roots, tubers and legumes, smallholders do not use inorganic fertilizers, whilst seeds/planting material are usually recycled. In terms of agricultural research, far less effort has (historically) been directed towards these crops, especially in terms of developing improved varieties.

Figure 3: Burley Production and Yield, 1987–2010

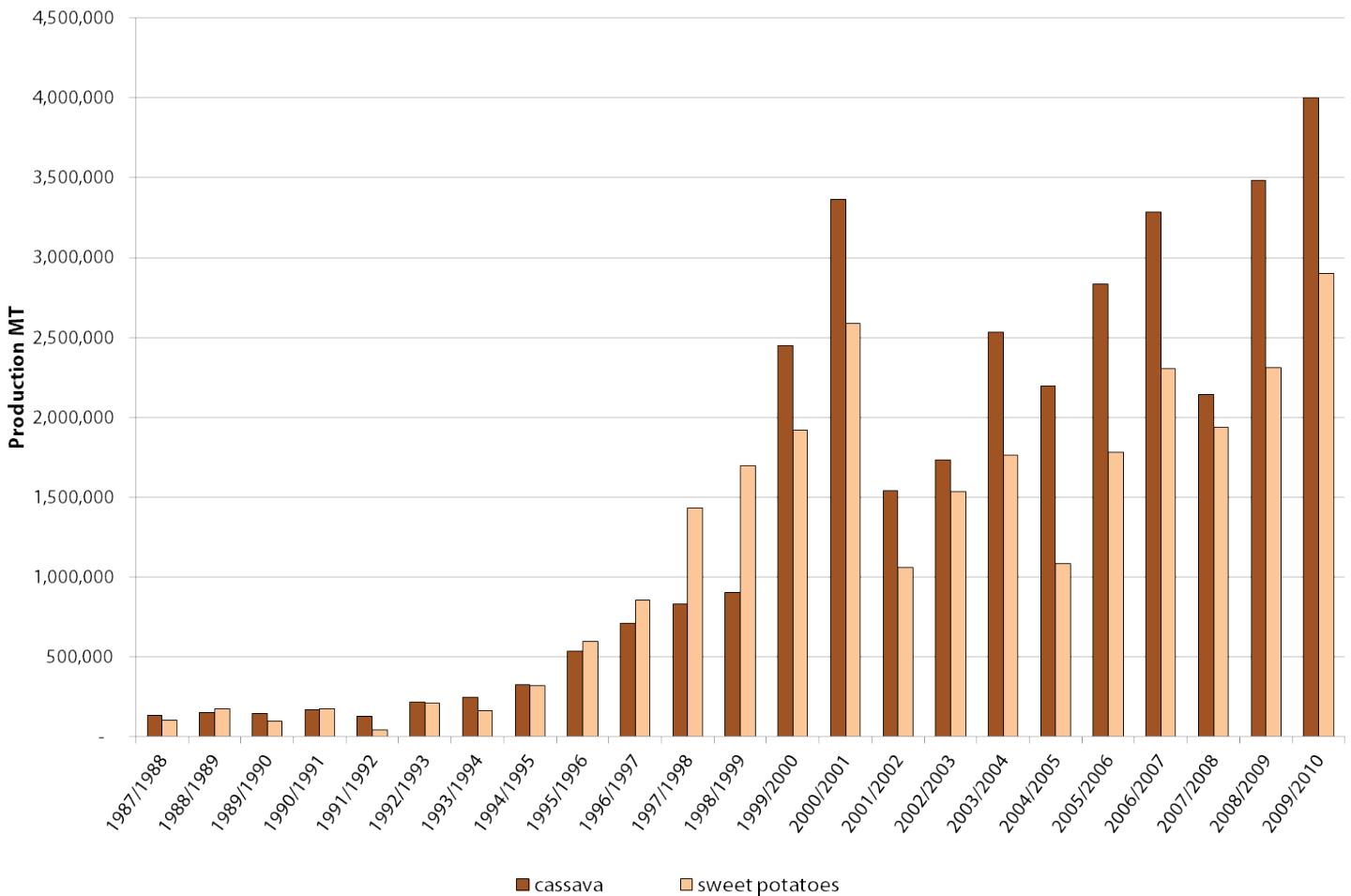


Source: MoAFS Final Crop Estimates

Since about 1994, smallholder output of cassava, sweet potatoes and legumes (ground beans, peas and soya) has increased substantially; the trend is shown in Figure 4. Roots, tubers and legumes are important staples in poor households, cultivated by women for the main purpose of meeting household food requirements. The IHS2 reports that 24 percent of rural households grew cassava (45 percent in the Northern, 25 percent in the Southern and 12 percent in the Central Regions, respectively) and 51 percent grew pulses or legumes (comparatively even distribution) (NSO, 2005:98). Over time, more and more households have cultivated cassava. The MVPA reports that some of the households who grew cassava in 2005 did so as a ‘consumption-smoothing’ mechanism to counter maize shortage (GoM, 2006). Yet, despite the increase in national maize availability, the trend in cassava and sweet potato production has remained on a (steep) upward curve. It is important to note that these two crops are not grown in significant quantities by the non-poor, whose efforts and resources are (wholly) tied up in the production of maize and tobacco.

