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# Vulnerability and Social Protection in Malawi

Stephen Devereux, Bob Baulch, Ian Macauslan, Alexander Phiri and  
Rachel Sabates-Wheeler

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## Vulnerability and Social Protection in Malawi

**Stephen Devereux, Bob Baulch, Ian Macauslan, Alexander Phiri and Rachel Sabates-Wheeler**

### Abstract

Vulnerability appears to be rising for many Malawians, whose exposure to livelihood shocks is increasing while their ability to cope is decreasing. The first part of this report draws on recently published studies and analysis of the 2004/05 Integrated Household Survey dataset to explore the nature of vulnerability in Malawi. Most livelihoods in Malawi depend on agriculture, but agricultural vulnerability is extremely high due to erratic rainfall, inequality in landholdings, constrained access to inputs, limited diversification and weak markets. Non-economic factors that compound economic risks include demographic and health risks, gendered vulnerabilities, social change and governance failures.

Economic vulnerability, defined as the risk of future monetary poverty, is high because of the heavy concentration of Malawians clustered close to the poverty line, and because of the frequency and severity of covariant shocks such as droughts, floods and food price fluctuations, as well as idiosyncratic shocks such as accidents, illness and death of family members. The economic, demographic and social impacts of HIV/AIDS are especially devastating. Monetary and subjective indicators of vulnerability are related to demographic characteristics (female- and older-headed households, orphans), lack of assets, geographic location (with a north-south gradient of rising vulnerability) and multiple shocks. Policy priorities derived from this analysis include: stabilise food prices, enhance access to agricultural inputs, and identify labour-saving technologies for labour-constrained households. More generally, social protection and livelihood promotion measures, together with an enabling environment, are central to addressing vulnerability in Malawi.

The second part of this report reviews a range of ongoing and discontinued social protection mechanisms in Malawi. Free inputs distribution ('Starter Packs') followed the abolition of fertiliser subsidies in the 1990s, and had positive impacts on food production and prices. Public works programmes (food-, cash- or inputs-for-work), social funds (the Malawi Social Action Fund) and food transfers (food aid, school feeding) also have long histories in Malawi, but have demonstrated limited impacts. Finally, unconditional cash transfers are increasingly popular, which this review endorses with the qualification that ongoing pilot projects need to be institutionalised within a comprehensive, government owned, national social protection strategy.

**Keywords:** Malawi, poverty, social protection, vulnerability.

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# Attributions and acknowledgements

This Discussion Paper draws together under one cover two related reports that were commissioned by DFID Malawi. The first study, 'Vulnerability to Chronic Poverty and Malnutrition in Malawi', was written by a team from IDS and Bunda College, University of Malawi. As team leader, Stephen Devereux compiled the report and wrote or co-authored Chapters 1, 3 and 6. Bob Baulch and Rachel Sabates-Wheeler conducted the empirical analysis of the Malawi Integrated Household Survey 2004/05. In addition, Bob co-authored Chapter 2 and wrote Chapter 4, while Rachel co-authored Chapters 1 and 2, and wrote Chapter 5. Alexander Phiri wrote two background papers that contributed to Chapter 3. The second study, 'Review of Social Protection Instruments in Malawi', was written by Stephen Devereux and Ian Macauslan.

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## Section 1

# Vulnerability to Chronic Poverty and Malnutrition in Malawi





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# 1 Introduction and conceptual framework

## 1.1 Introduction

This study aims to develop a conceptual framework to improve the understanding of vulnerability to chronic poverty and malnutrition in Malawi. The project started with a review of available evidence and thinking on the poverty and vulnerability context in Malawi, and developed an evidence-based conceptual framework. Next the framework was elaborated and tested empirically, drawing on the 2004/5 Integrated Household Survey (IHS-2) and other datasets, to strengthen the analysis and refine the conceptual framework. The overall intention was to draw out implications for social protection policy and related programming in Malawi.

## 1.2 Conceptual framework

Our conceptual approach draws on several insights from the risk and vulnerability literature, including the following propositions: (1) that **vulnerability** is a complex and multidimensional concept; (2) that vulnerability must be understood in relation to **outcomes** of interest ('vulnerable to...'); (3) that individuals, households and communities are not passive in the face of vulnerability but adopt a range of **responses**; and (4) that policy **interventions** can address vulnerability in many discrete ways. Our approach can be simply encapsulated in the following statement, which provides an organising framework for the work on vulnerability that is undertaken in this project:

**Vulnerability** is conceptualised in relation to specified **outcomes** (chronic poverty, malnutrition) and is mediated by both **household responses** (coping strategies) and **policy interventions** (risk reduction, risk mitigation, risk coping).

A conceptual framework for analysing vulnerability to chronic poverty and malnutrition in Malawi expands on the highlighted elements of this statement. The framework has seven components:

**Generic vulnerability categories:** agricultural vulnerabilities; economic shocks and processes; health risks; demographic vulnerability; political, legal and social risks.

**Malawi-specific vulnerability factors:** these are directly related to the above list of generic vulnerability categories: for example, under 'agricultural vulnerabilities' we consider erratic rainfall and soil fertility decline; under 'economic shocks and processes', weak markets and undiversified livelihoods; 'health risks' include malnutrition and HIV/AIDS, and so on.

**Outcomes of vulnerability:** in the context of this project, the main outcomes of interest are chronic poverty and malnutrition.

**Household responses to vulnerability:** these include agricultural intensification, livelihood diversification, and 'coping strategies'.

**Generic policy responses to vulnerability:** following standard risk analytical frameworks, these include 'risk reduction', 'risk mitigation' and 'risk coping'.

**Specific policy responses to vulnerability:** under 'risk reduction', these include economic growth and employment creation policies; under 'risk mitigation', livelihood diversification and insurance mechanisms; and under 'risk coping', safety nets (e.g. food aid) and broader social protection policies – recognising that some forms of social protection also have impacts on risk reduction and risk mitigation.

**Relevant policies in Malawi:** these are directly related to specific policy responses – Malawi's Poverty Reduction Strategy relates to economic growth; MASAF is partly an employment creation programme; there is already a National Safety Net Strategy; and there will be a Social Protection Strategy in 2007.

### 1.2.1 Defining vulnerability

A common way of conceptualising vulnerability is to view it as a product of two components: **exposure** to hazard (a shock or process) and **resilience**, or the ability to manage the hazard. From the perspective of vulnerable Malawians, hazards could include natural shocks such as drought, or economic shocks such as currency depreciation. Resilience relates to 'coping strategies' at the individual, household, community and group levels. People can protect themselves against the risk that a hazard will undermine their livelihood by drawing on savings, diversifying their livelihoods to spread risk, building social networks that can provide informal social assistance in times of need, and so on. When all these risk-coping mechanisms fail, people become acutely vulnerable to even minor shocks. As will be argued later in this paper, **many 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.**

Understanding vulnerability in two-dimensional space is important as it illustrates the very different policy responses that need to be taken in relation to what constitutes the vulnerability of any one person, household, community, or 'vulnerable group'. It is particularly useful for acute situations requiring an immediate response. That is, at any one time it is possible to construct a static vulnerability profile that indicates whether the hazard or the ability to cope is the main determinant of vulnerability. Policies appropriate to the composite nature of the vulnerability can then be designed. However, to understand vulnerability fully it is not enough to simply take a one-period view; we need know what happens in the next period. Vulnerability needs to be forward-looking, as it makes a prediction about future poverty (or other outcomes). Vulnerability does not simply refer to those who are likely to become poor in the future due to an unexpected shock, but also to those who will remain poor, those who will fall deeper into poverty and those who may fall into poverty due to predictable fluctuations such as seasonality. This disaggregation is important as the policy implications are very different for these different groups.

An understanding of vulnerability is further complicated by the notion of 'ability to manage'. We argue that the ability to manage shocks or hazards is a complex function of existing behaviour, reflected in livelihood profiles that themselves represent long-term or structural adaptation to predictable shocks; crisis response behaviour (such as the ability to rely on formal and informal insurance and networks in times of crisis), which is constrained by established livelihoods; and by external (policy) response to a predicted and actual crisis.

It is important to emphasise that vulnerability, poverty and food insecurity are not synonymous, although the three concepts do overlap and all of them are responsible for causing malnutrition, one outcome indicator of interest in this study. Specifically, vulnerability is a broader concept than poverty, in at least three ways:

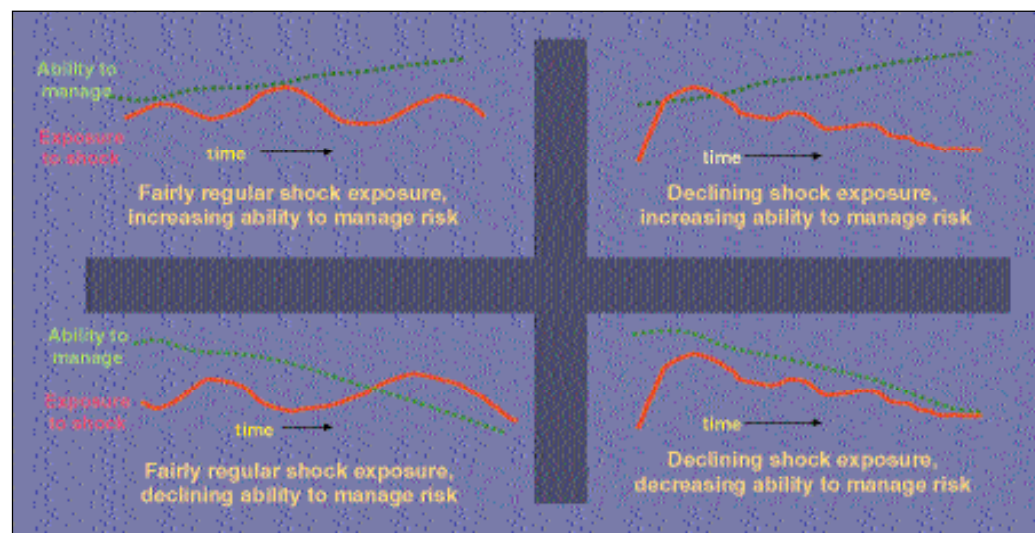
- (1) The non-poor are also vulnerable to future poverty (some definitions of vulnerability refer to people whose income is within, say, 20 per cent of the poverty line).
- (2) Vulnerability incorporates various non-income aspects of ill-being, such as insecurity, social exclusion and political marginalisation, while poverty measures focus on income and assets.
- (3) Vulnerability is a dynamic concept, which is both forward-looking and constantly changing, while poverty is a static concept that measures proxies for wellbeing at a point in time.

Policy implications of vulnerability are also broader than efforts to reduce poverty – although it is true that wealthier people tend to be less vulnerable, because they have more income and assets to buffer them against hazardous shocks and adverse processes. Policy interventions to manage vulnerability can either aim to reduce or spread risk (e.g. by supporting livelihood diversification), or to strengthen resilience (e.g. by introducing social insurance mechanisms such as weather insurance for farmers). In the absence or failure of these measures, public interventions need to deliver safety nets (e.g. food aid) and other forms of social protection (e.g. orphan carer grants) to those affected by shocks and processes that they are unable to cope with unassisted.

### 1.2.2 Vulnerability scenarios

The above conceptualisation of vulnerability as having two distinct and dynamic dimensions can be illustrated in relation to the ‘vulnerability scenarios’ presented below.

**Figure 1 Vulnerability scenarios for Malawi**



Source: Sabates-Wheeler and Haddad (2005)

The stylised scenarios in Figure 1 highlight a few possibilities of dynamic situations. The bottom left-hand quadrant illustrates a slow-onset crisis, where management of risk is gradually eroded in a context of regularly repeated shocks (for instance, chronic poverty and the run-down of assets in response of small but cumulatively devastating shocks). At the extreme left-hand side of the diagram we see that shocks and management ability are mutually exclusive. As we move to the right-hand side, shocks begin to erode the ability to manage, however, the latter dominates the former. Over time, the shock increasingly interacts with and erodes the ability to manage, to a point when the effects of the shock overwhelm the ability to manage. The top left-hand quadrant highlights a situation where public and private actions combine to improve the ability to manage risk, despite continued exposure to shocks (e.g. certain effective AIDS-management policies).

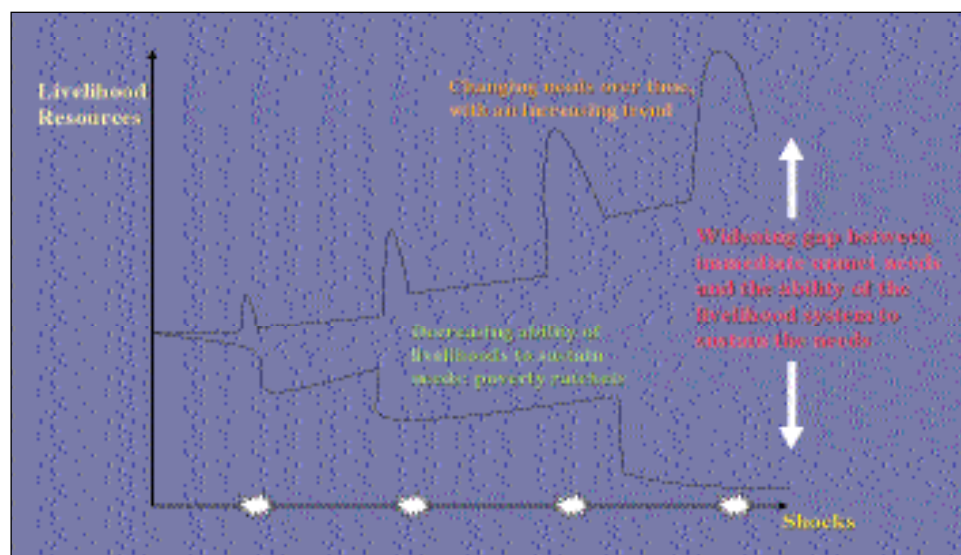
The bottom right-hand quadrant describes a scenario where both exposure to shock and ability to manage are decreasing. This is a less intuitive scenario. An example may be a land-grab from the widow of a recently deceased man. This would be a major shock to the woman and any children, stripping her of important productive assets and undermining her ability to manage future hazards and shocks. While she may not experience substantial future shocks, it is possible that her ability to manage will be further undermined by discriminatory practices that alienate her from social networks, non-land assets and possible

livelihood opportunities. The top right-hand quadrant is a 'best case' scenario – exposure to shock is reducing (e.g. by moving homes away from flood-prone areas) and ability to manage risk is increasing.

Clearly, the severity and frequency of shocks are crucial factors in determining the ability to manage. Many different scenarios are possible, depending on the nature and severity of hazards (a single devastating disaster such as an earthquake, a number of moderate shocks such as a sequence of poor harvests, or a persistent process such as falling farm sizes over many years); whether shocks are multiple and simultaneous, or individual and occasional; whether shocks are totally unexpected (such as a tsunami) or regular and predictable (such as the annual hungry season). But vulnerability is not just a phenomenon that corresponds to shocks striking people at random, it is also socially constructed, being related to structural rigidities and inequalities that perpetuate disadvantage, exclusion and marginalisation of certain groups of people in the long term. Certain types of vulnerabilities are established and reproduced through sociocultural norms, various forms of discrimination, and differential access to political power. These factors are unlikely to present themselves as shocks, but rather as long-term declining trends in the ability to manage.

A final point to emphasise is that shocks and adverse processes often interact to reinforce each other, so that transitory shocks can create or deepen chronic poverty. This point is illustrated in Figure 2. During a period of crisis (such as the 2001/2 food crisis in Malawi), people respond by engaging in 'coping strategies' such as borrowing, selling assets, rationing food consumption, withdrawing children from school, and so on. The consequence of adopting such 'erosive' coping strategies is that the household's ability to generate future livelihoods is compromised, because its livelihood resources (including community support) have been compromised. When the next shock strikes, the household has fewer options and will again be forced to shed assets to survive. Over time, the 'poverty ratchet' effect that repeated shocks have on increasingly weakened livelihoods steadily undermines the ability to recover, and pushes people towards chronic poverty and destitution. This kind of process may be affecting large numbers of people in rural Malawi.

**Figure 2 Cumulative effect of regular shocks**



### 1.3 Structure of this report

Chapter 2 describes several available data sources for analysing vulnerability in Malawi, notably the Integrated Household Survey (IHS-2) conducted in 2005. Chapter 3 reviews the literature on vulnerability in Malawi, both conceptual approaches and analyses of risks and



vulnerabilities of various kinds (agricultural, economic, health, demographic, political, legal and social). Chapter 4 analyses variables relating to income (expenditure) and asset vulnerability in the IHS-2 dataset, assesses household- and community-level shocks, and constructs a 'durable asset index' to estimate changes in wellbeing over time. Chapter 5 analyses indicators of subjective poverty and social exclusion in the IHS-2 dataset, compares these findings to monetary measures of poverty, and explores the relative vulnerability of different 'vulnerable groups' (such as orphans, or female-headed households). Chapter 6 concludes and draws implications for policy.

## 2 Data sources for analysing vulnerability in Malawi

### 2.1 Introduction

During the first phase of this study, various sources of data were reviewed for their relevance to the analysis of vulnerability to chronic poverty and malnutrition in Malawi. Among the datasets considered were the following:

- Integrated Household Surveys (IHS): IHS-1 and IHS-2
- Complementary Panel Survey (CPS)
- Malawi Atlas of Social Statistics
- Malawi Vulnerability Assessment Committee (MVAC)
- Demographic and Health Surveys (DHS): 1992, 2000, 2004
- Core Welfare Indicator Questionnaire (CWIQ).

### 2.2 Integrated Household Surveys (IHS)

Two 'Integrated Household Surveys' have been conducted in Malawi, in 1997/8 and 2004/5. These are usually referred to as IHS-1 and IHS-2.

The 1997/8 IHS was a comprehensive socioeconomic survey of living standards of households in all the (then) 25 districts of Malawi plus the four major urban centres. The National Statistical Office administered the two-part IHS questionnaire to 12,960 households over a 12-month period between November 1997 and October 1998. However, after two rounds of data cleaning, the dataset shrunk to first 10,698 and then to 6,586 households (for whom consistent consumption expenditure data, suitable for conventional poverty analysis, are available). Expansion factors (sampling weights) were derived for the 25 districts and four urban areas, but in some districts, the number of households left after data cleaning was 'very small'. Nonetheless, district-level maps of the incidence and depth of poverty (headcount and poverty gap, etc.) have been produced from the IHS-1 data.

The IHS-1 questionnaire consisted of two parts, a 'large questionnaire', typically administered to the respondent households in a single visit, plus a diary of expenditures kept over 14 days (either by the household head if s/he was literate, or through twice weekly visits by the enumerator). The use of the diary method in IHS-1 undermines its comparability with other household surveys conducted in Malawi – including the IHS-2 – which used the recall method. Indeed the use of diary methods for collecting expenditure data in poor countries is now questioned by many survey experts.

The 'large questionnaire' of IHS-1 contains the following modules: household identifiers, household roster, current education of those under 25, past education of those over 25, health/morbidity, nutrition, fertility, deaths over the last 12 months, immunisation, income, employment, time use, migration, housing, assets (durables, livestock and land), credit, recall information on major household expenditures.

Although a number of extremely useful studies – in particular the National Economic Council's 'Malawi Poverty Profile' (2000) and 'Determinants of Poverty' (2001) – have been generated from the IHS-1, the quality of the enumeration and processing of questionnaires is generally regarded to be problematic in some respects.

A second IHS was conducted between March 2004 and March 2005, with a sample of 11,280 households across 564 communities. Unlike IHS-1, which used a diary method, IHS-2 used a 7-day recall period for collecting information on food consumption, and included a

community questionnaire to collect information on infrastructure and basic services at Traditional Authority (TA) level. The data files were finalised by CSO and the World Bank, who also constructed the expenditure aggregates and poverty lines from the IHS-2. The quality of the enumeration and processing of IHS-2 was said to constitute a 'substantial improvement' over IHS-1.

There is no longitudinal element (panel) between households in IHS-1 and IHS-2, but a number of retrospective questions (on shocks, durable assets, subjective wellbeing) are included in the IHS-2 questionnaire which are useful for analysing vulnerability-related issues. Unlike IHS-1, IHS-2 also included an anthropometric module for children under 5 years old. Table 1 lists the variables in the IHS-2 household and community questionnaires that are relevant to this study.

**Table 1 IHS-2 questionnaires: relevant modules for vulnerability analysis**

Module	Description	Remarks	Page
<b>Household questionnaire:</b>			
AB	Recent Shocks to Household Welfare	Over the last 5 years, for three major shocks – includes information on how widespread and response	50
AC	Deaths in Household	Over the last 2 years – causes include accidents and illness codes (including HIV-AIDS)	51
AD	Child Anthropometry	Measures weight and height (or length) of all children aged 6–60 months. Asks about child participation in nutrition programmes	52
Y	Social Safety Nets	List of programmes from which the household benefited over the last 3 years, plus the value of benefits in last year	47
M	Durable Assets	Ownership of 36 durable and productive assets, with recall information on ownership over the last 5 years for 19 of the durable assets	29
F	Security and Safety	Over the last 3 years – subjective and objective on attacks and theft, including whether reported to the police	16–17
D	Health	Self-reported illness over the last 2 and 4 weeks – also information on hospitalisation and its costs	10–12
AA	Subjective Assessment of Wellbeing	Includes the minimum level of income to make ends meet; adequacy of food, housing, clothing and healthcare; 6-step ladder visualisation exercise	49
W	Other Income	Includes income from pensions	45
<b>Community questionnaire:</b>			
CG	Changes	How community conditions have changed for worse or better (5-point scale) over the last 5 years; Q.50 asks about important events which made people worse off or better off over the last 5 years, useful for triangulation of module AB of the household questionnaire	12–14
CD	Access to Basic Services	Includes information on roads, bus services, markets, ADMARC markets, clinics, schools, mosques, etc.	6–7

## 2.3 Complementary Panel Survey (CPS)

The CPS is a longitudinal household survey conducted between January 2000 and September 2002 by the International Food Policy Research Institute (IFPRI), the Centre for Social Research (CSR) and the Poverty Monitoring System of the Government of Malawi.

The first round of the CPS was conducted in January–February 2000, drawing on a purposive sample of households that were ‘believed’ to have been surveyed in the IHS-1 of 1997/8. The second round of the CPS was conducted in October–December 2000, with a sample of 667 households. The third round was in July–August 2001, and surveyed 631 households. The fourth round took place in August–September 2002, with a sample of 499 households. Due to various problems with identifying the IHS-1 households, the theft of round one questionnaires before they were entered and processed and problems in tracking households between rounds, just 291 households can be tracked between the IHS-1 and rounds 1 to 4 of the CPS. Furthermore, seasonality and differences in the way in which data was collected means that ‘the comparability of the CPS and IHS welfare indicators must be seriously questioned’ (Sharma *et al* 2002).

The CPS sample had four strata, enabling the rural Southern, rural Central and rural Northern regions of Malawi plus its four Urban centres to be identified separately. Given the sample size and level of attrition in the CPS noted above, it is unlikely that statistics derived from it can be regarded as representative of these four regions.

The CPS has a common set of modules that appeared in all rounds. These are the household roster, education, morbidity, food security and coping strategies, labour and employment, income, expenditures and transfers. Other modules (for example HIV/AIDS, negative economic shocks, household decision-making, pre-marriage assets, and time use, were included on an *ad hoc* basis to allow the investigation of additional topics of interest.

A number of useful papers have been prepared by IFPRI and the Government of Malawi, using the CPS and IHS-1 data (Government of Malawi 2000; Sharma and Yohannes 2005).

## 2.4 Malawi Atlas of Social Statistics

The ‘Malawi Atlas of Social Statistics’ was produced by the Government of Malawi and the International Food Policy Research Institute (IFPRI). The Atlas of Social Statistics provides disaggregated data on poverty and a range of household-level demographic, economic and other variables. The data come from the 1998 Census and the 1998 IHS. Disaggregated estimates of monetary poverty were produced by combining the Census and IHS data using small area estimation techniques. The data are disaggregated to the Traditional Authority (TA) level.

Variables of interest include: population/sex ratio/growth rates/poverty headcount/ultra-poverty headcount. Marital status/depth/severity of poverty/orphanhood/literacy/schooling/water access and source/cooking/assets/distance/location.

## 2.5 Malawi Vulnerability Assessment Committee (MVAC)

Malawi’s ‘Vulnerability Assessment Committee’ (VAC) is a consortium committee of government, NGO and UN agencies that is chaired by the Ministry of Economic Planning and Development (formerly the National Economic Council). The MVAC has developed a series of livelihood profiles that describe how households obtain their primary food requirements: these are called ‘baseline studies’, and they depict the sources of food and income, as well as the expenditure patterns that households employ to survive. If these baselines are combined with monitoring information that describes changes in the different variables then it is possible to translate the changes into food equivalents. This means that we are able to observe how changes in food access occur as a result of changes in livelihoods, such as access to markets, price changes and labour markets.

The main purpose of the MVAC is to assess and reduce vulnerability in Malawi. Methodologically, the MVAC is based on the Household Economy Approach (HEA). This method of data collection is less cumbersome than a typical household multi-topic survey (such as a Living Standards Measurement Survey (LSMS) or the IHS), as it purposely collects information at an aggregate level. That is, through focus groups, village-specific knowledge, key informant interviews and processes of triangulation the HEA specifies averages for the main variables of interest for clusters of groups, where within-group characteristics are relatively homogeneous (i.e. wealth categories). The data are presented in spreadsheets according to wealth category (rich, middle, poor) and location (or livelihood zones). The HEA approach is often used for monitoring vulnerability to changes in food access over time and for predictive purposes. Models are typically constructed that introduce a shock to a livelihood system (such as the removal of a subsidy) and the implications this would have for food access of different wealth groups are calculated.

The MVAC was set up in response to the food crisis of 2001/2. Between May and July 2003, the MVAC conducted a livelihood re-zoning exercise and an HEA baseline survey in 11 out of 17 livelihood zones in Malawi. These activities form the first stage in the establishment of a livelihood information and monitoring system within the MVAC that is designed to generate a deeper understanding of rural livelihoods, food access issues and the ability of households from different wealth groups to cope with shocks and vulnerability. The baseline information is employed as an analytical modelling tool by the MVAC (2004) for monitoring household food and livelihood security. It is also used to generate analysis for understanding the impact of different programming and policy on vulnerability, and food and livelihood security. The LBVA (livelihood-based vulnerability approach) adopted by the MVAC is aimed at providing relevant information and analysis on food access and livelihoods to different government ministries, as well as international organisations and civil society to inform early warning, rural development strategies, poverty reduction, safety nets programming and food security policy formulation.

The data comprise a large range of variables that would be useful for an analysis of poverty and vulnerability, including crop production data, consumption, livestock, income, expenditure, employment, sources of food, cash expenditure, AIDS and food security. It is also the closest available source of 'dynamic' longitudinal data in Malawi. However, it has limitations due to the method of aggregation of households, which means that changes in food access due to shocks can only be assessed for the 'typical' or average household in any one wealth group. Also, assessing outcomes (food access) is derived in the sense that outcomes are simulated according to assumptions about how a hazard will work through a livelihood system.

## 2.6 Demographic and Health Surveys (DHS)

Four 'Demographic and Health Surveys' (DHS) have been conducted in Malawi: in 1992, 1996, 2000 and 2004. There was also a 'DHS Ed' survey in 2002, but this only collected information on education.

The 1992 MDHS sampled 5,232 households, 4,840 women and 4,232 men. It also contained a facilities survey of 223 clinics, health stations, etc. The 1996 MDHS surveyed 2,898 households, 2,683 women and 2,658 men. The 2000 MDHS increased its sample size dramatically to 14,214 households, 13,220 women and 3,092 men. Finally, the 2004 MDHS, for which no results had been released by late 2005, sampled 15,000 households, 13,000 women and 5,000 men.

DHS surveys do not collect information on incomes and expenditures, but are extremely useful for their comprehensive information on human development indicators, in particular mortality and malnutrition among children, and mothers' health, education and wellbeing. Information about community characteristics, housing, and assets are also collected. DHS surveys are useful for examining trends in wellbeing, both within and between countries, but do not contain a panel component, making the analysis of issues to do with poverty dynamics and vulnerability difficult.

The Macro-International website ([www.measuredhs.com](http://www.measuredhs.com)) has the reports for the 1992, 1996 and 2000 MDHS but only an abstract for the DHS Ed Survey of 2002. The status of the 2004 MDHS was listed as 'ongoing' as of late 2005.

## 2.7 Core Welfare Indicator Questionnaire (CWIQ)

One CWIQ survey has been conducted in Malawi, in 2002, with technical support from the World Bank (which has conducted CWIQ surveys in 14 other African countries). Data collection occurred between September and November 2002, and a total of 9,819 households were surveyed (8,941 of which were rural and 878 urban). There were 31 sampling strata: the 27 districts plus four urban centres.

The CWIQ contains 10 modules: household roster, education, health, employment, household assets, household amenities, children under 5 years old, food security, safety and security and HIV/AIDS. The CWIQ does not collect information on incomes and expenditures, but a set of pre-chosen poverty predictors (identified using the IHS-1) were used to estimate poverty levels as per the standard CWIQ methodology. The HIV/AIDS section asks about people's knowledge of HIV transmission and prevention, but it does not allow HIV infection rates to be estimated.

As a reflection of its acronym, the initial CWIQ survey reports (based on scanned questionnaires and pre-programmed standard tables) was produced just 1 month after the survey work was completed in December 2002. The main results of the CWIQ are summarised in a 139-page report by the National Statistics Office (NSO 2002).

## 2.8 Nutrition and food security surveillance

The Malawi Integrated Nutrition and Food Security Surveillance System produces monthly 'Data Reports' on a number of indicators of malnutrition and food stress in sentinel sites across the country. Technical support is provided by 'Action Against Hunger', with funding from the European Union. This system monitors the growth of 4,200 children in 12 districts, and assesses the food security status of their households using a short questionnaire. The nutritional surveillance component reports on underweight children (weight-for-height) and mid upper-arm circumference (MUAC). The 'food stress index' combines eight indicators, including (1) households with <51kg cereals in their granary; (2) households earning <MK1,001 in the last month; (3) meal frequency; (4) households reducing portions and (5) households going entire days without staple food. The questionnaire also monitors the proportion of households looking for *ganyu* (casual employment).

## 3 Review of literature on vulnerability in Malawi

### 3.1 Definitions and conceptual approaches

Vulnerability is defined by economists as the risk of future poverty. In Malawi's context of high baseline poverty, however, Sharma and Yohannes (2005) do not exclude the current poor from their definition of vulnerability as 'the presence of a high degree of risk of slipping into deeper poverty'. They also point out that the extent of vulnerability is affected by the depth of poverty: 'Since consequences of unexpected declines in income on welfare become harsher the poorer the households, vulnerability generally increases with poverty'.

Different analyses of vulnerability in Malawi adopt different conceptual and analytical approaches. Ellis *et al* (2002) consider historical and contemporary constraints to livelihood diversification as a potential pathway out of rural poverty, and they provide a framework for analysing poverty and vulnerability based on characteristics of different 'wealth groups' such as assets owned (e.g. land, livestock), housing type, labour market participation and food security status. TANGO (2004a) summarises the underlying causes of livelihood vulnerability and food insecurity in Malawi:

The current vulnerability in Malawi is the result of decades of exposure to macro-economic shocks, weather-induced production shortfalls, and demographic pressures. The government's focus on national self-sufficiency has not been sustainable or appropriate in the context of rapid population growth, rising input costs and recurrent droughts and floods. The country enjoys few employment opportunities outside of agriculture, while market liberalisation has increased rural inequality and stratification.

Dorward and Kydd (2002) develop a framework for understanding vulnerability in Malawi that identifies interactions between structural economic weaknesses and transitory shocks or risks.

Low levels of financial and physical capital together with reliance on agriculture and natural resources make poor rural economies and livelihoods particularly exposed and vulnerable to *risks of natural shocks*. These might arise from adverse weather (affecting crop yields or damaging physical assets); human, crop or animal disease; or physical insecurity (as a result of crime, or political violence, or conflict). Where markets are thin and there are poor communications and high transport costs, isolated markets are prone to large *price risks* when affected by local supply or demand shocks. This may be particularly problematic for food crops with relatively inelastic demand and where there are large differences between local import and export parity prices.

### 3.2 Sources of vulnerability

Based on our own conceptual framework and a review of the literature, we subdivide the sources of vulnerability to poverty and malnutrition in Malawi into five clusters of factors: (1) agricultural, (2) economic, (3) health, (4) demographic, (5) political, legal and social vulnerabilities.

