

**Three Eyes on Malawi Poverty:
A Comparison of Quantitative and Subjective Wellbeing
Assessments**

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Abstract

This dissertation aims at improving the official measurement of wellbeing in Malawi by proposing the incorporation of popular understanding of wellbeing. The objective is to reduce targeting errors that come due to differences in the understanding of wellbeing and poverty between those that identify the poor (villagers) and those who evaluate the quality of the targeting (experts).

The dissertation compares the official measure of household wellbeing (consumption expenditure) against subjective measures of wellbeing (self and peers assessments) that are applied on the same households at the same time. Four comparisons are made; household rankings, poverty rates, households determined as poor, and characteristics of poor households. The comparisons determine similarities and differences and, where different, whether the characteristics unique to subjective assessments can be incorporated in the official wellbeing assessment.

The dissertation finds that the three assessments are not similar, although there are some overlaps. The ranking of the households based on consumption expenditure is significantly different from that based on peers-assessment. Likewise, poverty rates for three assessments are different. While some households identified as poor are the same, these are less than discordant households. In terms of characteristics, some are common in all the three assessments while some features associated with subjective assessments are absent in the official wellbeing assessment system.

An assessment of the absent features shows that it is possible to improve the official assessment without radical changes. Modifications can be made in data collection and analysis, and wellbeing profiling. In particular, qualitative aspects of wellbeing like type and frequency of meals, food security, quality and quantity of clothing would improve the relevance of the operational definition of poverty. Likewise, wellbeing profiling that includes subjective wellbeing assessment is likely to resonate with what is on the ground.

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Dedication

I dedicate this to my mother, mai a Lidess, who inculcated in me the benefits of education despite being uneducated herself and the ideals of hard work. Her efforts as a single mom in ensuring that I had what I needed for my primary school laid a foundation for whatever followed thereafter.

Author's declaration

I declare that this dissertation is my own work and is being presented to the University of York for the first time.

Signed:

Date:

Chapter 1: Introduction

1.1 Study rationale

This study has been inspired by challenges facing well-meaning project implementers when they use community members to identify poor people in their community to benefit from social transfers like cash, free or subsidised food or inputs. One of the challenges is that some of the people who are selected as beneficiaries are said to be non-poor and some who are not benefiting are said to be poor. Even after factoring in biases, some mismatches still linger on. The question is why? Is there any other source for these identification or targeting errors? If wrong targeting is common place, why target at all? There are reasons why targeting is common in Malawi.

Malawi is a poor country. With over half of the population defined as living 'in absolute poverty, unable to reach a subsistence level of income' (GoM & WorldBank, 2007a, p. 213), any effective programme using universal targeting would cost a fortune. Malawi public resources are, as expected, limited and its budget tight. Further, external donors support a substantial amount of the government budget; contributing between a third and almost three-fifths of public expenditure in the period 1994 and 2004 (Barnett, et al., 2006, p. 7). Thus, the implementation of the budget and especially the efficiency of resource use are of interest to both local taxpayers as well as those in donor countries.

Chinsinga (2005) provides motivations for targeting at three levels. At the national level, limited public resources forces government to cut back on expenditures and targeting the limited resources becomes paramount. At the programme level, designers want the limited resources to reach those in dire need at the least possible cost as this maximises benefits from the amount spent. At the outcome level, targeting achieves the highest possible 'return' by delivering to the neediest or the most deserving. He states that delivering to the relatively well off and excluding poorest reduces 'returns to investment'. To maximise the return to investment, several choices need to be made. The first is the type of budget instrument to use, the second is the type of programme to run, third is the geographical area the programme is to be implemented and lastly the target group (Smith, 2001).

With the high poverty rates, the tight budgets in Malawi mean limited resources available for meeting the range of needs of the people. Botolo (2008) reports that public expenditure directed to social protection in the 2002/3 - 2004/5 period peaked

at 7% of the total budget in 2003/4. In another case, tight budgets (and donor pressure) forced Government of Malawi (GoM) to replace a popular universal free inputs programme with a targeted one (GoM & WorldBank, 2007a, p. 225).

Donor pressure is potent because the bulk of social protection programmes are donor-funded. For example, in the period 2003-2006, local resources covered only 3% of social protection activities (WorldBank, 2007, p. 35). Pressure from taxpayers in donor countries also means pressure to evaluate the programmes to determine their effectiveness and efficiency. It is common to find programmes with revealed high targeting errors modified as was the case with the free inputs programme which was scaled down and finally abandoned (Levy, et al., 2000; Levy and Barahona, 2001; Levy and Barahona, 2002).

Even in programmes where there is no donor support and pressure, Malawi Government has ever abandoned them due to poor targeting, among other reasons. A case in point is a popular micro enterprise credit revolving fund programme which was scrapped because of massive inclusion of undeserving and default-prone politicians (GoM, 2003). Thus, development partners have ever abandoned programmes due to problems of targeting, among other reasons. In theory and practice, targeting errors are critical policy informers. Financiers, programme designers, and implementers use them as barometers of resource use efficiency.

Since targeting efficiency is a critical input in policy and programme development, it follows that reporting the correct targeting errors is crucial. It also follows that to get correct targeting errors the evaluation methodology has to be correct. Thus the method used to check whether beneficiaries meet the criteria and non-beneficiaries do not meet the criteria is just as important. In other words, faulty evaluation methodology is likely to lead to faulty policy and programme decisions.

Evaluators and commentators seem to conclude that correct targeting is rare in Malawi. For example, the Malawi Social Support Policy states that few social transfers reach the intended targets (GoM, 2009) and a review of benefit incidence of social transfers in households found high targeting errors and that one of the major programmes, the Targeted Inputs Programme, excluded over half of those it intended to reach while four in ten of its actual beneficiaries were in fact ineligible (GoM & WorldBank, 2007a). This echoed what Levy and colleagues (2002) in earlier evaluations found. Evaluation of the inputs subsidy programme also found high targeting errors (Doward, et al., 2008). A review of evaluations of small scale projects also found varying degrees of targeting

errors (World Bank, 2007). An evaluation of a cash transfer pilot project also found high targeting errors (Miller, et al., 2009). This gives the impression that targeting of social transfers in Malawi faces some challenges.

A number of reasons are given for these targeting errors in Malawi. One of the most commonly cited reasons is lack of household level database (Levy, et al., 2000; Chinsinga, 2005; GoM, 2006; GoM, 2006a; Doward, et al., 2008) due to the absence of a household or individual registration system, a system that would have been amenable to modification to include some basic 'poverty' variables for household targeting purposes. Another related point is that the nationally representative household socio-economic data that is frequently collected is valid only at the district level (Levy, et al., 2000; Chinsinga, 2005). Others argue that even if that data were available at household level, they would not be useful for poverty targeting because they mainly focus on monetary dimension of wellbeing when households seldom interact with the cash economy (Levy, et al., 2000). The implicit point is that an operational definition of poverty that is based on monetary dimensions may not match community poverty criteria such that when communities identify the poor among them, their selection can be inaccurate, in the 'eyes' of the monetary measure and vice versa.

The other reason given for wrong targeting is that there are no simple poverty proxies for identifying the poor (Levy and Barahona, 2001) when the poor are a large and undifferentiated group (Smith, 2001). As a result project implementers are 'forced' to use poverty proxies that fail to narrowly target the neediest. Related to this reason is that sometimes these imprecise proxies are imposed on a community group to use for identifying the poor on behalf of implementers. In some cases, the community group is given the freedom to design its own criteria as long as the poorest are identified. The assumption here is a community group has superior knowledge of the households in the community compared to an outsider. However, the use of community groups do not get rid of targeting errors even when the community is given a free hand to develop own criteria (Levy, et al., 2000; Chinsinga, 2005).

However, evaluators have found that the use of well managed community groups produce 'acceptable' targeting errors (Chinsinga, 2005; Milner and Tsoka, 2005; Miller et al., 2008). Apart from identifying beneficiaries, the community agents are able to refine the selection criteria to ensure that the right recipients are selected (Chinsinga, 2005; Milner and Tsoka, 2005). Chinsinga et al. (2001) found that community groups, in the presence of facilitators, are able to develop targeting criteria and identify the poorest of the poor. Non-Governmental Organisations (NGOs) who use community

groups state that most of the misidentification is deliberate based on the fact that the community agents expertly developed the criteria and demonstrated that they can identify the poor (Milner and Tsoka, 2005).

At the same time, the community agents are prone to 'tuck' in undeserving recipients, especially when a possibility of 'getting away with it' exists. Miller and colleagues (2008) found that community groups include households that were otherwise not the poorest because they 'realised' that no one, including the traditional leaders, checked the quality of their work. Again, elite capture and favouritism, at times, discount the information advantage associated with community based targeting (Chinsinga, et al., 2001; Levy and Barahona, 2001; GoM & WorldBank, 2007a).

There have been recommendations on how to deal with the high targeting errors associated with community based targeting (Levy and Barahona, 2001; Chinsinga, 2005; WorldBank, 2007; WorldBank, 2007a; Miller, et al., 2008). For example, Chinsinga (2005) and Miller and colleagues (2008) recommend effective community oversight of the selection process while Levy and Barahona (2001) discourage the use of community based targeting unless there are sufficient resources for its monitoring. The stocktake report on social protection in Malawi (World Bank, 2007) recommends a top-down approach; community groups should be given rules, guidelines and proxy indicators to use for targeting. In contrast, Chinsinga (2005) advocates for a hands-free approach where the community group is given the freedom to determine its targeting criteria instead of the top-down 'credibly analysed proxy indicators' or guidelines developed from monetary-based profile of the ultra poor.