The rise in the production of cassava, now Malawi’s second-most important food staple, has been attributed to drought and labour shortage because the crop has much lower water and labour requirements. But these explanations are inadequate. They cannot account for the expansion of cassava into higher rainfall areas and the increased net allocation of household labour afforded to it and to other traditional crops. Instead, the increased investment of labour towards cassava, sweet potatoes and legumes may be the result of the labour savings and the release of land from maize cultivation through the productivity gains arising from inputs

Figure 4: Cassava and Sweet Potato Production, 1987–2010



Source: MoAFS Final Crop Estimates

transfers/subsidies. The data shows a close correlation between production spikes in cassava and sweet potatoes and the universal provision of fertilizer and maize seed inputs to all smallholders. In socio-cultural terms, the main beneficiaries of this multiplier effect were households in general, who enjoyed more food security, and women in particular, who gained entitlements or control over these traditional crops.

Since the mid-1990s, the production of traditional food crops has been strongly promoted in multiple INGO projects and within SP measures. For example, cassava and sweet potato cuttings were distributed in drought recovery interventions, through direct transfers and PWP; similarly, legume seed was included in input transfer programmes. The success of these initiatives, it has been argued, owes less to the availability of the planting material/seed than to the targeting of these interventions to marginalized households (i.e., the ultra-poor) and to women in particular (Charman, 2008). In cultural terms, roots, tubers and legumes are crops in which female entitlements (or use rights) are relatively secure, meaning that women could retain ownership of the resource and legitimately devote land and labour towards their production in accordance with customary practice. These crops are culturally regarded as ‘belonging’ to women in the sense that they have entitlement to use them to feed their families or to sell them for income, as they choose appropriate. The promotion of cassava, sweet potatoes and legumes through SP interventions under the banner

of a government-sanctioned food security strategy reinforced their control over these crops.²¹ Hybrid maize seed and fertilizer, in contrast, have historically been resources in which men have held dominant entitlements through their more advantaged position to acquire finance and their customary ownership of the household (maize) granary. The MPVA report (GoM, 2006:XX) comments on this dynamic: “While women hold decision making power in female-headed households, in male headed households there is a clear division: to the extent that women are involved in decisions about inputs and planting, their role is largely limited to crops that do not require fertilizer application, and where seeds are recycled.” The simultaneous provision of hybrid/OPV maize and fertilizer in the inputs transfer programmes may have detracted male concern from the strengthened entitlements of women in traditional crops, permitting them time (labour) and land to intensify production without opposition or significant contestation.

Cost-Benefit Considerations

The Starter Pack and TIP programmes (input transfers) were shown to transfer benefits (in terms of increased household maize production) more cost-effectively than procuring and distributing grain through food aid programmes. An evaluation of the 1999/2000 edition estimated that the maize productivity gain arising from the USD 20 million programme (280,000–420,000 metric tons) would have cost between USD 70 million and USD 100 million, had the maize been obtained through commercial or food aid pipelines (Levy, 2005). The evaluation considered the major known cost variables (fertilizer procurement, logistical and operational costs) and then examined the qualitative impact of the programme on households through surveys.²² Whilst cost-effective in comparison to food aid (see below) and certainly of benefit to the smallholder beneficiaries, input transfers on the scale undertaken would prove to be inadequate as a means of substantially increasing national production and stabilizing supply conditions. Most of the additional maize did not enter markets and was consumed at home. The measure was incapable of redressing crisis situations where households needed to recover from falling into poverty, whereas the input transfers could provide no more than a minor productivity boost. A more appropriate pathway, from the government perspective, was the provision of input subsidies on a scale that would enable farmers to substantially raise production, returning to the development concept first used under the Banda administration but now broadened in scope to include poor farmers.