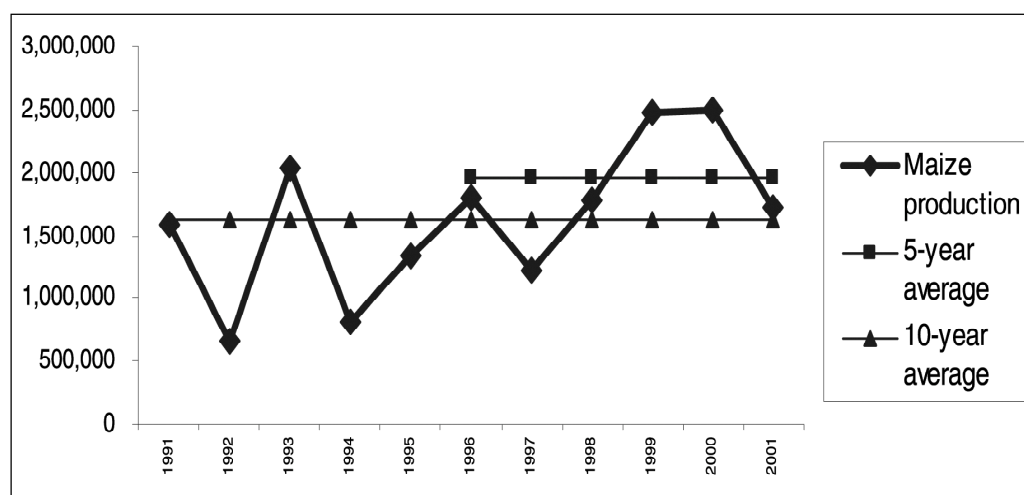
#### 3.2.1 Vulnerability in agriculture

Over 85 per cent of the population of Malawi is rural, and 89 per cent of the labour force was employed in agriculture in 1998. Yet, despite employing most of the population and

producing 72 per cent of Malawi's total exports, agriculture accounts for only 36 per cent of total value added to the Malawian economy, a large proportion of this coming from the commercial estates, mainly tobacco (Wobst *et al* 2004). Malawi is no longer self-sufficient in maize, its staple food crop. Smallholder agriculture has consistently under-performed. A combination of characteristics of the sub-sector raises the vulnerability of smallholder households in Malawi to both transitory shocks and chronic poverty. By common consensus, the following factors combine to cause food production to be either consistently or occasionally inadequate to meet consumption needs in many rural households:

1. **Erratic rainfall:** the near total dependence of rural households on rainfall for their livelihoods, both directly (for crop production) and indirectly (for *ganyu* employment), where rainfall is erratic and unpredictable, exposes farmers every year to the risk of drought or flooding within the growing season. Figure 3 illustrates the variability in maize production in Malawi, which is largely attributed to erratic rainfall. Although the trend in maize production is generally rising, the coefficient of variation has become greater since the early 1990s. This unpredictability of rains and harvests undermines food security and raises vulnerability. For instance, the food crisis of 2001/2 followed two bumper harvests (in 1999 and 2000) and a harvest (in 2001) that was actually 6 per cent above the 10-year average (Devereux and Tiba 2006).

**Figure 3 Maize production in Malawi, 1990–2001 (metric tonnes)**

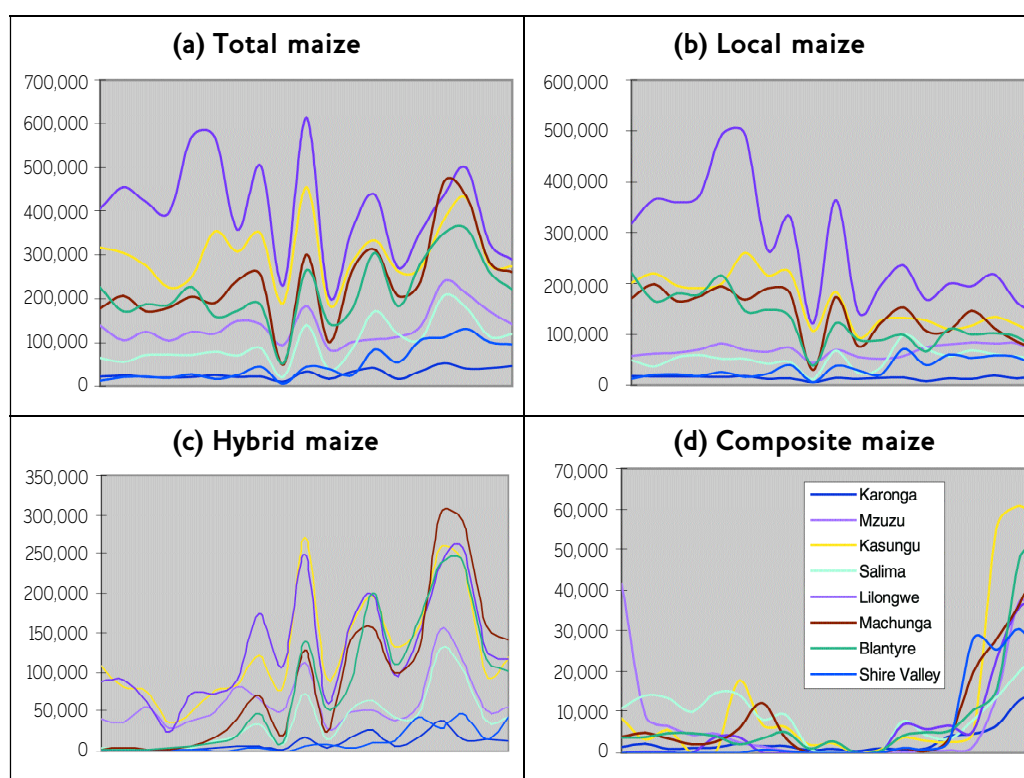
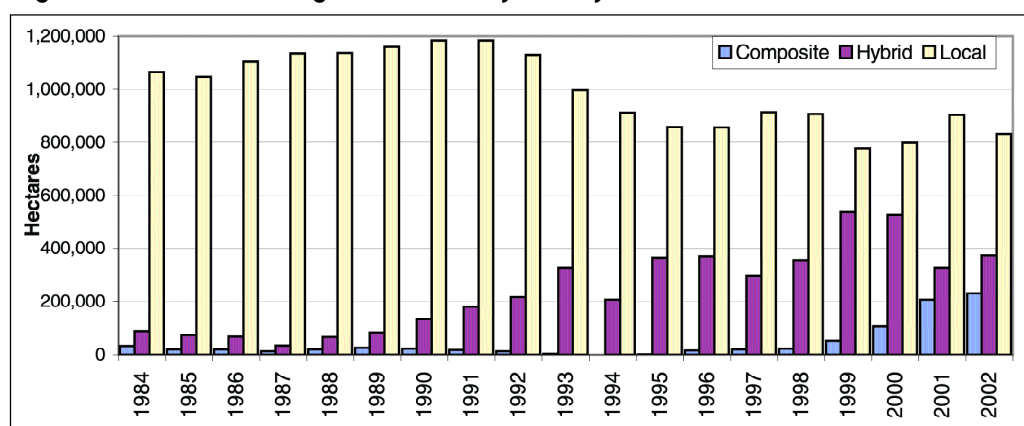


Source: Tiba (2005)

Figure 4a shows that maize production over the past 20 years has been even more variable at the Agricultural District (ADD) level than at aggregate (national) level. It also reveals that maize production is concentrated in a few districts (such as Lilongwe and Kasungu), while food-insecure districts such as the Shire Valley produce much smaller harvests. Figure 4b reveals a substantial decline in production of local maize, which has been compensated in recent years by corresponding increases in hybrid maize (Figure 4c) and composite maize (Figure 4d). Figure 5 illustrates this shift away from local maize towards composite and hybrid varieties – in terms of hectareage planted to each. This trend could be interpreted as an encouraging indicator of agricultural intensification.

Dorward and Kydd (2002) note that risk lowers the productivity of rural economies in three ways, by: (1) reducing returns to investment, (2) distorting investments 'away from those that maximise expected returns towards those that reduce risks', (3) discouraging investment altogether, because returns are low and investors are risk-averse. In this way, risk contributes to under-investment and hence to agricultural stagnation and rural poverty in Malawi.

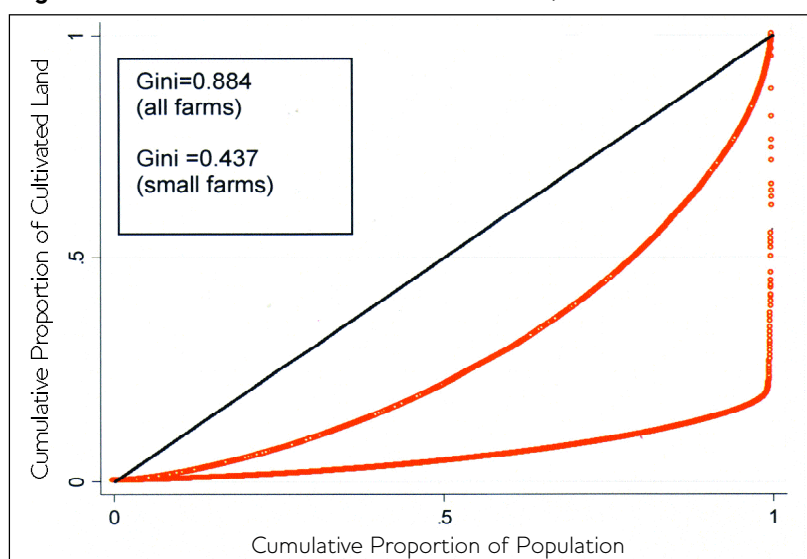


**Figure 4 Maize production in Malawi (MT) by ADD, 1984–2002****Figure 5 Maize hectareage in Malawi by variety, 1984–2002**

Source: Phiri (2005b)

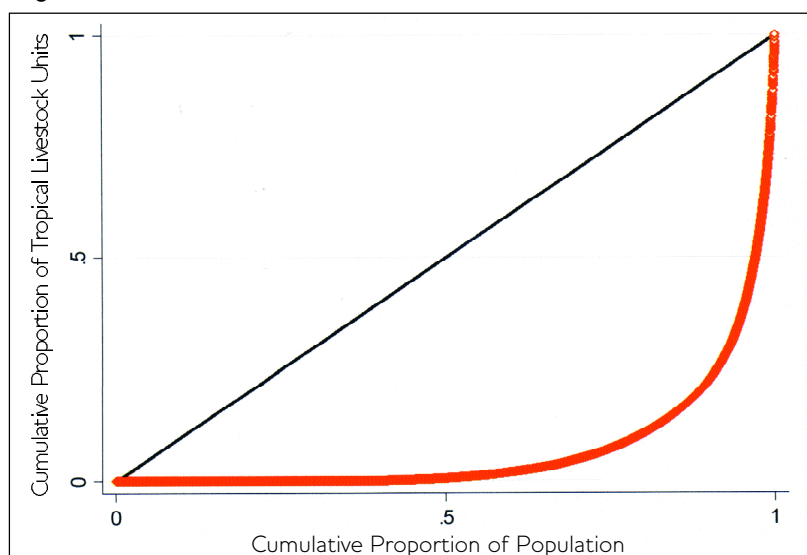
2. **Land constraints:** In just 20 years, between 1977 and 1998, population growth rates of about 2 per cent per annum resulted in a doubling of the Malawi population, with a corresponding doubling of population densities from 59 to 112 person/km<sup>2</sup>, and a halving of crop land per capita from 0.42 to 0.23 hectares (GoM 2000). Land is, however, very unequally distributed with the IHS-2 data revealing a Gini coefficient for cultivated land of 0.884 in 2004/5. This is primarily due to the presence of large estates: the land Gini falls to 0.437 when farms of less than 20 hectares are considered. Figure 6 shows this relationship graphically using Lorenz curves.

Land pressure intensifies from north to south, with median land cultivated falling from 1.14 hectare/capita in the North, to 1.10 hectare/capita in the Centre and 0.823 hectare/capita in the South. In 1988, 78 per cent of rural households cultivated less than one hectare of land; but by 2004/5, this proportion had risen to 91.4 per cent.

**Figure 6 Lorenz curves for land in Malawi, 2004/5**

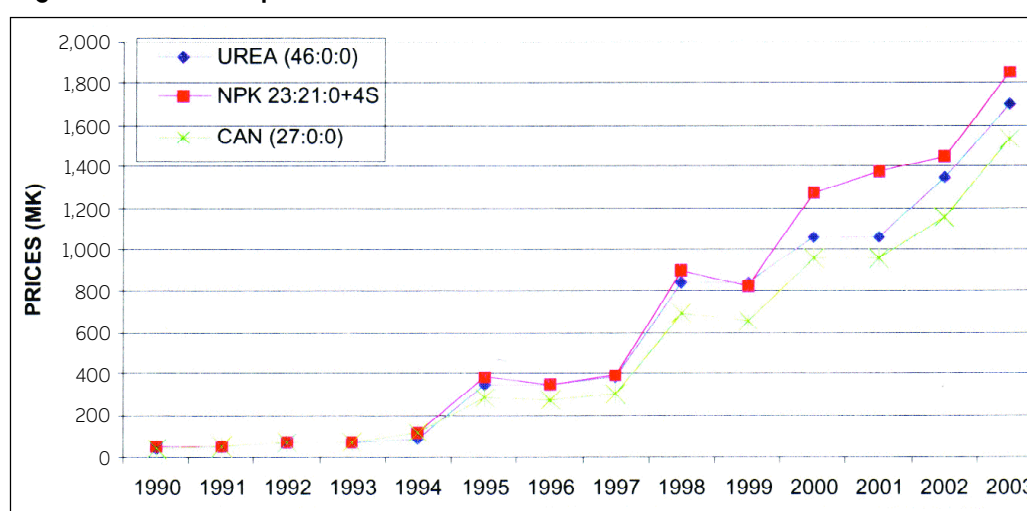
Increasing land pressure is a source of vulnerability because poorer rural households tend to cultivate less land, and because declining farm sizes have not been accompanied by agricultural intensification, nor by diversification either within or outside agriculture. Instead, yields of staple food crops have remaining low, soil fertility has declined and cultivation of high-yielding varieties or high-value crops remains limited.

3. **Lack of livestock:** Uniquely in southern Africa, Malawians own very few livestock, and 'there is a virtual absence of cattle from asset portfolios of rural households' (Ellis *et al* 2002). In 2000–2, Malawians owned 8.9 tropical livestock units (TLU) per capita, compared with 24.9 in Zambia, 45.1 in Zambia and 157.5 in Botswana (FAO, undated). In agricultural societies elsewhere in Africa, livestock provide draught power and manure for farming, they serve as pack animals for transporting goods to and from markets, they provide nutritious food (meat and milk), and they are a store of wealth and savings that accumulates in good times and can be drawn down in emergencies. However, in 2004/5, 43 per cent of Malawian households owned no livestock of any kind, with the remaining livestock being distributed very unequally (Figure 7). Most Malawians also own no physical or financial assets that increase in value over time.

**Figure 7 Lorenz curves for livestock in Malawi, 2004/5**

4. **Constrained access to fertiliser and input credit:** Since the completion of the Fertiliser Subsidy Removal Programme (FSRP) in 1995, and following the collapse of SACA (the Smallholder Agricultural Credit Association) in 1992, Malawian smallholders have faced higher prices for fertilisers, and severely restricted access to input credit. Many farmers' clubs that formed in order to access fertiliser and hybrid maize seed have defaulted on their loans and disbanded (van Donge *et al* 2001). Costs of agricultural inputs have continued to spiral beyond the reach of most farmers following successive devaluations of the Malawian kwacha during the 1990s (notably by 62 per cent in August 1998), and further depreciations since 2000 (see Figure 8). Households that reported being badly affected by recent fertiliser price increases were found to have average consumption levels 13 per cent lower than other households (Hoddinott 2005).

**Figure 8 Fertiliser price trends in Malawi, 1990–2003**



Source: Phiri (2005a)

In all the major productive inputs required for sustainable agriculture – water, land, soil, livestock, fertiliser – therefore, Malawian farmers face severely constrained access. Moreover, many of the most vulnerable households are those with severe labour constraints. As a consequence, per capita food availability declined throughout the 1980s and 1990s, mainly because of falling per capita maize production (Wobst *et al* 2004). The magnitude of the decline in food supply was disguised in the 1990s by exaggerated cassava production figures, which appeared to offset the decline in maize output until they were exposed as grossly inflated during the 2001/2 food crisis.

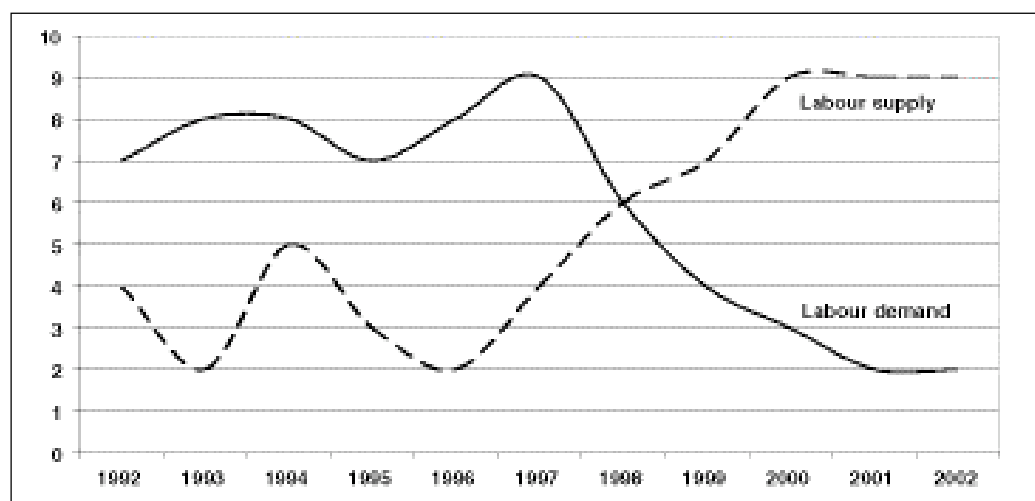
A recent literature on ‘asset thresholds’ argues that rural households need a certain minimum bundle of productive assets to make a viable living from farming. Without this minimum bundle, they will be structurally incapable of meeting their subsistence needs, and they will lack the capacity to cross the threshold from structural poverty to sustainable accumulation (Carter *et al* 2004). Given the severe asset constraints that many Malawian households face, and the evidence of high levels of chronic undernutrition that persist independently of short-term livelihood shocks, we have to conclude that large numbers of Malawian families are trapped in this ‘asset trap’. This situation cannot be redressed with food handouts or even with cash transfer programmes: instead, asset-protecting and asset-building interventions are needed.

### 3.2.2 Economic shocks and processes

1. **Undiversified livelihoods:** The belief that rural Malawians derive almost all their food and income from subsistence-oriented maize production pervades the literature. This

view is too simplistic: the chronic food gap, that the majority of farming households experience for several months every year, forces them to find secondary sources of food. In the past, *ganyu* provided the main supplementary income for poor households, but *ganyu* is becoming more difficult to find: there is a surplus of rural labour and demand for *ganyu*, as well as wage rates, are falling. (Figure 9 illustrates these trends in rural labour markets, from a participatory exercise conducted in Zomba District in 2003.) There is a correlation between poverty and engagement in *ganyu*: according to Wobst *et al* (2004), the poorest, middle-income and relatively wealthy categories of rural households take 39 per cent, 28 per cent and 23 per cent of *ganyu* employment, respectively. Nonetheless, *ganyu* is a survival option rather than an accumulation strategy. Lucrative alternatives to farming remain rare in rural Malawi, and most non-farm activities that people pursue are minor and generate very low returns to labour.

**Figure 9 Supply and demand for ‘ganyu’ labour, 1992–2002, rural Zomba**



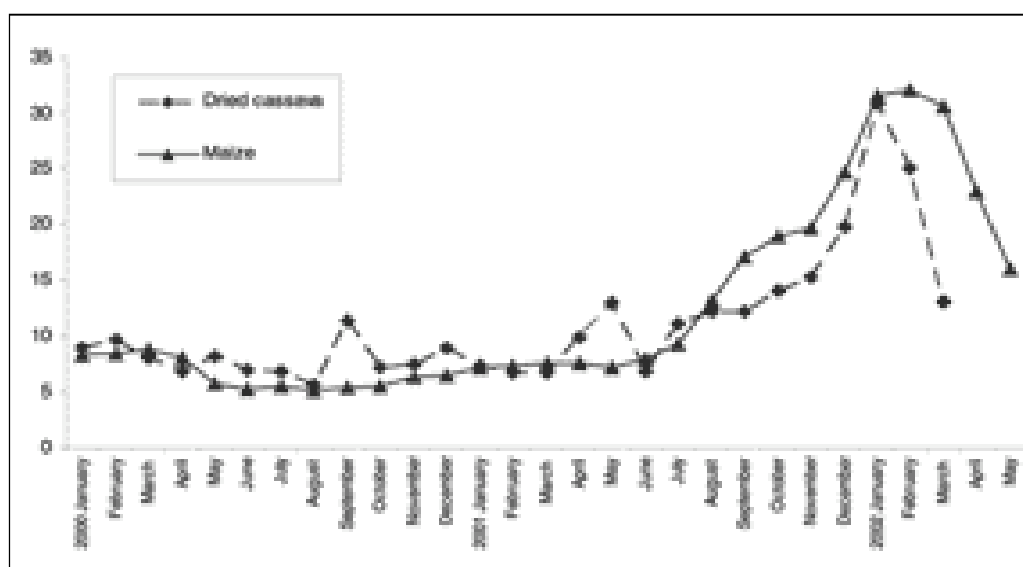
Source: Devereux *et al* (2003: 64)

Urbanisation rates in Malawi are unusually low – under 20 per cent – compared with neighbouring countries. One adverse consequence is that rural–urban linkages are limited, so livelihood diversification that includes access to non-covariant incomes (i.e. not correlated to rainfed agriculture) are also limited. Migration and remittances are not only low; important migration opportunities have declined over time (for instance, large-scale migration of contract miners to South Africa’s goldmines ended in the 1970s), terminating that source of non-covariant income, much of which had been reinvested in agriculture and small enterprise activities.

2. **Weak markets:** ADMARC remains a major actor in agricultural marketing, but its roles have been redefined and its activities have been curtailed several times in recent years, leaving a confused and inefficient agricultural marketing system, where neither ADMARC nor private actors are serving the needs of smallholders for access to inputs and output markets that are reliable and timely, deliver inputs at affordable prices, and pay fair prices for their produce. Instead, rural households face input prices during the farming season, and food prices during the hungry season, that they cannot afford to pay. Phiri (2005a) found that while maize prices tend to be higher closer to urban areas and lower in the remote areas, fertiliser prices followed an opposite trend. He concluded that villages closer to town use more fertiliser and hence are more food secure, while those further away apply less fertiliser so produce less, and also earn less from crop sales so are poorer. This evidence that markets are weaker in distant communities suggests that vulnerability is related to geographic remoteness.

Dorward and Kydd (2002) explain agricultural marketing failures in Malawi in terms of high transactions costs (due to low trade volumes and poor communications), and coordination failures (because the high risk premiums and margins needed to make trade profitable in this context depress demand), which result in 'a low-level equilibrium trap and market failure'. High input prices combined with food price seasonality result in low yields and a food gap that can only be covered – because *ganyu* is scarce and food prices are so high in January–March – by coping strategies that erode the household's asset base. Figure 10 graphs the evolution of food prices in Malawi before and during the famine of 2001/2. The failure of private trade and public interventions to stabilise food supplies and prices is clear, and it was this particular source of vulnerability that transformed a relatively minor food production decline into a major food security crisis. Giving evidence to the UK's inquiry into 'The Humanitarian Crisis in Southern Africa', one expert witness (John Seaman) argued that: 'if you had stabilized the price of maize in 2001 in Malawi, no crisis would have occurred' (IDC 2003: EV67).

**Figure 10 Average maize and cassava prices in Malawi, 2000–2 (MK/kg)**



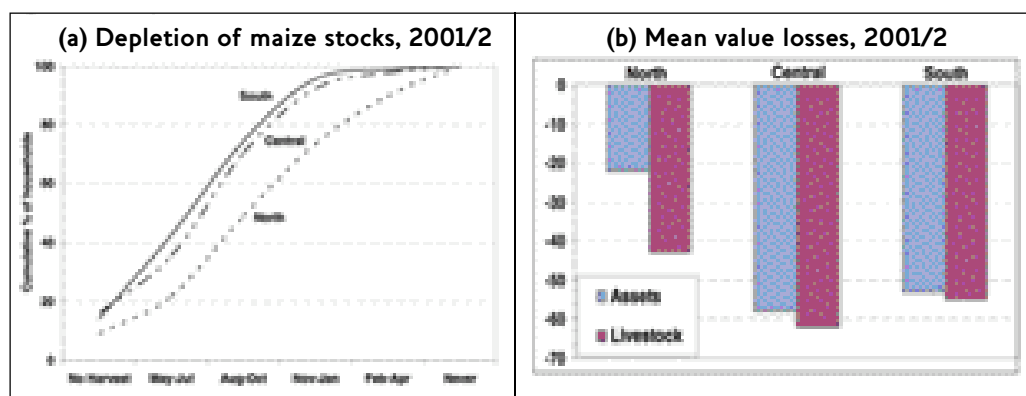
Source: Tiba (2005)

3. **Interactions between transitory shocks and chronic poverty:** Although the focus of this report is on chronic vulnerability rather than transitory livelihood shocks, there are significant interactions between the two that are important to recognise and understand. Households that are chronically poor are more vulnerable to even minor livelihood shocks, while severe or repeated shocks can force households to dispose of key productive assets to meet immediate consumption needs, leaving them incapable of maintaining a sustainable livelihood. Hoddinott (2005) demonstrates that 'past shocks continue to affect current levels of consumption' in Malawi – survey data reveal that households that were directly affected by the 2001/2 drought had lower consumption levels and lower asset holdings in 2004.

Further evidence on the long-term impacts of the 2001/2 food crisis comes from a survey conducted 1 year later. Figure 11a plots the proportion of households by region running out of own-produced maize, month by month, in the year of the food crisis. By August–October, for instance, 80 per cent of households in Central and Southern regions, but only 50 per cent of households in Northern region, had run out of harvested maize. One response to harvest failure was to sell assets to buy food. Figure 11b measures the average 'value losses' from durable assets and livestock sold

during the crisis (defined as the percentage difference between the income received from selling the asset and its replacement cost). Here again, the impacts are seen to affect Central and Southern households disproportionately, as asset and livestock prices collapsed due to higher volumes of 'distress sales' and the weakness of asset markets.

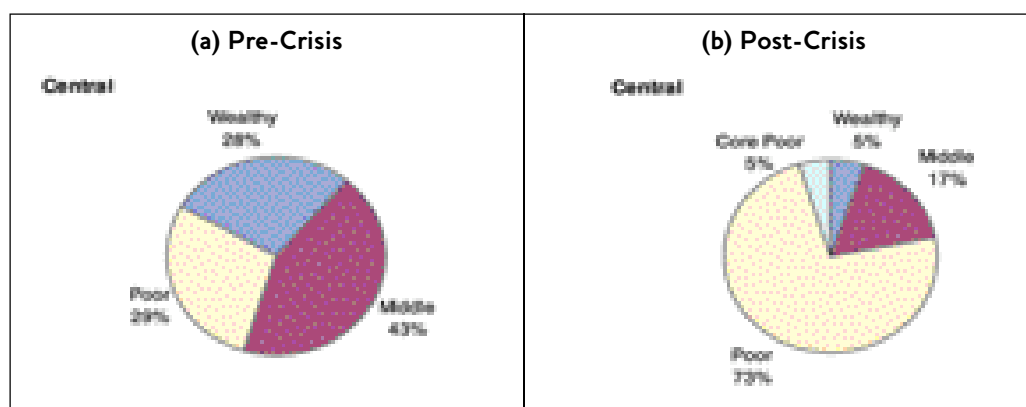
**Figure 11 Impacts of food crisis on household maize stocks and asset losses, 2001/2**



Source: Devereux *et al* (2003)

Partly because of distress sales of assets, the 2001/2 food crisis impoverished households throughout Malawi. In Central Region, the proportion of households identified as 'poor' by participatory wealth ranking exercises in affected communities more than doubled, middle and wealthier groups collapsed, and a new group of destitute 'core poor' emerged [Figure 12].

**Figure 12 Self-assessed poverty in Central Malawi, before and after the 2001/2 crisis**



Source: Devereux *et al* (2003)

### 3.2.3 Health and nutrition risks

Poor health and nutrition undermines the cognitive development of children and the productive capacities of adults. Almost half of all Malawian children have stunted growth (an indicator of chronic poverty and food insecurity), 16 per cent of babies are born malnourished, half the population (49 per cent) suffers from micronutrient deficiencies – iron, iodine, vitamin A – and almost three-quarters (73 per cent) have inadequate food intake (Gillespie and Haddad 2004). More than half of all pregnant women (56 per cent)

are anaemic. 'Diseases of poverty' such as diarrhoea, acute respiratory infections, cholera and malaria are endemic in Malawi. Many of these health risks interact with each other: inadequate intake of calories, protein, fat and micronutrients lowers the body's immune system and raises susceptibility to water-borne and other diseases, including HIV. Episodes of illness in turn are associated with appetite loss, vomiting and poor nutrient utilisation, which exacerbates malnutrition and perpetuates the cycle. Poor quality and outreach of health services, limited availability of drugs, under-provision of reproductive healthcare, limited access to potable water, and a virtual absence of public health and sanitation facilities in most rural communities amount to a wholly inadequate set of public interventions to address these health risks and break these vicious cycles.

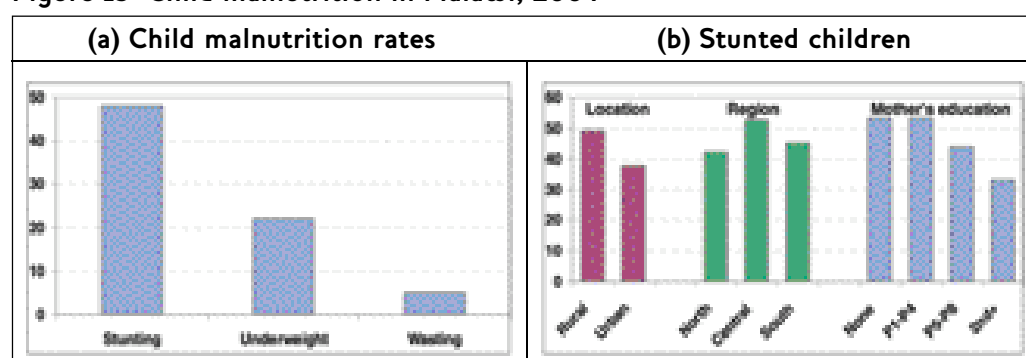
**Table 2 Access to health services and drinking water in Malawi (% of households)**

Indicator	North	Centre	South
<b>Time to nearest health centre</b>			
<15 min	6.5	9.0	8.8
15–29 min	10.6	10.7	9.3
30–44 min	11.6	13.4	11.9
45–59 min	7.2	10.4	11.5
60+ min	64.1	56.5	58.6
<b>Main source of drinking water</b>			
Communal pipe, borehole	61.7	51.0	67.6
Unprotected, rainwater	13.7	35.3	17.7
Spring, lake, river, pond	18.4	7.4	8.3
Piped water, protected well	6.2	6.2	6.3

Source: NSO (2002) Malawi Core Welfare Indicators Survey

According to successive rounds of Demographic and Health Surveys (DHS), there has been no significant improvement in the nutritional status of Malawian children for at least the last 15 years. Almost half (47.8 per cent) of 8,520 children measured in the 2004 DHS were stunted (low height-for-age) – 'virtually identical' to the level of stunting recorded in 1992 and in 2000. Levels of wasting were much lower – just 5 per cent in 2004 – which means that chronic malnutrition is much more of a problem among Malawian children than transitory or acute malnutrition [Figure 13a]. Stunting is higher in rural than urban areas, and in Central and Southern Regions than in Northern Malawi. DHS data also find a strong association between stunted children and mother's education level, with the incidence of stunting falling significantly after 4 years of education – the minimum required to achieve basic literacy [Figure 13b]. This is consistent with findings from elsewhere that maternal education is positively associated with improvements in children's wellbeing.

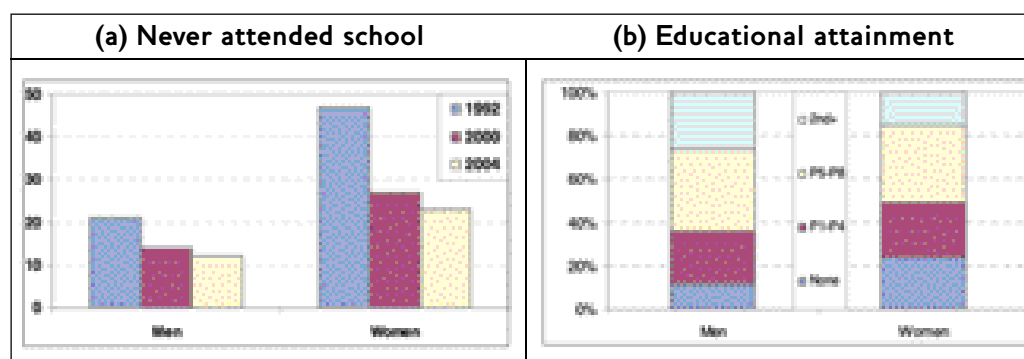
**Figure 13 Child malnutrition in Malawi, 2004**



Source: Macro-International (2004)

Given the importance of education, not only for child wellbeing but also to diversify livelihood options away from agriculture, there are some encouraging trends. Since the introduction of free primary education in 1994, the proportion of Malawians who have never attended school has halved, from 34 per cent in 1992 to 17.5 per cent in 2004. However, this progress is gendered: twice as many women (23 per cent) as men (12 per cent) have never attended school [Figure 14a]. Men are also much more likely than women to have reached secondary school (26 per cent against 16 per cent) [Figure 14b].