NGOs have already found ways of reducing the impact of elite capture and favouritism associated with community based targeting by using the community or independent assessors to validate the list of identified potential beneficiaries (Milner and Tsoka, 2005). In practice, NGOs provide poverty proxy indicators to a community group democratically elected by the community to refine into criteria which it uses to identify beneficiaries which are then validated by either the entire community or independent assessors (Milner and Tsoka, 2005). Large scale programmes generally fail to independently validate the selected households because of resource limitations. Instead, broad proxy indicators are used and this is why Government programmes have generally higher targeting errors than those run by NGOs (WorldBank, 2007). Indeed, the use of unrefined or broad poverty proxies have been found to be one of the sources of targeting errors (Levy and Barahona, 2001; Doward, et al., 2008; Miller, et al., 2008).

When broad top-down poverty proxy indicators are given, community groups are forced to deal with them depending on the type and size of the transfer. They can either refine them to identify the right recipients, or use them to the best of their knowledge, or take advantage of them to include themselves or their favourites. According to Levy and Barahona (2001), the type of the transfer sometimes determines how well the community refines the proxy indicators; pure welfare transfer (e.g. food for the starving) attracts refinement of the proxy indicators while cash or free or subsidised inputs attract no refinement to enable those identifying to take advantage of the 'loopholes'. Thus intentional targeting errors (taking advantage of the criteria) are common when a transfer is addressing a covariate shock or a common livelihood constraint. This is not surprising because in rural areas there are very small differences between the poor and non-poor or the ultra-poor and moderately poor or the so-called local elites and the poor (Levy and Barahona, 2001; Levy and Barahona, 2002; Chinsinga, 2005; Doward, et al., 2008). This is confirmed by the Gini coefficient of 0.34 for rural as opposed to 0.48 for urban areas (GoM & WorldBank, 2007a).

According to Levi and Barahona (2001) inputs programmes in Malawi are emotive because two-thirds of farmers cannot afford commercial inputs. Indeed, evaluative community visits found that communities resisted targeting because, according to them, everyone needed inputs (Chinsinga, et al., 2001; Van Donge, et al., 2001). Miller and colleagues (2008) also found that non-recipients 'waited their turn' for the second round of targeting of the cash transfer programme because they felt they deserved to be beneficiaries as well. They also found that community groups, by using the proxy indicators, included 'border line' households that satisfied the broad poverty indicators but not the consumption criterion used to evaluate targeting efficiency.

Targeting errors have also been found in projects that use self-selection. In Malawi, self-selection is mostly used in public works programmes. Beneficiary assessments of such programmes found that non-poor individuals participate (Zgovu, et al., 1998; Mvula, et al., 2000; Chirwa, et al., 2002). The review of benefit incidence of public works programmes found that households that could have participated in public works did not and that about a third of those that participated were non-poor (GoM & WorldBank, 2007b). The evaluations generally used the official wellbeing measure to determine whether the targeting is efficient. That assumes that the understanding of wellbeing held (or criteria used) by those who target is similar to that held or used by evaluators. Otherwise, it is possible for the identifier and evaluator to classify differently. This is clear when the processes of targeting and evaluation are compared.

How do evaluators determine targeting errors? Evaluators use the operational definition of poverty used by the designers when determining targeting efficiency. This is done to be fair to programme designers. For example, if a programme's target group is the ultra poor, an evaluator will use the designers' definition of ultra poverty. It is rare, if at all, for evaluators to use the community's understanding of the target group or criteria in evaluating the targeting efficiency even when it is known that the community refined the criteria to make it implementable. A review of anti-poverty interventions between 2003 and 2006 found that most of the interventions had broad target groups or poverty proxy indicators (WorldBank, 2007).

Examples of broad target groups include 'poorest households', 'ultra poor', 'chronically ill', 'food-insecure', 'households with no valuable assets', 'resource poor', and 'rural poor without labour' (World Bank, 2007). All of the programmes that had these indicators used community based targeting. In the case of, say poorest or ultra poor households, an evaluator uses the official ultra poverty line to check whether the recipients are ultra poor at the time of their selection. Yet, it is likely that the community agents that identified the recipients used their perceptions of the poorest or ultra poor households. If the two differ then it is likely that the evaluation would find that the community did not do a good job. This is worse when the target group is vague like 'rural poor with no labour'.

This means that an evaluator, by using the programme's definition and not the community's criteria, can find 'wrongly' targeted recipients due to the differences in the criteria used to select and evaluate. Once a different measure from that used by the community is used to determine the targeting efficiency, it is not easy to pinpoint the sources of targeting errors, if any. Sources of targeting errors in such a case can include deliberate wrong targeting as well as differences in the understanding of the criteria. Targeting errors that are due to differences in the understanding of the target group or criteria (termed superficial) are a creation of improper evaluation and need not be included in the determination of targeting efficiency. The contention in this study is that such errors are a product of imprecise conceptualisation, definition and measurement.

It is *possible* that superficial errors are among targeting errors reported in a number of evaluations. All the three evaluations of the free inputs programme realised that evaluating the targeting efficiency using the monetary definitions of poverty was inappropriate for households in Malawi (Levy, et al., 2000; Levy and Barahona, 2001; Levy and Barahona, 2002). Instead the evaluations used a livelihood assets-based approach. This does not entirely deal with possible differences unless the assets-based

methodology is empirically found to be similar to the one used by community groups. So far there is no evidence that such is the case.

The other reviews and evaluations used the consumption-based measure to determine targeting efficiency (Dorward, et al, 2008; Miller, et al, 2008; GoM & World Bank, 2007). Miller and colleagues (2008) also followed up each of the handed-down proxy indicators in the criteria to determine the targeting efficiency based on each and found that each had targeting errors. However, no evaluation has been based on what community groups understood the criteria to mean. While such an approach would imply using different criteria for each community, it has the advantage that what is purported to have been used for selection is what is used for evaluating the selection. Targeting errors that would come from such an evaluation would be more correct than otherwise. Whether the criteria would match what the programme designer had in mind is irrelevant if it is assumed that the community knows better.

Chinsinga (2005) reports that local people modified selection criteria apparently based on notions of need, equity, and entitlement. He found that while officials considered the targeting a failure, communities found it acceptable. In fact, a study covering communities in catchment areas of NGO's social transfer projects found that implementers permitted community institutions to modify the criteria; and that both implementers and households preferred the use of community based targeting than any other targeting methodology (Milner and Tsoka, 2005).

Thus for evaluation of targeting efficiency to be fair, the question should be whether the evaluator has the same understanding of wellbeing as the community agents (community group or household representative). With same understanding what remain are 'genuine' targeting errors. In other words, superficial errors would be high if the differences in the understanding is big. The reported high targeting errors in Malawi can be due to high intentional or superficial errors or indeed both. Suggestions have already been made on how the intentional errors can be minimised. What are missing are suggestions on how to minimise the superficial targeting errors. From the discussion above, the suggestions should focus on the understanding and measurement of wellbeing and poverty.

1.2 Wellbeing measurement and identification of the poor

The concepts of wellbeing and poverty are complex. Their definitions are battlegrounds of different schools of thoughts as very well summarised by Pete Alcock (2006) and Ruth Lister (2004). Measurement of poverty, in particular, is embroidered in

contentions and differences. As the following quotes indicate, these differences are said to be due to an absence of an agreed concept or definition of poverty.

“There is no credible theory that explains the phenomenon of poverty. ... there is no uniform definition of poverty or agreement on its most precise form or measurement.” (Samad, 1996, p.34)

“The weak theoretical foundation of poverty research makes it difficult for most researchers to identify and use a coherent framework in poverty studies.”(Oyen, et al., 1996, p.5)

“Poverty continues to be a term widely applied ... but with enormous scope for disagreement about what it means and how it is best applied.”(Nolan and Whelan, 1996, p.10)

[There is] “...growing consensus that there is no single definition of poverty capable of serving all purposes ... [because] Poverty ... is multi-faceted and complex human condition.”(Wilson, 1996, p.21)

At the same time, this does not deter others to advocate for developing a definition of poverty believing that differences should not derail a noble cause (Townsend, 1993) because “poverty is a condition that is unacceptable” (Nolan and Whelan, 1996, p. 10) and something should be done about poverty (Alcock, 2006). What is clear from literature is that poverty is defined, measured and dealt within an uncertain conceptual environment to the extent that some operational definitions of poverty are not in synch with reality, especially considering that they are derived from politically constructed poverty lines (Lister, 2004). Inevitably, as constructs, they miss some who are *genuinely* poor and include some non-poor as poor (Nolan and Whelan, 1996). The multiplicity of concepts and measurement approaches makes poverty analysis academically ‘hazardous’ and practically draining. For example on the concepts, a decision has to be made as to whether to measure subsistence or basic needs or relative poverty. On measures, there are choices to be made too regarding whether to use a direct measure of wellbeing (e.g. consumption or expenditure) or indirect (income or assets or resources in general); whether the measure is objective (quantitative determination of indicators) or subjective (based on unsubstantiated opinions); and whether the measure is one dimensional (income/expenditure/consumption) or multidimensional (composite indices, wealth ranking, self-rating).