There is no doubt that AISP achieved this goal. The cost-benefit of the programme is hard to determine because of the complexity of the numerous variables that influence the productivity outcome. An in-depth assessment of the 2006/2007 programme found that the benefits (a gain of between 423,000 and 881,000 metric tons) needed to be weighed against crude programme costs (USD 52.3 per beneficiary) and effectiveness of the measure (Dorward, Chirwa, Kelly, Jayne, Slater and Boughton, 2008). The analysis drew on qualitative data from focus group discussions with farmer groups in 12 districts, key informant interviews with programme stakeholders and beneficiaries, and an examination of descriptive statistics. The cost-benefit analysis used econometric modelling and livelihoods modelling. In its assessment of costs, the study considered: i) the displacement costs to the commercial fertilizer market (which varied between 30 percent and 50 percent); ii) the programme operational costs; and iii) the incremental gain from the use of nitrogenous fertilizers, a variable that is itself subject to rainfall conditions and crop management practices. In terms of the overall objective of increasing input availability, the ASIP 2006/2007 programme cost USD 1.19 to transfer USD 1 of fertilizer, which, in turn, produced a productivity gain in maize of between 5 kilograms (low level) and 11 kilograms (upper level). This cost benefit was evidently much lower than the input transfer programmes that, although their returns are surely exaggerated through the exclusion of such variables, tempted the authors to call for a reduction in the programme scale and size of input packages. AISP costs have escalated in the subsequent two seasons (rising from USD 91 million to USD 284 million) (through a combination of factors, including the increase in programme sale, rising fertiliser costs and inefficiencies in implementation), whilst the gain in productivity indicates a possible diminishing return (although no detailed analysis has been conducted).

21 Ironically, the MVPA cautions against this strategy, arguing that “low-value traditional crops” are likely to “trap” smallholders at “a bare subsistence level” (GoM, 2006:71).

22 The analysis does not adequately reflect the influence all significant variables, including displacement costs (probably minor), mistargeting and leakages (less significant, especially under universal targeting), and the incremental grain production gain from the use of hybrid/OPV seed and inorganic fertilizer.

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On the basis of the evidence from the Starter Pack programme and AISP, we can contrast the cost benefit of these measures against that of direct food transfers. In the 2009/2010 crop season, as already mentioned, the MVAC identified a missing food entitlement for 275,000 persons over five months. The report motivated for the provision of food aid (in terms of 50 kilograms of maize) on a monthly basis to the vulnerable 68,750 households. Using data on the costs of a WFP social protection programme in Malawi that was undertaken at about this time, we can estimate that the cost of procuring and distributing the necessary food (through a food aid pipeline) would amount to USD 7.4 million. This equals an investment of USD 109 over the five-month period to mitigate hunger in one household. The alternative cost of supporting these households to produce sufficient food to fulfil the missing entitlement, were this option possible prior to the onset of the crisis situation, is then examined. The results, as shown in Table 7, indicate that the Starter Pack approach is the most cost-effective, requiring a total investment of somewhere between USD 800,000 and USD 1.2 million, or between USD 12 and USD 18 per household, to produce sufficient maize to survive this period. In contrast, the AISP subsidy would have cost considerably more, requiring a total investment of between USD 1.5 million and USD 3.4 million, though the measure is probably more likely to have supported market conditions (stabilizing maize supply and smoothing price spikes). Our analysis shows that the cost of enabling one household to produce sufficient maize to fulfil this missing food entitlement over five months through this modality would range between USD 23 and USD 50 per household, subject to the variable of incremental productivity gain from fertilizer adoption. These costs are still more than 50 percent lower than those of food aid.

Despite the evidence in their favour, there is concern that input transfers and subsidies have been unduly costly (and inefficient) and are not sustainable, given the budgetary constraints on the GoM. The 2006/2007 ASIP assessment concluded that the cost-benefit ratio ranged from 0.76 to 1.36, implying that the measure could indeed be economically justifiable if the programme was well-managed (Dorward, Chirwa, Kelly, Jayne, Slater, and Boughton, 2008:IV). But its affordability remains doubtful and can be implemented on a significantly wide scale (i.e., universal distribution) only with donor funding at a cost of about USD 200 million per year. Yet sustained donor commitment is unlikely, not least because opponents of subsidization perceive other measures (including food aid) as more cost-beneficial (ignoring the significant costs of targeting and leakages), partly because the food component is seen as a benefit rather than as a cost²³ and partly because food aid (along with other forms of transfers) is a more flexible instrument that can be mobilized in short lead times to address production shortfall shocks. The argument in favour of input transfers remains strong within government policy decision-making circles, reflecting the above evidence. There is still significant room for improving the programme's efficiency and rationalizing (or downsizing) the input package to ensure maximum possible return on investment. The 2006/2007 assessment indeed advocates comprehensive coverage of all smallholders with a reduced subsidy (Dorward, Chirwa, Kelly, Jayne, Slater, and Boughton, 2008:100), thus keeping costs down whilst ensuring near universal coverage and thereby minimizing mistargeting costs.