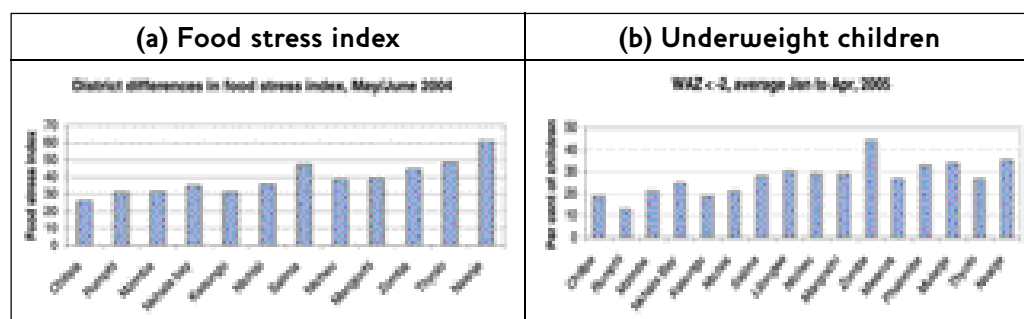
**Figure 14 Education in Malawi, by gender**



Source: Macro-International (1992, 2000, 2004)

On many indicators of vulnerability and illbeing, including prevalence of stunting, the Northern Region appears to be better off than the Central and Southern Regions. The Central Region is paradoxical: sometimes better off than other regions but on other indicators worst off. In general, though, several indicators display evidence for a 'north-to-south gradient' of falling wellbeing. Figure 15a presents Action Against Hunger's 'food stress index' for 12 districts, ordered from north to south, from May/June 2004. Figure 15b presents the proportion of underweight children for 16 districts from Action Against Hunger's nutritional surveillance bulletins from January to April 2005, again ordered from north to south. For both indicators, a clear increase in food stress and of underweight children can be seen. Though this pattern is not monotonic – there are anomalous districts – it provides further evidence that vulnerability to food insecurity and malnutrition are higher in Southern than Northern Malawi.

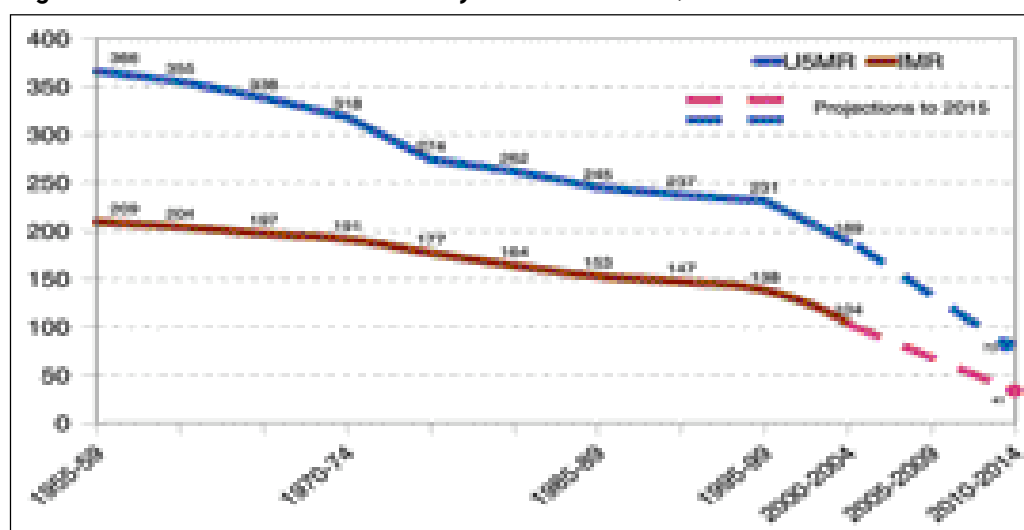
**Figure 15 'North-to-south gradients' in food stress and malnutrition in Malawi**



Source: Action Against Hunger (2004/5)

Encouragingly, infant mortality rates (IMR) and child mortality rates (under-5s – 'U5MR') are falling in Malawi. Until the 1990s, these declines were gradual, but in the last decade the rate of improvement has accelerated, and is projected to continue to do so [Figure 16]. It is not clear what is driving this rapid improvement, which according to the 2004 Malawi DHS, 'has also been observed in neighbouring countries'.



**Figure 16 Infant and child mortality rates in Malawi, 1955–2015**

Source: World Health Chart (WHO 2001) and Macro-International (2000)

In recent years, HIV and AIDS has reached pandemic proportions in Malawi, where an estimated 15 per cent of Malawian adults aged 15–49 are now HIV-positive and mortality due to HIV and AIDS increased by 75 per cent during the 1990s. 'Malawi has already lost more than 5 per cent of its farm labour force due to HIV/AIDS and is projected to lose an additional 15 per cent by 2020' (TANGO 2004a). HIV/AIDS is not only a human tragedy; it is responsible for widespread impoverishment among affected families. The main mechanisms include: loss of household labour and skills; diversion of adult labour time and withdrawal of children from school to care for the sick and dying; depletion of savings and sale of assets to pay for treatment, care and funeral costs. Households with chronically ill members (especially adults), are more vulnerable because their income-earning potential is lower and their costs are higher, than before the illness. One recent study in Malawi estimated 'an income loss of approximately 60 per cent among PLWHAs who were running businesses due to reduced operations, frequent closures and capital diversion' (Palamuleni *et al* 2003).

### 3.2.4 Demographic vulnerability

Increasing numbers of households in Malawi are headed by women, children, or the elderly (who are often left caring for orphaned grandchildren), and most of these households face labour constraints that undermine their ability to sustain a viable independent livelihood (Kadzandira 2002). It is generally accepted that these households are more vulnerable than others, both to chronic poverty and to transitory shocks. These households share a common characteristic, in that they are either structurally labour-constrained, or their labour capacity has been undermined by chronic health problems, such as HIV/AIDS affecting adult household members. The process of becoming a female-, elderly- or child-headed household is often in itself a 'poverty ratchet', as the loss of adult male labour is especially detrimental to the household's capacity to farm and engage in *ganyu* or manual labour. A recent study found that the death of a spouse in a Malawian household severely reduces consumption levels, by as much as 27–45 per cent (Hoddinott 2005).

Total fertility rates (TFR) in Malawi are extremely high: the average rural Malawian woman will have six children in her lifetime. This produces high dependency ratios, which places more stress on income-earners (and more orphans if the adults succumb to AIDS). Urban fertility rates are lower than rural fertility rates, and urban households are generally better off and less vulnerable than rural households. The trend is towards lower TFR over time – down from 7.6 in 1984 to 6.0 in 2004 – which is arguably a positive trend, as smaller households tend to be better off by various indicators.

There are a number of reasons why vulnerability in Malawi is significantly gendered in nature. A recent review of 'Gender Exploitation in Malawi' summarised many of these reasons (Box 1).

### Box 1 Gendered vulnerabilities in Malawi

1. Women comprise 70 per cent of the agricultural labour force, but they are less likely to engage in cash crop production due to labour and time constraints.
2. The value of assets owned by male-headed households is double that of female-headed households and male-headed households are more likely to own productive agricultural assets.
3. Women's rates of pay for *ganyu* is likely to be only two-thirds the rate paid to men.
4. Women face more difficulties in accessing credit, as they do not possess assets for collateral.
5. In 1998, 44 per cent of women were literate compared with 72 per cent of men.
6. Only 43 per cent of births are attended by health workers.
7. As household assets are depleted women are more likely to engage in sexual transactions to meet household subsistence needs.
8. Women and girls typically take on the burden of caring for sick family members.
9. Young girls are more likely to be withdrawn from school to care for younger siblings or the sick, and to assist with domestic and agricultural work, following a livelihood shock to the household.
10. Female-headed households are more dependent than male-headed households on external support for their subsistence – gifts of food from relatives, food aid and public works programmes.
11. Women are rarely represented on the council of elders, and so are unable to influence decisions over access to land, inheritance rights, and so on.

Source: TANGO (2004c)

### 3.2.5 Political and social vulnerabilities

Poverty is differentially distributed across regions, with the lowest incidence in Central Malawi (44.2 per cent) and the highest in Southern Malawi (59.7 per cent). Although the Central Region has the lowest poverty rate, it also has the widest gap between male- and female-headed households (42.2 per cent vs. 53.4 per cent), while the Northern Region shows the narrowest difference (53.8 per cent vs. 55.4 per cent) [Table 3]. One explanation could be the impact of regionally differentiated marriage systems and settlement patterns. It might be hypothesised that the patrilineal marriage system in the north leads to more equitable distribution of resources, particularly land.

In the north, even after the death of a husband, the widow is expected to remain in her husband's village. Until recently, widows were 'inherited' by a brother or cousin of the deceased, and the dowry that is paid in the north links women strongly to her husband's family. Widows therefore continue to cultivate the same land as when the husband was alive. Conversely, Southern Malawi is largely matrilineal (*Chikamwini*). Husbands settle in the wife's village; land is acquired through the wife; and after divorce or death of the husband; the wife also continues to cultivate the same piece of land. However, population pressure is highest in the South (146 persons per square kilometre in 1998, compared with 46 persons in the North), so partition of land leads to smaller farms and (other things being equal) to higher poverty levels.

Lastly, the Central Region has a more mixed marriage system. *Chikamwini* is practised, as in the South, but *Chitengwa* is increasingly common. In this system, the husband requests permission from the wife's parents to take her to his home, after paying a small token.

Following divorce or death of the husband, the wife is usually chased out of the husband's village back to her natal village, leading to loss of assets and a more precarious livelihood. These differences in marriage systems could explain some of the gendered differences in poverty observed between regions.

**Table 3 Poverty in Malawi by region and gender of household head, 2004/5**

	<b>Poverty rate (%)</b>	<b>Ultra-poverty (%)</b>	<b>Male-headed (%)</b>	<b>Female-headed (%)</b>
<b>Malawi</b>	<b>52.4</b>	<b>22.4</b>	<b>51.0</b>	<b>58.5</b>
Urban	22.5	7.5	24.4	31.8
Rural	55.9	24.3	54.7	60.8
<b>Region</b>				
Southern	59.7	28.5	58.8	63.1
Central	44.2	15.4	42.2	53.4
Northern	54.1	24.4	53.8	55.4

Source: IHS-2 Summary Results (2005)

Conflict and civil instability are rare in Malawi, but crime is rising and the associated insecurity is causing behavioural change that adversely affects livelihoods. One reason why people do not own livestock to the extent that they did in the past is fear of theft. Backyard granaries have disappeared from many rural communities, as people increasingly store their harvest indoors to protect it from thieves. A recent survey found that one in five households interviewed had had crops stolen from their field or granary (19.4 per cent), and one in seven had lost livestock to theft (14.7 per cent) (Sharma and Yohannes 2005).

Malawians in both urban and rural communities complain that people help each other less than in the past, either because they are less able to help (due to poverty), or because they are less willing to help (due to social change, including increasing individualisation and commercialisation) (Devereux 1999). The erosion of 'traditional values' was highlighted by the breakdown of law and order during the 2001/2 food crisis, when people caught stealing maize were mutilated and even killed in unprecedented outbreaks of 'vigilante justice' (Devereux 2002). This suggests that social change is undermining social capital, which was previously an important source of informal social protection against risk and vulnerability.

### 3.3 Conclusions

This chapter has demonstrated that the poor and the vulnerable in Malawi are not two distinct categories. Those most vulnerable to shocks are the chronically poor, because poverty and vulnerability interact and reinforce each other in various 'poverty cycles' or 'vulnerability ratchets'.

Despite being the dominant livelihood activity for most Malawians, agriculture is a source of both chronic poverty and acute vulnerability. Limited productive assets (land, livestock, labour) and constrained access to inputs (fertiliser, seeds) undermine the ability to cope with shocks such as erratic rainfall – which result in asset depletion and deepening poverty. Undiversified livelihoods and weak markets expose people to price fluctuations which cause further asset depletion, in the absence of alternative sources of income and limited savings or insurance mechanisms.

Poor health status and high rates of undernutrition are perpetuated from one generation to the next by persistent food insecurity and inadequate outreach and quality of health services. Negative interactions between ill-health and poverty are well documented, and

are apparent from evidence of higher levels of malnutrition, food insecurity and monetary poverty in Southern Malawi than Northern Malawi. HIV/AIDS is a major vulnerability factor in both senses: raising the burden of illness and the costs of care in affected households, while also undermining household assets and income-earning capacity. The impacts of ill-health and poverty are significantly gendered, with women and female-headed households being more severely affected.

Finally, rising crime also impacts negatively on both poverty and vulnerability. Fear of theft partly explains why people now keep fewer livestock, and the breakdown of law and order during the food crisis of 2002 may be symptomatic of a longer-term erosion of community solidarity, either because of rising (perceived, relative or actual) poverty and inequality, or because of changing social values.

## 4 Vulnerability in the Malawi IHS-2 data

### 4.1 Introduction

Economists often view vulnerability as vulnerability to monetary poverty (Pritchett *et al* 2000; Chaudhuri *et al* 2001). Since a large proportion of the population is often ‘just above’ the poverty line, this implies that many more people are vulnerable to poverty than are currently poor. The IHS-2 data can be used to ascertain whether this is also the case for Malawi.

Using the poverty line established by the Central Statistics Office and World Bank of MK16,165 per person per year, the number of people with per capita expenditure below the poverty line (the poverty headcount) is estimated to be 52.4 per cent. However, as shown in Table 4 below, if the poverty line was raised by 10 per cent, the poverty headcount would rise to 58.4 per cent, while if it were to fall by 10 per cent, poverty would fall to 45.5 per cent. Thus approximately one-eighth of the population is living within 10 per cent of the poverty line. Similarly, if the poverty line were to be increased/decreased by 20 per cent, the poverty headcount would rise/fall to 63.8 per cent and 37.6 per cent. So just over one-quarter of the population would be living within 20 per cent of the poverty line.

**Table 4 The poverty headcount with alternative poverty lines**

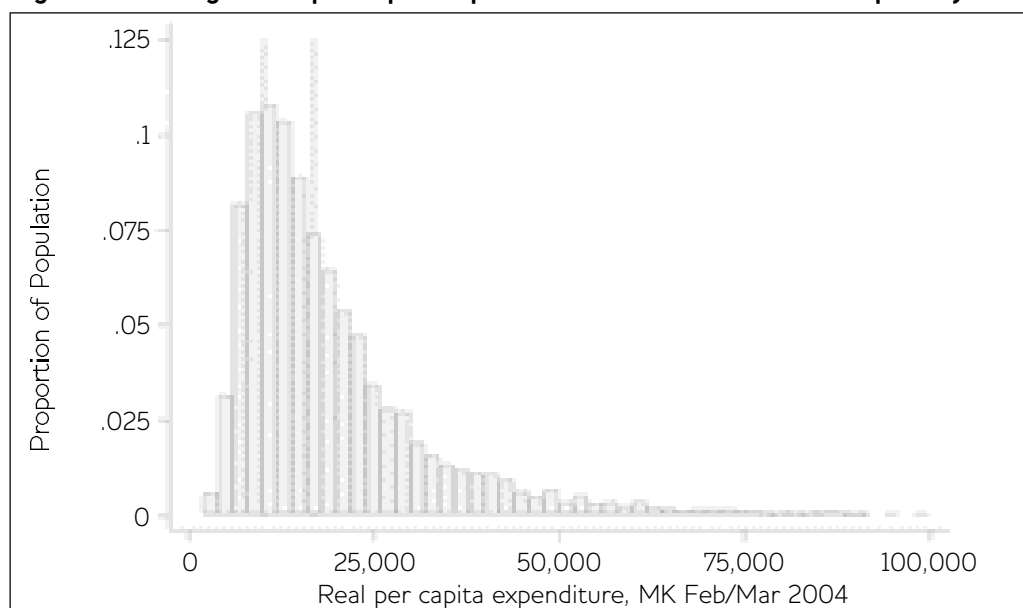
Poverty line	Estimate (%)	SE (%)	Design effect
z-20	37.6	1.0	4.45
z-10	45.5	1.0	4.46
z	52.4	1.0	4.48
z+10	58.4	1.0	4.37
z+20	63.8	0.9	4.34

Source: IHS-2, IHS2\_pov; SE, standard error

Figure 17 provides a pictorial representation of why such vulnerability to monetary poverty occurs, using a histogram of expenditures. The bars in Figure 17 show the proportion of the population that falls into each of 50 ranges, while the two vertical lines show the food (or ultra-) poverty line and (total-) poverty line of the CSO-WB. As is common with Cost of Basic Need type poverty lines, the mode of the distribution is very close to the poverty line – in this case the ultra-poverty line.<sup>1</sup> Some 22.4 per cent of the population have per capita expenditures below the ultra-poverty line, compared with 52.4 per cent for the total poverty line (which also includes a modest allowance for non-food expenditures). The closeness of the poverty line to the mode of the expenditure distribution is both good and bad news. It is good news because it indicates that a relatively small increase in mean per capita expenditures will move large numbers of poor households over the poverty line. But it is also bad news, since it would only take a relatively small reduction in expenditures for those currently just above the poverty line to fall back into poverty again.

The next section uses the IHS-2 data to examine the type of shocks that might push non-poor individuals and households back into poverty, while the following section uses the IHS's current and retrospective asset data to estimate the changes in welfare that were due to such shocks.

1 The ultra-poverty line established for IHS-2 is MK 10,020 per person per year.

**Figure 17 Histogram of per capita expenditures with ultra- and total-poverty lines**

## 4.2 Sources of vulnerability

The sources of vulnerability are multiple, and affect different types of households, and individuals living within them, differently. It is common to distinguish between two types of risk: household or person specific (idiosyncratic risk) and community-wide (covariant risk).<sup>2</sup> In addition, some shocks (which are realised risks/hazards) may recur on a regular basis. The extent to which realised risks (i.e. shocks) translate into vulnerability is a function of the shock and ability to cope.

The IHS-2 asks a number of questions about the frequency and effects of shocks, at both the household and community levels. Table 5 shows the percentage of households who were severely and negatively affected by different types of shocks over the past 5 years.

**Table 5 Frequency of shocks at the household level**

Type of shock	Yes	No
Large rise in price of food	77.0	23.0
Lower crop yields due to drought or floods	62.7	37.3
Illness or accident of household member	45.7	54.3
Death of other family member	40.6	59.4
Large fall in sales price for crops	38.0	62.0
Livestock died or were stolen	33.3	66.7
Crop disease or crop pests	23.8	76.2
Household business failure	21.9	78.1
Theft	19.3	80.7
Birth in the household	11.0	89.0
Dwelling damaged or destroyed	10.2	89.8
Break-up of the household	10.1	90.0
Loss of salaried employment or non-payment of salary	8.9	91.1
Death of working member of household	8.7	91.3
End of regular assistance, aid, or remittance	7.2	92.8
Death of household head	4.8	95.3
Other	1.4	98.6
<b>Total</b>	<b>23.8</b>	<b>76.2</b>

Source: IHS-2, Module AB

<sup>2</sup> See, for example, Binswanger and McIntire (1987).

Over three-quarters of all households stated they were affected by large rises in the price of food. Nearly two-thirds of households experienced lower crop yields due to drought or floods, while just under two-fifths (38 per cent) experienced large falls in the sales price for their crops. Just under a quarter of households experienced crop diseases or crop pests. As confirmed in Table 6, these shocks were covariant or community-wide, as they impacted most or all households in the community.

**Table 6 Impact of household-level shocks in Malawi**

Type of shock	Who did the shock affect: (%)			
	Own HH only	Some other HHs too	Most HHs in community	All HHs in community
Large rise in price of food	3.2	9.1	41.4	46.3
Lower crop yields due to drought or floods	3.0	18.2	46.5	32.3
Rise in farm inputs prices	16.6	14.7	37.4	31.4
Crop disease or crop pests	7.9	35.1	37.1	19.9
Household business failed	80.0	10.3	4.7	5.1
Loss of salaried employment or non-payment of salary	73.2	19.0	5.2	2.6
End of regular assistance, aid, or remittances	67.6	19.1	10.8	2.5
Livestock died or were stolen	54.6	30.5	13.4	1.5
Illness or accident of household member	77.9	19.5	1.3	1.3
Theft	77.7	17.8	3.4	1.1
Death of working member of household	37.6	60.6	1.4	0.4
Dwelling damaged or destroyed	78.9	17.2	3.5	0.4
Death of household head	53.2	45.2	1.4	0.2
Break-up of the household	89.5	9.2	1.2	0.1
Birth in the household	93.8	5.7	0.5	0.0
<b>Total</b>	<b>31.0</b>	<b>22.8</b>	<b>25.0</b>	<b>21.3</b>

Source: IHS-2, Module AB

In contrast, negative shocks such as illness, accidents and deaths of family members, the failure of household business, loss of wage employment, and theft tend to be idiosyncratic, in that they affect either only the household or a few other households too. Of these shocks, illness, accidents and deaths of family members are most common, affecting 40–45 per cent of households. In only 9 per cent of cases, however, is the death of a working household member involved. A third of households experienced the death or theft of livestock in the last 5 years, but the lack of covariance of these shocks suggests that epidemic livestock disease and cattle rustling are relatively rare. Just under one-fifth of all households experienced some other type of theft, while over one-fifth experienced a business failure.

Other types of ‘shocks’, such as the birth of a child, destruction of housing, break-up of the household, and loss of regular assistance, affected around 10 per cent of households. It is important to note that some of these events, such as the birth of a child or death of the household head, may not strictly be ‘shocks’, as they may be anticipated.

The IHS-2 community questionnaire also asked focus groups (of at least five people each) about their community’s experience of shocks over the last 5 years. Allowing for some differences in coding, a similar ranking of shocks is revealed in Table 7. Sharp increases in prices (whether of inputs or food) affected 25 per cent of communities, followed by drought. Furthermore, drought is shown to occur more frequently (22 per cent) than floods (5 per cent). Human epidemic diseases and loss of key social services affected 13 per cent and 7

per cent of communities, respectively. Where these figures differ from the shocks module in the household questionnaire is that a much lower percentage of communities than households say they experienced shocks, though with relatively higher percentages of the population affected. This suggests that a more stringent criterion for identifying shocks may have been applied by the focus groups than by households.

**Table 7 Frequency and impact of community-wide shocks**

Type of shock	Number of communities	Percent of communities	Percent of population affected
Sharp increase in prices	451	25.0	94.2
Drought	392	21.7	92.5
Other negative shock	358	19.8	81.6
Human epidemic disease	238	13.2	60.9
Loss of key social services	124	6.9	83.2
Flood	85	4.7	75.4
Mass job lay-offs	78	4.3	57.8
Livestock disease	43	2.4	69.5
Crop disease/pests	38	2.1	85.1
<b>Total</b>	<b>1,807</b>	<b>100.0</b>	

Source: IHS-2, Community Questionnaire

IHS-2 households stated that responses to the occurrence of a shock are fairly uniform. A total of 35 per cent of households stated that they 'did not do anything' in response to the shocks; 20 per cent worked more; 11 per cent spent their cash savings; 9 per cent reduced their food consumption and 6 per cent sold livestock. Other less common responses to shocks included consuming less preferred but cheaper foods, borrowing money from relatives or moneylenders, reducing non-food expenditures, and prayer.

### 4.3 Estimating changes in welfare over time

Analysing vulnerability using the IHS data is problematic as the IHS-1 and IHS-2 do not track the same households over time (i.e. they do not have a panel component). Furthermore, there is a lack of comparability in some of questions included in the IHS-1 and IHS-2 questionnaires (especially the expenditure module). Fortunately, the IHS-2 included a number of questions that asked about changes in household circumstances in the recent past, which allows changes in welfare for the same households to be estimated.

In this section, we use the information on durable asset ownership to construct a welfare index for both 2004 and 2005. After showing that the 2005 asset index is well correlated with real household expenditures in that year, we use the asset index to assess changes in household welfare over the last year.

To construct the asset index, we followed the approach used by the Demographic and Health Surveys (Rutstein and Johnson 2004), which is itself modelled on Filmer and Pritchett's (1998) work in India. The DHS uses 13–15 variables on ownership of durable assets, vehicles, land and housing to construct its wealth index. Unfortunately, the IHS-2 does not contain retrospective information on housing or land ownership, so we are restricted to the variables on durable assets (which includes vehicles). Unlike the DHS, however, the IHS-2 did collect information on the ownership of 19 types of durable assets in both 2004 and 2005 and during the preceding 5 years.



For each of these variables, we first created indicator variables for each of the durable assets in Module M of the IHS-2, for which we have information in both 2004/5 and during the preceding 5 years. Examination of the recall questions on asset ownership shows that it becomes relatively unreliable after 1 or 2 years have elapsed, so we restrict our attention to the changes in asset ownership over the last year.<sup>3</sup> As shown in Table 8, mean levels of asset ownership are very similar – and in some case identical – across the 2 years.

**Table 8 Changes in ownership of durable assets**

Type of durable asset	Level of ownership (% of households)		Weight
	2004/5	2003/4	
Mortar/pestle ( <i>mtondo</i> )	48.8	48.7	0.040
Bed	30.1	29.9	0.150
Table	34.3	34.2	0.141
Chair	43.0	42.7	0.130
Fan	2.3	2.3	0.188
Air conditioner	0.2	0.3	–
Radio (wireless)	54.5	54.1	0.045
Tape or CD player, HiFi	15.9	15.8	0.146
Television and VCR	3.7	3.7	0.197
Sewing machine	2.8	2.8	0.091
Kerosene/paraffin stove	2.2	2.2	0.104
Electric or gas stove	2.5	2.4	0.182
Refrigerator	2.0	1.9	0.195
Washing machine	0.2	0.2	–
Bicycle	36.1	36.1	0.058
Motorcycle/ scooter	0.4	0.4	–
Car	1.3	1.3	0.141
Mini-bus	0.2	0.2	–
Lorry	0.2	0.2	–

Source: Based on IHS-2, Module M

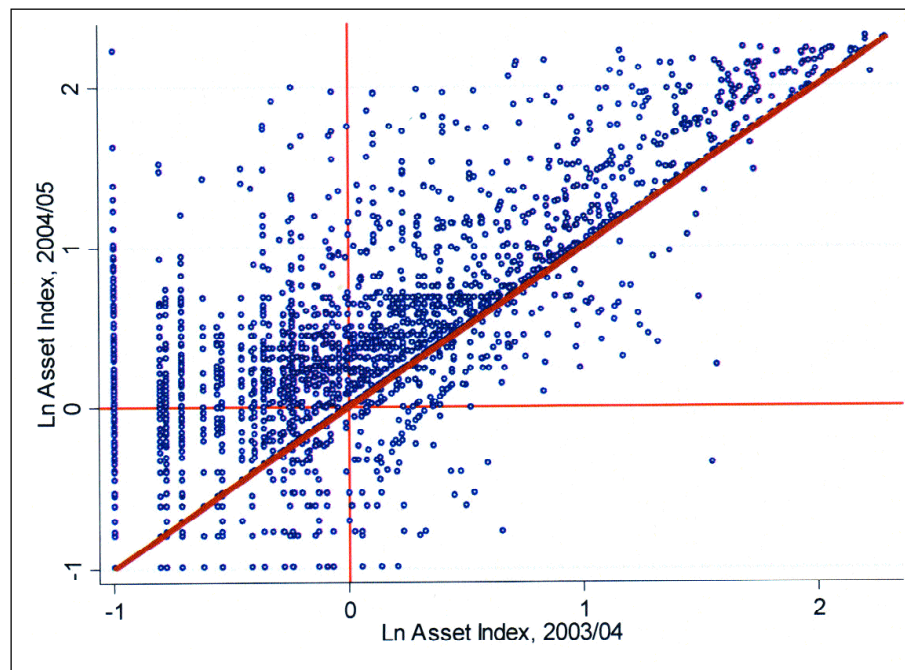
For each of these durable assets, we first created indicator variables from Module M in the IHS-2, showing whether the household owned one or more of the asset in both 2004/05 and 2003/4. Five types of assets (air conditioners, washing machines, motorcycles, mini-buses and lorries) were owned by less than 1 per cent of all households, and so were excluded from the subsequent analysis. The data on the remaining 14 durable assets ownership for the 2 years was pooled, and principal components analysis was applied to estimate an index that explains the variance in asset holdings. The first three principal components explain almost half (48.7 per cent), and the first principal component just over a quarter (26.2 per cent), of the total variation in asset holdings.

Accordingly, we constructed a durable asset index using the first principal component as the weights, as shown in column 4 of Table 8. Multiplying the indicators variables for each household and durable asset by these weights and scaling produces an asset index with a mean close to zero and a standard deviation of one. The asset index has a correlation of 0.747 with real household expenditures for 2005/4, and a similarly (left) skewed distribution.

<sup>3</sup> This is also the same period over which subjective changes in household wellbeing was assessed in IHS-2.

Figure 18 shows how the asset index in 2004/5 compared with that in 2003/4 for all households in the IHS-2. Households whose welfare (as proxied by the asset index) had improved would lie above the diagonal line in Figure 18. Conversely, households whose welfare had deteriorated between 2003/4 and 2004/5 would lie below the diagonal. Of the 11,280 households in the IHS-2, 5,229 have asset indices which improved between the 2 years, while 607 households had asset indices which deteriorated. The remaining 5,444 households had the same asset index in both years.

**Figure 18 Scatter plot of the asset index in 2003/4 and 2004/5**



To examine the determinants of changes in the durable asset index, we regressed the (absolute) change in the asset index between 2003/4 and 2004/5 on a number of (time-invariant) household characteristics plus five types of shocks. Household characteristics included as regressors were the age, sex, marital status and educational level of the household head, the amount of land cultivated by the household, whether the household operated a household enterprise and housing and toilet type. A dummy variable indicating whether or not the household had a mains electricity connection was also included as a proxy for urbanisation.<sup>4</sup> Community-level variables included the distance of the community to the nearest tarmac road, school or market. Shock variables included dummies for whether the household had experienced crop failure or crop diseases, whether there had been large falls in the sales price for its crops or the prices paid for food, whether any household member had experienced illness, whether a household member had died, and whether there had been any instances of theft. All these shocks relate to changes within the last year.

Since better-off households will be better able to draw down assets in order to pay for unexpected expenditures or smooth consumption, all these shock variables were interacted with the initial value of the durable asset index. After allowing for the stratification and clustering of the survey, and using household level sampling weights, the regression results in Table 9 were produced.

<sup>4</sup> The urbanisation variable included in IHS-2 is problematic, as many households classified as urban actually live outside the urban centres and engage in agriculture as their primary occupation.