Ideally, the choice of a measure should be based on an understanding of well-being or poverty but this is not always the case (Ringen, 2006). With so many 'legitimate' options to choose from coupled with the absence of credible theories of poverty (Ringen, 2006), cherry picking of the measure as well as the poverty line is commonplace. On the issue of the poverty line, Gordon (2000) reports that it can either be scientific (i.e. based on the minimum consumption required to sustain life) or moral (i.e. based on the consumption necessary to lead a socially acceptable life). Apart from very few (Doyal and Gough, 1991), most of poverty lines follow the moral route because as Townsend (1979) argues, a human being is a physical as well as social animal.

Whatever the case, both the scientific and moral routes have their challenges. Deciding the amount and types of goods to achieve the scientific poverty line is difficult because the required intake of calories to achieve the minimum required quantities can come from an array of goods and services. Likewise, the fact that the moral poverty line accepts any good or service considered socially acceptable and that there is no set definition of what is socially acceptable, it is therefore too fluid. The number of goods in the *needs* basket is not predetermined and there is nothing to stop *wants* being referred to as needs (Piachaud, 1987).

Poverty lines, apart from being political constructs, are political (Lister, 2004). Since the level or choice of the poverty line determines the level of poverty, governments take keen interest on how it is conceptualised, operationalised and reported. In countries where the government is not directly involved in poverty analysis, they can refute results they are not happy with using prevalent academic disagreements. In countries where officials are directly involved, the governments can influence the choice of the wellbeing measure and poverty line. In most developing countries, poverty analyses are mostly donor funded. In such cases, the choice of the wellbeing measures and poverty lines is jointly done by the national government and the donors (Wilson, 1996).

It is assumed that the choice of the measure and poverty line in the cases where donors get involved is strategic because the blame for 'unfavourable' poverty statistics is generally shared among governments, NGOs and development partners (Chirwa, 2008). In fact, where poverty rates are high, some governments pass or extend the 'blame' to development partners while in others use them to request for increased levels of development aid (Oyen, 1996).

There are some measures that involve people especially at the measurement stage (Lister, 2004). For example, in consensual poverty measurement, respondents are requested to decide on goods and services they consider necessary for a minimum standard of living. However, experts decide the final composition of the minimum or typical needs basket. The absence of effective involvement of people in the choice of the wellbeing measure and poverty line results into operational definitions that inadequately reflect realities on the ground (Chambers, 1997) and wrong categorisation of some people as poor or non-poor (Van Praag and Ferrer-i-Carbonell, 2008).

There have been calls for increased involvement of people in the conceptualisation of poverty and refinement of operational definitions of poverty. Chambers (2007) is one scholar who strongly advocates for the transfer of responsibility of defining and measuring poverty to the *experts in poverty*, the poor themselves. Others argue for the creation of space for 'the voices of the people in poverty to be heard more clearly than hitherto' (Lister and Beresford, 2000, p.284); especially at the stage of the conceptualisation (Oyen 1996) in order to bring out subjective dimensions of poverty (Baulch, 1996) and fine-tune policy formulation and programming (Robb, 2002). So far these calls have not been heeded fully insofar as interrogating the *official experts'* poverty with that of *practical experts* at household and community levels.

The study's quest is to answer the call using Malawi as a case study. In Malawi official eyes dominate poverty analysis leaving those of households largely ignored though known and those of communities relegated to identifying beneficiaries. The study compares how the three pairs of eyes view poverty and determines the feasibility of introducing spectacles contoured by people's voices to the officials.

1.3 Justifying Malawi as a case study

Malawi is an ideal country for this kind of work for a number of reasons. The first reason is that Malawi has been and is still a poor country. Poverty worsened since 1964 when the country got its independence from Britain. According to commentators on early Malawi economy, the rural development policies adopted after independence created poverty among smallholder farmers (Kydd & Christiansen, 1982; Sahn & Arulpragasam, 1991a). The conditions of the poor were only bearable by subsidies and price control policies (World Bank, 2007). The introduction of structural adjustment programmes (SAPs) in the 1980s hit the poor hardest as the country dismantled price controls without freeing produce and labour markets (Lele, 1990).

Even when the produce and labour markets were freed more than ten years later, the damage had already been done such that wellbeing status has not changed since early 1990s. For example, Malawi's human development index was 17th poorest in 1992 (UNDP, 1994) as well as in 2010 (UNDP, 2010) and in terms of purchasing parity income per capita, Malawi was 20th poorest with US\$800 in 1991 and 3rd poorest with US\$911 in 2008 (UNDP, 2010). The no-improvement picture is confirmed by the latest poverty analysis which shows that poverty incidence did not change between 1998 and 2005 (GoM & World Bank, 2007a).

The second reason is that Malawi has designed, implemented and evaluated a number of anti-poverty programmes in the recent past. Apart from a number of poverty reducing development programmes, Malawi introduced a number of prominent anti-poverty programmes in support of local enterprises and smallholder farmers since 1994 (GoM, 2006; NEC, 2002). These were complemented by small-scale programmes implemented by NGOs and 'sprinkled' around the country (World Bank, 2007). Most of these have been evaluated and their results provide a sense of the quality of their targeting.

The third is that most of the social protection initiatives used community based targeting, most of which have been evaluated (Levy, et al., 2000; Levy and Barahona, 2001; Levy and Barahona, 2002; Doward, et al., 2008; Miller, et al., 2008) and reviewed (Smith, 2001; World Bank, 2007). Most of the evaluations used quantitative wellbeing assessment to determine the targeting errors. Their results are instructive as to the targeting performance of community based targeting. Apart from informing the design of the primary data collection, some of the evaluations give some reasons why it is possible for the official measure of wellbeing to be out of synch with local understanding of wellbeing.

The fourth reason is that there have been a number of quantitative and subjective wellbeing assessments. In particular, the assessments offer glimpses of what quantitative and subjective assessments of wellbeing and poverty entail. An analysis of these offers a chance to compare 'the three eyes' as how they characterise and measure wellbeing and poverty.

Thus secondary data available in Malawi on wellbeing and poverty offers an opportunity to interrogate the official wellbeing and poverty perspective with that from people at community level. With supplementary data from few communities, Malawi offers a chance to check whether the official measure used to evaluate targeting

efficiency matches the implicit measure used by local people to judge wellbeing status of households in their communities and why it is possible for the measures to classify the same household differently.

1.4 The research problem and questions

High prevalence of poverty and limited resources in Malawi leads to widespread use of community based targeting. Evaluations have shown high targeting errors on the basis of which some social protection projects have been scaled down or scrapped altogether. However, it is possible that some of the errors have less to do with the quality of targeting but more with the evaluation criteria. In particular, some of the errors could be a reflection of conceptual differences between officials and people at local level regarding who is poor.

It is therefore imperative that any errors that are due to conceptual differences be reduced or removed in order to present policy makers and programme designers with genuine targeting errors. This can be done by either requiring the use of one criteria for selecting beneficiaries and evaluating the selection or modifying the official wellbeing and poverty version using people's understanding of the two concepts. In both cases it is important to have good knowledge of the community's understanding of wellbeing and poverty. The advantage of the latter is that if the official version is corrected by grassroots version, the official poverty definition and proxy indicators would resonate with people's understanding.

The first solution has the problem that if the 'criteria' is the official poverty definition or proxy indicators, it is possible that the community may not understand them and this will lead to discordant identification between identifiers and evaluators. Regarding the use of poverty proxies, Miller and colleagues (2008) report that people found proxy indicators handed down to them unusable. If they are community-based, it is also imperative that the evaluators understand them. Even if they understand, it implies that evaluators may have to use different standards if the project covered communities with different criteria. This would also make comparisons difficult. Milner and Tsoka (2005) found that even though some communities were allowed to modify the proxy indicators, evaluators did not use the modified proxy indicators in assessing the community group's targeting performance. Thus the use of an official version which has incorporated people's voices is a better option since it can be used across communities.

However, that solution would make sense if it is established that there are differences in perspectives between experts and communities. What is established in Malawi is that

the process of developing a wellbeing measure and an operational definition of poverty did not include community voices (GoM & World Bank, 2007a; GoM, 2000; World Bank, 1996; World Bank, 1990). The non-involvement of people in the process may not necessarily mean that their concepts are not factored in. In fact, by the time of the first major poverty analysis in 2000, Malawi had produced a landmark report on poverty covering both quantitative and subjective perspectives of wellbeing (GoM & UN, 1993) which was specifically consulted to inform the analysis (GoM, 2000). Further, by the second poverty analysis in 2007, more subjective assessments of wellbeing and poverty had been completed (GoM, 2002; Khaila, et al., 1999) which were referenced as well (GoM & World Bank, 2007a). Thus until the official wellbeing measure and the operational definition of poverty are checked against those at community level, it is premature to conclude that the official (quantitative) version is different from the subjective versions of wellbeing.