Impact on Labour Markets

Free inputs, input subsidies, food/cash transfers and PWP have positively and negatively affected rural labour markets. As discussed earlier, some of these programmes have affected labour market participation through offering above-equilibrium wage rates. PWP have been implemented in about 14 percent of communities (GoM, 2006:134), though participation on average is usually brief (for a few weeks) and only 2 percent of households reported that food-for-work provided their main source of food (NSO, 2008:100). A more significant impact on rural labour markets has resulted from the decline in surplus labour during the height of the agricultural season consequent to greater on-farm productivity. Across the country, rapid wage increases were observed after the 2006/2007 season. The AISP evaluation (Dorward, Chirwa, Kelly, Jayne, Slater, and Boughton, 2008:33) found that the improvement in maize production and enhanced household access to food (maize, but also cassava) reduced the need of the poor to 'hire out' labour to meet short-term cash or food needs. At the same time, the availability of subsidized inputs increased the ability of non-poor smallholders to 'hire in' labour to enhance their agricultural productivity through expanding their fields under cultivation and allocating additional labour to crop management. These labour market pressures increased piece-work rates, which translated into

23 This thinking is applicable to food aid, not to commercial imports.

Table 7: Cost Benefit Comparative Analysis: Starter Pack, AISP and Food Aid

Evidence	Social Protection Measure		
	Starter Pack	ASIP	Food Aid
Year	1999/2000	2006/2007	2008/2009
Fix cost	USD 20,000,000	USD 91,577,250	
Beneficiaries	2800000 HH	1750000 HH	WFP Pilot Experience
Cost per beneficiary	USD 7.1	USD 52.3	
Maize price (FOB) (ton)			USD 306
Distribution and handling costs (ton)			USD 120
Transfer costs (per USD 1 expended on fertilizer)		USD 1.19	
Food transfer (per USD 1 expended on maize)			2.3 kg maize
Maize productivity gain (upper level)	150 kg/ha	881000 mt	
Maize productivity gain (mid level)	100 kg/ha	413000 mt	
Productivity return on USD 1 transfer (upper level)	21 kg maize	11 kg maize	
Productivity return on USD 1 transfer (mid level)	14 kg maize	5 kg maize	
Cost / Benefit in current situation			
2009/10 Food-Insecure Population	275,000	275,000	275,000
Households in need	68,750	68,750	68,750
Missing food entitlement (kg) per household: 5 months @ 50 kg maize	250	250	250
Total missing food entitlement (kg)	17,187,500	17,187,500	17,187,500
Total cost of mitigating hunger for 1 HH (upper productivity level)	USD 12	USD 23	USD 109
Total cost of mitigating hunger for 1 HH (lower productivity level)	USD 18	USD 50	
Total cost of mitigating hunger (upper level)	USD 818,452	USD 1,562,500	USD 7,472,826
Total cost of mitigating hunger (lower level)	USD 1,227,679	USD 3,437,500	
	Variables	Variables	Variables
	<p>Effectiveness of targeting (minimizing inclusion and exclusion errors)</p> <p>Programme logistical efficiency, including costs of targeting & registering beneficiaries and monitoring impact.</p> <p>Incremental grain production from use of nitrogenous fertilizer subject to horticultural / management practice as well as rainfall.</p> <p>Inflexible tool for dealing with national food shortage and market inefficiencies as increased production will not necessarily become available as marketable surplus during demand peaks.</p>	<p>Effectiveness of targeting (minimizing inclusion and exclusion errors)</p> <p>Programme logistical efficiency, especially role of parastatals whose relatively higher costs impede market competitiveness.</p> <p>Incremental grain production from use of nitrogenous fertilizer subject to horticultural/ management practice as well as rainfall.</p> <p>Market displacement, i.e., decreasing commercial sales (between 30% and 50%).</p> <p>Inflexible tool for dealing with national food shortage and market inefficiencies as increased production will not necessarily become available as marketable surplus during demand peaks.</p>	<p>Effectiveness of targeting (minimizing inclusion and exclusion errors)</p> <p>Food pipeline breakages or disruptions.</p> <p>Transfer value is subject to considerable fluctuation, especially when grain procured on international markets is below seasonal spikes within the domestic market (April-August): the price gap provides an operational subsidy.</p> <p>Effective tool for humanitarian crisis situations, though costs are not necessarily lower than cash transfers. The benefit for agricultural development is limited.</p>

Source: Levy, 2005; Dorward, Chirwa, Kelly, Jayne, Slater and Boughton, 2008; Audsley, et al., 2010.

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a positive income effect for households hiring out labour. The increase in piece-work wages was observable throughout the country, though most pronounced in areas of greater labour scarcity and lower relative poverty. The scale of the rate increase varied from about 33 percent for brief tasks such as weeding to two- and three-fold increases in month-long work assignments. The authors of the investigation postulate that the combination of falling maize prices (due to increased maize supply) and rising piece-work rates could significantly reduce affect the real income of those households hiring out their labour to earn food. There have been similar wage spikes in communities benefiting from cash transfers where the target group is those households that would otherwise need to seek piece-work to secure food. These wage increases are characteristically short-lived and tend to return to an equilibrium level once food supplies/cash reserves diminish or when SP programmes cease operations.