**Table 9 Determinants of changes in the durable asset index**

<b>Survey linear regression</b>				
Number of obs	=	11,026		
Number of strata	=	30		
Number of PSUs	=	447		
Population size	=	2,638,528		
F(37, 381)	=	30.31		
Prob >F	=	0.0000		
R <sup>2</sup>	=	0.2987		
<b>Dep = change in asset index</b>	<b>Coeff.</b>	<b>SE</b>	<b>t</b>	<b>P&gt; t </b>
<b>Household characteristics</b>				
Age of Head of household	−0.0071	0.0013	−5.39	0.000
Age of Head squared	0.0000	0.0000	4.17	0.000
Sex of Head	−0.0370	0.0170	−2.18	0.030
<i>Marital status of Head</i>				
Polygamous marriage	−0.0250	0.0111	−2.25	0.025
Separated	−0.0309	0.0184	−1.68	0.093
Divorced	−0.0465	0.0170	−2.72	0.007
Widowed	−0.0324	0.0231	−1.4	0.163
Never married	−0.0097	0.0352	−0.27	0.784
Matrilineal	−0.0630	0.0096	−6.54	0.000
<i>Education of Household Head</i>				
PSLC	−0.0038	0.0151	−0.25	0.803
JCE 0.0717	0.0257	2.79	0.006	
MSCE	0.2403	0.0714	3.36	0.001
Diploma/Degree	0.5306	0.1302	4.08	0.000
<i>Land cultivated by household</i>				
<1 ha	−0.0158	0.0341	−0.46	0.643
1–2 ha	−0.0394	0.0234	−1.68	0.094
2–5 ha	−0.0218	0.0221	−0.99	0.324
5–10 ha	−0.0114	0.0217	−0.53	0.600
10–20 ha	0.0128	0.0228	0.56	0.575
>20 ha	0.0604	0.0397	1.52	0.129
Household enterprise	0.0452	0.0100	4.52	0.000
<i>Housing</i>				
Permanent dwelling	0.0939	0.0209	4.49	0.000
Semi-permanent dwelling	0.0715	0.0117	6.1	0.000
Latrine	0.2924	0.0967	3.02	0.003
Flush toilet	0.0227	0.0065	3.48	0.001
Electricity	0.7769	0.0619	12.56	0.000
<b>Community characteristics</b>				
ln distance to road	−0.0059	0.0031	−1.94	0.054
ln distance to market	−0.0081	0.0042	−1.94	0.053
<b>Shocks</b>				
Crop failure	−0.0038	0.0183	−0.2	0.838
Crop failure x asset index	0.0060	0.0354	0.17	0.866
Price shock	−0.0600	0.0215	−2.79	0.006
Price shock x asset index	−0.1779	0.0680	−2.62	0.009
Illness	0.0203	0.0239	0.85	0.395
Illness x asset index	0.0105	0.0572	0.18	0.855
Death of HH member	−0.0061	0.0195	−0.31	0.757
Death x asset index	−0.0271	0.0398	−0.68	0.497
Theft	0.0078	0.0102	0.77	0.442
Theft x asset index	−0.0754	0.0216	−3.48	0.001
Constant	0.3883	0.0402	9.65	0.000

The regression results generally conform to expectations. After controlling for other factors, households with young, female, or divorced heads are associated with decreases in the asset index. If decreases in the asset index are associated with lower expenditures, as the high correlation between the asset index and expenditures reported above indicates, this suggests that households with young, female or divorced heads are more vulnerable. Polygamous marriages and coming from a language group with a matrilineal inheritance tradition are also associated with dis-accumulation of durable assets and lower material wellbeing. In contrast, households whose heads have completed the junior certificate of education, high school or college/university are in a position to accumulate assets, as are households who operate a household enterprise or cultivate more than 20 ha of land. This confirms the usual argument that ownership of human or physical assets is a key buffer guarding against vulnerability. Living in a permanent or semi-permanent house or one with a flush toilet or latrine is also associated with increases in the asset index. Having a mains electricity connection, which as explained above can be interpreted as a proxy for urbanisation, is also strongly associated with rising asset levels. Turning to the community-level variables, distance from either a tarmac road or primary school is associated with decreases in the asset index, suggesting that remoteness plays a key role in vulnerability.

Most of the shock variables have the expected negative sign, indicating that shocks in the past year are associated with decreases in the durable asset index. However, with the exception of price shocks, their coefficients are not statistically significant at the 5 per cent level. The negative and statistically significant terms on the price shock and theft dummies interacted with the asset index in 2003/4 suggests that richer households are more vulnerable to changes in prices and theft. We hypothesise that this is due to richer households being more dependent on the market for their livelihoods, or being more prone to be targeted by robbers.

#### 4.4 Conclusions

This chapter has examined vulnerability to monetary poverty using data from the 2004/5 Malawi Integrated Household Survey. The main findings from this analysis are that:

- Vulnerability to monetary poverty in Malawi is high: one-quarter of people have expenditure within  $\pm 20$  per cent of the NSOs expenditure poverty line.
- Covariant shocks are widespread: over three-quarters of IHS-2 households stated that they had been negatively affected by the rising price of food over the past 5 years, while nearly two-thirds had experienced lower crop yields due to drought or floods. Idiosyncratic shocks, in particular illness, accidents and the death of family members, are rarer but still common, affecting around two-fifths of IHS-2 households.
- Changes in the durable asset index suggest that the living standards of the vast majority of households have improved (46.3 per cent) or were static (48.3 per cent) between 2003/4 and 2004/5. However, a significant minority (5.4 per cent) of households had deteriorating asset indices.
- After controlling for other factors, households living in remote areas or with a young, female or divorced head, polygamous marriages and matrilineal inheritance traditions, are found to be most likely to have deteriorating asset indices. In contrast, living in an urban area, completing higher or secondary education, cultivating more than 20 hectares of land, or operating a household enterprise are all characteristics that are associated with an improvement in the asset index over the last year.

## 5 Subjective poverty and social exclusion in Malawi: an analysis using IHS-2 data

### 5.1 Introduction

The proliferation of recent poverty analyses, both conceptual and empirical, confirms the need to utilise measurements of poverty that are broader than income or occupation (see, for instance, Ravallion and Bidani 1994; Ravallion 1996; Ravallion and Lokshin 1999). Subjective poverty measurements – those that rely on relative measurements or self-reported poverty – are becoming widely used as they are able to capture more fully the social and political aspects of poverty. Of course, they are sensitive to personality, relative positioning and aspirations, however we believe that understandings of the determinants of subjective poverty and vulnerability complement monetary measurements of poverty, rather than substituting for them, and together provide a much richer and more comprehensive understanding of poverty and vulnerability. For this reason, we focus here on analysing subjective poverty measurements, comparing them with monetary measures. We then move on to investigate why the two measures may yield different results. This is followed by an exploration of the relative vulnerability of different traditionally-labelled vulnerable groups (such as orphans, female-headed households, minority language groups, widows), in an attempt to understand the extent of exclusion in Malawi.

### 5.2 Data and data limitations

The IHS-2 dataset includes a special section on subjective wellbeing and changes in wellbeing over the past year. This provides the basis for our analysis here. We construct two variables from this module that we use as dependent variables. The first variable is constructed from the following question: ‘In terms of your household economic wellbeing, are you better off, the same as, or worse off than this same time a year ago?’ The respondent had to choose one of five categories (much better, better, no change, worse off, much worse off). We grouped these into three categories: ‘better’, ‘no change’ and ‘worse’. Thus we have a three-category variable indicating changes in wellbeing over the last year.

The second variable is a subjective poverty measurement. Respondents were asked to imagine six steps, the bottom step representing the poorest people and the top step representing the richest people. Each respondent indicated which step they were on when interviewed. Again we collapse these steps into two categories (poor and non-poor) so that we can compare subjective poverty indicators with the expenditure-based indicator. After examining the data and frequencies of households falling into each poverty category, we decided to label the two bottom steps as ‘poor’ ( $n = 9,399$ ) and the top four steps as ‘non-poor’ ( $n = 1,864$ ). This classification could be disaggregated further.

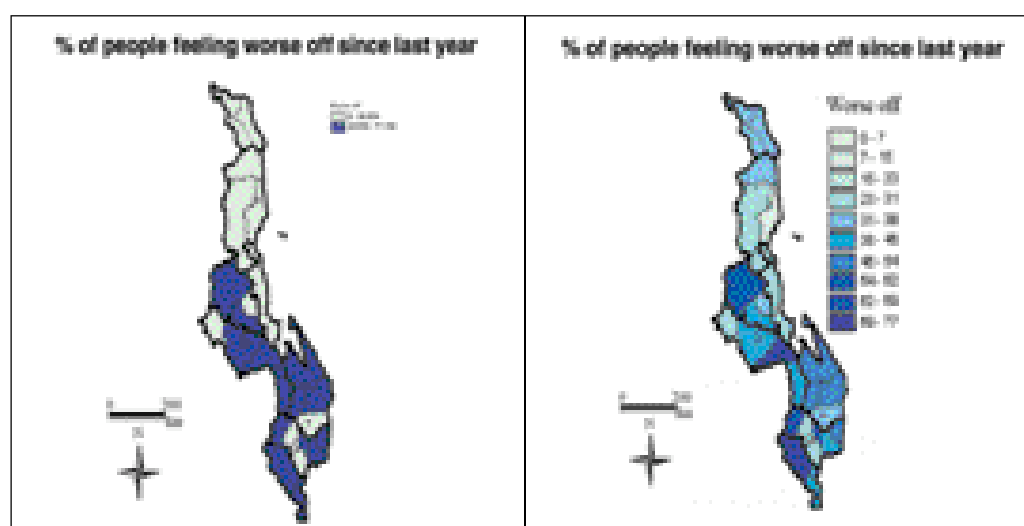
Other variables utilised below that require brief explanations are shock variables, change variables, an asset index, language groupings and tenurial types. The IHS-2 survey contains a comprehensive module on the type of shocks experienced by households over the past 5 years. We have collapsed these shocks into five categories: price shocks, crop failure, illness, death of a household member and theft. We also restrict our analysis of shocks to those experienced in the last year, as some of our other variables are based on the last year and this will allow for comparability. The asset index is constructed using principal components analysis and according to the methodology detailed earlier in Chapter 4 of this report. We included a change in the asset index, which involved subtracting the log of the asset index in 2005 from the log of the asset index in 2004. Thus the variable measures the ratio of the asset index across years. Other change variables include household perceptions of changing levels of crime in the last year. Based on knowledge of Malawi, we construct two variables that may

provide evidence of social exclusion. The first variable uses the main language spoken by the household head to construct three language groupings – from the dominant languages to the minority languages. These are taken as a proxy for majority, middle and minority population groups (see Annex Tables for a list of these language groupings). The second variable is constructed according to whether the property tenure system is matrilineal, patrilineal or mixed. (Again, the districts corresponding to these types are presented in the Annex Tables.)

### 5.3 Changes in wellbeing

For those households who feel that they have become worse off over the last year, we mapped the distribution on a map of Malawi (see Figure 19a). What is obvious at first glance is that the majority of those households feeling worse off are located in the south and centre of the country. Disaggregating further (Figure 19b), the picture is much more nuanced, with the majority of those feeling worse off in the south, but coexisting with pockets of households who feel better off this year than last year. This finding is consistent with findings presented in earlier chapters, of a broad ‘north-to-south gradient’ in wellbeing indicators, but with certain districts in the Central and Southern Regions being better off than neighbouring districts.

**Figure 19a and b Self-reported declines in wellbeing in Malawi**



Source: IHS-2 data

#### 5.3.1 Factors associated with changes in wellbeing

Apart from those geographic and historical factors discussed above, it is also interesting to look at the determinants of changes in wellbeing at a household level. To do this, we run a multinomial logit regression with a three-category dependent variable that indicates changes in wellbeing over the last year. After allowing for the stratification and clustering of the survey, and using household level sampling weights, the regression results in Table 10 and Table 11 were produced.

Table 10 presents the results of a regression that uses only information on changes and shocks over the past year as determinants of changes in wellbeing. Households experiencing one or two shocks last year are 17 per cent more likely to feel worse off than those households that experienced no shocks. Households that experienced three or more shocks are 29 per cent more likely to feel worse off. An increase in crime over the last year is also a significant determinant of feeling worse off. An increase in durable assets over the last year implies that households are 13 per cent less likely to consider themselves worse off. In terms of the shock variables,

crop failure is positively and significantly related to declines in wellbeing, as compared with the death of a household member (in other words, crop failure is seen as more damaging to wellbeing than the death of a household member), whereas theft is not considered as serious as the shock from the death of a family member. Hospitalisation of a household member in the last year is also significant and positively related to a decline in wellbeing.

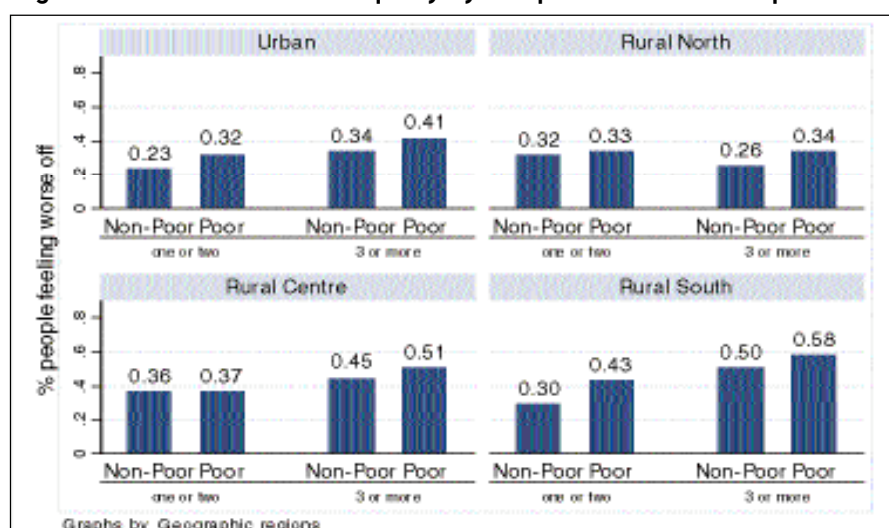
**Table 10 Multinomial logit model for estimating perceptions in change in wellbeing over the last year**

Shock variables	Worse off			Same		
	Beta	SE	Marginal effects	Beta	SE	Marginal effects
<b>No shock</b>						
1–2 shocks	<b>1.038</b>	<b>0.188</b>	0.170	<b>0.587</b>	<b>0.161</b>	–0.028
>2 shocks	<b>1.593</b>	<b>0.193</b>	0.296	<b>0.528</b>	<b>0.167</b>	–0.075
<b>Crime has decreased</b>						
Crime is the same	–0.027	0.078	–0.066	0.424	0.078	0.097
Crime has increased	<b>0.146</b>	<b>0.079</b>	0.027	0.065	0.084	–0.006
Change in durable assets	<b>–0.989</b>	<b>0.102</b>	–0.136	<b>–0.780</b>	<b>0.095</b>	–0.033
<b>Death of household member</b>						
Crop or food price shock	–0.214	0.125	–0.010	<b>–0.334</b>	<b>0.124</b>	–0.042
Crop failure	<b>0.439</b>	<b>0.111</b>	0.100	0.066	0.127	–0.048
Illness	–0.150	0.101	–0.019	–0.131	0.116	–0.008
Theft	<b>–0.315</b>	<b>0.114</b>	–0.023	<b>–0.437</b>	<b>0.141</b>	–0.051
<b>No hospitalisation</b>						
Hospitalisation	<b>0.456</b>	<b>0.178</b>	0.053	<b>0.404</b>	<b>0.189</b>	0.020
constant	–0.722	0.196		–0.277	0.165	

Note: This model is based only on changes and shocks experienced last year.

Unpacking the above effects in terms of poverty status and gender reveals that poor people who experience shocks are more likely to experience a decline in wellbeing than non-poor people who experience the same number of shocks. In other words, the impacts of shocks are exacerbated by poverty. Figure 20 illustrates this graphically and by area.

**Figure 20 Are shocks felt equally by the poor and the non-poor?**



Source: IHS-2 data

**Table 11 Multinomial logit including change variables plus time-invariant characteristics**

Variables	Worse off		Same	
	Beta	SE	Beta	SE
<b>Shock Variables</b>				
One or two shocks	<b>0.933</b>	<b>0.192</b>	<b>0.472</b>	<b>0.166</b>
Three or more shocks	<b>1.280</b>	<b>0.201</b>	<b>0.316</b>	<b>0.164</b>
Crime is the same	−0.019	0.082	<b>0.378</b>	<b>0.080</b>
Crime has increased	<b>0.238</b>	<b>0.080</b>	0.137	0.084
Change in asset index	<b>−0.440</b>	<b>0.107</b>	<b>−0.338</b>	<b>0.100</b>
Price shock	−0.064	0.131	<b>−0.269</b>	<b>0.127</b>
Crop failure shocks	0.180	0.116	−0.120	0.130
Illness shock	−0.132	0.108	−0.145	0.121
Theft	−0.122	0.122	−0.262	0.146
Hospitalised in last 12 months	<b>0.398</b>	<b>0.184</b>	0.345	0.197
<b>Household and demographic variables</b>				
Per capita expenditure	<b>−0.537</b>	<b>0.074</b>	<b>−0.656</b>	<b>0.073</b>
Log household size	−0.129	0.087	<b>−0.357</b>	<b>0.089</b>
Dependency ratio	−0.230	0.132	<b>−0.299</b>	<b>0.140</b>
Sex of household head	<b>0.349</b>	<b>0.129</b>	<b>0.510</b>	<b>0.136</b>
Age of household head	<b>0.016</b>	<b>0.002</b>	<b>0.016</b>	<b>0.002</b>
Monogamous	−0.247	0.166	0.164	0.186
Polygamous	−0.243	0.182	−0.062	0.199
Never married	−0.151	0.156	0.131	0.161
Widow(er)	0.135	0.231	−0.176	0.242
PSLC	−0.007	0.100	−0.068	0.100
JCE	<b>−0.246</b>	<b>0.121</b>	0.002	0.113
MSCE or Diploma	−0.213	0.165	−0.089	0.139
<b>Exclusion and access variables</b>				
One or more household members has a disability	0.134	0.100	−0.046	0.111
Majority language group	−0.400	0.259	<b>−0.646</b>	<b>0.216</b>
Northern	<b>−0.528</b>	<b>0.211</b>	−0.131	0.199
Patrilineal	<b>0.977</b>	<b>0.172</b>	<b>0.766</b>	<b>0.169</b>
Mixed system	<b>1.216</b>	<b>0.158</b>	<b>0.412</b>	<b>0.170</b>
Road	0.096	0.117	0.106	0.117
Community access to a primary school	−0.145	0.092	−0.113	0.099
<b>Asset variables</b>				
Had wage employment last year	−0.012	0.084	<b>0.206</b>	<b>0.084</b>
Engaged in <i>ganyu</i> last year	<b>0.527</b>	<b>0.072</b>	<b>0.392</b>	<b>0.081</b>
Log of land area	−0.077	0.056	−0.100	0.064
Owens an enterprise	<b>−0.222</b>	<b>0.066</b>	<b>−0.165</b>	<b>0.073</b>
Permanent dwelling	<b>−0.349</b>	<b>0.113</b>	<b>−0.275</b>	<b>0.111</b>
Semi-permanent	<b>−0.440</b>	<b>0.096</b>	−0.144	0.083
<b>Location</b>				
Rural North	−0.263	0.245	<b>−0.836</b>	<b>0.216</b>
Rural Centre	0.147	0.151	0.137669	0.165551
Rural South	<b>1.159</b>	<b>0.170</b>	0.24692	0.193859
Constant	3.737	0.960	6.312482	0.911196

As well as exploring ‘pure change’ factors that may have occurred over the last year causing a change in wellbeing, it is also important to examine whether time-invariant characteristics of households (such as sex of household head, ethnic or language group, location), as well as asset variables, explain declines in wellbeing. The results indicate that real per capita expenditure is negatively and significantly related to declines in wellbeing. That is, the more income a household has, the less likely it is to experience a decline in wellbeing, even if it is

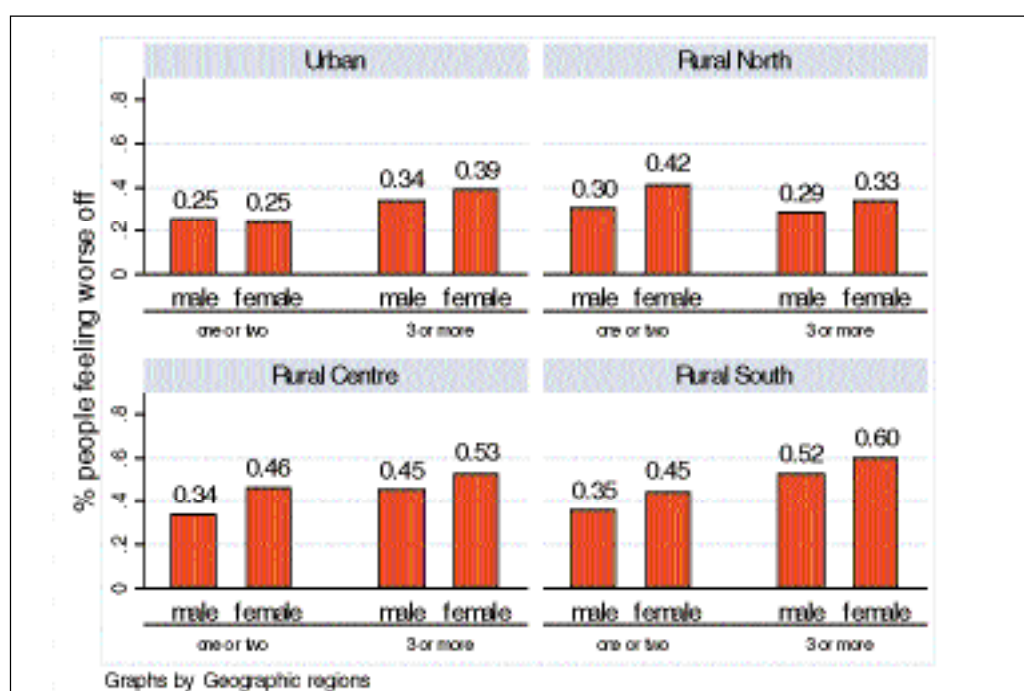


exposed to similar shocks as poor households. Female-headed households and households with older heads are more likely than other households to have experienced a decline in wellbeing. The minority language groups experienced a decline in wellbeing. Whether a household participated in *ganyu* last year is highly significant and positively related to declines in wellbeing. This makes sense as *ganyu* is seen largely as a poor person's coping mechanism in difficult times. Thus, increasing *ganyu* should be indicative of a worsening situation. As expected, households in the rural south are more likely to have experienced a decline in wellbeing over the previous year, compared with households in urban areas.

### 5.3.2 Changes in wellbeing by gender of household head

Figure 21 indicates that female-headed households are more likely to experience a decline in wellbeing as a result of shocks compared with male-headed households. There are a host of possible reasons for this. Female-headed households may have fewer assets, less education, less labour and less social and political capital than male-headed households, leaving them in a much more vulnerable situation than their male counterparts. In the event of a shock, female-headed households may be less resilient. We explore these possible explanations below.

**Figure 21 Shocks affect female-headed households more than male-headed households**



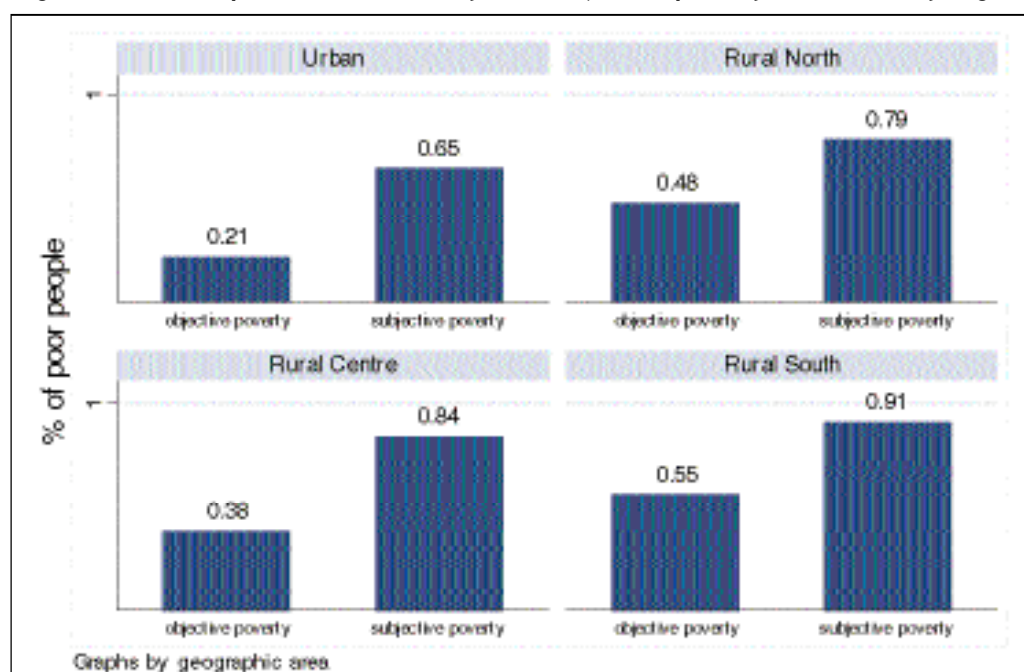
Source: IHS-2 data

## 5.4 Comparing subjective and monetary poverty measurements

It is now widely accepted that poverty is a multidimensional phenomenon, comprising more than just adequate income and consumption needs, but also including feelings of relative deprivation, vulnerability, social exclusion and lack of access to basic needs. Given this, it is very likely, even expected, that determinants of monetary poverty will be different to determinants of subjective poverty. Monetary poverty measurements quantify income or basic expenditure requirements of a household or individual. Subjective measures are likely to extend well beyond this, as they will include a household's feelings of relative deprivation,

exclusion from services and institutions, as well as feelings of marginalisation related to household or individual status (such as ethnicity, or marital status). Figure 22 illustrates the percentage of households classified as poor according to monetary and subjective poverty measurements (see the description earlier for the way in which the subjective poverty variable was created). The proportion of Malawians classified as poor is very different depending on which measurement of poverty is used. A subjective poverty measure produces a much higher incidence of poverty. For instance, in the rural south, 55 per cent of households are poor by the monetary measure (16,165 MK), whereas 91 per cent report that they feel poor. This large difference indicates that the different measures reflect different dimensions of poverty.

**Figure 22 A comparison of monetary and subjective poverty in Malawi, by region**



Source: IHS-2 data

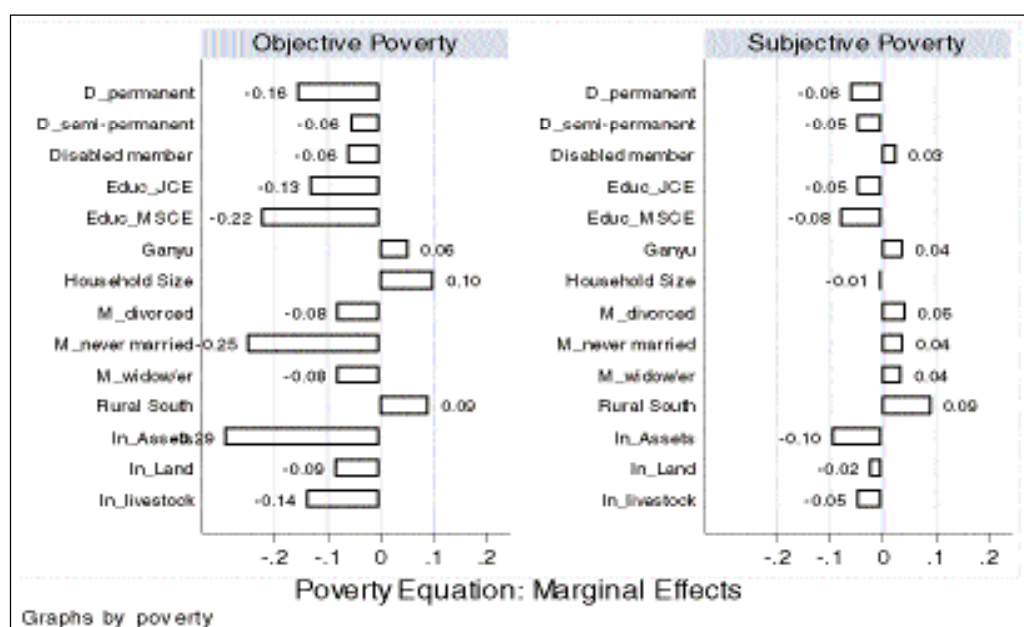
Below we use the IHS-2 dataset to explore the differences in monetary and subjective poverty measures, as a way of gaining some insight into determinants of subjective poverty in Malawi. Two probit models were run, using the same explanatory variables.<sup>5</sup> The first model uses the monetary poverty line to classify households as poor or non-poor. The second model uses self-reported poverty status. A full set of results for both regressions is presented as an Annex Table. Figure 23 and Figure 24 report the marginal effects for selected findings that are of interest to this report. Figure 23 shows the correlates of poverty that are significant in both the monetary and subjective poverty equations. As expected, we find that a range of variables predicts both types of poverty, and in the same way. These include: land cultivated, amount of livestock owned, the level of durable assets owned, the amount of *ganyu* performed, type of dwelling and region where a household is located. Specifically, Figure 23 shows that households living in permanent and semi-permanent dwelling structures are less likely to be monetarily poor and to feel poor than households living in traditional dwelling structures. Similarly, households with heads who have obtained junior certificate or secondary certificates of education are less likely to be poor and feel poor compared to those with no schooling. In the rural south, households are 9 per cent

<sup>5</sup> The subjective poverty regression includes one extra variable (log of real per capita expenditure). This could not be included in the monetary regression as the dependent variable (poverty) is constructed using this expenditure.

more likely to be poor and feel poor than those in urban areas. The higher the *ganyu* labour, the more likely that a household will be monetarily and subjectively poor. With some variables there is a substantial difference in the strength of the relationship with poverty across the regressions. For instance, households with more livestock units are 14 per cent less likely to be monetarily poor but only 5 per cent less likely to feel poor.

What is particularly interesting about the results presented in Figure 23 is the nature of divergence between the impact of the explanatory variables on the dependent (the same is true for Figure 24). We see that households with disabled members are 6 per cent less likely to be monetarily poor but 3 per cent more likely to be subjectively poor. Similarly, the bigger the household size the more likely the household will be monetarily poor but the less likely it will feel poor. There is a clear opposite trend in the results for marital status. Divorced heads, heads who have never married and widows or widowers are less likely to be monetarily poor but more likely to feel poor. These results give some insights into what may be driving the difference between alternative poverty measurements. Larger households may provide intangible benefits, such as a sense of belonging, support and care, that feed into peoples' sense of wellbeing. Thus, even though on average larger households have less income, individuals do not associate households size with poverty. In fact large families may be positively associated with wellbeing. It also appears that a person's marital status will affect their sense of wellbeing in a negative way. This is likely to be related to sociocultural norms around marriage, with widows, divorcees and people who have never married feeling more socially vulnerable than people who are married. The same rationale applies to households with members who have disabilities. While they are less likely to be financially poor, these households feel that the disability negatively affects their wellbeing.

**Figure 23 Correlates of poverty that are significant in monetary and subjective measurements**

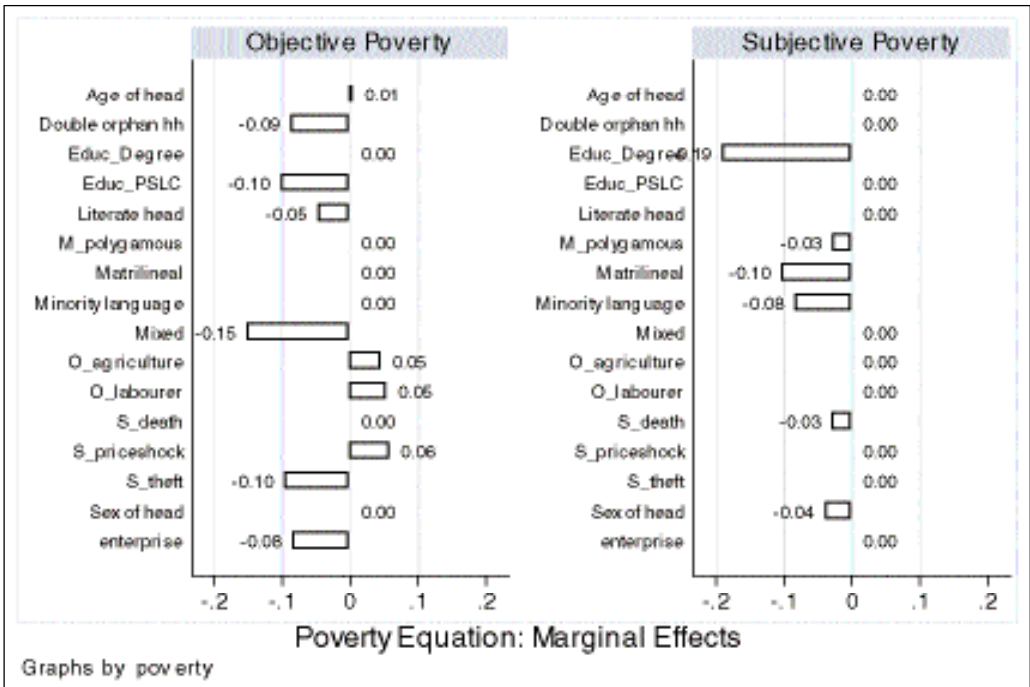


Source: IHS-2 data

Key: D permanent: a permanent dwelling  
 D semi-permanent: a semi-permanent dwelling  
 Disabled member (the household has one or more members with a disability)  
 Educ JCE (Junior Certificate of Education)  
 Educ MSCE (Malawi Secondary Certificate of Education)  
 Ganyu (days of *ganyu* labour obtained last year)  
 Ln asset (log of asset index)  
 Ln land (log of land size)  
 Ln livestock (log of tropical livestock units).

Figure 24 presents results from the same regressions, however these results indicate where different factors are significantly associated with one poverty measure but not with another. Household heads with a diploma/degree are less likely to feel poor, but there is no difference in their objective poverty status compared with household heads with no education. Other significant factors explaining subjective poverty are polygamy, tenurial type, language group, nature of shocks and female headship. Female household heads report feeling less poor than male heads. Polygamous households are less likely to feel poor compared with monogamous households, as are matrilineal households compared with patrilineal groups. Households from minority language groups feel less poor. Households with double-orphans are 9 per cent less likely to be monetarily poor than households with no orphans (perhaps this is because of the various social protection mechanisms they are able to access), however, it appears that households with orphans do not feel poorer than other households.