The policy objective of the research is to reduce superficial targeting errors by making the wellbeing measure and operational definition of poverty relevant to community based targeting in Malawi through systematic incorporation of people's conceptions of wellbeing and poverty in official wellbeing and poverty analysis system¹. Following from this policy objective are three research objectives which are meant to first find out whether indeed the official version of wellbeing and poverty needs to be modified. The research objectives are:

- i. To determine whether household wellbeing rankings, in a given community, generated by official measure and peers assessment are the same;
- ii. To determine whether the list of households identified as poor, in a given community, using the official poverty definition, self-rating and peer assessment are the same; and
- iii. To determine whether the implicit wellbeing features/proxy indicators in the official measure are similar to those implicit in self and peers assessment.

1.5 Analytical framework

The study uses participatory poverty research whereby people's views are factored in the official process of analysing poverty. There are four inter-related tasks envisaged and these include: (i) Reviewing *official* and *community level* wellbeing and poverty

¹ System here covers the design of data collection tools, construction of the wellbeing measure, construction of the poverty line (operational definition of poverty), wellbeing/poverty correlates and determinants analyses and wellbeing/poverty profiling.

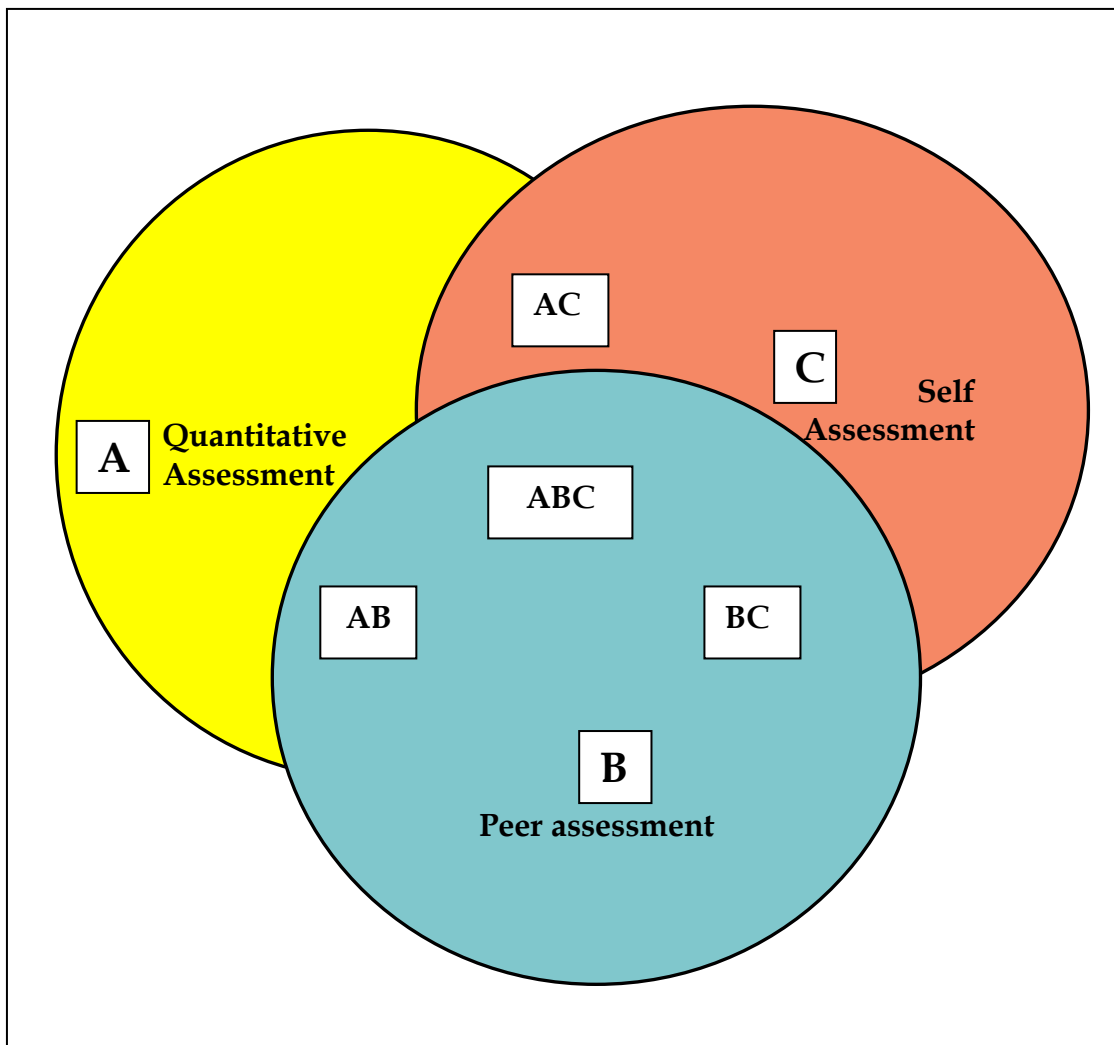
concepts and definitions to get respective implicit factors used to characterise wellbeing and poverty; (ii) Comparing the factors in order to highlight similarities and differences which may explain similarities and differences in the way experts and local people assess wellbeing and poverty; (iii) Comparing household wellbeing rankings based on consumption expenditure, the official measure, and community group assessment; and (iv) Comparing households that have been identified as poor by ‘the three eyes’; consumption expenditure, peers assessment, and self assessment in order to simulate targeting errors, if any.

The study uses both qualitative and quantitative methods. Qualitative methods are employed to get the views of community groups. Quantitative methods are used to get household-level data including self-assessment. Further, quantitative data analysis is used to calculate the wellbeing measure and poverty rates as well as determine wellbeing/poverty determinants and correlates. Qualitative methods are specially used to facilitate the characterisation of well-being, ranking of households and analysis of wellbeing/poverty features. Document and secondary data analysis of nationally representative quantitative and qualitative studies are used to get features associated with wellbeing and poverty.

Primary data collection is conducted in three randomly selected villages in the Southern part of Malawi². The sampling of the villages is based on the 2008 population and housing census. At each site, both qualitative and quantitative data collection methods are used. The data so collected are used to construct wellbeing measure for three different methods of analysing wellbeing and poverty on which basis the households in each village are ranked from the worst off to best off, poor households identified, and wellbeing/poverty characteristics determined. A comparison of the household rankings responds to the first research objective and a comparison of the lists of poor people from the three measures deals with the second research objective. Figure 1.1 facilitates the analysis of the identified poor by the three assessments.

² Due to financial constraints, a one-hundred kilometre radius from Zomba, a town in the South of the country, is also imposed. This implies that only two regions of the country were covered. The South is the poorest region in Malawi.

Figure 1.1: Analytical framework for the identified poor



The size (proportion) of ABC determines whether the three methods of identifying the poor are similar or not. Likewise, the sizes of the intercepts (AB, BC and AC) determine the closeness of the respective pairs. If the three types of assessment are divergent, the sizes of A B C (representing households identified as poor by one measure) are relatively large. It is the size of A B and C that determines whether the official wellbeing analysis system needs some modification.

A combination of statistical data analysis and content analysis is used to identify wellbeing factors that are common in all the measures (ABC), common to pairs (AB, BC, and AC) and unique to each measure (A, B and C). If any modification is warranted by the number of households uniquely identified by a measure, the unique features from self and peer-assessments are analysed for possible inclusion in the official wellbeing and poverty analysis system.

1.6 Outline of the thesis

The thesis is presented in nine chapters. The first four chapters lay the background and the second four present findings that assist in responding to the research questions. The final chapter takes the findings and puts them together to respond to the research questions and based on the responses moves on to suggest ways of modifying the Malawi wellbeing and poverty analysis system.

This chapter has presented the research problem and how the problem can be broken into various components that can easily be dealt with by this rather small study. Chapter 2 reviews literature on measurement of poverty and identification of the poor. It covers both quantitative measurement of poverty and subjective assessment of wellbeing by households themselves and community groups. It particularly focuses on wellbeing analysis and pairwise ranking used by community groups to assess household wellbeing. The chapter 2 provides a basis for the methodology adopted by the study presented in Chapter 3. Just like Chapter 2, Chapter 4 lays a foundation for the findings presented in Chapters 5 to 8. It presents the Malawi country background, commentaries on poverty and results of previous poverty studies.

Chapter 5 is the first of the four chapters on findings. It responds to the research questions whether or not the three types of assessment under study are the same. It presents the poverty rates and the households identified as poor for each type of assessment before comparing them. Chapter 6 presents household characteristics associated with the official version of wellbeing and poverty while Chapters 7 and 8 do the same from the perspectives of community groups and households, respectively.

Chapter 9 summarily deals with the research problem. The chapter compares the characteristics obtained from Chapters 6 to 8 to check for convergences and divergences. Then concentrating on the divergences especially from the community groups, the chapter proposes what needs to be done to the data collection and analysis regime and the profiling of household wellbeing and poverty. In essence, this final chapter provides the tools for broadening the official vision based on the households and community visions.

Chapter 2: Measuring wellbeing and identifying the poor

2.1 Introduction

The objective of this chapter is to show the existence of diversity, fluidity, and complexity of wellbeing measurement and the identification of the poor. Its focus is on the opening up of poverty analysis to local people to improve the measurement and identification at community level. As a platform for these, the chapter looks at theories, concepts, and measures associated with poverty analysis. The chapter's emphasis is on how wellbeing and poverty are measured in developing countries so as to situate the research problem and design.