The WMS found that about 5 percent of households relied principally on obtaining piece-work for their main food source (NSO, 2008) and these wage rate improvements would thus significantly reduce poverty in at least 144,000 households. These impacts are potentially seasonal and are directly correlated with the scale of the productivity gain arising from the subsidy programme. This trend needs to be considered together with the growth in real remuneration of the formal sector workforce from the late 1990s to 2006 (Durevall and Mussa, 2010).²⁴ Rural wages (including casual wages) nevertheless remain very low, with the statutory minimum at USD 0.75 per day, and many casual workers are paid less than this amount, either fully or partially in-kind (usually with food).

The expansion in smallholder maize, burley tobacco, roots, tubers and legumes has absorbed available labour resources during the main cropping and post-harvest periods. Using data from research on crop labour requirements (person days), along with the MoAFS crop estimate statistics, we were able to estimate smallholder labour requirements for these crops. The estimation assumes an average monthly labour input of 26 days. As yield varies in the case of maize and tobacco, correlating with the scale of inputs, we consider high and low labour-input scenarios. The results are shown in Table 8.

Table 8: Maize and Tobacco Labour Input

Fertilizer	Labour Requirement					
	Person-days/ hectare	Total hectares 2009/10	Total person- days	Length of season/month	Seasonal requirement/ month	Seasonal requirement/ day
Maize high	176	1,696,270	298,543,520	4	74,635,880	2,870,611
Maize low	132	1,696,270	223,907,640	4	55,976,910	2,152,958
Tobacco high	751	155,149	116,516,899	9	12,946,322	497,935
Tobacco low	596	155,149	92,468,804	9	10,274,312	395,166
Cassava	171	195,828	33,486,588	15	2,232,439	85,863
Total low			349,863,032		68,483,661	2,633,987
Total high			448,547,007		89,814,641	3,454,409

Source: Person-days/hectare: Maize and Tobacco (Takane, 2008:193); Tobacco (Koester, et al., 2004:64); Maize and Cassava (Barratt, et al., 2006:118); Crop hectare: MoAFS Final Crop Estimates.

The number of persons required to cultivate the current area of land under maize on a daily basis for four months is 2,152,958 at a low input level and 2,870,611 at a high input level. For tobacco, the number of persons required for nine months at a low input level is 395,166 and 497,935 for a high input level. During the summer rainfall season, when smallholders are producing all three crops, the total labour requirement necessitates the full-time involvement of between 2.6 million (low input) and 3.4 million (high

²⁴ Within firms in the agricultural sector, for example, wages rose by 150 percent over this period, partially in response to currently devaluation.

input) Malawians of working age in agricultural endeavours. These figures need to be seen in the context of the total potential adult (18–65 years) rural labour force, which currently amounts to about 5.5 million persons (both genders). The results show that between 47 percent (low input) 62 percent (high input) of this total potential labour force needs to be permanently engaged in agricultural activities for at least four months to achieve the current level of production in maize alone. Smallholders need to balance this demand on their labour against the labour requirements for other crops (cash crops [cotton/coffee/tea/sugar/groundnuts], grains [rice/millet/sorghum], legumes, fruit and vegetables), livestock production, natural resource harvesting, and off-farm income activities. The WMS 2008 survey findings which report that rural unemployment was less than 1 percent is consistent with the proposition that rural labour force has achieved near maximum seasonal employment during the agricultural season of maize / tobacco production. The cumulative evidence suggests that the rural labour market faces an emerging scarcity in supply, certainly for the period from October to May.

The impact that other forms of SP have had on either the price or supply of agricultural labour in Malawi—given current levels of on-farm demand—are little known. PWP intentionally influence labour markets, either through providing employment to the unemployed, through raising the work rate to enable the beneficiaries to achieve acceptable consumption levels (thus attaining household food security) or through providing assets. Although most PWP are scheduled for the off-season when the demand for agricultural labour is low,²⁵ this has not always taken place and some programmes have competed for labour. But their scale—outside of food crises situations—has been limited and the disruption generally short in duration. There is evidence that food-for-work (FFW) programmes have reduced household expenditure on food. In times of widespread food shortage, such as during 2001/02, FFW interventions helped to stabilize maize market prices (reducing the costs of maize), thus minimizing the length for which food insecure households had to engage in piece-work. Whilst food transfers have surely had an inflationary influence on wage rates, it is reasonable to assume that the impact has been short in duration and relatively isolated.