Figure 24 Differences in correlates of poverty according to poverty measurement



Source: IHS-2 data

The above analysis has drawn attention to the diversity of factors that constitute ‘poverty’ in Malawi. A monetary measure of poverty alone, and the analysis and policy focus that typically emerges from this, would not adequately or fairly represent the extent and complexity of household poverty and vulnerability. Recognising the social and cultural underpinnings of poverty, as well as the obvious financial and asset-based determinants, helps us to move some way to tackling the causes of poverty and vulnerability in a more comprehensive and meaningful way.

The following section provides a descriptive analysis of a number of groups that much of the current literature on Malawi labels as vulnerable, and attempts to establish whether there is some evidence to support these claims.

### 5.5 Social understandings of poverty: vulnerable groups<sup>6</sup>

A review of recent literature reveals that poverty and vulnerability in Malawi are often reported in terms of vulnerable groups. These include orphans and vulnerable children,

6 See also Chapter 7 of the PVA for complementary analysis.

female-headed households, people with disabilities and people living with HIV/AIDS. This section investigates the relationship between different vulnerable group indicators and poverty. We also use other groupings, based on language and tenurial systems, to investigate whether there is any statistical evidence that suggests that certain groups are poorer and more vulnerable than others.

### 5.5.1 Do poor households have more orphans?

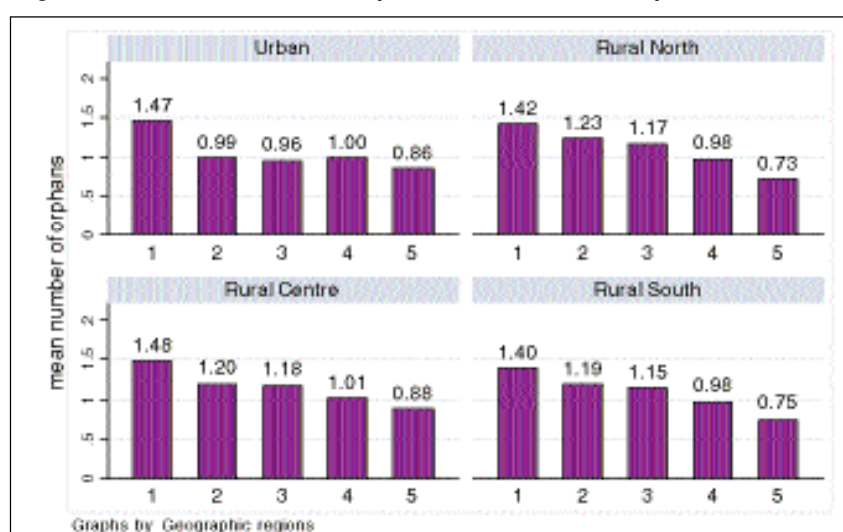
There are 1,040,000s orphans and vulnerable children (OVC) in Malawi, which accounts for 14 per cent of all children in Malawi (2004).<sup>7</sup> By 2010, the expected number of OVC will be 1,150,000, of which 50 per cent will be due to HIV/AIDS. The Malawi National Action Plan for Orphans and Vulnerable Children covers the period 2004–9. The emphasis of the Plan is to provide care, support, protection and development for OVC through the family and community. One initiative planned is a cash transfer to carers and families of OVC, specifically involving direct assistance to destitute families caring for OVC. This type of programme will require well designed targeting mechanisms. The assumption underlying this programme, as well as many others across Africa, is that orphans are predominantly located within poorer households. This is not uncontested. A recent study concluded:

The presence of an orphan (defined as having lost 1 or both parents) in a household has been widely used in southern Africa as a targeting criterion for food aid. However, in villages in Swaziland and Mozambique no relationship was found between this criterion and poverty. In Malawi the relationship was tenuous.

(Seaman and Petty 2005)

In direct contradiction to the findings of the study above, Figure 25 indicates that the mean number of orphans in Malawi is higher in poorer households than richer ones. This finding is consistent across regions, with a declining pattern across income quintiles.<sup>8</sup> One reason for this may be that poorer households have, on average, larger households. Figure 25 also indicates that there is little difference across regions in terms of the mean number of orphans per household.

**Figure 25 Distribution of orphans across income quintiles**



Source: IHS-2 data

<sup>7</sup> Statistics are taken from the Malawi National Plan of Action for Orphans and Vulnerable Children (2004). (World Bank 2006)

<sup>8</sup> The same holds true for households with double-orphans.

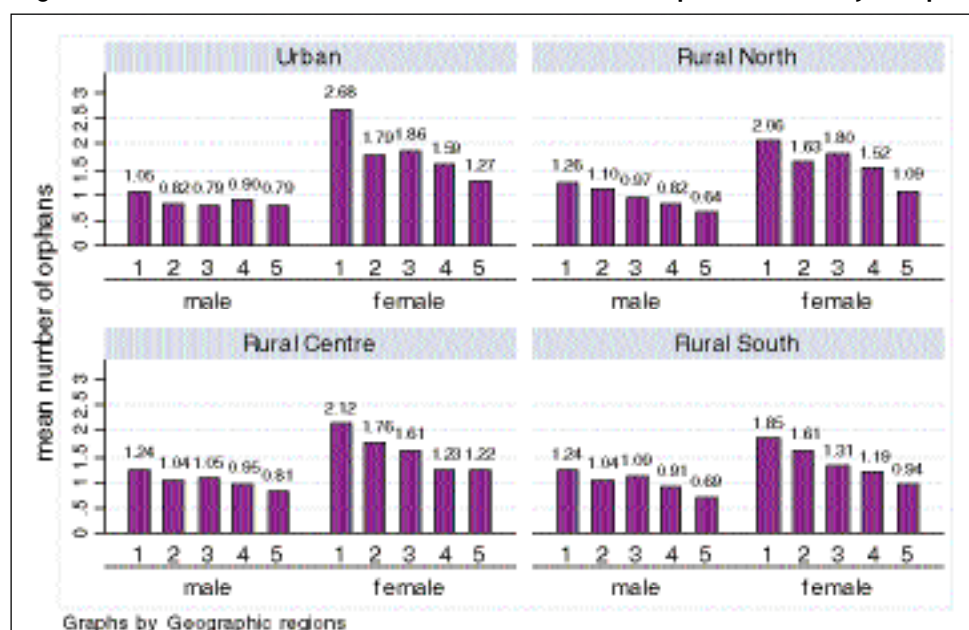
Table 12 provides information on various characteristics of households with and without orphans, across expenditure quintiles. Some interesting patterns stand out. Households with orphans are larger across the income range. The poorest households with single orphans have an average size of 6.18 compared with 5.45 for households with no orphans. Households with orphans are more likely to be female-headed, and have older household heads. Poorer households have older heads than richer households, whether they have orphans or not. The number of children (orphans and non-orphans) per household is higher in poor families than richer families, but not significantly different across orphan and non-orphan households. The last row in Table 12 indicates that the share of orphans to all children does not change dramatically as households become richer.

**Table 12 Characteristics of households with and without orphans aged 0–18 years**

<i>Household characteristics</i> <i>Income quintile</i>	No orphans					Orphans				
	1	2	3	4	5	1	2	3	4	5
Households in each quintile (%)	16.4	18.6	18.9	21.2	24.8	22.1	20.8	20.6	19.2	17.1
Household size (mean)	5.45	4.84	4.28	3.84	2.83	6.18	5.23	4.62	4.06	3.48
(median)	5	5	4	4	2	6	5	4	4	3
Age of household head	35.9	34.6	32.6	32.3	31.2	48.8	48.2	48.7	47.5	45.8
Female household head (%)	25.1	24.3	20.4	22.6	27.5	74.8	75.6	79.5	77.3	72.2
Number of children (1–15)	3.26	2.69	2.19	1.79	1.03	3.45	2.73	2.21	1.73	1.32
Dependency ratio	0.6	0.53	0.48	0.41	0.28	0.62	0.58	0.55	0.48	0.44
Orphans as a share of total children						0.62	0.67	0.69	0.68	0.58

Source: IHS-2

**Figure 26 Female-headed households have more orphans and they are poorer**



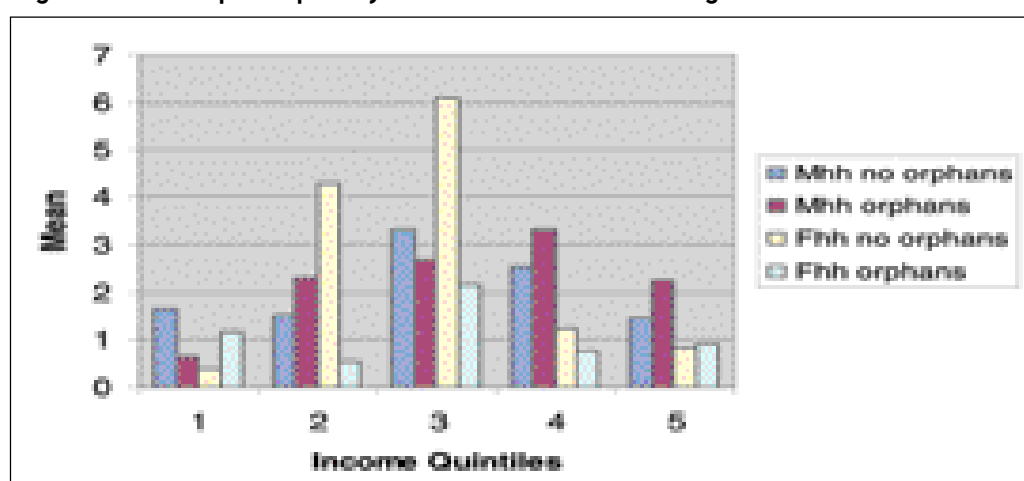
Source: IHS-2 data

Analysing mean number of orphans across income quintiles and by gender of headship, Figure 26 shows that female-headed households have, on average, more orphans across the board, with poorer female-headed households caring for the most orphans (this is also the case for double-orphans). Female-headed households located in urban areas, on average, care for more orphans than in any other areas of Malawi.

### 5.5.2 Are poorer female-headed households caring for orphans more vulnerable than other poor households?

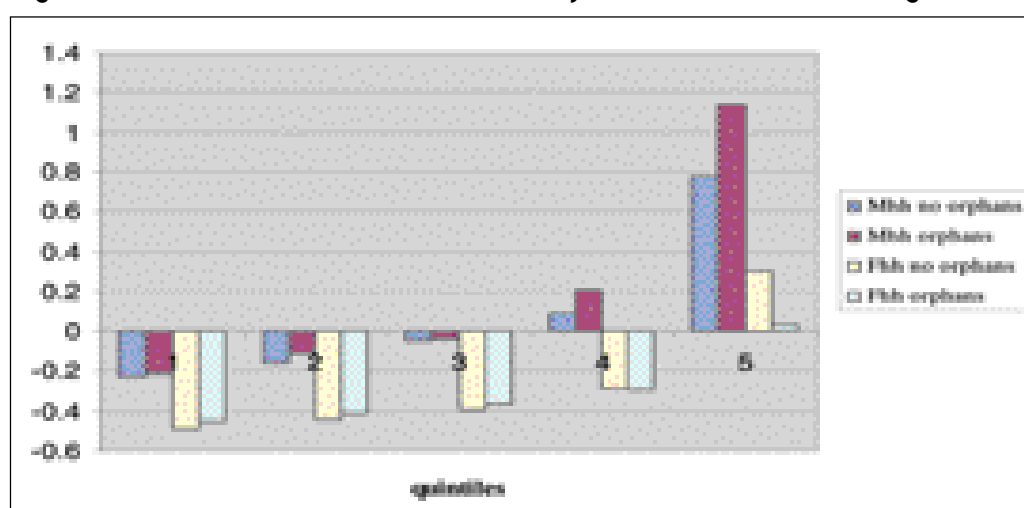
Analysing the asset-holdings of households with orphans and those with no orphans, we find no significant difference between the two types of households (see Chapter 7 of the PVA). However, disaggregating the data by sex of the head of household and looking at asset profiles over the income quintiles reveals some interesting results. Figure 27 and Figure 28 show the average land and asset holdings across different types of households. A striking result is that female-headed households with orphans have significantly less land per capita than other households. Furthermore, female-headed households in general own less durable assets than male-headed households.

**Figure 27 Land per capita by different household categories**



Note: All cases with land per capita over 1,000 hectares have been dropped

**Figure 28 Levels of durable assets owned by different household categories**





## 5.6 Other ‘vulnerable groups’

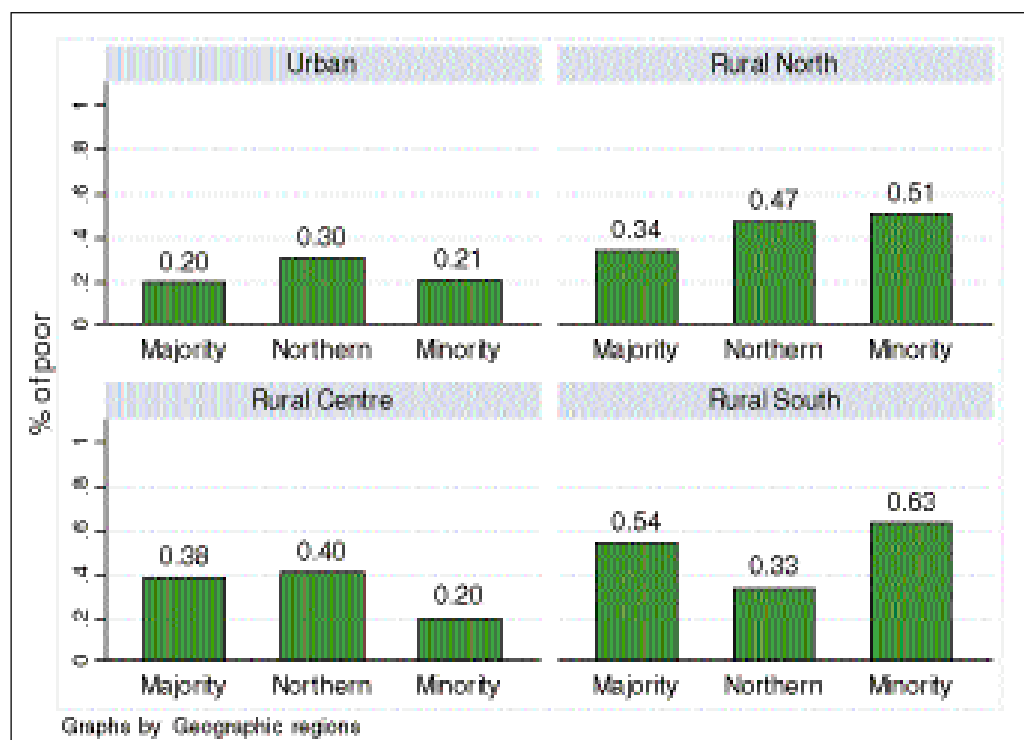
Much of the literature discussing vulnerability in Malawi refers to various categories of vulnerable groups. For instance, a report on causes and consequences of vulnerability in Malawi states that:

while chronic poverty is widespread among rural households, the rural poor that fall into this category should not be considered a homogeneous group. Certain demographic sub-sets have been identified as being particularly prone to high rates of chronic poverty. These include land-constrained smallholder farmers; labour-constrained female-headed households; estate workers or tenants; *ganyu* (piece-work) and other casual labourers; destitute or disadvantaged children; persons with disabilities; the elderly; the uneducated; and the unemployed. One chronically vulnerable group that has grown in size in recent years is people living with HIV/AIDS. The 2001–3 food crisis made a strong case for stepping up social protection interventions to support PLWHA, AIDS orphans and care givers (Devereux *et al* 2003). An estimated 80,000 people now annually die of AIDS and another 110,000, mostly young people, are infected. PLWHA face new constraints to food security, with consequences at the micro-, meso-, and macro-levels.

(TANGO 2004a: 18)

Below we provide some information on vulnerable groups, defined by disability and language groupings. The overall conclusions from these two groups is that there is little evidence of significant poverty differences between sub-categories within these groups.

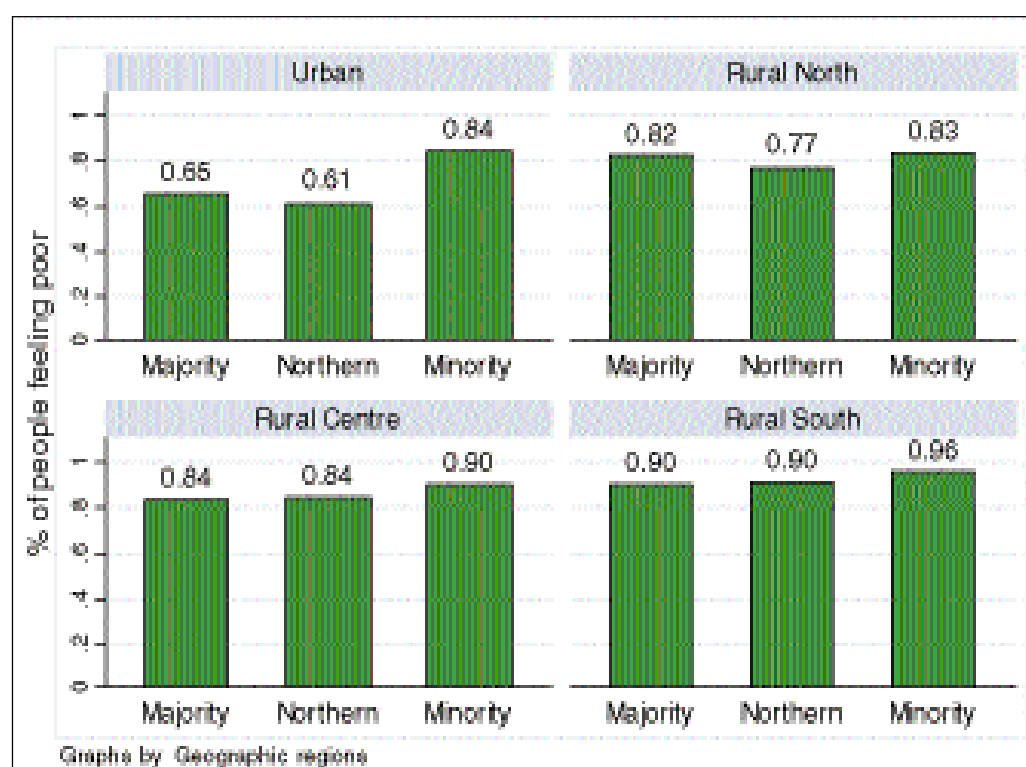
**Figure 29 Percent of monetarily poor households according to language groupings**



Source: IHS-2 data

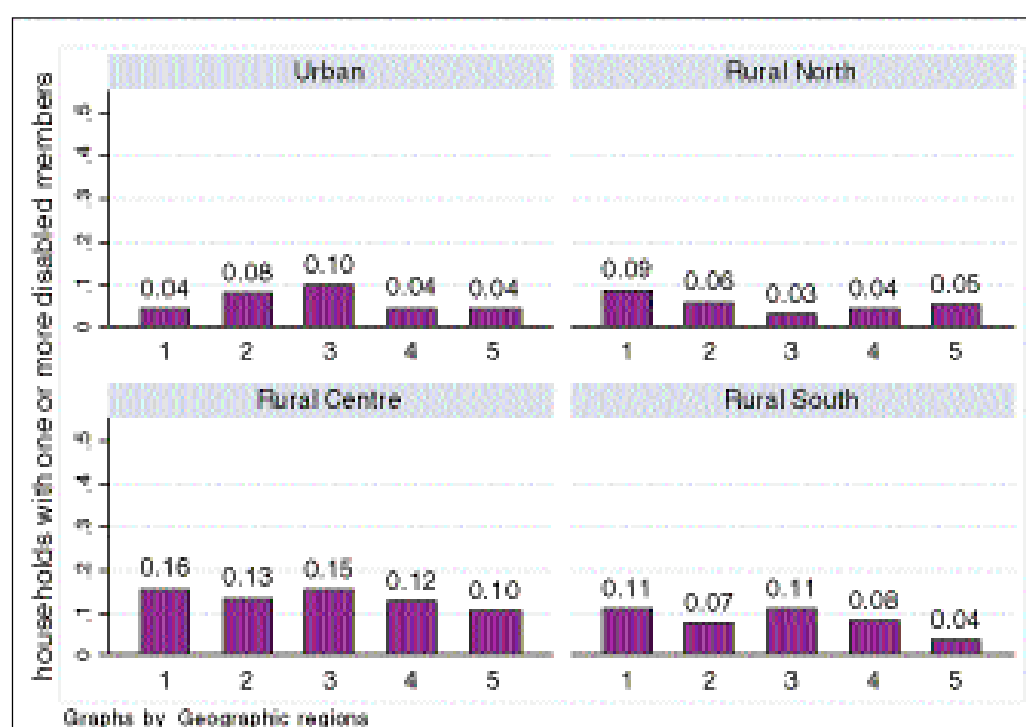


**Figure 30** Percentage of subjectively poor households according to language groupings



Source: IHS-2 data

**Figure 31** Households with disabled members



Source: IHS-2 data

## 5.7 Conclusions

From the evidence presented in this chapter, the following conclusions can be drawn about the distribution of poverty and vulnerability in Malawi.

- **Location:** Households in southern and central Malawi are consistently worse off, both in monetary and in subjective poverty terms. This finding is consistent with evidence from earlier chapters, of a broad 'north-to-south gradient' in wellbeing indicators, but with certain districts in the Central and Southern Regions being better off than neighbouring districts.
- **Changes in wellbeing:** Multiple shocks, changes in crime levels, changes in durable asset wealth and hospitalisation contribute to feelings of illbeing. Poor people who experience shocks are more likely to experience a decline in wellbeing than non-poor people who face the same number of shocks – in other words, the impacts of shocks are exacerbated by poverty. Furthermore, female-headed households and households with older heads are more likely than others to have experienced a decline in wellbeing.
- **Subjective and monetary poverty measures:** Subjective poverty is higher than objective poverty, indicating the multidimensional nature of poverty and vulnerability. Moreover, factors explaining the different poverty measures indicate interesting divergences. Sociocultural factors related to marital status, and cultural perceptions related to disability and household size, cause subjective and objective poverty linkages to work in opposite directions. Similarly, land tenure system, language group and sex of household head are important predictors of subjective poverty, but not of monetary poverty.
- **Orphans and female-headed households:** Poorer households care for more orphans than richer households. Female-headed households have, on average, more orphans across the income range, with poorer female-headed households caring for the most orphans (this is also the case for double-orphans). Female-headed households located in urban areas, on average, care for more orphans than in any other areas of Malawi. A striking result is that female-headed households with orphans have significantly less land per capita than other households. Female-headed households in general also own fewer durable assets.
- **Social exclusion:** There is no hard evidence for identifiable 'vulnerable groups' by personal characteristics – such as language group (a proxy for ethnicity), or disability – suggesting that social exclusion on these grounds is not common and/or is not strongly associated with poverty outcomes.

## 6 Implications for policy

### 6.1 Introduction

Policy responses to address chronic vulnerability in Malawi should pursue two parallel objectives:

1. **Social protection:** provide social assistance and social insurance to people facing inadequate food consumption and/or erratic incomes.
2. **Livelihood promotion:** support viable livelihoods through improving access to key productive inputs and to output markets.

### 6.2 Social protection

It is often asserted (though not empirically proven) that ‘informal safety nets are breaking down’ (TANGO 2004b) in Malawi,<sup>9</sup> and that the poor are therefore increasingly dependent on formal safety nets provided by the government and NGOs. It is certainly true that formal social protection is increasing in Malawi – Smith and Subbarao (2003) recorded 15 distinct donor-funded social protection programmes – but these interventions are generally uncoordinated, poorly targeted and ‘projectised’ rather than institutionalised. As a matter of urgency, social protection policy in Malawi needs to be made coherent by being set within a single overarching framework, it needs to be comprehensive but tailored to specific groups (the labour-constrained and the economically active poor have very different needs), and it needs to be institutionalised within government (though drawing on technical and financial support from development partners as required). Specific interventions that should be prioritised by government and donors include the following.

1. **Stabilise food prices and attack food price seasonality:** For all its problems, ADMARC did have a mandate to protect household food security, through consumption-smoothing interventions such as food price banding (purchasing maize at a pan-territorial floor price and selling at no higher than a fixed ceiling price), and managing a Strategic Grain Reserve to stabilise inter-seasonal food supplies. ADMARC has steadily withdrawn from these food security functions, but the private sector has not responded to generate the integrated, competitive and efficient markets that would stabilise prices and keep food affordable even during the hungry season. The risks that food price variability introduce to market-dependent poor households are not only short term – cumulative food deficits result in stunted child growth, intergenerational transmission of undernutrition, and chronic poverty. Policies must be introduced that stabilise food supplies and reduce inter-seasonal food price variability. Innovative approaches – to avoid the risk of making matters worse – include using South African futures and options contracts to establish a floor price for maize; or measures to promote intra-annual grain storage by private traders.
2. **Introduce labour-saving technologies for labour-constrained households:** Households can become labour-constrained if their productive members become chronically ill and/or die, or if a couple separates leaving a female-headed household without adult male labour. Shah (2002) identifies several ways in which female-headed and labour-constrained households can continue to make a viable living from agriculture. These include: ‘introducing labour economizing technologies, introducing crops that require less labour, increased and better utilization of low-lying wetlands and homestead

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9 See also Palamuleni *et al* (2003): ‘social structures that offer extended and communal support are gradually collapsing ...’.

gardens, and providing opportunities for women to acquire skills to cultivate high value “male” crops like tobacco, so that in the event of their husband’s death, they don’t lose a significant source of their livelihood’.

3. **Targeted nutrition programmes for adolescent girls:** ‘At an absolute minimum, there is a need for a specific focus on anaemia among adolescents – which is both widespread and preventable, through the provision of iron/folate supplements as part of the Essential Health Package’ (Gillespie and Haddad 2004).
4. **Protect land rights for rural households with no adult males:** ‘Land ownership and usufruct rights to be revisited to protect children, divorcees and widows/widowers’ (Kadzandira 2002).
5. **Social insurance:** Effective social insurance has the potential to protect the gains from economic growth against shocks that, in the absence of insurance, can dissipate these gains. (For example, a household that builds up its assets over several years can be forced to dispose of these assets to care for a chronically ill family member.) Social insurance mechanisms include: (1) *crop or weather insurance* to protect farmers against erratic rainfall; (2) *community-based health insurance schemes* and *burial societies* to provide funds to draw down in times of illness and death; (3) *employment guarantee schemes* to stabilise income following a livelihood shock or during periods of under-employment. These three examples also illustrate the range of social insurance providers: (1) is a market-based intervention, sometimes subsidised by donors; (2) is a self-funded informal insurance scheme; (3) is a government-run programme (the Government of India enacted a National Rural Employment Guarantee Programme in August 2005, which guarantees 100 days of work at the minimum wage to every household in rural India on demand).

These ‘social protection’ interventions all have the advantage of linking short-term support to long-term livelihood promotion. For instance, controlling food price seasonality will allow poor households to retain their assets rather than selling them to survive the ‘hungry season’ and falling into irreversible ‘poverty traps’. Nutrition programmes that allow young mothers to have healthy babies will break the cycle of intergenerational transmission of poverty and undernutrition: low birthweight babies are known to face problems with human capital formation in later life. Social insurance mechanisms like weather insurance or employment guarantee schemes will encourage farmers to take moderate risks (e.g. by investing in higher-yielding crop varieties), in the knowledge that if their harvest fails they will be compensated, or can at least be assured of finding alternative employment.

### 6.3 Livelihood promotion

Although there are linkages between some form of social protection and livelihood promotion, social protection is never enough on its own to address the underlying causes of chronic poverty and vulnerability, which in rural Malawi are largely a product of **lack of assets** at the household level and **market failures** at the sectoral level, in a context of recurrent **natural risks and policy failures** at the national level. Apart from social assistance for those unable to participate in economic activities (i.e. social welfare support for ‘vulnerable groups’ such as orphans, the elderly and the chronically ill), social protection is compensation for a failure of livelihoods, and it should not substitute for policies, programmes and investments that promote sustainable livelihoods and ultimately reduce the need for social assistance to economically active groups. Priority measures to promote rural livelihoods in Malawi should focus on input and output markets, assets, and employment.

1. **Restore access to agricultural inputs, especially fertiliser:** Either through free handouts (not desirable or sustainable), subsidies, or input credit – or building fertiliser markets.

2. **Expand markets for high-value crops:** In the early 1990s, when Malawian smallholders were first legally allowed to cultivate burley tobacco, this crop was seen as a pathway out of poverty for many rural households. But tobacco failed to live up to this initial promise, due to unpredictable auction prices, inability to compete with tobacco estates on either quality or volume of production, and the fact that smallholders continued to face input constraints which meant that tobacco had to compete with maize for scarce land, labour and fertiliser. In the late 1990s, paprika was promoted as another high-value cash crop (Peters 1999). To date, all efforts to identify high-value crops that could lead to accelerated income growth for large numbers of Malawian farmers have either petered out or have provided opportunities for only a small cluster of smallholders. Nonetheless, these efforts should continue.
3. **Protect and build productive assets:** ‘Asset buffers’ protect individuals and households against shocks, so one solution to rising vulnerability in some Malawian communities is to build productive assets of all kinds. This includes: (1) human capital at the *individual* level (improved health services to reduce illness and raise labour productivity, improved education to build skills and broaden livelihood opportunities beyond agriculture); (2) physical assets at the *household* level (e.g. exploring innovative options for building livestock flocks and herds); (3) infrastructure at the *community* level (e.g. feeder roads to integrate markets, which can be – and are being – constructed and maintained through public works projects).
4. **Increase opportunities for rural non-farm employment:** In order to diversify rural options, stabilise consumption and raise incomes (Ellis *et al* 2002).

## 6.4 Conclusion

The likelihood of achieving successful outcomes from the interventions proposed above, in terms of sustainable poverty reduction and reduced vulnerability, is dependent on the broader context within which individuals and households pursue their livelihoods. There are many features of the socioeconomic environment in Malawi that are ‘disabling’ rather than ‘enabling’, which require policy attention if livelihood promotion and social protection interventions are to be fully effective.

Key contextual **economic** factors that emerge from our analysis as undermining livelihoods include weak markets – which restrict access to productive inputs and expose poor households to excessive price seasonality – and limited non-agricultural employment opportunities. Contextual **social** factors that exacerbate vulnerability include gender inequities – severe discrimination against women and girls that results in lower wellbeing outcomes – and an apparent decline in informal social support systems in recent years, accompanied by rising crime and insecurity.

Finally, any targeted intervention that aims to protect the vulnerable and promote the livelihoods of the poor requires accurate identification of those who need different types of assistance, to minimise both inclusion and exclusion errors. Targeting is a major challenge facing all antipoverty programmes. The analysis in this report suggests that monetary measurements of poverty do not allow us to capture, and thereby target, certain types of poor households – such as households experiencing vulnerability as a result of changing family structure (household size and family breakdown), as well as those including members with disabilities. On the other hand, a robust proxy for vulnerability and poverty is female-headed households, especially those caring for orphans. Poor female-headed households are poorer than others in terms of income as well as land size and assets owned. These households typically have more orphans than other households and are often on a downward spiral over time, in terms of both actual and perceived wellbeing. These trends are important for policy because they imply that current poverty status under-estimates the extent and severity of future poverty for these (and other) highly vulnerable households. For targeting purposes, this also suggests that subjective understandings of poverty are as important as objective measurement, when classifying and responding to vulnerability.