2.2 Theories of Poverty

There is some variety in poverty measurement. Apart from advancements made in this field, the variety is also reflective of divergence of thinking. Absence of a general theory of poverty creates a 'free for all' state of affairs. Many poverty researchers recognise the absence of a theory of poverty but the recognition is rarely followed up by the development of one, giving an excuse that 'poverty is hardly germane to any behavioural economic analysis' (Sohata, 1990, p. 3). However, a theory is needful for poverty measurement. As David Gordon puts it, "for a measurement of poverty to be 'scientific', the theory it is based upon must also be 'scientific'. The theory must not only be logically internally consistent but also fulfil a number of strict criteria" (2000a, p. 43).

Townsend (1979) argues that the formulation of a theory of poverty precedes the formulation of policy or programme, which in turn are preceded by conceptualisation, definition, and measurement. Tony Novak states that most "existing studies of poverty make the mistake of beginning where they should end up. Instead of beginning with an understanding of the nature and causes of poverty, from which adequate and appropriate measurements can be drawn, they begin by trying to quantify poverty" and this results in arbitrary, partial, inadequate understanding, and definition of poverty (Novak, 1995, p. 59). Gordon (1972, p. 3) cites lack of a coherent theory or theories of poverty and lack of analytical definition of poverty as the causes of the divergencies and confusions in poverty studies.

The point is not the absence of theories of poverty but the existence of theories that are described either as unscientific or internally inconsistent or logically inconsistent or

incoherent (Gordon, 1972; Townsend, 1993). Indeed each theory of poverty that has been put forward has its strengths and weaknesses. Some are but indirect theories of poverty since they focus on income as a measure of economic wellbeing. In any case, it is only when all the theories are seen together that a picture of poverty comes out. Some of the theories are discussed below.

Character deficiency theory of poverty

In this theory, deficient personal characteristics like idleness, improvidence causes poverty because they prevent an individual from utilising their resources for the benefit of uplifting their wellbeing. Under this theory poverty reduction is achieved by the introduction of discipline and change of attitudes (Townsend, 1993). This theory assumes no structural rigidities that may make a good-attitude and disciplined individual fail to transform labour power to functionings for wellbeing improvement. Townsend (1993) considers this theory “wholly misplaced or, at the most, as a very small factor in the multiple causation of poverty” (p. 97). This implicit theory of poverty was an incomplete explanation of poverty even then because lack of land or property, for example, was structural and character alone could not explain the state of poverty.

Minority group theory of poverty

This is a Townsend (1979) label given to early Booth-Rowntree poverty studies because of the minimalist isolation of poverty as a condition of a subset of the working class. It is minimalist because hitherto the term poverty described “the condition of a working class, of a propertyless proletariat ... a state of one who, in order to obtain a mere subsistence, is forced to have recourse to labour” (Novak, 1995, p. 64). This theory corresponds with the concept of subsistence poverty (Rowntree, 2000). Thus poverty analyses in the spirit of Booth and Rowntree curve groups like the underclass, core poor and primary poor out of the poor. This theory focuses on identification and characterisation of groups prone to poverty. It fits the prevalent practice in developing countries where poverty analysis inevitably means poverty profiling. Just like the character deficiency theory, this is an implicit theory. It is a label more than a theory.

Theory of the sub-culture of poverty

In this theory, the poorest section of the society forms a distinctive self-perpetuating sub-society as an adaptation (Lewis, 1965) and reaction to their marginal position in a class-stratified, highly individualised capitalistic society (Townsend, 1979). Homes and communities act as conveyor belts for poverty-enhancing characteristics as they raise

children to accept poverty as fate (Harrington, 1962). As a result, the poor do not work to get out of poverty even when opportunities are available (Lewis, 1968). In this theory, behaviour and attitudes make poverty inevitable and the culture of poverty is a way of accepting poverty; facilitated by resignation and fatalism (Holman, 1978).

The theory characterises the poor as socially excluded by own choice, unorganised, morally corrupt, and unmotivated (Holman, 1978). The poor do not participate in normal wellbeing enhancing activities available in the society and are not integrated in society's institutions. Further, the poor are not organised apart from relying on their extended family and community's cohesiveness. Under this theory, the morals of poor people are said to be different from the rest of the society. For example, they abandon family, initiate sex early, and practice free unions. Holman (1978) include helplessness, dependence, inferiority, resignation and fatalism, and failure to control impulses (evidenced by inability to defer gratification and plan for the future) as characteristics of the poor. Little motivation for change, advancement, and work underline the poor's resignation and fatalism. The theory posits that the poor are poor because they do not want to move out of poverty; they choose not to participate in work, mismanage their resources and families, and do not prepare their children to escape poverty.

Just like the character deficiency theory, this theory blames the poor for their poverty (Townsend, 1993). Thus even when presented with income-guaranteeing job opportunities the poor are said not take them since their culture "intervenes in the response to opportunities, sometimes making it impossible ... to develop the behaviour and value patterns needed" (Gans, 1970, p. 150). According to Gans (1970) this is not true in reality because fatalism or resignation comes when the poor *structurally* fail to realise their preferred or own-conceived alternatives. He argues that "if the culture of poverty is defined as those cultural elements which keep people poor, it would be necessary to include also the persisting cultural patterns among the affluent that combine to keep their fellow citizens poor" and concludes that poverty exists due to "an economic system that is dedicated to the maintenance and increase of wealth among the already affluent" (Gans, 1970, p. 156). In other words, culture alone cannot explain the existence of poverty.

Cycle of deprivation theory

This is a 1970s British version of the culture of poverty theory. It is credited to Sir Keith Joseph, who stressed the importance of child-rearing practices in the first five years for shaping personality in later life. This was an explanation for the persistence of

deprivation despite improved living standards in the UK. Unlike the culture of poverty, the theory takes deficient family morals and conventions as intrinsic conveyor belts of poverty-enriching characteristics in children which manifest in their adulthood (Hawthorn & Carter, 1977) . In this theory, deprivation and poverty pass from one generation to another through inadequate family practices.

Unlike the culture of poverty where socialisation enforces poverty, the cycle of poverty blames the absence of the right socialisation (Hawthorn & Carter, 1977). The theory states that there are aspects in culture that assist people to keep out of poverty and that failure to inculcate those aspects in children perpetuates poverty (Holman, 1978). Deprived children grow up to become parents with deficient child-rearing practices who end up raising socially deprived children themselves. This creates a cycle of deprivation and, over time, the culture of the poor ends up different from that of the rest of the society.

The poor in this theory are characterised by insecurity, sexual disturbance, inability to form close relationships, absence of a strong ego, inability to postpone satisfactions, marked narcissism, aggressiveness, a tendency to flee from unpleasant experiences, and a rebellious attitude towards authority (Holman, 1978). The deprived have improper attitudes towards work and ambition and therefore fail to succeed in occupations, marriages, and relationships.

There are similarities between the culture of poverty and cultural deprivation theories. One of them is that the poor are qualitatively and distinctly different from the rest of society and the other is that the family socialisation transmits poverty from generation to generation. The criticism raised against the culture of poverty theory also applies here. While accepting that socialisation plays a role in motivating children and shaping their personality, it is also true that not all children in poor families end up poor and that not all children in non-poor families end up rich. Some intervening factors can affect the final destination of socially deprived or well socialised children. Just like the culture of poverty theory, the cycle of deprivation is a partial theory of poverty.

Structural theories of poverty

Three theories look at low income as the major cause of poverty. Consequently, they explain poverty via income determination. The first, orthodox economic theory of poverty, assumes perfect and competitive markets, including the labour market. The second theory, dual labour market, assumes a differentiated labour market. The third

theory, radical economic theory, assumes highly differentiated labour markets with fluid wage determination.

The orthodox economic theory of poverty and underemployment links income to marginal productivity after assuming labour market equilibrium and harmony, perfect competition, homogeneity of labour and perfect identity of wage and marginal product. In this theory, poverty is a result of distribution of labour earnings, which is dependent on interaction between demand and supply of labour (Gordon, 1972). According to Townsend (1979), to get out of poverty an individual has to improve her/his marginal productivity through, among others, education, training and mobility.

The down side of the theory is that the assumptions it is based on are flimsy because perfect markets do not exist in the real world. Secondly, even if the assumptions were firm, low income is a distant cause of poverty. Thus it is more a theory of income determination than poverty because it cannot explain poverty in economies where wages are a non-existent source of income for the majority of the population (Gordon, 1972). As such it is a partial explanation of poverty, if at all.

According to the *dual labour market theory*, the poor get their wages from unstructured labour markets (termed secondary) whose wages and working conditions are inferior to primary labour markets, characterised by stable and decent pay and job structures. In this theory, there is very little inter-sectoral mobility between the two labour markets. The labour market in which one starts in is where one ends. Race, sex, and education are the major determinants of where one starts from, making some doomed to life of poverty (Gordon, 1972).

According to Townsend (1979), this theory is an improvement over the orthodox theory because it recognises the existence of labour market segmentation, inter-sectoral labour immobility and the role of non-market factors in wage determination. However, Gordon (1972) takes issue with the 'iron curtain' between primary and secondary labour markets because in practice it is difficult to separate labour markets based on job stability. Further, the theory suffers from the same problem identified under the orthodox theory; it is an income determination and not poverty theory.