Conditional cash transfer programmes have had a direct influence on rural labour markets and could have a long reaching impact if they are sustained as proposed. In the experience of the GoM / UNICEF Social Cash Transfer Scheme (SCTC), the transfer of USD 14 per month to poor households has lessened their reliance on piece-work. However, instead of entering the labour market themselves, there is evidence that benefiting households have begun to employ piece workers in on-farm activities (Miller, 2009). Almost half the beneficiaries hired-in labour. Some of this employment arises from a reciprocal gesture, whereby the beneficiaries aim to redistribute a portion of their gains to other, non-beneficiary households and thus preserve good social relations within the community. Other forms of reciprocal gestures included the intra-household distribution of gifts of food and loans. This conforms to cultural practice. As one researcher has noted, piece work employment is regarded (by both buyers and seller) as part economic contract and part moral obligation, whereby wealthier families (i.e. non-poor) are expected to provide employment to poor households (Takane, 2009:193). In the case of the SCTC, research by Miller found that the provision of employment was the most frequently reported means through which beneficiaries redistribute benefits to non-beneficiaries. The scale of this redistribution is small in value terms (less than 5 percent of the original sum transferred), but nevertheless accounts for about half of the work opportunities that non-beneficiaries were able to obtain in this case on a monthly basis (Miller, 2009:22).

25 Rural people use the off-season to catch up on livelihoods activities and asset building (including repairing and building houses), work activities that could not be undertaken during the agricultural season due to the intensity of the labour demands.

5. Conclusions

The structural characteristics of poverty in Malawi dictate that agriculture and investment in small-scale farmers in particular provide the main pathway for alleviating poverty. The population is overwhelming poor and entrenched in a rural economy that is based on small farms producing subsistence and cash crops. Rural politics is dominated by traditional leadership and democratic institutions are still weak. The population is fast growing and young, almost half under the age of 15. There is little formal industry, service sectors or mining to provide alternative employment. In agriculture, Malawi holds regional comparative advantages in agro-ecological conditions, including high rainfall, whilst the rural labour force is skilled in (traditional) crop husbandry and willing to work at relatively low wages.

The Malawi case provides evidence of the reduction of poverty through the provision of maize technology transfers, initially as a result of the fee distribution of small start-up packages and later through subsidies. There is an emerging consensus that input subsidies, as a developmental tool, can 'raise land and labour productivity and improve food security for large numbers of poor [Malawian] households' (Dorward, Chirwa, et al., 2010:34). The study supports the argument that increases in smallholder maize production are the fastest way to improve food security and to reduce poverty. The scale of this achievement is notable, especially from 2005. The growth in national maize production in the period 2007 to 2010 significantly reduced the need for food aid and safety net measures to mitigate hunger. National surveillance surveys report that the number of persons living below the poverty line fell by 12 percent between 2004 and 2008 and currently (2010) stands at 40 percent. There is quantifiable evidence that the welfare benefit has been evenly distributed across all strata of the poor. Whereas the non-poor gained from increased crop sales and increased home production, the poor also increased subsistence production and gained from higher wages for casual labour. Over this brief time, the poor as well as the ultra-poor have managed to accumulate assets, most notably livestock (goats, pigs and cattle) and also to set aside savings. On the basis of the number of households recorded in the 2008 census, the national average number of Tropical Livestock Units has risen from 0.53, as recorded in 2004, to 0.57 (a considerable achievement, given the rapid levels of population growth), with considerable expansion in the goat population.²⁶ The increase in small livestock is important because women are culturally entitled to possess goats and pigs as well as poultry (which they do, as national surveys confirm) and the growth trend implies that they own more livestock.

The main areas of benefit amongst the strata of the ultra-poor, poor and the non-poor in this case are summarized in Table 9. The role of other forms of SP, including PWP and direct transfers, in the reduction of poverty is debatable, though PWP are certainly a logical complement to crop enhancement because of complementary seasonality. But, unlike the case of productivity enhancement measures, their impact has been geographically limited. Their main beneficiaries include cohorts of the poor and ultra-poor, who have nonetheless gained directly and indirectly from input transfers and subsidies. Given the narrower objectives of some of these alternative SP measures, it is fair to conclude that their main impact has been to smooth consumption and enable households to more easily overcome minor shocks through improved income. Their role in the empowerment of marginalized smallholders (the ultra-poor) and of women, in particular, deserves acknowledgement, though it remains unclear whether this has contributed towards further on-farm investment.

The case provides important lessons on the role of agricultural productivity enhancement SP in poverty alleviation. First, input transfers and subsidies were most effective when targeted broadly—in other words, to all small-farm households—so as to benefit the ultra poor as well as the poor and non-poor. The scale of the interventions determined their outcome. To Malawian smallholders themselves, universal targeting is considered justifiable, as all farms are small and there is no considerable wealth gap between the ultra-poor and the non-poor. In terms of material possessions, for example, all rural households possess few assets (only 3 percent of households have oxcarts, almost none have motor vehicles or tractors). There has been much criticism that the targeting of AISP

²⁶ Estimate calculated using the following conversions: cattle = 0.7, small ruminants = 0.10, pigs = 0.2, and poultry = 0.01. Livestock data from FAOSTATS.