# References

- Action Against Hunger (AAH) (2004–5) *Malawi Integrated Nutrition and Food Security Surveillance: Monthly Reports*, Lilongwe: Action Against Hunger
- Binswanger, H. and McIntire, J. (1987) 'Behavioural and Material Determinants of Production Relations in Land-abundant Tropical Agriculture', *Economic Development and Cultural Change* 36.1
- Carter, M., Little, P., Tewodaj, Mogues and Workneh, Negatu (2004) *Shocks, Sensitivity and Resilience: Tracking the Economic Impacts of Environmental Disaster on Assets in Ethiopia and Honduras*, University of Manchester: Institute for Development Policy and Management
- Chaudhuri, P., Jalan, J. and Suryahadi, A. (2001) 'Assessing Household Vulnerability to Poverty: Methodology and Application to Indonesia', mimeo, Columbia University
- Devereux, S. (2002) *State of Disaster: Causes, Consequences and Policy Lessons from Malawi*, Lilongwe: ActionAid Malawi
- (1999) "Making Less Last Longer": *Informal Safety Nets in Malawi*, IDS Discussion Paper 373, Brighton: IDS
- Devereux, S. and Tiba, Z. (2006) 'Malawi's First Famine: 2001–2', in S. Devereux (ed.), *The New Famines*, London: Routledge
- Devereux, S., Chilowa, W., Kadzandira, J. Mvula, P. and Tsoka, M. (2003) *Malawi Food Crisis Impact Survey: A Research Report on the Impacts, Coping Behaviours and Formal Responses To The Food Crisis in Malawi of 2001/02*, Brighton, UK and Lilongwe, Malawi: IDS and Centre for Social Research
- Dorward, A. and Kydd, J. (2002) *The Malawi 2002 Food Crisis: The Rural Development Challenge*, Imperial College at Wye: Centre for Development and Poverty Reduction
- Ellis, F., Kutengule, M. and Nyasula, A. (2002) *Livelihoods and Rural Poverty Reduction in Malawi*, Ladder Working Paper, Norwich: University of East Anglia
- FAO (undated) *Global Livestock and Health Production Atlas*, Rome: Food and Agricultural Organisation, [www.fao.org/AG/againfo/resources/en/glipha/using.html](http://www.fao.org/AG/againfo/resources/en/glipha/using.html)
- Filmer, D. and Pritchett, L. (1998) *Estimating Wealth Effects Without Expenditure Data – Or Tears*, World Bank Policy Research Working Paper 1994, Washington, DC: World Bank
- Gillespie, S. and Haddad, L. (2004) *Reducing Chronic Malnutrition in Malawi: What Role for DFID?*, Washington, DC: International Food Policy Research Institute (IFPRI)
- Government of Malawi (2002) *Malawi Poverty Reduction Strategy Paper*, Lilongwe: Ministry of Finance and Economic Planning
- (2000) *Profile of Poverty in Malawi: Poverty Analysis of the Integrated Household Survey 1998*, Lilongwe: National Economic Council
- Government of Malawi and International Food Policy Research Institute (2002) *Malawi – An Atlas of Social Statistics*, Lilongwe: National Statistical Office
- Hoddinott, J. (2005) *Vulnerability, Shocks, and Impacts in Ethiopia and Malawi: Implications for Public Action*, Washington, DC: International Food Policy Research Institute (IFPRI)
- International Development Committee (IDC) (2003) 'The Humanitarian Crisis in Southern Africa', *Third Report of Session 2002–03*, London: House of Commons
- Kadzandira, J. (2002) *Sources of Risks and Vulnerability for Malawian Households and Communities*, University of Malawi: Centre for Social Research

- Macro-International (1992, 2000, 2004) *Malawi Demographic and Health Survey Reports*, [www.measuredhs.com](http://www.measuredhs.com)
- Malawi National Vulnerability Assessment Committee (2004) *Food Security Monitoring Report, Malawi*, Lilongwe: MVAC
- National Statistical Office (2002) *2002 Malawi Core Welfare Indicators Questionnaire Survey: Report of Survey Results*, Zomba: NSO
- Palamuleni, M., Kambewa, P. and Kadzandira, J. (2003) *HIV/AIDS and Food Security in Malawi*, Lilongwe: World Food Program
- Peters, P. (1999) *Agricultural Commercialization, Rural Economy and Household Livelihoods, 1990–1997, Final Report*, Harvard: Harvard Institute for International Development
- Phiri, A. (2005a) *Vulnerability Analysis of Malawi's Agricultural Sector*, Lilongwe: Bunda College of Agriculture
- (2005b) *Regional Vulnerability Analysis for Malawi: Poverty, Agriculture and Nutrition Security*, Lilongwe: Bunda College of Agriculture
- Pritchett, L., Suryahadi, S. and Sumarto, S. (2000) *Measuring Vulnerability to Poverty: A Proposed Measure with Application to Indonesia*, SMERU Working Paper
- Ravallion, M. (1996) 'How Well Can Method Substitute for Data? Five Experiments in Poverty Analysis', *World Bank Research Observer* 11.2
- Ravallion, M. and Bidani, B. (1994) 'How Robust is the Poverty Profile?' *World Bank Economic Review* 8.1: 75–102
- Ravallion, M. and Lokshin, M. (1999) *Subjective Economic Welfare*, Policy Research Working Paper 2106, Washington, DC: World Bank
- Rutstein, S. and Johnson, K. (2004) *The DHS Wealth Index*, DHS Comparative Reports 6, Calverton: ORC Macro
- Sabates-Wheeler, R. and Haddad, L. (2005), *Reconciling Different Concepts of Risk and Vulnerability: A Review of Donor Documents*, Brighton: IDS
- Seaman, J. and Petty, C. (2005), *Understanding the Impact of HIV/AIDS on Household Economy*, [www.ifpri.org/events/conferences/2005/durban/papers/seamanWUP.pdf](http://www.ifpri.org/events/conferences/2005/durban/papers/seamanWUP.pdf)
- Shah (2002) *The Impact of HIV/AIDS on Agricultural Production Systems and Rural Livelihoods in the Central Region of Malawi*, Lilongwe: CARE
- Sharma, M. and Yohannes, Y. (2005) *Vulnerability, Shocks, and their Consequences on Household Expenditure and Asset Levels in Malawi*, Washington, DC: IFPRI
- Sharma, M., Tsoka, M., Payongayong, E. and Benson, T. (2002), *Analysis of Poverty Dynamics in Malawi with an Assessment of the Impact of ADMARC on Household Welfare*, Washington, DC: IFPRI
- Subbarao, K. and Smith, J. (2003) *What Role for Safety Nets in Low-Income Countries?*, Social Safety Net Primer Series No. 1, Washington, DC: World Bank
- TANGO International (2004a) *Theme Paper I: Underlying Causes of Livelihood Vulnerability and Insecurity in Malawi*, Lilongwe: CARE
- (2004b) *Theme Paper II: Social Protection in Malawi*, Lilongwe: CARE
- (2004c) *Theme Paper IV: Gender Exploitation in Malawi*, Lilongwe: CARE
- Tiba, Z. (2005) 'A New Type of Famine With Traditional Response: The Case of Malawi, 2001–2003', unpublished PhD thesis, London: School of Oriental and African Studies, University of London

van Donge, J., Chivwaile, M., Kasapila, W., Kapondamgaga, P., Mgemzulu, O., Sangore, N. and Thawani, E. (2001) *A Qualitative Study of Markets and Livelihood Security in Rural Malawi*, An evaluation study commissioned for the Ministry of Agriculture and Irrigation of the Government of Malawi, Lilongwe: DFID Malawi

Wobst, P., Lofgren, H., Tchale, H. and Morrison, J. (2004) *Pro-poor Development Strategies for Malawi: An Economy-wide Analysis of Alternative Policy Scenarios*, London: Imperial College London

World Bank (2006) *Malawi Poverty and Vulnerability Assessment 2005*, Washington, DC: World Bank

World Health Organisation (WHO) (2001) *World Health Chart 2001*, [www.whc.ki.se/files/basicinfo.ph](http://www.whc.ki.se/files/basicinfo.ph)



## Annex tables

**Table 13 Language groups in Malawi**

Category	Languages	Comments
1.	Chewa and Nyanja, Yao, Lomwe, English	These are the largest groupings in the country, with Chewa and Nyanja mainly in Central Region, and Yao in Balaka, Mangochi, Machinga and part of Zomba, while Lomwe is spoken in Thyolo, Chiradzulu and Mulanje. These groupings largely determine the current political environment in Malawi.
2.	Tumbuka, Tonga, Ngoni, English	These are all languages in the North, with Tumbuka as the main grouping (mainly Mzimba and Rumphu districts), with Ngoni part of the minority in Mzimba district.
3.	Lambya, Nyakyusa, Sukwa, Nkhonde, Senga, Sena, other	These are minority groupings (Lambya, Nyakyusa, Sukwa, all in Chitipa district) Nkhonde in Karonga, Senga in Mchinji and Sena in the Lower Shire (Nsanje and Chikwawa districts).
4.	English	It is difficult to place this category. But although a minority group, it should not be excluded, as these become influential people in the community.

**Table 14 Property tenure systems in Malawi**

Category	Districts
1. Patrilineal	Mzimba, Rumphu, Nkhata bay, Chitipa, Karonga, and Likoma are the only clear patrilineal districts. Ntcheu, Chikwawa, Nsanje and Mchinji are mixed but they lean more towards patrilineal.
2. Matrilineal	Zomba, Machinga, Balaka, Mangochi, Mulanje, Thyolo, Chiradzulu, Phalombe. These are typical matrilineal districts, where the man moves and follows the wife. Land ownership is through the wife. This is known as <i>Chikamwini</i> .
3. Mixed	Dedza, Nkhatakota, Blantyre, Mulanje, Thyolo, Chiradzulu, Salima, Lilongwe, Dowa, Ntchisi, Kasungu, Mwanza. Most of these districts are matrilineal but men may take their wife to their village through a system known locally as <i>Chitengwa</i> , which means that land is obtained through the man. There are also pockets of <i>Chikamwini</i> ; hence these are mixed districts.

**Table 15 Comparison of monetary and subjective poverty measurements**

Variables	Monetary			Subjective		
	Coeff.	SE	t	Coeff.	SE	t
HH size	0.258	0.016	16.370	-0.033	0.013	-2.430
Age hh	0.013	0.007	2.000	0.008	0.007	1.160
Age 2	0.000	0.000	-1.210	0.000	0.000	-0.580
Sex hhh	0.134	0.079	1.700	-0.182	0.095	-1.910
_leduchead_2	-0.257	0.069	-3.740	-0.102	0.062	-1.640
_leduchead_3	-0.336	0.070	-4.780	-0.215	0.067	-3.200
_leduchead_4	-0.582	0.113	-5.160	-0.334	0.093	-3.600
_leduchead_5	-0.434	0.256	-1.700	-0.687	0.170	-4.050
_loccupati 1	-0.015	0.072	-0.200	-0.042	0.068	-0.610
_loccupati 2	0.115	0.045	2.530	-0.021	0.062	-0.330
_loccupati 3	0.137	0.065	2.120	-0.017	0.076	-0.230
_lmarstat_2	-0.037	0.062	-0.600	-0.130	0.062	-2.090
_lmarstat_3	-0.205	0.088	-2.320	0.261	0.110	2.380
_lmarstat_4	-0.665	0.147	-4.530	0.241	0.121	2.000
_lmarstat_5	-0.208	0.085	-2.440	0.211	0.111	1.900
lithhh	-0.118	0.040	-2.950	-0.068	0.055	-1.230
_lo_1	0.003	0.040	0.060	0.054	0.044	1.240
_lo_2	-0.217	0.085	-2.540	0.107	0.098	1.090
matrilineal	0.092	0.111	0.830	-0.465	0.104	-4.460
mixed	-0.382	0.081	-4.710	-0.146	0.087	-1.690
_llang3_1	-0.056	0.131	-0.420	-0.284	0.176	-1.610
_llang3_2	-0.022	0.166	-0.130	-0.358	0.165	-2.170
dismem	-0.157	0.060	-2.620	0.150	0.073	2.070
Inland	-0.213	0.042	-5.110	-0.122	0.035	-3.480
ltlu	-0.346	0.052	-6.710	-0.245	0.049	-5.030
lnai05	-0.738	0.038	-19.470	-0.486	0.049	-10.020
distroad	0.000	0.001	0.280	-0.003	0.002	-1.780
pschool	0.076	0.055	1.360	0.027	0.063	0.420
clinic	-0.029	0.064	-0.450	-0.008	0.065	-0.120
ganyu	0.138	0.040	3.450	0.213	0.046	4.660
enterprise	-0.212	0.045	-4.740	-0.043	0.050	-0.860
_ldwelling_1	-0.396	0.073	-5.400	-0.275	0.067	-4.140
_ldwelling_2	-0.142	0.054	-2.640	-0.221	0.062	-3.580
_ltoilet2_1	-0.065	0.047	-1.380	-0.081	0.070	-1.160
_ltoilet2_2	-0.391	0.256	-1.530	0.068	0.173	0.390
priceshock	0.148	0.072	2.040	0.080	0.069	1.160
theftA	-0.243	0.084	-2.900	-0.042	0.084	-0.500
totdeathbr k	-0.044	0.052	-0.840	-0.139	0.058	-2.410
illness	-0.073	0.056	-1.290	-0.073	0.061	-1.190
hos	-0.035	0.082	-0.420	0.158	0.111	1.420
_larea_2	0.016	0.169	0.090	-0.007	0.187	-0.040
_larea_3	-0.156	0.104	-1.500	0.063	0.086	0.730
_larea_4	0.234	0.121	1.930	0.495	0.100	4.960
lrcpexp				-0.368	0.057	-6.510
_cons	-1.293	0.224	-5.760	5.196	0.665	7.810

## Section 2

# Review of Social Protection Instruments in Malawi



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# 1 Overview

A striking feature of social protection in Malawi is how many different programmes and policies have been implemented in recent years, yet the evidence that vulnerability is rising rather than falling suggests that these interventions are not adding up. The purpose of this desk review is to synthesise current thinking and available evidence on the relative effectiveness of various types of social protection interventions, and to examine the achievements of programmes actually implemented in Malawi. This paper combines a review of comparative international experiences and findings from evaluations in Malawi. The objective is to contribute to an informed debate on developing an optimal package of social protection measures for vulnerable Malawians.

## 1.1 Scope of this review

Although the terms ‘safety nets’ and ‘social protection’ are often used interchangeably, social protection is broader than safety nets, and covers at least three broad areas of intervention. Several types of ‘productivity-enhancing safety nets’ and ‘direct welfare transfers’ are examined in the main sections of this review. Annex 1 shows how these interventions address different types of vulnerability, such as idiosyncratic or covariate shocks, chronic poverty, and market failures.

- **Productivity-enhancing safety nets:** These interventions are targeted at economically active people who face constrained access to assets, inputs and/or markets, due to poverty or market failures. Often these programmes have multiple objectives: to transfer resources to poor or vulnerable individuals or households (a welfarist objective), and simultaneously to build individual, household or community assets. In Malawi, examples include: *fertiliser subsidies*; *free inputs distribution* (fertiliser and seeds); *public works programmes* (food-, cash- or inputs-for-work) and *social funds* (MASAF).
- **Direct welfare transfers:** Direct transfers of food or cash range from short-term relief to institutionalised social security systems. The main objective of humanitarian relief interventions is to smooth consumption after a large-scale livelihood shock (such as a drought) that threatens lives and exceeds the ability of affected households and communities to cope. Typically, as in Malawi in 2002/3, humanitarian assistance is dominated by emergency *food aid* – general food distribution, plus supplementary feeding and therapeutic feeding – followed by rehabilitation programmes. In non-emergency contexts, *school feeding programmes* are a form of project food aid that could also be described as ‘productivity-enhancing’, since they provide nutritional support to children but also promote access to education. Similarly, *conditional cash transfers* link the provision of resources to poor households with their utilisation of education and health services. Finally, *unconditional cash transfers* include social pensions, disability grants, or orphan carer grants.
- **Market interventions:** A third category of instruments that have social protection aims are open market operations, such as: *strategic grain reserve management* (buying grain after the harvest and releasing it onto the market, to dampen price rises before the next harvest); and *food price banding* (stabilising grain prices between a floor price for producers and a ceiling price for consumers). Both of these instruments have been important in Malawi in the past, but price banding was phased out in the 1990s and the Strategic Grain Reserve now fulfils only a nominal buffer stock role, following its catastrophic mismanagement during the 2001/2 food crisis. Market interventions might be an important tool in the package of social protection interventions in Malawi in the future, but these instruments are not examined in detail in this review.

## 1.2 Issues arising

There are a number of unresolved issues in the design and implementation of social protection programmes, most of which also preoccupy policy-makers in Malawi. Some of these issues are briefly discussed here.

- **Poverty reduction or poverty alleviation?**

‘Productivity-enhancing safety nets’ aim to contribute to sustainable **poverty reduction**, both directly through raising incomes but mainly indirectly, through generating income (or raising food production), or building productive assets that in turn will generate further income. Sometimes this impact is immediate and measurable, as with public works projects that build infrastructure (such as roads) that reduces transactions costs and integrates markets. At other times the ‘productive’ impact is very long-term and indirect, as with school feeding schemes that build on evidence of lifetime returns to education in terms of the learners’ employment prospects and income-earning potential. Some programmes, e.g. the Productive Safety Net Programme (PSNP) in Ethiopia, combine two ambitious objectives: to provide income transfers to several million chronically food insecure Ethiopians in the short-term, and to reduce their dependence on social assistance (either food or cash transfers) in the long-term. After 5 years, PSNP beneficiaries are expected to ‘graduate’ out of poverty and dependence on external support, except during emergencies.

‘Welfare assistance’ and ‘disaster management’ focus more on **poverty alleviation**, by bridging a consumption deficit with food or cash transfers. In the case of disasters, this is usually for a short period of time only (e.g. until the next harvest in drought-affected farming communities). Welfare assistance, however, is provided to some vulnerable groups for their entire lifetimes (e.g. people with severe disabilities), or for a life-cycle phase that can last for many years (e.g. social pensions which citizens are entitled to receive from their 60th birthday until their death). In most Western countries, social welfare systems provide institutionalised, regular support of various kinds to such vulnerable groups as a ‘citizenship entitlement’ – there is no expectation that this will reduce beneficiaries’ poverty sustainably, avoid dependence, or contribute to economic growth.

- **Multiple objectives = multiple success or multiple failure?**

Sometimes programmes that are initiated with one set of objectives become broadened or diverted to meet other objectives instead of (or as well as) the primary objective. In Malawi, for instance, emergency food aid programmes have been motivated as a response to HIV and AIDS. ‘Starter Packs’ were initiated as a drought relief intervention, but continued in subsequent years on the basis that agricultural liberalisation had undermined farmers’ access to farm inputs – so a disaster recovery programme became a productivity-enhancing intervention and a compensation for market failure. Public works programmes in Malawi aim to strengthen household food security, but also to build community assets and promote gender equity. The risk with multiple objectives in a single intervention is that they often contradict each other in practice, and it might be more advisable to focus on achieving one objective well, rather than partially achieving two or three.

- **What’s the driver: Instruments or objectives?**

Too much of the social protection debate at present is driven by interests representing available instruments, instead of being grounded in a rigorous, disaggregated, participatory assessment of problems faced by different categories of vulnerable people, and the design of appropriate interventions to address this range of needs. For instance, safety nets in Africa have been dominated for decades by the availability of American and European food aid. In the last few years, the appropriateness of food aid in meeting (especially) non-emergency social protection needs has been questioned, and recently a bandwagon has been building around unconditional cash transfers, which is in direct conflict with the food aid lobby. This is unhelpful: a better



way to design social protection programmes is to identify *who* needs *what* type of assistance, *when*, *where* and *why*, and then to address these needs with interventions tailored to these needs. In the late 1990s, UNDP developed a methodology for linking ‘sustainable livelihoods’ thinking to processes of decentralisation in Africa. This was called ‘PAPSL’ – Participatory Analysis and Planning for Sustainable Livelihoods – and it was piloted in Malawi. This kind of approach, where communities identify who needs external support and what type of support is most appropriate, could provide a model for assessing and prioritising social protection needs, by putting the objectives ahead of the available instruments.

- **Projectised or institutionalised?**

A danger with many safety net interventions is that they are stand-alone ‘flagship’ projects, often designed and funded by bilateral or multilateral donors, and run by international NGOs, that create islands of social protection in oceans of vulnerability. Even if these projects are successful if evaluated on their own terms, they typically have limited impact beyond their defined target group of beneficiaries, and they are usually time-bound rather than permanent. Social protection must not be ‘projectised’, it must be institutionalised; it must not be donor-driven, it must be government-owned (though donor financing may be required in very poor countries like Malawi); and it must not be seen as ‘charity’ or ‘welfare’, but ultimately as a right of citizenship.

### 1.3 Structure of this review

This desk review is organised around the two broad categories of social protection interventions identified above. Chapter 2 discusses instruments that aim simultaneously to protect and promote livelihoods, under the title ‘productivity-enhancing safety nets’. Chapter 3 discusses instruments that aim simply to protect lives and livelihoods, under the title ‘direct welfare transfers’. Chapter 4 concludes by drawing lessons on alternative social protection instruments, from the experiences reviewed both in Malawi and internationally.

## 2 Productivity-enhancing safety nets

This section reviews experiences with free inputs distribution, including Malawi's 'Starter Pack' programmes; fertiliser subsidies; public works programmes; and 'social funds', specifically the Malawi Social Action Fund (MASAF).

### 2.1 Free inputs distribution

The distribution of fertiliser and seeds for free is, in effect, a 100 per cent subsidy of agricultural inputs to economically active farmers, designed to enhance household food security through boosting food production. Fertiliser and seeds have been handed out for free to Malawian farmers almost every year, since 1993. The first distribution followed the southern African drought of 1992, when the Drought Recovery Inputs Programme ('DRIP') provided inputs to farmers whose seeds had been lost or consumed during the previous year. This was followed in 1995/6 by the Supplementary Inputs Programme ('SIP'), which attempted to restore access to inputs for farmers who could not afford the high fertiliser prices that followed heavy devaluations of the Kwacha, and the removal of fertiliser subsidies (the Fertiliser Subsidy Removal Programme (FSRP) started in 1987 and was completed in 1995).

The 'Starter Pack' programme started in 1998, as a large-scale intervention that aimed to support both household and national food security, through subsidising maize production. The rationale was that it is more cost-effective to subsidise food production before the harvest, with free inputs distribution, than food consumption after the harvest, with free food distribution. The Starter Pack included enough fertiliser, maize seed and legume seeds for 0.1 hectares, and it was distributed to all smallholders in Malawi. Farmers were able to produce 100–150kg of additional maize per pack (Levy 2005a) – not enough for national self-sufficiency, but enough to close the food gap substantially. Malawi had an annual maize deficit of 500,000–600,000 tonnes in the early 2000s, and universal distribution of Starter Packs to 2.8 million beneficiaries produced 280,000–400,000 additional tonnes of maize each year (Levy 2005b).

Levy *et al* (2004) argue that the key issue for food security in Malawi is not self-sufficiency, but the price of maize, which is a key determinant of access to food. Starter Packs not only increased maize production and market supplies, but also reduced the demand for maize from smallholders who are market-dependent for part of the year, and kept the price of maize relatively low in the hungry season. When the programme was scaled down after 2000, it contributed only 3–4 per cent of total smallholder production, compared with 16 per cent in 1999/2000. This decline, Levy (2005b) argues, contributed to the sharp rises in the price of maize, from MK10/kg in October 2001 to MK44/kg in March 2002, that precipitated a major food crisis.

After 2000, the Starter Pack programme was scaled down from an untargeted national food security programme to a poverty-targeted safety net, but the Targeted Inputs Programme (TIP) faced significant problems with beneficiary identification and selection. Community selection was the preferred targeting methodology, but Chinsinga *et al* (2002) found that beneficiaries selected were spread across all wealth categories (measured by income and assets), with only a slight preference for the extremely food insecure. Communities proved to be very resistant to the idea of targeting, showing a reluctance to exclude any community members that has been reported from other African countries (Hoddinott 1999). In many communities, Starter Packs were evenly divided among all households, while in other cases 'elite capture' meant that most of these packs were diverted to the most powerful families.

Critics argue that Starter Packs achieved neither the objective of national food security nor more sustainable agriculture in Malawi. Barahona and Cromwell (2005) argue that the latter

failure is due to: (1) funding being constantly renegotiated, leading to an inability to purchase quality seed in advance; (2) fertiliser and seed that are inappropriate to local cropping patterns; (3) the failure to reach a 'critical mass' and (4) the short-term nature of the intervention. Garforth (2005) and Ashley and Maxwell (2001) also highlight problems of implementation, particularly in communicating the relevant agricultural extension messages. One further objection to Starter Packs is that they could crowd out private supplies of inputs and inhibit market development. (For this reason, the World Bank and other agencies consistently resisted free inputs distribution in Malawi.) Nyirongo (2005) argues that this is not the case for fertiliser, since similar proportions of Starter Pack beneficiaries and non-beneficiaries bought fertiliser in each year, and is only partially the case for seeds, which were purchased by 15 per cent of beneficiaries but 24 per cent of non-beneficiaries in 2003. Though farmers do recognise the need to address declining soil fertility (van Donge 2005), few households buy inputs because: (1) the end of subsidies raised the cost of fertiliser to three times that of neighbouring landlocked countries; (2) fertiliser is only available in 50kg bags, which are too large; (3) almost no smallholders have access to credit for inputs and (4) seeds are often unavailable.

Nevertheless, Levy (2005c) argues that Starter Packs implemented on a universal scale (at an estimated fixed cost of US\$20m for 2.8 million households) can have a significant impact, and compares very favourably in terms of cost and macro-economic effects with other food security measures. Some 80 per cent of the cost of (untargeted) Starter Packs goes to beneficiaries in the form of inputs. Equivalent imports would cost US\$70–100m per year and create inflationary pressure through exchange rate depreciation (which was 66 per cent in the period between August 2001 and August 2003). Targeted food aid would cost US\$100m per year; general fertiliser subsidies would cost US\$20m but are not guaranteed to benefit the poorest; and safety nets providing MK2,000 per month to 30 per cent of households for 5 months would cost US\$107m. Levy concludes that the Starter Pack is both a lower risk and more cost-effective strategy.

There remains the problem, however, that without targeting, Starter Packs benefit only those with sufficient land and labour to maximise the potential of the pack. An evaluation of the 1998/9 (universal) scheme found that households that were wealthier, had more land and more members received more packs, and that these households tended to produce higher outputs and yields (Longley *et al* 1999). The same evaluation concluded that for those households without sufficient land and labour, an 'alternative form of safety net' was needed. Interestingly, only 20 per cent of farmers interviewed reported that they would pay the actual cost (MK450) for a Starter Pack (Longley *et al* 1999). Moreover, when 1,000 'flexi-vouchers' were offered that could be redeemed either for the Starter Pack or for goods worth MK450 (the same cost as a Starter Pack), 56 per cent of these vouchers were redeemed for goods. Both these findings suggest that Starter Packs did not address the priority needs of poor farmers in Malawi (Harnett and Cromwell 2000).

Seeds-and-tools programmes are less popular in Malawi than in other African countries. In 2003, however, Concern Worldwide ran a seed exchange programme, using a revolving credit system, in four districts of Malawi, and also established 4,000 village grain banks (Kambewa 2005). A summary of evaluations of seeds-and-tools programmes concluded that seed distribution projects 'have fewer positive impacts than anticipated [and] can actually decrease seed system stability and varietal diversity, while bringing with them a set of unintended negative impacts on the social and political economy of recipient communities' (Longley and Sperling 2002). For example, a review of 'seed aid' programmes by Sperling *et al* (2004) found evidence that repeated deliveries of free seeds in contexts of chronic stress distorts farmers' own seed procurement strategies (including in the case of Malawi's Starter Pack programme), undermines the functioning of local seed and grain markets (e.g. in Burundi) and compromises the development of commercial seed supply systems (e.g. in Zimbabwe). In contexts where maize is an important commercial crop and commercial maize is dominant in the seed market, as in Malawi, free seed systems inevitably interfere with commercial maize and seed markets.

Several studies reach similar conclusions: (1) that the free distribution of agricultural inputs – seeds, tools, fertiliser – share an assumption that these inputs are unavailable on local markets, which is often not true; (2) that local inputs markets should be supported, not undermined; (3) that seed vouchers and fairs may be more effective in stimulating local markets; (4) that if constrained access to inputs is caused by ‘unaffordability’ then the real problem is poverty, not unavailability of inputs, so poverty is the underlying problem that should be addressed (Sperling *et al* 2004). Vouchers or cash transfers could improve access to inputs and stimulate the market, which is preferable to undermining the private sector with free inputs distribution.

## 2.2 Fertiliser subsidies

The arguments for subsidising fertiliser are analogous to those for distributing fertilisers for free. Boosting production enhances household and national food security, in economies dominated by smallholder agriculture. Where markets are weak and poverty is widespread, subsidising inputs increases their uptake, raising yields and reducing the need for food aid. Under the Banda regime in Malawi, a general fertiliser subsidy was one component in a set of policies designed to ensure maize production self-sufficiency among the smallholder sub-sector, and to maximise foreign exchange earnings from cash crop exports by the estate sub-sector. In the 1980s, however, the fertiliser subsidy was declared fiscally unsustainable by the international financial institutions, and was phased out under structural adjustment conditionalities by the mid-1990s. Another argument against fertiliser subsidies in Malawi is that they are regressive, being captured disproportionately by wealthier farmers – even Starter Packs targeted at the poor were sold to the estates or across the border into Zambia, where prices are higher. This implies that removing fertiliser subsidies had relatively little impact on the poor, and the reality of Malawi’s ‘porous borders’ means that the income transfer effects of any general price subsidy are unlikely to be retained within the country.

Crawford *et al* (2005) identify three arguments in favour of fertiliser subsidies: (1) increased agricultural output and incomes; (2) economic benefits by kick-starting innovation or correcting for market failures and (3) non-economic benefits such as food security, social protection, and the restoration of soil fertility. This last argument is endorsed by Sachs (2003), who argues that fertiliser subsidies are cheaper than food aid (though this assumes that subsidies are pro-poor). In the context of Malawi, the first and second arguments are disputed by Govindan and Babu (2001), whose modelling exercise finds that the removal of the 25 per cent fertiliser price subsidy led to only a 1 per cent reduction in aggregate maize output, and a 5 per cent and 7 per cent reduction in demand for labour and fertiliser respectively. Earlier, Sahn and Arulpragasam (1991) had found that implementation of the Fertiliser Subsidy Removal Programme (which commenced in 1987) was associated with increased fertiliser prices but also an increase in fertiliser uptake by smallholders, suggesting that the major constraint on fertiliser uptake in Malawi is not its price, but its availability on the market.

This evidence is disputed by other studies, and by agencies that believe the abolition of fertiliser subsidies and the collapse of smallholder agricultural credit schemes resulted in a decline in fertiliser utilisation, and hence in maize yields, in Malawi’s smallholder sub-sector. Peters (1999) finds that fertiliser price increases resulted in smallholders applying less fertiliser than they used to (and would like to) apply. Together with several devaluations of the Malawi Kwacha – by 62 per cent in 1998 alone – the average price of a bag of Urea increased by over 400 per cent, from MK400 to MK1,700 per bag, between 1997 and 2003. In a PRA survey conducted in 12 villages across Malawi in 1998, constrained access to agricultural inputs, especially chemical fertilisers, was mentioned as one of the gravest problems faced by farmers (Devereux 1999). The Starter Pack was one response to this market failure, but free distribution of inputs was, as noted above, controversial and unpopular with many of the Government of Malawi’s development partners.

Another non-market method of transferring agricultural inputs to poor farmers is inputs-for-work projects. Instead of distributing inputs for free, inputs-for-work makes access to fertiliser and seeds conditional on meeting a work requirement. In 2001, an NGO (Emmanuel International) implemented a pilot inputs-for-work project in two districts of Malawi. Rural access roads were constructed by a total of 20,000 participants, who were paid with inputs (50kg of urea and 10kg of hybrid maize seed) rather than cash wages or food rations. These inputs were enough to produce an extra 450kg of maize, or 5 months staple food consumption for an average family. Inputs were transferred either directly or in the form of vouchers redeemable at local stores. To minimise 'exclusion errors' due to the inability of labour-constrained individuals (such as the elderly or chronically ill) to provide heavy manual labour, up to 5 per cent of beneficiaries in each community were 'seriously disadvantaged people', who were identified by community members to receive fertiliser and seed without having to work. According to one evaluation, payment with inputs was more popular with project participants than payment in food or cash. The total cost of the project was US\$744,900, while the estimated benefits for the 20,000 beneficiaries included the construction of 250km of roads, and production of 9,000 tonnes of maize, worth US\$1.8 million (Carr 2002).

## 2.3 Public works programmes

Public works programmes refer to 'activities which entail the payment of a wage in return for the provision of labour, in order to (i) enhance employment and (ii) produce an asset, with the overall objective of promoting social protection' (SALDRU 2005). Public works are popular with policy-makers because they offer the potential of simultaneously creating useful assets and transferring food or income to the poor, while being self-targeting, avoiding dependency and minimising 'leakages' to the non-poor, because of the work requirement. In Malawi, a wide range of public works programmes – food-for-work, cash-for-work, and inputs-for-work – have been implemented by the government, donors and NGOs since the early 1990s, with the objective of providing an employment-based safety net for households facing chronic or transitory food shortage. In terms of social protection objectives, well-timed public works employment can smooth incomes and consumption in contexts where seasonal under-employment is a severe constraint on livelihoods. Recent public works activities in Malawi include (Kambewa 2005):

- **Food-for-work:** Following the food crises of 2001–3, the Joint Emergency Food Assistance Programme II (JEFAP II) and the Consortium for Southern Africa Food Security Emergency Programme (C-SAFE) implemented road rehabilitation projects, cassava planting for hunger mitigation, reforestation, fishpond construction and manure production, with support from the World Food Programme (WFP) and USAID's Food for Peace Programme.
- **Cash-for-work:** Under a European Union-funded Public Works Programme, the Government of Malawi implements labour-intensive food security projects, construction and rehabilitation of rural feeder roads and transport infrastructure, and planting of community woodlots. Under the Malawi Social Action Fund (MASAF) Public Works Programme, various cash-for-work projects are implemented through Local Authority Managed Projects (LAMPs), including: 'Improvement of Livelihood through Public Works Programmes' (funded by DFID), the 'Emergency Drought Relief Programme', and 'Relief Cash for Works Programme' (funded by the Government of Malawi). Most activities are in road rehabilitation (80 per cent of projects), followed by afforestation, water (flood control) and agriculture. In 2003/4, almost 95,000 workers – equal numbers of men and women – were employed on MASAF cash-for-work projects.
- **Inputs-for-work:** Small-scale activities have been initiated in Malawi, most recently a project called 'Sustaining Productive Livelihoods Through Income for Assets' (SUPLIFA), funded by DFID, on which workers received 50kg of urea and 10kg of maize seed after 20 days of work.