The *radical economic theory of income determination and distribution* also explains poverty as a low-income phenomenon. In this theory, the power and productivity of labour vis-à-vis capital determines the level of wages and, by implication, poverty. Thus, poverty is an outcome of class struggle between workers and capitalists. In particular, social division of labour and their contracts in a capitalist economic system create

worker classes whose respective wages depend on their respective productivity (Gordon, 1972). The radical economic theory combines the orthodox theory (by considering demand for and supply of labour) and class conflict theory (Gordon, 1972).

This theory recognises intra-sectoral labour differentiation. Townsend (1979) argues that the differentiation enables employers to create worker classes and hierarchies and, using this 'divide and rule' system, determine income distribution among the classes. Crucially, the dual labour and radical economic theories recognise the non-existence of perfect competition implied by the presence of trade unions as well as employers' associations, and government institutions in the labour market (Townsend, 1979). According to Gordon (1972), poverty changes with the rate of labour exploitation by capitalists. Putting this differently, Townsend (1979) argues that what determines the level of poverty is the relative power of the institutions in negotiating the share of the final product.

These three structural theories are but economic theories of wage determination. Two assumptions link the theory to poverty. The first assumption is that low income causes poverty since low income implies low purchasing power of goods and services. The second is that wage income is the major, if not the only, source of income. Novak (1995), in support of the structural view, states that power relationships (e.g. class, race and gender) provide the only and better context to understand poverty. He concludes that it "is this relationship that lies at the heart of the nature and experience of poverty, and an understanding of this relationship as the cause of poverty must be the starting point of any attempt to define and measure it" (Novak, 1995, p. 63). The link between income and poverty is arguably weak (Sen, 1999). This view, and the theories it supports, focuses too much on opulence concept in its understanding of poverty. It would have been better if resources, which are broad enough to cover more than income and wealth, replaced income and wealth. In particular, the theories do not explain the link between income and human needs.

Lessons from the theories

There is no specific theory of poverty. What has been presented are just characterisation of poverty. They help breakdown the mystic poverty into easily 'seen' parts. For example, the character deficiency theories blame poverty on genetics, psychological state of mind, and culture (Holman, 1978). According to these theories, genetic deficiency/disorder leads to low intelligence and, therefore, failure to advance wellbeing. Poor attitudes, attributes, and psychological states of mind (manifested as

laziness, lack of industry and efficiency, sloth and sinfulness or absence of marketable skills) limit an individual's capacity to take advantage of free markets to sale own produced goods and labour services. Inappropriate cultural upbringing leads to dislike of work, and willingness to survive out of charity or state instead of working. Thus, individual genetics, psychological state of mind, and cultural upbringing determine how the economic person reacts to opportunities offered in the markets.

The structural theories, on the other hand, highlight the structural obstacles an individual meets in pursuing their goals, regardless of individual characteristics. They stress that a high IQ, strong 'economic nose to sniff' opportunities, strong and positive mind, or competitive upbringing are not guarantees of success in capitalist-controlled markets. The point being that the behaviourists ignore the need to analyse the structures (economic system, culture, and customs) that are vital in the process of transforming one's resources and using one's capabilities (e.g. labour) into functionings to achieve one's wellbeing. Townsend (1993) particularly calls for the inclusion of an analysis of the role of international, national and community level institutions in poverty production or reduction. At international level, he proposes analysing the roles of the IMF, World Bank, UN, EU, and multinational corporations. At national level, he proposes focusing on laws, regulations, and codes and employers' terms and conditions of employment; and at community level, customs and conventions.

Robert Pinker (1999) bemoans the polarisation because poverty "itself is a dynamic rather than a static phenomenon and the poor themselves are subject to complex processes of upward and downward *social mobility*" (p.1). He recommends recognising the "the diversity of values that motivate people and the many structural and cultural variables that shape their lives" (Pinker, 1999, p. 2). Sohata (1990) proposes including sectoral, policy and life cycle dimensions in a theory of poverty. He states that a theory of poverty should factor in location (rural/urban), sector of operation (formal/informal), and accessibility. He proposes that the policy dimension should cover macro as well micro policies like the budget (taxes and expenditures), institutions (social assistance systems), parastatals, controls, laws, regulations, public investment, incentive schemes, and public research (Sohata, 1990). Sohata's policy dimension is, in effect, a breakdown of the institutional analysis of poverty as proposed by Townsend (1993). Sohata's life cycle dimension includes fertility, infancy, childhood, adolescence, marriage, working life and old age, each of which brings with it specific needs.

Waxman (1977) brings behaviourists and structuralists together by arguing that poverty is a stigma from which the poor develop some behaviour to cope with as such the

culture of poverty is relational; it has both internal and external sources. According to Waxman (1977), the culture is not solely internal, as the behaviourists argue, and is not solely external, as the structuralists argue. Therefore, poverty analysis should take the middle ground; combine the best of the structuralists and behaviourists.

The bottom line is that there is a need for a theory of poverty that addresses bottlenecks affecting availability of resources, and development of capabilities, and expansion of opportunities so that individuals pursue their desired styles of life. Such a theory is likely to combine the individual characteristics and the structures that the individual works under. In other words, such a theory has to address the conditions that lead to the failure to satisfy minimum or basic human needs (Gregor, 2007). So far, such a theory does not exist. However, there are lessons like (i) theories seen together shed some useful light on poverty; (ii) the absence of a general theory of poverty does not stop poverty research; and (iii) concepts breakdown the complex poverty in manageable bits and as such no concept is useless just as none explains poverty comprehensively. It is on the basis of concepts rather than theories that poverty research has flourished.

2.3 Poverty concepts as sources of poverty measures

In the absence of a theory of poverty, concepts provide a platform for deriving poverty definitions and measures because a poverty concept provides a framework for understanding its related definition and, by extension, measure (Lister, 2004). By operating at a general level, concepts comprise meanings or understandings as well as discourses and images of poverty. A poverty definition breaks down a general meaning or understanding into a precise characterisation of poverty or being poor while a poverty measure operationalises the definition by providing ways of counting those in poverty and the extent or severity of their poverty (Lister, 2004). The move from concept to measures necessarily means narrowing down the focus, from a framework of poverty to a state of poverty to people in poverty.

This is in line with the recommendation that poverty measures must stem from theory and understanding of poverty (Novak, 1995) because a poverty measure is a translation of a poverty definition (Hagenaars, 1986). Poverty definition has two parts; analytical and operational. The analytical definition describes the state of poverty or being poor while the operational definition, which naturally follows from the analytical definition, provides a measureable characterisation of the poor (Novak, 1995). Poverty measurement then completes the poverty analysis process by finding details about the characterised poor, in terms of numbers and extent of their poverty. Townsend (1979)

states that different definitions of poverty lead to different methodologies of measurement.

Over time there have been a variety of poverty concepts that have been used or advocated for use. In fact since the inception of formal poverty analysis, there have been advances in the conceptualisation of poverty facilitated by general social, political and economic development in Europe and America. Starting from subsistence poverty, poverty has been conceptualised as failure to meet basic needs, failure to achieve a style of life lived by the average and capability failure to function as an active member of the community one is in. With constant changes in culture, life styles and social structures, there have been continuous changes in the measured basket of basic needs, styles of living, and society requirements of its members. Each of these concepts has its challenges. In some cases the challenges come from the concept itself while in others it is how it is defined or measured. Some of these are discussed below.

The *subsistence concept of poverty* only considers physical needs of a human. Apart from food, it also covers rent, bare minimum clothing, and heating. Subsistence poverty neglects the fact that people, unlike animals, have social needs in their various roles as citizens or parents or wives or husbands or neighbours, or friends. It is also sidesteps the fact that people are both consumers and producers. These roles, mediated by customs, values, and availability of needs satisfiers, determine the type and amount of physical needs required by a human being to function. Experts are employed to determine what is required for subsistence living.

The *basic needs concept of poverty* goes beyond physical efficiency by covering social needs as well. Basic needs covers at least food, shelter, clothing, basic furniture, and equipment but cover essential services notably health, water and sanitation, public transport, education, and cultural facilities and in some cases human autonomy and dignity. The coverage of basic needs is dependent on the researcher's objective but no scientific method exists that limits what can be included. The theory of human needs (Doyal and Gough, 1991) helps narrow the list but not all researchers may agree with the reasoning.

The *relative poverty concept* focuses the poor segments of the population on distribution of income or consumption. It does not dwell on what the income covers or what is consumed. No budget standard is used. A poverty line is imposed based on the position of the mean of the measure used. By ignoring what is actually consumed or what the income can purchase, it is more of an inequality than poverty concept.

The *relative deprivation* concept is based on the premise that as people become poor, they forgo consumption of goods and services that their peers consume as standard. This concept is an improvement of the relative and basic needs concepts in that the goods and services considered 'standard' are defined and that the definition is done by the people themselves. No goods and services are fixed over time since "during any period of a few years in history new commodities are made up differently, social roles are merged, replaced and extended; customs decline or grow or new ones become established; and the division between paid and unpaid work, as well as the scope and nature of that work, changes dramatically" (Townsend, 1970, p. 34).