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(and other SP measures) has been wide of the mark, benefiting the non-poor and excluding some of the most deserving households. It is also true that there has been considerable leakage. These concerns, whilst legitimate, overshadow the long-term, accumulated impact that SP measures have had over the course of the decade. In a strongly traditional society, non-formal mechanisms of wealth redistribution (or reciprocal gestures) evidently fulfil a corrective action to mistargeting, ensuring that, amongst smallholders, the benefit of SP is widely distributed (though not necessarily equally), both directly (through sharing assets/inputs) and indirectly (through providing employment opportunities). These reciprocal gestures are rooted in cultural practices, ties of clan and

Table 9: Distribution of Benefit from Productivity Enhancement Measures

Type of Benefit	Social Protection Measure				
	Ultra-Poor			Poor	Non-Poor
	Land scarce, with labour	Land and labour scarce	Landless		
Food	Increased maize output has reduced the scale of dependence on markets.	Marginal or no improvement in food position, though greater access to marketable supplies due to increased national food availability.	Still depend on markets (though food availability has improved) and thus have remained seasonally food-insecure when prices spike.	Increased maize output and comparatively higher yields, though still dependent on markets for a portion of their household requirements.	Increased maize output, household requirements fulfilled. Main productivity enhancement achieved in non-food crops (tobacco).
Assets	Marginal improvement, livestock accumulation	Marginal or no improvement	Marginal or no improvement	Livestock accumulation	Livestock accumulation, savings, and reinvestment in fertilizers
Income	Income position improved through reduced expenditure on food. Selling fertilizer would have provided additional income, but hindered their ability to invest in on-farm food production.	Wealth transfers—including selling fertilizer and cash—have improved household income. If able to employ labour to support on-farm agriculture, income position would have further improved. Wages remain low.	Labour demand and higher wages from piece-work may have improved their position. Low labour demand in off-season remains a challenge. Some household income gain from migration and remittances. Wages remain low.	Increased household income from crop sales (estimated at between 6% and 8%). However, higher wages would have reduced their capacity to employ labour.	Increased household income from commodity crops/maize, which has improved their ability to hire in labour.
Household resilience	Still highly vulnerable to shocks, though crop diversification may have reduced food insecurity risks.	Still highly vulnerable to shocks; dependent on off-farm income, asset transfers and unable to enhance on-farm productivity.	Still highly vulnerable to shocks; dependent on scale of smallholder investment in agriculture and thus on labour demand and still reliant on asset transfers and PWP.	Household resilience strengthened through crop diversification, though farming system dependency on maize (and inputs) reinforced.	Household resilience strengthened through good returns from investment in maize/tobacco. But farming systems remain undiversified, whilst dependency on inputs enhanced.

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responsibility of the tribe (see Chinsinga, 2005). Second, enhancing on-farm productivity from providing free or heavily subsidized inputs (seed and fertilizer) improved the comparative profitability of maize and tobacco and thus stimulated surplus production, which resulted in greater household income either directly from sales or indirectly through lessening reliance on markets to acquire the missing household food entitlement. Furthermore, the technology transfer raised yields, thus enabling farmers to release land and labour that could then be used for other crops including cash crops and traditional food staples such as cassava, sweet potatoes and beans. Third, input transfers/subsidies and other SP measures have empowered women directly through enhancing their income or through capacity building and indirectly through the opportunities to expand production of crops in which their entitlement is secure. The national output of these crops exceeds the upward trends in maize and tobacco, proving that women have been able to devote more land and labour to crops that directly benefit the household (food) and themselves (income). Fourth, the resulting growth in agricultural production (in the targeted crops and in the indirectly affected traditional crops) fully absorbed the rural labour supply (throughout the main cropping season), creating labour shortages, which the market sought to correct through substantially raising piece-work rates. The readjustment in wages equates to a transfer of wealth from the non-poor (those hiring in labour) to the poor and ultra-poor (those hiring out labour). Research has shown that the ultra-poor (and even the poor) benefit as much or even more from piece-work opportunities and off-farm incomes (through a higher rate of return) than from investing additional labour in on-farm agricultural activities, since the latter provides a lower rate of return. Fifth, the various programmes have collectively advanced smallholder knowledge of the value of green revolution technologies through demonstrating the potential of higher-yielding seed and nitrogenous fertilizer. In the case of maize, this has resulted in more widespread adoption OPV seeds and displacement of low-yielding traditional varieties. In this respect, further technical support along with inputs can realistically enable smallholders to double their current yields. It has been demonstrated that smallholders can realistically aim to achieve yields of 4,500 kg/hectare. However, research and development must be guided by a clear agricultural development strategy which should aim to achieve optimal use of the country's land and water resources, avoiding past errors in this respect such as promoting maize in unsuitable agro-ecological areas, and ensure relative price stability in strategically important food crops.