Public works often have gender equity objectives. MASAF public works projects operate in food deficit rural areas of Malawi, and target women and female-headed households, 'since female-headed households make up a disproportionate share of the poorest' (MASAF 1996: 16). On its food-for-work projects, WFP purposely selects projects that either attract a large proportion of women workers or create assets that benefit women directly – such as community woodlots and water-points that reduce women's firewood and water collection time (Cammack 1996). Critics have questioned the implications for women's workloads of requiring them to undertake heavy manual labour, and note that this also excludes several highly vulnerable groups – orphans, the elderly, PLWHA. Other forms of social protection are needed for the labour-constrained poor.

Expanded public works programmes were advocated by the World Bank – which led the design team – as the main platform of Malawi's National Safety Net Programme (NSNP) in 1999: 'some form of labour-intensive public works program is the most likely solution, perhaps supplemented by limited feeding or cash transfer schemes for those unable to work' (Smith 1999: 6). However, concerns were raised about whether public works could be scaled up to the extent envisaged, especially in terms of the administrative and management capacities required (Gsänger 2000).

Unfortunately, there is little cross-country evidence that public works projects can produce high quality, useful, pro-poor and durable assets that contribute to sustainable poverty reduction. Few evaluations have attempted to quantify the economic returns to assets created by public works, but McCord (2005) maintains that the value of public works assets intended to promote economic growth in Malawi 'is less apparent' than the value of assets created in response to specific environmental threats, as in Bangladesh. It is widely accepted that community involvement in project design is crucial to the identification of assets that are appropriate and need community priorities, but 'elite capture' is always a danger, while genuine participatory processes raise programme costs and timeframes in situations where time is often a constraint.

Moreover, McCord (2005) finds that in the Malawian context of chronic poverty and seasonal under-employment, public works programmes are 'a serious mismatch between problem and policy response'. In particular, setting public works wages below the minimum wage – or below the *ganyu* daily rate, in Malawi's case – to encourage self-targeting is unlikely to have a positive impact on poverty (McCord 2004). Because of the time commitment and heavy manual labour involved, public works employment has significant opportunity costs – Lipton (1998) estimates 20–30 per cent in terms of lost income in South Asian programmes, and Maxwell (1993) estimates a direct participation cost of 1,000 calories per day. These costs reduce the net value of income earned on public works programmes. In Botswana, where workers on the rural labour-based roads programme earned just 50 per cent of the minimum wage, this low payment 'contributed to the marginalisation and social exclusion of those employed' (Mayer and Kayira 1997). In Malawi, the low wages paid on MASAF's public works caused workers to leave the project (MASAF 2004).

The level and mode of payment are problematic issues in the design of public works projects. While low payment levels are stigmatising and have limited impact on poverty and food insecurity, higher wages or rations reduce targeting accuracy by attracting the non-poor (Subbarao *et al* 1996). Where a food surplus is available, payment in cash is preferable to food because it is cheaper to administer – 40 per cent cheaper on public works in Ethiopia – and has multiplier effects on the local economy (Devereux 2002), but in areas of food shortage, a combination may be optimal for social protection outcomes (SALDRU 2005). In Malawi, a survey of public works participants found that their payment preferences varied by season, gender and location. Payment was preferred in cash around harvest time, in agricultural inputs (fertiliser and seeds) around planting time, and in maize during the hungry season (Zgova *et al* 1998). Women and households living far from markets generally favoured food rations, while men and households near urban centres generally preferred cash wages.

In a comparison of the cost-effectiveness of alternative social protection interventions in Malawi, Smith (2001) calculated a unit cost of 13.9 Kwacha to transfer 1 Kwacha to the

poorest through MASAF public works projects – significantly more than the 1.73 Kwacha required to transfer 1 Kwacha in the form of cash transfers. On the other hand, Haddad and Adato (2001) found that 4.31 Rands were required to transfer 1 Rand to the poor on public works projects in South Africa (including the indirect benefits of assets); compared with 6.58 Rand for untargeted cash transfers. Bloom *et al* (2005) find that 48.6 per cent of the US\$12.8m disbursed by MASAF between 1996 and 2001 went on unskilled wages. Subbarao *et al* (1997) concur that a low proportion of public works budgets is typically spent on wages (30–60 per cent), ‘with the rest being consumed in material and management costs’, a consideration that leads the World Bank (2001) to conclude that ‘workfare programmes are not necessarily an inexpensive way of delivering benefits to poor people’. SALDRU (2005) makes a similar point, emphasising the high cost of transferring income through public works (40–70 per cent) relative to cash grants (10–40 per cent), arguing that public works may be highly inefficient unless the assets created have a high socioeconomic value, and concluding that ‘there is not an evidence base in [southern Africa] which endorses public works as an effective social protection instrument’.

## 2.4 Social funds

Social Funds are agencies that finance small projects in several sectors, targeted to benefit a country’s poor and vulnerable groups. Ideas for projects are generated in a participatory manner by communities and screened against a set of eligibility criteria (Jorgensen and van Domelen 1999). Social Funds such as the Malawi Social Action Fund (MASAF) support the overarching goal of poverty reduction by implementing community projects in three areas: broad-based economic growth, investment in human capital, and social safety nets for vulnerable groups. MASAF was set up in July 1995, as one component of the then recently elected UDF government’s ‘Poverty Alleviation Programme’, with financing from the World Bank (US\$56 million in its first 5-year phase). MASAF had four elements – public works projects, investment in village-level infrastructure, community empowerment, and poverty monitoring (MASAF 1996).

Although Social Funds are demand-led and participatory in theory, the evidence on this is mixed. Van Domelen (2002) concludes that in general, the activities financed by Social Funds are usually among the community’s top priorities, and the World Bank (2002a) finds that people are generally satisfied with projects. However, another review of the literature concluded that only a minority of Social Funds are demand-led in practice, that the technical requirements of a demand-driven process may create a bias against the most disadvantaged communities, and that intermediaries rarely act disinterestedly (de Haan *et al* 2002). Bloom *et al* (2005) note that traditional leaders play a very influential role in MASAF activities. Carvalho *et al* (2002) point out that applications for project funding have to be made by educated persons of social standing in the community, which inevitably biases the selection of projects and who benefits within the community. White (2002) questions the extent of participation in Social Funds, noting that: ‘typically, almost everyone is involved in making a community contribution, but far fewer people are active in identification and fewer still in project management’, and that some groups, particularly women, may be excluded.

Dulani (2003) finds evidence for these concerns in an assessment of three MASAF projects in Malawi, noting that communities played very limited roles in needs assessment, project selection, planning or monitoring and evaluation. Where community members were involved, local elites dominated who did not necessarily represent the interests or priorities of the majority. Community members were mostly involved in implementation, but in one case where the project addressed a non-priority need, ‘participation imposed a significant cost to the poorest of the poor’. Bloom *et al* (2005) reach similar conclusions in their broader assessment of MASAF, which reports that active and participatory community involvement in MASAF projects was limited.

Partly because of the risk of elite capture, Social Funds are often criticised for not targeting the poor. Van Domelen (2002) argues that criticism of Social Fund targeting is not

supported by data, and presents evidence from Social Funds in six countries showing that they can reach the poor and do often reach the poorest. However, de Haan *et al* (2002) points out that since targeting methods vary across Social Funds, so does their targeting accuracy. White (2002) finds that Type II (inclusion) targeting errors are large – ranging from 29–45 per cent in poverty-oriented projects – but argues that this is inevitable (and not undesirable) for infrastructure projects such as school buildings that benefit entire communities. District targeting, however, may be more problematic. In the case of Malawi, Bloom *et al* (2005) find little evidence of leakage to the better off, but equally little evidence of efforts to target the poorest and most vulnerable in MASAF projects.

The welfare impacts of Social Funds are unclear. While there have been successes in creating and using facilities, and there is some evidence of increased primary enrolment and immunisation coverage, and decreased mortality as a result of Social Funds, World Bank (2002a, b) data show several cases of insignificant or even negative impact, leading White (2002) to suggest that complementary programmes are essential. Tendler (2000) is more sceptical, arguing that Social Funds have negligible impact on poverty. Bloom *et al* (2005) find evidence of direct and sustainable benefits of MASAF to the poor. MASAF public works projects reportedly improved the quality of life for 71 per cent of their 721,155 workers, and MASAF funded the construction of one-quarter of all classrooms in Malawi between 1994 and 2001, all of which were still in use by 2005.

Concerns are often raised about the maintenance and sustainability of assets and infrastructure created under Social Funds, especially where recurrent costs must be covered after the project is completed (White 2002). In Malawi, Bloom *et al* (2005) report that, out of 200,000 boreholes constructed by MASAF, only half of those linked to schools and two-thirds of stand-alone boreholes still provide a good supply of drinking water. Finally, since Social Funds are usually institutionally separate from government, there are concerns that their parallel activities might undermine government institutions (de Haan *et al* 2002). Tensions between MASAF and the Ministry of Health resulted in MASAF ceasing all funding of health projects (Bloom *et al* 2005).



### 3 Direct welfare transfers

Direct welfare transfers typically take the form of food or cash transfers to poor and vulnerable people. This section considers two types of food transfers (food aid or supplementary feeding, and school feeding or food-for-education) and two types of cash transfers (conditional and unconditional).

#### 3.1 Food aid

Food aid is most often thought of as a response to humanitarian emergencies, to alleviate hunger and prevent starvation. Apart from relief food aid, however, there is also programme food aid and project food aid (public works, school feeding, supplementary feeding), which have a role in social protection and, arguably, in poverty reduction. Since public works projects have been discussed elsewhere in this report, this section briefly reviews emergency relief and supplementary feeding programmes in Malawi, after a broader discussion of the case for and against food aid.

Several arguments are made in support of food aid. Apart from saving lives during emergencies, food aid can help to address vulnerability. Dercon and Krishnan (2000) and Quisumbing (2003) find that food aid is effective in reducing household vulnerability in Ethiopia, and Hoddinott *et al* (2003) note the importance of food aid in smoothing consumption and protecting assets among households facing food stress. Recently, food transfers have been advocated as providing both economic and nutritional support to people living with HIV and AIDS (PLWHA) (WFP 2005). In the Malawi context, linking food aid to HIV/AIDS is motivated by three facts: that HIV is a fundamental cause of the Southern African food crisis, that malnutrition can increase susceptibility to HIV and AIDS, and that HIV and AIDS exacerbate food security and malnutrition (Kadiyala and Gillespie 2003; UN 2003). One more general point often made in favour of food aid is that it can achieve improved nutrition better than cash because more food is consumed for equivalent values of transfer (Edirisinghe 1998), which may partly be a consequence of women controlling food in the household (Haddad *et al* 1997).

Critics of non-emergency food aid argue that it is unlikely to eliminate chronic food insecurity or to reduce poverty without complementary interventions, and that developmental food aid is less effective and less efficient than other transfers (Barrett and Maxwell 2005; ODI 2000; Clay *et al* 1998a,b; Holt 1998). One limitation of food transfers is their high transaction costs. Barrett and Maxwell (2005) estimate that more than half (53 per cent) the value of US food aid in 2000 was spent on shipping and handling costs. Clay *et al* (1998b) claim that whenever it is systematically analysed, financial aid is more cost-effective than food aid. Both reviews conclude that food is preferable to cash transfers only where local markets are functioning extremely poorly and inelastic food supply means that cash injections would merely inflate commodity prices and harm the poorest.

Interestingly, popular perceptions that food aid causes disincentives and dependency have been challenged by recent empirical studies. A regression analysis of food aid in Ethiopia finds that disincentive effects are insignificant among the poor but increase with household wealth, which suggests that most observed disincentives are the result of mis-targeting wealthier households (Dayton-Johnson and Hoddinott 2004). Barrett and Maxwell's (2005) review of food aid concludes that: (1) food aid rarely induces dependency because the amounts transferred are usually small; (2) the evidence of food crowding out other transfers is mixed; (3) well-targeted and well-timed food aid has minimal negative price effects in local markets, because it reaches households who are already priced out of the market; but (4) food aid can affect local production, labour markets and consumption patterns; so (5) food aid should be locally sourced wherever possible.

Food aid has a long history in Malawi, though until recently project food aid (mainly public works and supplementary feeding) was more common than emergency relief. An evaluation of food aid to Malawi in the 1990s concluded that supplementary feeding programmes implemented by WFP, UNICEF and NGOs had achieved little in over 20 years, either to reduce levels of undernutrition or to address the underlying causes of food insecurity (FSG 1994). Although their humanitarian value was clear, widespread chronic and seasonal undernutrition persisted, and household food insecurity appeared to be worsening rather than improving from year to year. As a result of this finding, WFP decided to phase out its supplementary feeding in Malawi, and to restrict its food aid interventions to emergency and 'developmental' interventions. In 1996, however, supplementary feeding continued, reaching 150,000 beneficiaries (pregnant women, malnourished infants, street children, destitutes), through Nutrition Rehabilitation Units, Mother and Child Health Centres and Community-Based Supplementary Feeding (Brown *et al* 1996).

Following the 2001/2 food crisis, the Joint Emergency Food Aid Programme (JEFAP) distributed 240,00 MT of food to over 3 million Malawians between July 2002 and June 2003, in the form of general food distribution (2.9 million beneficiaries each month), therapeutic and supplementary feeding and school feeding. Available evidence suggests that the general food distribution was weakly targeted on the poorest and most drought-affected households, but fairly well targeted by observable indicators of vulnerability such as households with orphans or chronically ill members and female-headed households (Sharma 2005b). Impacts of food distribution were limited by the low levels of participation (only 38 per cent of rural households), infrequent rather than monthly receipt of food, and transfers of less than full rations. In terms of food consumption levels and adoption of coping strategies like selling assets, no statistically significant differences in outcomes were recorded between food aid beneficiaries and non-beneficiaries (Sharma 2005a).

In 2005/6, supplementary feeding programmes are as widespread in Malawi as ever. WFP is implementing a project entitled 'Support to HIV/AIDS Affected and Infected People', which aims to maintain minimum nutritional standards of 45,700 households living with HIV/AIDS (PLWHAs), with transfers of maize-meal, pulses, vegetable oil and corn-soy blend. Following the 2001/2 food crisis, several international NGOs, including GOAL and CRS, implemented 'Targeted Nutrition Programs' under the Joint Emergency Food Assistance Programme II (JEFAP). In non-crisis years, instead of a general food distribution food is distributed to households with chronically ill members, orphans, female-headed and elderly-headed households. In 2003/4 the Ministry of Health's supplementary and therapeutic feeding programme reached 38,000 beneficiaries – malnourished children, pregnant and lactating mothers, and orphan carers – with food provided by USAID's C-SAFE3 programme (Kambewa 2005).

### 3.2 School feeding programmes

School feeding programmes (SFP) provide meals to children at school, as distinct from 'food-for-education' (FFE), which gives children dry rations (e.g. a bag of wheat or rice) to take home for the family. The primary objective of school feeding is to increase enrolment and attendance rates, while food-for-education aims to enhance household food security. When school feeding was originally introduced, it had explicit nutritional objectives, but the World Food Programme (WFP) no longer argues for school feeding as a nutritional programme, but instead as an intervention to support education.

The reason for this shift in programme objectives is that the evidence for nutritional benefits of school is weak (Caldes and Ahmed 2004). A comprehensive review of food aid by Clay (1998a) found that food-based interventions in non-emergency contexts generally have little impact on nutritional status, morbidity, or mortality levels. Some empirical studies have found an increase in children's food intake through school feeding and food-for-education (Jacoby *et al* 1997), either because a school meal is additional food and 'sticks' to the child – Jacoby (1997) labels this the 'flypaper effect' – or because take-home rations

effectively increase real household income (Babu and Hallam 1989). However, in many cases, school meals simply substitute for meals at home, so there is no net increment in children's food consumption. Also, the nutritional impact of food-for-education on vulnerable family members is unclear, because the allocation of food rations is determined by intra-household decision-making power (Ahmed and del Ninno 2002).

Some studies conclude that the nutritional benefits of school feeding and food-for-education are greater during food crises or other episodes of vulnerability than in normal times. Grantham-McGregor *et al* (1991) found that undernourished (stunted and wasted) children benefit more than others from school meals. Several studies conclude that the income transfer effect of school feeding programmes can act as a substantial safety net for vulnerable groups, particularly during the 'hungry' season just prior to the harvest, when food insecurity in poor rural households is at its height.

Although the evidence for nutritional benefits of school feeding and food-for-education is limited and ambiguous, the evidence for positive educational impacts is strong. Among numerous examples of improved school enrolment and attendance are the following:

- increased attendance in schools in Jamaica (Powell and Grantham-McGregor 1983)
- reduced drop-out rates in Uttar Pradesh (Agarwal 1987)
- increased enrolment, more regular attendance, fewer repeaters and reduced drop-out rates in disadvantaged provinces of Burkina Faso (Moore and Kunze 1994)
- in Bangladesh, food-for-education reduced the gender gap in schools – female primary enrolment increased by 44 per cent and male enrolment by 28 per cent (Ahmed and del Ninno 2002)
- the impressive gender effects of school feeding in Côte d'Ivoire elicited government support to reduce early marriages and teenage pregnancies (Odaga and Heneveld 1995).

School feeding and food-for-education are often introduced with explicit gender equity objectives, such as narrowing the gender gap in schools, providing incentives for girls to pursue secondary education, or retaining girls in school during emergencies. Moussa (2002) presents evidence that gender incentives are very effective during emergencies: a WFP school feeding programme that targeted girls during a drought in Pakistan increased female attendance by 76 per cent. Lvinger (1986) argues that gender effects are strong in cultures where girls are fed least and last. Kadiyala and Gillespie (2003) argued that food-for-education for AIDS-affected families is an effective incentive to attract children to school rather than doing domestic chores or foraging. However, Bennett (2003) points out that there is often a plateau (usually of income) beyond which school feeding or food-for-education cannot be effective; UNICEF found this level to be 10 per cent in Bangladesh.

Beyond increased enrolment and attendance, some studies find evidence for positive effects of school feeding on learners' performance and cognitive development. Hungry children are less able to concentrate in class, and perform less well in exams. Providing meals at school has been claimed to improve learning outcomes in controlled studies in Jamaica (Powell and Grantham-McGregor 1983; Chandler *et al* 1995) and Peru (Jacoby *et al* 1997) and non-controlled studies in Burkina Faso (Moore and Kunze 1994) and Benin (WFP 2001). However, Lopez *et al* (1993) find no association between school feeding and learners' performance in Chile. Bennett (2003) concludes that the evidence on improved learning outcomes is generally weak, and that cheaper options for stimulating demand for education, such as waiving school fees, might be preferable, since school feeding programmes are 'by far the most expensive nutrition interventions'. In Malawi and Uganda, fee-free primary education has already been introduced, in both cases substantially boosting school enrolment (from 1.8 to 3.2 million children in the case of Malawi).

Malawi's experience with school feeding dates back to the early 1990s. In 1996, a pilot school feeding project in Malawi, implemented by WFP, led to 5 per cent increases in enrolment and 36 per cent increases in attendance (WFP 1996). Enrolment in one school rose by 26 per cent in 1 month – from 1,293 in February to 1,631 in March – following the introduction of free school meals. Dil (1996) found that not all of this incremental enrolment was new students, but students 'migrating' from other schools where no school meals were provided: this migration 'was significant and led to disorder and disruption of classes'. Dil (1996) also concluded that the main problem with school feeding in Malawi was exclusion errors: the poorest families either do not send their children to school (because of the direct and indirect costs of education) or withdraw them during hard times (because they are needed to work for food), and many poor households do not have school-aged children (such as elderly widows without support). It is of course possible that school meals could induce some poor families to enrol their children and to retain them in school in difficult times, and this is in fact one of the strongest claims made by proponents of school feeding programmes.

### 3.3 Unconditional cash transfers

Unconditional cash transfers have been defined as 'unconditional transfers of cash made by government or non-governmental organisations to individuals or households identified as highly vulnerable, with the objective of alleviating poverty, providing social protection, or reducing economic vulnerability' (Devereux *et al* 2005). Included in this category are social pensions to the elderly, disability grants, child support grants, and a number of pilot cash transfer schemes – such as the Kalomo Pilot Social Cash Transfer project (2004) in Zambia – which are currently being considered for potential adoption in Malawi. Unconditional cash transfers are gaining in popularity, especially in Africa where social security systems are undeveloped. Cash transfers are seen as a preferable alternative to food aid, because they are cheaper to administer and avoid the risks associated with in-kind transfers (such as dependency and disincentives); they are less paternalistic because they enable individual choice; and they contribute to pro-poor growth by being invested as well as consumed, and generating multiplier effects (Schubert *et al* 2005).

The poverty impact of unconditional cash transfers depends primarily on the size of the transfer. Generous transfers can reduce poverty significantly. In the case of social pensions for elderly South Africans, Case and Deaton (1998) find that the 'dollar a day' poverty headcount has been reduced by 12.5 per cent by the social pension scheme, which transfers US\$3/day to men over 65 and women over 60. Samson *et al* (2002) reports that although most of the poor in South Africa live in households that do not receive social welfare transfers, and most of those who do remain poor, social pensions and other unconditional cash transfers have reduced the average poverty gap by 23 per cent. Barrientos and Lloyd-Sherlock (2002) report similar findings for Brazil and Argentina. In other African countries that have non-contributory social pension schemes – Botswana, Lesotho, Mauritius, Namibia – the poverty reduction effect is less because the value of the transfer is less.

Although it is often claimed that Malawi cannot afford a non-contributory social pension scheme, Lesotho's decision to introduce a social pension in 2004 (with no donor support) proves that it is feasible even in very poor countries. The case for social pensions is based on evidence that poverty is disproportionately concentrated among the elderly (Barrientos and Lloyd-Sherlock 2002; Camarano 2002), but in recent years this has been strengthened by evidence that older people are assuming much of the burden of caring for orphans and vulnerable children (OVC), especially in countries like Malawi and Uganda, where the prevalence of HIV/AIDS is high and numbers of AIDS orphans and elderly-headed households are rising (Ntozi and Nakayiwa 1999).

Malawi's experience with unconditional cash transfers to date is limited, mainly to a project called the Dedza Safety Net Pilot Project, implemented by Concern Universal in 2001/2. Three types of transfers were distributed to beneficiaries in 54 randomly selected villages:

(1) *Cash* (MK550 per household per month); (2) *Vouchers* (to buy goods at selected retailers, worth MK550 per month); (3) *Commodities* (a package of goods – blankets, plates, a cooking pot, bucket, and soap – worth MK2,750, followed by maize-flour worth MK550 per month).

An evaluation found that the cash and commodity transfers were relatively simple and cheap to administer, with over 60 per cent of the project budget being transferred directly to beneficiaries. The main concern with cash transfers was that their value in commodity terms varied from month to month as commodity prices rose and fell. The problem this introduces is that the purchasing power of cash is lowest when food prices are highest – between January and March each year – and hunger is at its worst. Also because of price seasonality, the amount of maize transferred in-kind was cut from 20kg to 15kg during the hungry season months, when maize prices peaked.

Vouchers proved more expensive and complex to administer, and were less effective. Higher overhead costs and commission payments to retailers reduced the proportion of project budget transferred to beneficiaries to 56 per cent. Beneficiaries also complained that stores did not stock the commodities they wanted to purchase (e.g. orphans could not buy the school uniforms they needed), or that retailers abused the voucher scheme by inflating their prices. The evaluation team recommended avoiding vouchers, in favour of 'a combination of in-kind transfers (maize flour only) and cash to provide other foods and basic needs' (Levy *et al* 2002: 63).

### 3.4 Conditional cash transfers

Conditional cash transfers are very popular in Latin America, but are relatively untested in Africa. Nonetheless, they are worth considering as a potential social protection instrument for Malawi in the future. The thinking behind conditional cash transfers is that more than one objective can be achieved through a social protection programme that transfers resources to the poor and also provides an incentive to adjust the behaviour of beneficiaries, in a way that is believed to be in their own best interests as well as socially desirable (de Janvry and Sadoulet 2004). The most common form of conditionality is to require beneficiaries to send their children to school or a clinic, in an attempt to improve education and health outcomes in poor households. Together with the cash transfer itself, these interventions aim to achieve both immediate safety net priorities as well as long-term poverty reduction objectives.

The best-known conditional cash transfer programme is *Progresa* in Mexico, a model that has inspired a number of similar programmes elsewhere in Latin America, such as *Bolsa Escola* in Brazil. *Progresa* (now *Oportunidades*) aimed to prevent the inter-generational transfer of poverty, through changing incentives for schooling, healthcare, and attention to nutrition. Many conditional cash transfers – including *Progresa* and *Bolsa Escola* – have current as well as future poverty reduction as an objective. However, the effects of conditional cash transfers on poverty reduction are unclear. Nigenda and Gonzalez-Robledo (2005) find that *Oportunidades* had a significant poverty effect in Mexico, reducing the poverty gap for 30 per cent of beneficiaries and reducing the severity of poverty by 45 per cent, and that the Social Protection Network in Nicaragua supplemented per capita annual household expenditure by 18 per cent. On the other hand, Bourguignon *et al* (2003) estimate that although *Bolsa Escola* in Brazil is relatively well targeted, the small size of the transfer – at US\$15 per month for each child attending school – means that it will only reduce the incidence of poverty by just over 1 per cent, and the Gini coefficient – a measure of income inequality – by just 0.5 per cent. Britto (2005) concludes that the long-term impact of conditional cash transfers on poverty reduction is not proven, while the short-term impact varies by programme.

Positive impacts on education and health are much better documented than impacts on poverty. Coady and Parker (2001) estimate that demand-side interventions for schooling are 7.3 times more cost-effective than supply-side measures. Several evaluations find positive

correlations between conditional cash transfers on the one hand and school enrolment, clinic attendance and nutrition outcomes on the other (Sedlacek *et al* 2000; Guerrero 2001; Morley and Coady 2003; Rawlings and Rubio 2004). Coady (2003) found that *Progresa* increased school enrolments by 7–9 per cent. Bourguignon *et al* (2003) estimate that *Bolsa Escola* could lead to 40 per cent of children aged 10–15 (and 60 per cent among the poor) who are not in school to enrol, and that the proportion of children outside school would fall from 6 per cent to 3.7 per cent. Nigenda and Gonzalez-Robledo (2005) report that *Oportunidades* helped to reduce the number of rural and urban school dropouts in Mexico by 17 per cent and 10 per cent, respectively since 1997.

De Janvry and Sadoulet (2004) argue, however, that closer calibration of *Progresa* would have led to significant efficiency gains, since primary enrolment was already 97 per cent, but 36 per cent of children who complete primary school fail to continue to secondary level. Sedlacek *et al* (2005) argue that since there is a stronger negative correlation of child labour with progression through school, and quality of attainment through attendance than with enrolment, it is correct that conditional cash child labour and schooling is mixed, with indications that they are not mutually exclusive but may instead be complementary (Patrinos and Psacharopoulos 1997; Ravallion and Wodon 2001). Bourguignon *et al* (2003) estimate that one-third of the extra children enrolling as a result of *Bolsa Escola* in Brazil would stay in work. Sadoulet *et al* (2004) find, though, that *Progresa* compensates for the use of children as risk coping mechanisms, thereby having a positive impact on child labour.

Conditional cash transfers have also had positive impacts on health and nutrition (Coady 2003). Summarising several evaluations of *Oportunidades*, Nigenda and Gonzalez-Robledo (2005) report an increase in demand for health consultations, an 11 per cent reduction in maternal mortality, and a 20 per cent average reduction in the number of days that 16–49 year olds are ill, compared with a control group of non-beneficiaries in the same communities. Other positive collateral effects of conditional cash transfers have been documented, including greater female participation in household decision-making where the transfers are given to women (Adato *et al* 2000; Coady 2003), a multiplier effect on local economies, increased civil registration and access of the poor to financial services (Britto 2005), and increased investment (Coady 2004).

Some concerns about conditional cash transfers have been raised. Any cash transfer programme might lead to local price inflation, although Handa *et al* (2001) found no evidence of this in the case of *Progresa*. In the Malawi context, much would depend on the scale of the programme, the size of individual transfers, and whether local markets are well functioning or not. It is also argued that public transfers might ‘crowd out’ private transfers, thus undermining informal social support systems (Coady 2004). Scott (1999) found that in *Progresa* there was a danger of abuse of power by *promotoras*, especially where they are also the service providers. Britto (2005) notes the difficulties of monitoring adherence to conditionalities, in cases where both the beneficiaries and the service providers have incentives to report compliance.

In the Latin American conditional cash transfer programmes, Bourguignon *et al* (2002) caution that improved educational attainment might not necessarily translate into higher earnings in adult life, because this is mediated by various other factors, such as quality of schooling and conditions in the labour market. In the African context, Nigenda and Gonzalez-Robledo (2005) question the connection between health and education status and future employment potential. In this regard, it must be emphasised that the adequate provision of good quality health and education services is a crucial complement to successful conditional cash transfers (Barrientos and de Jong 2004; Britto 2005). One reason why conditional cash transfers are less popular in Africa might be that the quality of education and health services is so poor that the benefits of requiring children to attend schools and clinics are limited at best, and negligible at worst. Those who argue that conditional cash transfers are paternalistic point out that there might be good reasons why parents choose not to make use of education and health services, even if they are provided free of charge.

Targeting conditional cash transfers also presents difficulties, with exclusion errors often being high because of the nature of their conditionalities. Britto (2005) notes that *Progresá* inadvertently excluded those communities without schools and clinics – which tend to be among the poorest communities in Mexico – and that *Bolsa Escola* excluded households in Brazil without school-age children, because eligibility for both these programmes require the use of education and health services.

In the case of Malawi, the problems with education and health services are more significant on the supply side – in terms of the numbers of schools and clinics in rural communities, as well as the quality of service provision (too few trained teachers, inadequate drugs, and so on) – than the demand side. The priority sequencing, therefore, should be to invest in improved service delivery, and only thereafter to boost demand for services through inducements such as conditional cash transfers. As an intermediate option, Devereux *et al* (2005) recommend linking the delivery of cash transfers to the delivery of basic services – such as an immunisation drive, HIV and AIDS awareness, adult literacy or nutrition education – but on a voluntary rather than compulsory basis.

## 4 Summary and conclusions

Despite implementing an increasingly diverse range of safety net and social protection measures, levels of poverty and vulnerability in rural Malawi remain extremely high, and the risk of another humanitarian emergency on the scale of 2001/2 has scarcely receded, despite the efforts of the government, donors and NGOs. One reason for this is the uncoordinated and patchy nature of the social protection instruments in place in Malawi. The ideal of a comprehensive, effective and responsive social security system that protects vulnerable Malawians against livelihood shocks and life-cycle stages seems many decades away, and the patchwork of relief interventions, 'productivity-enhancing safety nets' and direct welfare transfers currently in place is inadequate to meet the full extent of Malawi's social protection needs. This paper has attempted to review the achievements and limitations of several of the main social protection instruments in Malawi, while also drawing on lessons from international experiences. This concluding section summarises the key findings.

### 4.1 Productivity-enhancing safety nets

Malawi's farmers face severely constrained access to agricultural inputs, especially fertilisers, both because of limited availability on the market and because of prices that are unaffordable for poor smallholders. Improving access to inputs has the potential to boost maize yields, narrow the food gap, stabilise food prices, and reduce the need for food imports and food aid distribution. So 'getting fertiliser to farmers' can be seen as a productivity-enhancing safety net, a pre-emptive measure that supports production in order to minimise the need for direct welfare transfers. The crux of the inputs debate is how best to improve access to inputs. Every conceivable approach has been tried in Malawi: from free handouts to fertiliser subsidies to subsidised input credit.

The economic rationale for both Starter Packs and subsidies is that subsidising food production in Malawi is up to five times more cost-effective than subsidising food consumption through food aid. This is demonstrably true, as is the substantial contribution that Starter Packs made to the national maize harvest: 16 per cent at its peak in 1999/2000. Conversely, one of the most damaging consequences of scaling down the Starter Pack, from universal distribution to the Targeted Inputs Programme, was a rise in market dependence for food and a tenfold increase in maize prices.

The case against subsidised or free fertiliser and seeds is that this distorts markets, undermines the private sector, and is fiscally unsustainable. Given widespread rural poverty, erratic weather (which raises the risk of investing scarce household resources in farm inputs), the weakness of the Kwacha, and the consequent failure of the private sector to meet farmers' demand for inputs at affordable prices, these criticisms are questionable. Other concerns with free or subsidised inputs are: (1) universal subsidies are regressive and 'leak' to wealthier farmers, estates and neighbouring countries; (2) targeted inputs distribution is subject to targeting errors (inclusion and exclusion), politicisation and 'elite capture'; (3) a 'projectised' approach to inputs delivery is not an institutionalised solution. Nonetheless, unless and until effective ways can be found to support access to inputs through the market, there may be no alternative to subsidised access.