The *capability concept* has been advanced by Amartya Sen in several publications (1982; 1991). The concept is an alternative to income-based poverty measurement in that it argues that it is not the resources that an individual or household has but how those resources are converted to wellbeing outcomes. The concept allows for the multi-dimensionality of poverty and relativity of poverty by space. Despite its many attractions the concept does not have credible operational definition and measures. However, some measures in the form of composite indices have been devised. Kakwani and Silber (2008a; 2008b) have jointly and individually advanced such measures.

The Oxford Poverty and Human Development Initiative (OPHI) is a specific research programme focusing on measurement of multi-dimensional poverty. Apart from developing measures for 'missing dimensions' of poverty namely employment quality, empowerment, physical safety, the ability to go about without shame, and psychological and subjective wellbeing (Alkire, 2007), OPHI has developed a Multidimensional Poverty Index (MPI) as an international measure of acute poverty (Alkire and Santos, 2010). The MPI has three dimensions (and ten indicators) namely education (years of schooling and school attendance), health (nutrition and child mortality) and living standard (cooking fuel, sanitation, water, electricity, floor, and assets).

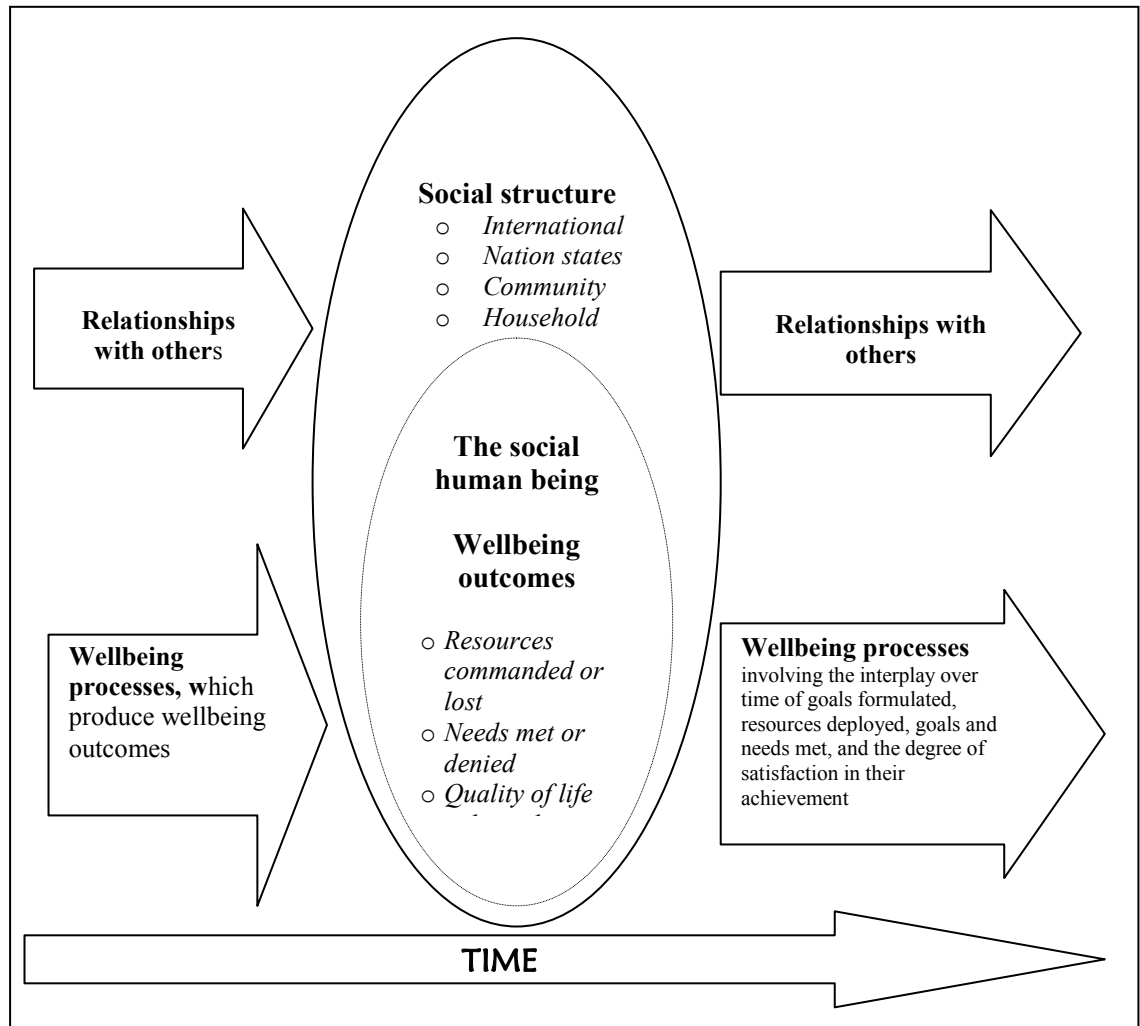
The discussion of the multidimensional poverty logically leads to a discussion of wellbeing. The expansion of poverty beyond resources under the capability approach inevitably puts multidimensional poverty on the same plane as wellbeing. In fact, poverty defined as illbeing neatly falls within the wellbeing plane. Many scholars have therefore moved from measuring poverty to measuring wellbeing (Bradshaw and Finch, 2003; Bradshaw et al., 2006; Fattore et al., 2006; Hanafin et al., 2006; Bradshaw and Richardson, 2008). Analysis of the research on wellbeing shows that they are similar to those measuring multi-dimensional poverty, insofar as they both use composite indices.

Other scholars working in the wellbeing research programme coordinated by the University of Bath are focusing their work on coming with various measures for wellbeing in developing countries (WeD, 2011). Scholars in the programme argue that poverty should be located in wellbeing discourse because wellbeing is wide enough to accommodate multidimensional poverty (Gough, et al., 2007, p. 4) and that poverty and suffering being variants of wellbeing, fit the capability approach (Gough, et al., 2007, p. 10). Echoing this, White and Ellison (2007) argue that “wellbeing offers rounded, positive focus which includes not only material resources and social relationships, but also the psychological states and subjective perceptions of people themselves” (pp. 58-9). The study of wellbeing goes beyond poverty because it is concerned with “the essential conditions for human flourishing” (White & Ellison, 2007, p. 159).

However, just like quality of life, wellbeing is not an agreed concept. Gough and colleagues (2007) report that in applied social science, wellbeing is a novel category whose meaning is yet to emerge (p. 5) and whose *nature* is yet to be agreed (p. 4). Gasper (2007), also states that wellbeing is still a complex term even when it is restricted to material wellbeing because even material wellbeing can embrace economic opulence, ‘objective’ needs and a variety of psychological (subjective) states. As such, there is no consensus on the tools for measuring it. Further, in many cases the tools are still ‘under development’. Just like capability approach, measurement tools for wellbeing prove more difficult to develop than the concept itself. To move forward, wellbeing as a research subject “requires both a better explanatory theory of need satisfactions and a more sophisticated measurement and communicative device than the human development index” (Gough et al., 2007, p. 34).

McGregor (2007) proposes a conceptual framework (Figure 2.1) that incorporates the livelihoods framework discussed by White and Ellison (2007), theory of human needs satisfaction and subjective wellbeing. In this framework, the social human being is at the centre relating with others at different levels of the structure in pursuit of own wellbeing goals.

Figure 2.1: Wellbeing measurement framework



Source: McGregor, 2007, p. 337

The framework also shows the intertwining of wellbeing processes and outcomes, the iteration of processes and outcomes over time. Given goals (a combination of needs and desirables), available resources are deployed and, depending on how the goals are achieved, new goals are reformulated and available resources at that point in time deployed to meet the goals. The process continues through time, mediated by the relevant social structures at international, national, community and household levels (McGregor, 2007).

The methodology developed to deal with this framework has three parts covering structures, processes and outcomes. There are two data collection parts under outcomes; (i) questionnaire covering resources and needs and (ii) qualitative methods covering quality of life. The questionnaire is used to collect data on individual demographics and distribution of resources (material, human, social, cultural, and natural) and basic needs

covering health, education, food and housing, and income and expenditure. It is also used to collect individual level data on levels of needs satisfaction. The income sub-component aims at mapping how household resources are transformed to meet needs or achieve goals, over a period of one year. The expenditure sub-component is used to collect individual level data on how needs are met or goals achieved. The methodology has two alternative routes it uses to factor in seasonal effects in income and expenditure; either to administer the income and expenditure questionnaire thrice a year or use a monthly household diary.

The quality of life component uses a three-phased approach. The first phase involves discussing with communities about goals and resources they consider important with the aim of establishing a community-specific workable definition of quality of life. The second phase involves gathering data related to the community's operational definition of quality of life. The third phase involves assessing the validity, consistency and reliability of various measures by relating community level data to household data. This third phase is important in that it checks the relationships between subjective data and questionnaire-collected quantitative and qualitative data.

The structures study includes community profiling (documenting salient demographic, social and physical characteristics of the community from secondary data, key informant interviews and participatory methods) and an institutional analysis of national and international structures of power, exchange and information that have a direct link to community level outcomes and processes. The institutional study also covers how community level actors mediate between the households and the outside (government, business and civil society organisations and institutions).

The processes study provides insights into relationships between wellbeing outcomes and structures using qualitative engagement with a purposively selected subsample of different individuals and households. This processes study is meant to determine the types of processes that households regard as most important in formulating their wellbeing goals and strategies. The study covers country and community specific themes, diary work and repeated interviews over an extended period.