The smallholder response to input transfers and especially to the AISP confirms the theory that small farms (as opposed to the estate sector/larger smallholders) are relatively more productive and that they are more socially efficient in using available labour resources (for the importance of this finding in the context of land reform debates, see Lipton, 2009; Berry, 2011). Despite concerns that channelling subsidized maize technology inputs to smallholders would reinforce a "vicious circle of the low productivity maize production trap" (Dorward, et al., 2008), evidence from detailed field studies suggests otherwise.²⁷ An investigation of the impact of AISP on household productivity found that the 'relatively land-poor' had maize yields that were 360 kg/hectare to 380 kg/hectare higher than the relatively land rich (i.e., non-poor) (Holden and Lunduka 2010a). Moreover, the study found that relatively 'labour-poor' households had average maize yields about 360 kg/hectare lower than 'labour-rich' households, a finding that confirms our proposition that input subsidies have increased labour scarcity. The importance of raising small-farm productivity should not be understated. There is evidence from other countries that this is an effective growth-producer, having multiplier impacts on non-agricultural activities (see Berry, 2008:5).

Questions of sustainability have bedevilled the Malawian experience in input transfers and input subsidies. The concern that these programmes impose a high cost burden on the fiscal position is well-founded. The AISP case shows that overall costs have escalated annually, whilst gains in programme efficiency through improvements in procurement and distribution (including giving the private sector a larger role) are unable to offset the spiralling trend. Further efficiency could be achieved, though this would have limited impact on the overall costs, as the predominant cost item is fertilizer. As a consequence of rising input prices, the size of the transfer

²⁷ Whilst the authors recognise that free inputs/subsidies have contributed towards lowering and stabilising maize prices and raising productivity, they are in favour of 'encouraging less people to grow maize, but to grow it more productively' (Dorward, et al, 2008:19). Yet the experience from 2005 seems to indicate that some of the very smallholder that, in these terms, ought not to grow maize, have in fact made significant productivity gains. Moreover, the strategic emphasis on maize (which has undoubtedly intensified since 1994) has not detracted from smallholder (and female) efforts towards crop diversification. Public sector extension support for regional specialization in crops other than maize must, in any case, support these emerging trends.

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and scope has had to be reduced; the programme now focuses on maize alone. Whilst subsidization on a large scale cannot be undertaken without sustained donor financial support or the virtual erosion of the agricultural budget, our analysis confirms that it is a cost-effective measure compared to other forms of SP. In budget terms, the best bet is for a universal subsidy that is larger than the original Starter Pack (15 kilograms of nitrogenous fertilizer and seed), but, on cost considerations alone, less than AISP (50 kilograms of nitrogenous fertilizer, 50 kilograms of base dressing and seed). It is important that the size of the transfer achieve more than a 'consumption-smoothing' impact, for, unless productivity enhancement releases land and labour, it cannot provide a pathway out of poverty. Whether smallholders have the means (and will) to purchase the same quantities of inputs at market rates will determine the sustainability of current output. Available research indicates that only 20 percent of rural households have the ability to procure a seed and fertilizer package at the full market price, whilst about half of households could afford a 50-percent subsidized package (Holden and Lunduka, 2010b:33). As cost concerns come to determine the future shape of input subsidies, further reduction in fertilizer use will affect national production and household income and could reverse recent gains.

Input transfers and free inputs are not a panacea. Agricultural development in Malawi requires far more investment. There is need, for example, for greater investment in public research facilities and extension services (both of which have largely been dismantled) to promote a productivity increase in traditional food crops through appropriate technology adoption, focusing in particular on disseminating low-cost seeds to offset dependence on patented varieties. Actions to further empower women and to strengthen their entitlements in traditional crops and livestock should be intensified, alongside incentives to encourage family planning so as to reduce the high fertility rate. Savings should be promoted, in order to provide farmers with an option outside of investment in small livestock (whose growing numbers will put pressure on environmental resources); expanding access to banking should be the first step in this process. The major agricultural implement in most households remains the hoe, with land preparation and weeding done by hand. Most smallholders make no use of irrigation, apart from winter cultivation of wetlands. There is also negligible use of mechanization or animal draught. So long as smallholder farming systems remain dependent on labour, which has hitherto been relatively cheap and widely available, there remains little incentive to adopt modern technologies.

For agriculture to maintain its role in driving economic growth and reducing poverty, an appropriate basket of SP measures should include: a universal inputs transfer to the poor and ultra-poor who have land and are able to work to increase household maize production; an inputs subsidy for the non-poor (reducing the costs by at least half) for investment in either maize or commodity crops; and food and cash transfers to specific cohorts among the ultra-poor—especially the landless—households unable to work and those households scarce in labour. The government endorses this strategy, as expressed in its 2009 Social Support Policy. But whether it can stay the course and convince donors to stay on board is a political question, subject to domestic political pressure (from the poor, who do not want to see their gains reversed, and the non-poor, who want to retain their position as beneficiaries) and donor equivocation over policy direction and their strategic manoeuvring to obtain a controlling influence in programme implementation.

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