Public works programmes in Malawi have delivered food, income and agricultural inputs, as well as employment opportunities to under-employed households. Apart from transferring resources to the poor, public works projects also build or maintain assets such as physical infrastructure. On paper, the achievements of public works in Malawi look impressive: hundreds of thousands of people have been employed, and numerous assets have been created (roads, water-points, woodlots, school buildings). Concerns about public works programmes relate to: (1) whether the assets created have economic value and are



sustainable; (2) what level of payment is fair and poverty-reducing, while also self-targeting the poor; (3) whether workers should be paid with cash wages, food rations or agricultural inputs; (4) evidence suggesting that public works are not a cost-effective measure compared with other social protection instruments, such as unconditional cash transfers.

## 4.2 Direct welfare transfers

The case for food aid as an emergency response to humanitarian crises is less controversial than the use of food aid in non-emergency contexts, especially as a developmental tool. Malawi has less experience with relief food aid than famine-prone countries elsewhere in Africa. Evaluations of the humanitarian response to the crisis of 2001/2 suggest that food aid played a limited role in terms of either saving lives or protecting livelihoods. Food was delivered very late (after the crisis had peaked), coverage was incomplete (only 38 per cent of rural households benefited from the general food distribution), and deliveries were erratic, with most beneficiaries receiving only a few rations, often less than their entitlement. Beneficiaries did not consume more food than non-beneficiaries, nor did they adopt fewer or less damaging coping strategies.

Non-emergency uses of food aid have increased in Malawi. This could be interpreted as a logical response to rising vulnerability and social protection needs; but the fact that vulnerability does not seem to be falling raises questions about the roles and objectives of project food aid. Despite an evaluation in 1994 concluding that supplementary feeding had failed to reduce food insecurity in Malawi, and WFP's resolution to phase out supplementary feeding in favour of 'developmental' uses of food aid, there are more supplementary feeding, therapeutic feeding and other targeted nutrition programmes than ever. Recently, food aid has been introduced as a social protection measure for people living with HIV and AIDS.

Concerns about food aid are wide-ranging. Food aid is more costly to deliver than cash transfers; transactions costs are high; imported food aid can undermine incentives for farmers and traders and distort markets. On the other hand, poorly targeted distribution of relatively small quantities of food aid has very little impact, either on household food security or on production and markets.

School feeding programmes are no longer advocated as a targeted nutrition intervention, but instead as a way of boosting school enrolment, attendance, and possibly learner performance, though the evidence for the latter is weak. Providing meals at school – or take-home rations in the case of food-for-education – can also retain children in school following livelihood shocks. School feeding in Malawi appears to have increased enrolment, though some of this increase may be due to learners switching to schools where meals are provided. However, it is debatable whether this is an appropriate and cost-effective way to promote education uptake in Malawi. The abolition of fees had a far bigger impact on enrolment; exclusion errors remain high; and concerns about the quality of education mean that attention to the supply-side may be more urgently needed.

Similar considerations might explain why conditional cash transfers, though popular throughout Latin America, are largely unknown in Africa. The principle behind conditional cash transfers is to link resource transfers to the poor with incentives to increase their utilisation of basic services, especially education and health. However, where the quality of these services is sub-standard and provision is inadequate, as in Malawi, the problems clearly lie more on the supply-side than the demand-side. Until these issues are addressed, the argument for introducing conditional cash transfers to Malawi will remain weak. As a compromise option, the delivery of unconditional cash transfers could be linked to the delivery of specific services: for instance, an immunisation drive might be held on the same day and in the same location as the delivery of a cash transfer.

Unconditional cash transfers have recently been advocated as a cost-effective mechanism for transferring resources to the poor in a way that avoids the problems associated with food aid, and supports markets and pro-poor growth through economic multiplier effects.

The evidence base on impacts of cash transfer in Africa is limited but generally positive. While endorsing unconditional cash transfers as a social protection instrument for Malawi, three cautions should be mentioned: (1) the value of cash varies with commodity prices, so cash transfers protect the poor against food price seasonality less effectively than food transfers (or market-stabilising interventions); (2) experience from Malawi suggests that delivering cash transfers through a voucher mechanism are problematic; (3) institutionalisation is preferable to projectisation – government-administered child support grants, social pensions, and other formal programmes are more administratively and politically sustainable than donor-driven resource transfer projects implemented by NGOs.

# References

## **Free inputs distribution**

- Ashley, C. and Maxwell, S. (2001) 'Overview. Rethinking Rural Development', *Development Policy Review* 19.4
- Barahona, C. and Cromwell, E. (2005) 'Starter Pack and Sustainable Agriculture', in S. Levy (ed.), *Starter Packs: A Strategy to Fight Hunger in Developing Countries? Lessons From the Malawi Experience 1998–2003*, Wallingford: CABI Publishing
- Chinsinga, B., Dzimidzi, C., Magalasi, M. and Mpekansambo, L. (2002) 'TIP Evaluation Module 2: TIP Messages: Beneficiary Selection and Community Targeting, Agricultural Extension and Health (TB and HIV/AIDS)', in CD: *The Monitoring and Evaluation Archive of the Starter Pack and Targeted Inputs Programmes Malawi 1999–2003*, University of Reading: Statistical Services Centre
- Garforth, C. (2005) The Challenges of Agricultural Extension, in S. Levy (ed.), *Starter Packs: A Strategy to Fight Hunger in Developing Countries? Lessons from the Malawi Experience 1998–2003*, Wallingford: CABI Publishing
- Harnett, P. and Cromwell, E. (2000) 'Malawi Starter Pack Scheme 1999–2000', *Follow-up Study of Flexivouchers: 'As Good As Money'*, London: DFID
- Hoddinott, J. (1999) *Targeting: Principles and Practice*, Washington, DC: International Food Policy Research Institute
- Kambewa, P. (2005) *A Review of Safety Net Programmes for 2003–04*, Lilongwe: Republic of Malawi
- Levy, S. (2005a) 'Introduction', in S. Levy (ed.), *Starter Packs: A Strategy to Fight Hunger in Developing Countries? Lessons From the Malawi Experience 1998–2003*, Wallingford: CABI Publishing
- (2005b) 'Production, Prices and Food Security: How Starter Pack Works', in S. Levy (ed.), *Starter Packs: A Strategy to Fight Hunger in Developing Countries? Lessons from the Malawi Experience 1998–2003*, Wallingford: CABI Publishing
- (2005c) 'Financing and Macro-economic Impact: How Does Starter Pack Compare?', in S. Levy (ed.), *Starter Packs: A Strategy to Fight Hunger in Developing Countries? Lessons from the Malawi Experience 1998–2003*, Wallingford: CABI Publishing
- Levy, S., with Barahona, C. and Chinsinga, B. (2004) 'Food Security, Social Protection, Growth and Poverty Reduction Synergies: The Starter Pack Programme in Malawi', *Natural Resource Perspectives* No. 95, London: Overseas Development Institute
- Longley, C. and Sperling, L. (2002) 'Editorial: Beyond Seeds and Tools: Effective Support to Farmers in Emergencies', *Disasters* 26.4: 283–7
- Longley, C., Coulter, J. and Thompson, R. (1999) *Malawi Rural Livelihoods Starter Pack Scheme, 1998–9: Evaluation Report*, London: ODI
- Nyirongo, C. (2005) 'Do Free Inputs Crowd Out the Private Sector in Agricultural Input Markets?', in S. Levy (ed.), *Starter Packs: A Strategy to Fight Hunger in Developing Countries? Lessons from the Malawi Experience 1998–2003*, Wallingford: CABI Publishing
- Sperling, L., Remington, T., Haugen, J. and Nagoda, S. (eds), (2004) *Addressing Seed Security in Disaster Response: Linking Relief with Development, Overview*, Cali, Colombia: International Center for Tropical Agriculture, [www.ciat.cgiar.org/africa/seeds.htm](http://www.ciat.cgiar.org/africa/seeds.htm)
- Van Donge, J. (2005) 'The Farmer's Perspective – Values, Incentives and Constraints', in S. Levy (ed.), *Starter Packs: A Strategy to Fight Hunger in Developing Countries? Lessons from the Malawi Experience 1998–2003*, Wallingford: CABI Publishing

### **Fertiliser subsidies**

- Carr, S. (2002) 'An Outline of an Inputs for Rural Infrastructural Development Programme', mimeo, Zomba
- Crawford, E., Jayne, T. and Kelly, V. (2005) *Alternative Approaches for Promoting Fertiliser Use in Africa, with Particular Reference to the Role of Fertiliser Subsidies*, Michigan State University: Department of Agricultural Economics
- Devereux, S. (1999) 'Making Less Last Longer': *Informal Safety Nets in Malawi*, IDS Discussion Paper 373, Brighton: IDS
- Ellis, F. (1990) 'The Rice Market and Its Management in Indonesia', *IDS Bulletin* 21.3, Brighton: IDS
- Govindan, K. and Babu, S. (2001) 'Supply Response Under Market Liberalisation: A Case Study of Malawian Agriculture', *Development Southern Africa* 18.1: March
- Levy, S. (2005) 'Financing and Macro-economic Impact: How Does Starter Pack Compare?', in S. Levy (ed.), *Starter Packs: A Strategy to Fight Hunger in Developing Countries? Lessons from the Malawi Experience 1998–2003*, Wallingford: CABI Publishing
- Peters, P. (1999) *Agricultural Commercialisation, Rural Economy and Household Livelihoods, 1990–1997*, Cambridge, MA: Harvard Institute for International Development
- Sachs, J. (2003) 'The Case for Fertilizer Subsidies for Subsistence Farmers', mimeo, 7 December
- Sahn, D. and Arulpragasam, J. (1991) 'The Stagnation of Smallholder Agriculture in Malawi: A Decade of Structural Adjustment', *Food Policy* June: 219–34

### **Public works programmes**

- Bloom, G., Chilowa, W., Chirwa, E., Lucas, H., Mvula, P., Schou, A. and Tsoka, M. (2005) *Poverty Reduction During Democratic Transition: The Malawi Social Action Fund 1996–2001*, Research Report 56, Brighton: IDS
- Cammack, D. (1996) *Food Security and Gender Disparities in Malawi: A Profile Paper for Gender Targeting by WFP-Malawi*, Lilongwe: World Food Programme
- Devereux, S. (2002) *From Workfare to Fair Work: The Contribution of Public Works and Other Labour-Based Infrastructure Programmes to Poverty Alleviation*, Issues in Employment and Poverty Discussion Paper 5, Geneva: ILO
- Gsänger, H. (2000) *Preliminary Assessment of the Envisaged National Safety Net Strategy for Malawi*, Berlin: GDI
- Haddad, L. and Adato, M. (2001) *How Efficiently Do Public Works Programs Transfer Benefits to the Poor? Evidence From South Africa*, FCND Discussion Paper 108, Washington, DC: International Food Policy Research Institute
- Lipton, M. (1998) *Successes in Anti-Poverty*, Issues in Development Discussion Paper 8, Geneva: Development and Technical Cooperation Dept, International Labour Office
- Malawi Social Action Fund (MASAF) (2004) 'The Evaluation of the Improving Livelihoods Through Public Works Programme (ILTPWP)', September, unpublished
- Malawi Social Action Fund (1996) *What is MASAF?*, Lilongwe: MASAF
- Maxwell, S. (1993) 'Can a Cloudless Sky Have a Silver Lining? The Scope for an Employment-Based Safety Net in Ethiopia', in H. Thimm, H. Hahn, I. Reinhard and D. Schulz (eds), *Regional Food Security and Rural Infrastructure*, Hamburg: Verlag Munster 1: 101–19

Mayer, W. and Kayira, G. (1997) *Addressing Unemployment Problems Through Expanding Labour-Based Public Works Programmes*, Botswana: Friedrich Ebert Stiftung

McCord, A. (2005) 'Win-win or Lose-lose? An Examination of the Use of Public Works as a Social Protection Instrument in Situations of Chronic Poverty', paper presented at the Conference on Social Protection for Chronic Poverty, IPDM University of Manchester, 23–24 February

—— (2004) *Policy Expectations and Programme Reality: The Poverty Reduction and Employment Performance of Two Public Works Programmes in South Africa*, Economics and Statistics Analysis Unit & Public Works Research Project, SALDRU, School of Economics, University of Cape Town, ESAU Working Paper, London: Overseas Development Institute

Smith, J. (2001) *Spending on Safety Nets for the Poor: How Much, For How Many? The Case of Malawi*, Africa Region Working Paper Series No 11, Washington, DC: World Bank

—— (1999) *Safety Nets in Malawi: How Much? For How Many?* Lilongwe: World Bank

South African Labour and Development Research Unit (SALDRU) (2005) *Public Works in the Context of HIV/AIDS: Innovations in Public Works for Reaching the Most Vulnerable Children and Households in East and Southern Africa*, University of Cape Town: SALDRU

Subbarao, K., Bonnerjee, A., Braithwaite, J., Carvalho, S., Ezemenari, K., Graham, C. and Thompson, A. (1997) *Safety Net Programs and Poverty Reduction, Lessons from Cross Country Experience. Directions in Development*, Washington, DC: The World Bank

Subbarao, K., Ahmed, A., et al (1996) *Selected Social Safety Net Programs in the Philippines. Targeting, Cost-Effectiveness, and Options for Reform*, Washington, DC: The World Bank

World Bank (2001) *World Development Report 2001: Attacking Poverty*, Washington, DC: World Bank

Zgovu, E., Mvula, P., Kunkwenzu, E. and Potani, M. (1998) *Malawi Social Action Fund: A Review and Evaluation of MASAF Safety Net Programme and Assessment of its Impact*, Zomba: Wadonda Consult

### **Social funds**

Bloom, G., Chilowa, W., Chirwa, E., Lucas, H., Mvula, P., Schou, A. and Tsoka, M. (2005) *Poverty Reduction During Democratic Transition: The Malawi Social Action Fund 1996–2001*, Research Report 56, Brighton: IDS

Carvalho, S., Perkins, G. and White, H. (2002) 'Social Funds, Sustainability and Institutional Development Impacts: Findings From an OED Review', *Journal of International Development* 14: 611–25

De Haan, A., Holland, J. and Kanji, N. (2002) 'Social Funds: An Effective Instrument to Support Local Action for Poverty Reduction', *Journal of International Development* 14.5: 643–52

Dulani, B. (2003) 'How Participatory is Participation in Social Funds? An Analysis of Three Case Studies From the Malawi Social Action Fund (MASAF)', paper presented at the Participation: From Tyranny to Transformation? Exploring New Approaches to Participation in Development, Conference, 27–8 February 2003, University of Manchester

Jorgensen, S. and van Domelen, J. (1999) 'Helping the Poor Manage Risk Better: The Role of Social Funds', in N. Lustig (ed.), *Shielding the Poor: Social Protection in the Developing World*, Washington, DC: Brookings Institution and Inter-American Development Bank

Malawi Social Action Fund (1996) *What is MASAF?*, Lilongwe: MASAF

- Tendler, J. (2000) 'Why are Social Funds so Popular?', in Y. Shahid, W. Wu and S. Evenett (eds), *Local Dynamics in the Era of Globalization*, Oxford: Oxford University Press for the World Bank: 114–29
- Van Domelen, J. (2002) 'Social Funds: Evidence on Targeting, Impacts, and Sustainability', *Journal of International Development* 14.5
- White, H. (2002) 'Social Funds: A Review of the Issues', *Journal of International Development* 14.5
- World Bank (2002a) *Social Funds: A Review of Experience*, Washington, DC: OED, World Bank
- (2002b) *Letting Communities Take the Lead. A Cross-country Evaluation of Social Fund Performance*, Washington, DC: World Bank

### **Food aid**

- Barrett, C. and Maxwell, D. (2005) *Food Aid After Fifty Years: Recasting its Role*, London: Routledge
- Brown, G., Reutlinger, S. and Thomson, A. (1996) *Food Security in Malawi: A Market Oriented Approach*, Lilongwe: USAID
- Clay, E., Pillai, N. and Benson, C. (1998a) *Food Aid and Food Security in the 1990s: Performance and Effectiveness*, ODI Working Paper 113, London: Overseas Development Institute
- (1998b) *The Future of Food Aid: A Policy Review*, London: Overseas Development Institute
- Dayton-Johnson, J. and Hoddinott, J. (2004) 'Examining the Incentive Effects of Food Aid on Household Behavior in Rural Ethiopia', mimeo
- Dercon, S. and Krishnan, P. (2000) 'Food Aid and Informal Insurance', in S. Dercon (ed.), *Insurance Against Poverty*, Oxford: Oxford University Press
- Edirisinghe, N. (1998) 'The Food Factor', paper presented at Time for Change, Food Aid and Development Conference at Rome, October, Rome: WFP
- Food Studies Group (FSG) (1994) *Country Strategy Outline: World Food Programme – Malawi*, Lilongwe: World Food Programme
- Haddad, L., Hoddinot, J. and Alderman, H. (1997) *Intrahousehold Resource Allocation in Developing Countries*, Washington, DC: International Food Policy Research Institute
- Hoddinott, J., Cohen, M. and Bos, M. (2003) *Redefining the Role of Food Aid*, Washington, DC: International Food Policy Research Institute
- Holt, J. (1998) 'Food as Aid: Special Features of Development Assistance in the form of Food', paper presented at Time for Change: Food Aid and Development Conference, Rome, October, Rome: WFP
- Kadiyala, S. and Gillespie, S. (2003) *Rethinking Food Aid to Fight AIDS*, FCND Discussion Paper 159, Washington, DC: IFPRI
- ODI (2000) *Reforming Food Aid: Time to Grasp the Nettle?*, ODI Briefing Paper, January
- Quisumbing, A. (2003) 'Food Aid and Child Nutrition in Rural Ethiopia', *World Development* 31.7: 1309–24
- Sharma, M. (2005a) *The Impact of Food aid on Consumption and Assets Levels in Rural Malawi*, Washington, DC: International Food Policy Research Institute

—— (2005b) *Targeting of Emergency Free Food Distribution Program in Malawi: An Assessment*, Washington, DC: International Food Policy Research Institute

United Nations (2003) Report of a mission by UN Special Envoy for Humanitarian Needs in Southern Africa, James Morris and UN Special Envoy for HIV/AIDS in Africa, Stephen Lewis to Lesotho, Malawi, Zambia and Zimbabwe, 22–29 January

World Food Program (WFP) (2005) *Reducing the Burden of HIV/AIDS. Experience of a Food Aid Intervention in Western Kenya. An Impact Study: 'Nutrition and Care of People Affected by HIV/AIDS' Busia District, Kenya*, Nairobi: WFP Kenya Country Office

### **School feeding programmes**

Ahmed, U. and del Ninno, C. (2002) *Food for Education Program in Bangladesh: An Evaluation of its Impact on Educational Attainment and Food Security*, Washington, DC: International Food Policy Research Institute

Agarwal, D., et al (1987) *Nutritional Status, Physical Work Capacity and Mental Function in School Children*, Scientific Report 6, Nutrition Foundation of India

Babu, S. and Hallam, J. (1989) 'Socioeconomic Impacts of School Feeding Programs. An Empirical Evidence from a South Indian Village', *Food Policy* 14.1: 58–66

Bennett, J. (2003) *Review of School Feeding Programmes*, London: DFID

Caldes, N. and Ahmed, A. (2004) 'Food for Education (Food for Schooling and School Feeding)', *Impact Review Paper*, draft, unpublished

Chandler, A., Walker, S., Connolly, K. and Grantham-McGregor, S. (1995) 'School Breakfast Improves Verbal Fluency in Undernourished Jamaican Children', *Community and International Nutrition* 125: 894–900

Dil, L. (1996) *Rural Appraisal: Primary Schools, Vulnerable Group Feeding, and Food for Work as Channels of Maize Distribution*, Lilongwe: World Food Programme

Grantham-McGregor, S., Powell, C.A., Walker, S.P. and Himes, J.H. (1991) 'Nutritional Supplementation, Psychosocial Stimulation and Mental Development of Stunted Children: The Jamaican Study', *The Lancet* 338

Jacoby, H. (1997) *Is There an Intra-household Flypaper Effect? Evidence From a School Feeding Program*, Food Consumption Nutrition Division Discussion Paper No 31, Washington, DC: IFPRI

Jacoby, E., Cueto, S. and Pollitt, E. (1997) 'Benefits of a School Breakfast Program Among Andean Children in Huaraz, Peru', *Food and Nutrition Bulletin* 17: 54–64

Kadiyala, S. and Gillespie, S. (2003) *Rethinking Food Aid to Fight AIDS*, IFPRI-FCN Discussion Paper No 159, Washington, DC: IFPRI-FCN

Levinger, B. (1986) *School Feeding Programs in Developing Countries: An Analysis of Actual and Potential Impacts*, AID Evaluation Special Study No 30, Washington, DC: USAID

Lopez, I., et al (1993) 'Breakfast Omission and Cognitive Performance of Normal, Wasted and Stunted School Children', *European Journal of Clinical Nutrition* 47

Moore, E. and Kunze, L. (1994) 'Evaluation of the Burkina Faso School Feeding Program. Catholic Relief Services', consultant report, unpublished

Moussa (2002), 'Keeping Schools Open: School Feeding in Conflict and Crisis', Horowitz Memorial Lecture, *SCN News* 24: July

Odaga and Heneveld (1995) *Girls and Schools in Sub-Saharan Africa, From Analysis to Action*, World Bank Technical Paper 298, Africa Technical Department Series, Washington, DC: World Bank

Powell, C. and Grantham-McGregor, S. (1983) 'An Evaluation of Giving the Jamaican Government School Meal to a Class of Children', *Human Nutrition Clinical Nutrition* 37C: 381–8

World Food Program (WFP Food & Education, Zambia) (2002); *WFP's Role in Improving Access to Education for Orphans and Vulnerable Children in sub-Saharan Africa, Zambia: Strategy and Policy Division World Food*

World Food Program (WFP) (2001) 'School Feeding Works. An Annotated Bibliography', unpublished

—— (1996) 'Report on Pilot School Feeding Program Evaluation Report WFP/Malawi', unpublished

### **Unconditional cash transfers**

Barrientos, A. and de Jong, J. (2004) *Child Poverty and Cash Transfers*, Childhood Poverty Research and Policy Centre Report No 4, London: CHIP

Barrientos, A. and Lloyd-Sherlock, P. (2002) 'Non Contributory Pensions and Social Protection', paper for the series *Issues in Social Protection*, published by the Social Protection Sector, International Labour Organisation

Camarano, A. (2002) 'Brazilian Population Ageing: Differences in Well-Being Between Rural and Urban Areas', paper presented at UNRISD meeting on Ageing, Development and Social Protection, Madrid, April

Case, A. and Deaton, A. (1998) 'Large Cash Transfers to the Elderly in South Africa', *The Economic Journal* 108.450: 1330–61

Devereux, S., Marshall, J., MacAskill, J. and Pelham, L. (2005) *Making Cash Count. Lessons from Cash Transfer Schemes in East and Southern Africa for Supporting Vulnerable Children and Households*, London: HelpAge International and Brighton: IDS

Levy, S., Nyasulu, G. and Kuyeli, J. (2002) *Dedza Safety Net Pilot Project: Learning Lessons About Direct Welfare Transfers for Malawi's National Safety Nets Strategy*, Reading: Calibre Consultants

Ntozi, J. and Nakayiwa, S. (1999) 'AIDS in Uganda: How Has the Household Coped with the Epidemic?', in I. Orubuloye, J. Caldwell and J. Ntozi (eds), *The Continuing HIV/AIDS Epidemic in Africa: Response and Coping Strategies*, Canberra: Australian National University, Health Transition Centre

Samson, M., Babson, O., Haarmann, C., Haarmann, D., Khathi, G., MacQuene, K. and van Niekerk, I. (2002) *Research Review on Social Security Reform and the Basic Income Grant for South Africa*, EPRI Policy Report 31, European Policy Research Institute and International Labour Organisation

Schubert, B., Schramm, B., Wiebe, N., Baak, M., Wolter, B. and Wegener, H. (2005) *Social Cash Transfer in Development Cooperation: Kalomo District, Zambia*, Germany: GTZ

### **Conditional cash transfers**

Adato, M., de la Brière, B., Mindek, D. and Quisumbing, A. (2000) 'El Impacto de Progreso en la Condición de la Mujer y en las Relaciones al Interior del Hogar', in SEDESOL (eds), *Más Oportunidades para las Familias Pobres – Impacto en el Trabajo y las Relaciones Familiares*, Mexico City, Mexico: SEDESOL: 65–211

Barrientos, A. and de Jong, J. (2004) *Chile Poverty and Cash Transfers*, Childhood Poverty Research and Support Centre No 4, London: Save the Children



- Bourguignon, F., Ferreira, F. and Leite, P. (2003) *Cash Transfers will Increase School Attendance but are too Small to Reduce Poverty*, Brazil: Departamento de Economia, Pontifícia Universidade Católica do Rio de Janeiro (PUC-RIO)
- (2002) *Ex-ante Evaluation of Conditional Cash Transfer Programs: The Case of Bolsa Escola*, Washington, DC: The World Bank
- Britto, T. (2005) *Recent Trends in the Development Agenda of Latin America: An Analysis of Conditional Cash Transfers*, Brazil: Ministry of Social Development
- Catholic Relief Services/Ethiopia Program (2003) *Evaluation of the 'Emergency Response Through Increased Access to Seed, Water and Sanitation' Project*, Baltimore: CRS
- Coady D. (2004) *Designing and Evaluating Social Safety Nets: Theory Evidence and Policy Conclusions*, Washington, DC: IFPRI
- (2003) *Alleviating Structural Poverty in Developing Countries: The Approach of Progreso in Mexico*, background paper for the World Development Report 2004, Washington, DC: The World Bank
- Coady, D. and Parker, S. (2001) 'A Cost-Effectiveness Analysis of Demand- and Supply-Side Education Interventions: The Case of Progreso in Mexico', mimeo
- de Janvry, A. and Sadoulet, E. (2004) *Conditional Cash Transfer Programs: Are They Really Magic Bullets?* University of California at Berkeley: Department of Agricultural and Resource Economics
- Guerrero Serdan, A. (2001) 'School Attendance in Rural Mexico: An Evaluation of the PROGRESA Program', Master of Arts Research Paper, Institute of Social Studies, The Netherlands
- Handa, S., Huerta, M-C., Perez, R. and Straffon, B. (2001) *Poverty, Inequality and Spillover in Mexico's Education, Health and Nutrition Program*, FCND Discussion Paper No 101, Washington, DC: International Food Policy Research Institute
- Harnett, P. and Cromwell, E. (2000) 'Malawi Starter Pack Scheme 1999–2000', *Follow up Study of Flexivouchers: 'As Good As Money'*, Final Report, London: DFID
- Morley, S. and Coady, D. (2003) *From Social Assistance to Social Development: Targeted Education Subsidies in Developing Countries*, Washington, DC: International Food Policy Research Institute
- Nigenda, G. and Gonzalez-Robledo, L. (2005) *Lessons Offered by Latin American Cash Transfer Programmes, Mexico's Oportunidades and Nicaragua's SPN. Implications for African Countries*, Centre for Economic and Social Analysis, Mexican Health Foundation
- Patrinos, H. and Psacharopoulos, G. (1997) 'Family Size, Schooling and Child Labor in Peru – An Empirical Analysis', *Journal of Population Economics* 10 October: 387–405
- Ravallion, M. and Wodon, Q. (2001) 'Does Child Labour Displace Schooling? Evidence on Behavioural Responses to an Enrolment Subsidy', *Economic Journal* 110 March: C158–75
- Rawlings, L. and Rubio, G. (2004) *Evaluating the Impact of Conditional Cash Transfer Programs: Lessons from Latin America*, Washington, DC: The World Bank
- Sadoulet, E., Vakis, R., de Janvry, A. and Finan, F. (2004) *Education, Child Labour and Shocks: Children Benefit from Cash Transfers*, Washington, DC: World Bank
- Scott, J. (1999) *Análisis del Programa de Educación, Salud y Alimentación (PROGRESA): México*, Mexico City, Mexico: CIDE
- Sedlacek G., Duryea, S., Ilahi, N. and Sasaki, M. (2005) *Child Labor, Schooling, and Poverty in Latin America*, Washington, DC: World Bank
- Sedlacek, G., Ilahi, N. and Gustafsson-Wright, E. (2000) *Targeted Conditional Transfer Programs in Latin America: An Early Survey*, Washington, DC: World Bank

## Annex 1 Vulnerabilities and social protection responses

### Direct welfare transfers

Sources of vulnerability	Affected groups	Social protection interventions	Objectives
Covariant livelihood shocks (e.g. drought or erratic rainfall) that cause transitory vulnerability by reducing access to food	<ul style="list-style-type: none"> <li>● Small farming families with undiversified livelihoods</li> <li>● Rural service providers (e.g. barbers, small traders) whose livelihood depends on farmers</li> </ul>	Humanitarian relief: <ul style="list-style-type: none"> <li>● General food distribution</li> <li>● Supplementary feeding</li> <li>● Emergency cash transfers</li> <li>● Public works projects</li> </ul>	Smooth consumption after a shock that threatens lives and exceeds the ability of affected households and communities to cope, by delivering free food, cash to buy food, or employment opportunities
Idiosyncratic livelihood shock (e.g. serious illness, or death of a breadwinner) or personal characteristic (e.g. severe disability) that causes chronic vulnerability by undermining household labour capacity	Chronically vulnerable people who are unable to work and who have inadequate family support, e.g.: <ul style="list-style-type: none"> <li>● Older infirm people living alone</li> <li>● People with disabilities</li> <li>● Chronically ill people</li> <li>● Orphans</li> </ul>	Institutionalised social welfare or social assistance (unconditional transfers of cash, or other goods and services), including: <ul style="list-style-type: none"> <li>● Social pensions</li> <li>● Disability grants</li> <li>● Orphan carer grants</li> </ul>	Provide adequate income, reliably and predictably, for a minimum subsistence to the labour-constrained poor and their dependents
Chronic or transitory poverty that results in adequate uptake of essential services, and/or child labour	Poor and vulnerable households who cannot afford to send their children to school or clinic, and/or withdraw children from school during crises, and/or send their children to work	<ul style="list-style-type: none"> <li>● School feeding programmes</li> <li>● Conditional cash transfers</li> <li>● Fee waivers</li> </ul>	<ul style="list-style-type: none"> <li>● Provide nutritional support to poor children and promote access to education</li> <li>● Provide income support to poor households and ensure their utilisation of education and health services</li> <li>● Offer free access to education and health services to all (e.g. Free Primary Education) or to targeted poor or marginalised groups</li> </ul>

**Productivity-enhancing safety nets**

Sources of vulnerability	Affected groups	Social protection interventions	Objectives
Constrained access to agricultural inputs, due to poverty or market failures	Small farmers	<ul style="list-style-type: none"> <li>● Fertiliser subsidies</li> <li>● Free inputs distribution ('Starter Packs')</li> <li>● Inputs-for-work</li> </ul>	Transfer key productive inputs to asset-constrained farmers, either for free, at subsidised prices, or for work
Limited access to basic services (schools, clinics) and markets, due to inadequate transport and physical infrastructure	Remote rural communities (whose poverty and vulnerability are related to their isolation)	<ul style="list-style-type: none"> <li>● Public works programmes (food- or cash-for-work)</li> <li>● Social funds (e.g. MASAF)</li> </ul>	Build roads and other physical assets that enhance individual and community access to services and markets

**Market interventions**

Sources of vulnerability	Affected groups	Social protection interventions	Objectives
Weak food markets: <ul style="list-style-type: none"> <li>● High food prices</li> <li>● Seasonal food shortages</li> <li>● Food supply shortages</li> <li>● Food price volatility</li> </ul>	Poor market-dependent net food purchasers in rural and urban areas, including production-deficit farmers who are forced to sell their crops immediately after harvest at excessively low food prices and to buy food back at excessively high prices during the hungry season	<ul style="list-style-type: none"> <li>● Food price subsidies (universal or untargeted)</li> <li>● Food vouchers (targeted)</li> <li>● Grain reserve management</li> <li>● Grain futures markets</li> <li>● Food price banding</li> <li>● Pan-seasonal pricing</li> <li>● Pan-territorial pricing</li> </ul>	<ul style="list-style-type: none"> <li>● Enhance access to food by subsidising prices of staples</li> <li>● Provide an entitlement to a basic food basket in the form of redeemable vouchers</li> <li>● Stabilise food supplies by buying food after harvest and releasing it on the market in the hungry season</li> <li>● Ensure access to adequate food imports at guaranteed prices by buying options or futures</li> <li>● Control food price movements by setting a floor price for producers and a ceiling price for consumers, or by fixing prices across the year and in all parts of the country</li> </ul>
Harvest failure due to erratic rainfall	<ul style="list-style-type: none"> <li>● Rainfed-dependent farmers</li> </ul>	<ul style="list-style-type: none"> <li>● Weather-based insurance</li> </ul>	Insure farmers against crop failure by compensating them if erratic rains reduce their harvests