A short hand of the methodology shows eight wellbeing domains (i.e. economic resources, local environment, agency and participation, social connections, family relationship, competence and self-worth, physical and mental health and values and meanings) influencing individual and household enabling environment, objective

wellbeing, reflections on the objective wellbeing and subjective wellbeing (WeD, 2011). The methodology uses a variety of research methods to ensure a wide inclusion of relevant wellbeing issues. In this methodology, subjective wellbeing is considered as important as objective wellbeing just as social, cultural and political resources are treated the same as economic resources. Its disadvantage is its complexity and the related resource requirements both in terms of time and money.

2.4 Measuring wellbeing and poverty: challenges and solutions

The concepts discussed above yield a variety of definitions and measures. However, some, like the capability concept, have no clear measure. Table 2.1 presents those that have been gleaned from available literature. This list may not be exhaustive but it paints the required picture; i.e. poverty is measured variously.

Each wellbeing measure can be classified in terms of how it measures the concept. A measure can be classified as direct or indirect depending on whether or not it directly/indirectly reflect the status of wellbeing under that concept. The measures can also be classified on the basis of whether they provide an absolute or relative level of the status. Another way of looking at a measure is whether it is objectively or subjectively determined. Again, a measure can be classified in terms of whether it is one dimensional or multi-dimensional. For example, income as a measure of wellbeing is indirect, absolute, objective and one-dimensional. Table 2.2 presents some of the classification and examples together with some brief explanations to illustrate the point.

Table 2.1: Poverty concepts, definitions and measures

	Concept	Elements of definition	Examples of measures
1	Subsistence (Townsend, 1993; Ringen, 2006)	Minimum to maintain health and working capacity (minimum for production and reproduction or survive and maintain physical efficiency)	Income equivalent to cost of a subsistence basket (food + non-food essentials)
			Estimated cost of 'consuming' the subsistence basket
2	Basic needs (Townsend, 1993)	Minimum requirements for private consumption for the satisfaction of physical and social needs.	Resources/income to cover a basic needs budget standard
			Estimated cost of 'consuming' the defined basic needs
3	Inequality/relative poverty (Ringen, 2006)	How the bottom income groups fare relative to the rest of the society	% of median/mean income % of median/mean consumption
4	Style of life/ Relative deprivation (Van Praag, et al., 1982; Mack and Lansley, 1985; Townsend, 1993; Gordon, et al., 2000)	No resources to enable participation in 'normal' style of life	Income at the point where the poor start to withdraw their participation
		Resources falling 'below a society's approved minimum'	Material and social resources converted to income equivalent
		Income too low to enable 'ends meet' or avoid hardship	Income
5	Capability (Sen, 1992; Lister, 2004)	Denial of choices and opportunities for living a tolerable life	Undefined minimum; use human development or wellbeing indices as wellbeing measure
		Inadequate capabilities to reach certain minimally acceptable levels; i.e. capability failure	Yet to be developed

Source: Townsend, 1993; Ringen, 2006; van Praag, et al., 1982; Mack and Lansley, 1985; Gordon, et al., 2000; Sen, 1992; Lister, 2004

Table 2.2: Categories of poverty measures

	Category of measure	Description	Examples
1	Direct measure	Measurement of poverty outcomes like living conditions or style of life	Consumption, expenditure, subjective assessment, HDI
	Indirect measure	Measurement of poverty determinants	Income or resources
2	Absolute	Measurement based on set standard	Calorific-intake based; basic needs-based, \$1/day
	Relative	Measurement based on a standard that is dependent on a situation	Percentage of median/ mean; deprivation index
3	Objective	Measurement based on some quantitative determination of indicators of say need or deprivation	Nutrition-based measures; Human-needs-based measures; Deprivation-index-based
	Subjective	Assessment of wellbeing based on views of households	Minimum income poverty Income evaluation poverty
4	Uni-dimensional	Measurement of poverty on one indicator or dimension	Income/consumption/expenditure
	Multi-dimensional	Measurement covering more than one dimension of poverty	Composite indices like HDI, wellbeing indices, child wellbeing indices

Source: Alcock, 2006; Lister, 2004

The many wellbeing and poverty measures also reflect developments in poverty research. Arguably, poverty is largely a product of capitalist development and poverty research is a by-product of modern development. For example, the pioneers of modern poverty analysis, Booth and Rowntree, concentrated on workers who had been ‘pulled to industrial sites’ and depended on wages as the only source of livelihood (Novak, 1995). Poverty analysis has traditionally concentrated in more developed and industrialised countries and its use in developing countries arguably followed the largely failed structural adjustment programmes designed and financed by the World since early 1980s (Oyen, et al., 1996).

The concern of pioneering poverty measurements was the physical efficiency of workers. They focussed on measuring absolute poverty in terms of what is needed to sustain life; mainly food, shelter, heating and warm clothing (Lister, 2004; Alcock, 2006). Perhaps not surprising most of poverty analysis in developing countries follows the absolute poverty tradition (Alcock, 2006). Absolute poverty utilises a basket of goods to determine a minimum level of consumption (expenditure) under which the poor fall. In

practice, experts determine a weekly budget standard of food and essential items for survival (subsistence concept) or food and non-food items socially determined as acceptable for living a normal life (basic needs concept).

The measurement of poverty in absolute terms survived but evolved over time. Starting from a basket meant for physical efficiency, a basic needs basket replaced it. The basic needs basket itself increased in size with affluence and open-mindedness. Alcock (2006) shows that over time and guided by culture, non-essential items like tea, radio, newspaper, presents to children, holidays, swimming, trips to cinema, and other leisure activities have progressively been included in the basic needs basket and since 1990s participation, freedom, and choice have variously been added in the basket, courtesy of the capability approach.

In some studies, the basic needs items are derived from observed expenditure (Alcock, 2006). This is more so for the non-food component of the basket where science cannot determine them. The use of income continues as a poverty measure, where poverty is lack of income (resources) to acquire the minimum basket of goods and services. Consumption as a measure gained currency with the realisation that in some circumstances, income is a less comprehensive and an indirect measure of economic status (Alcock, 2006).

Poverty analysis in developed countries rarely use subsistence poverty measures following the realisation that the rapidly declining subsistence-based poverty rates were blind to the fact that even physical needs are socially constructed and therefore just statistical artefacts (Ringen, 2006)³. This led to the reformulation of the 'rediscovered' relative poverty evident in earlier poverty discourses as far back as Adam Smith (Novak, 1995; Lister, 2004; Alcock, 2006).

Relative poverty uses a poverty line imposed as some proportion of the mean or median income/consumption. Relative poverty studies use different proportions but common ones are 50% or 60% of either the mean or median. There is no science behind the choice of the percentage or the benchmark statistic. However, the median is the preferred benchmark because it is not sensitive to outliers on the wellbeing measure. Further, the use of the observed mean or median implicitly takes into account changes in affluence and other style of life variables. However, there is no conceptual link between relative poverty and need just as there is no way of determining extent of poverty (Townsend, 1993).

³ Ringen (2006) reports that by early 1960s, the subsistence poverty rate in the UK was 2%.

Relative deprivation came to maintain the concept of relativity while addressing some of the problems associated with relative poverty like the setting of the arbitrary poverty line and the absence of a link to need (Mack and Lansley, 1985; Townsend, 1993). Relative deprivation sets out to determine an objective poverty line; a point on a ranked income scale where deprivation increases faster than the fall in income (Townsend, 1993). In Townsend's methodology, a combination of public opinion and expert manipulation, transforms a 60-indicator list of goods and services into twelve deprivation indicators used to derive two lines for the deprived and the non-deprived that intersect at a point considered as the poverty line. Mack and Lansley improve Townsend's methodology by reducing expert opinion in determining the deprivation indicators. This is accomplished by requesting respondents to indicate whether the absence of a needful item is due to choice or lack of resources. If a needful item is missed by at least 50% of the respondents then it is included in the deprivation index.

Relative deprivation studies have shown that it is possible to determine an 'objective' poverty line based on the relationship between a deprivation index and income (Townsend, 1979; Mack and Lansley, 1985; Desai, 1986; Townsend, 1993). Each found a point where the relationship between income and deprivation indices behaved differently, a point below which participation in customary activities and enjoyment of the benefits of being a member of a society is or nearly impossible. From that point, an individual or household is severely deprived to the point of withdrawing from society's style of life. In other words, at some point in the income distribution, low incomes force the poor to withdraw from being an active member of a society. Mack and Lansley (1985) pointed out that Townsend's methodology arbitrarily trimmed the list of indicators from 60 to 12. Yet their methodology also arbitrarily chose 50% as the cut off point between need and desirable. Although the 50% is easy to defend, it too is arbitrary because it does not have any scientific link to need or wellbeing or poverty.

The Leyden consensual poverty (van Praag, et al., 1982) is a version of relative deprivation. In this methodology, public opinion sets the minimum income required to escape poverty or hardship or 'make ends meet'. Poverty incidence comes from analysing the public views regarding required minimum income in line with corresponding household socio-economic characteristics. This method completely leaves the deciding of the income level necessary to avoid poverty in the hands of the public. Although sophisticated quantitative analysis is employed to determine the poverty line, the fact that public opinion sets the poverty line, the Leyden consensual poverty is also termed as subjective poverty. This underlines the point that how the poverty line is set

determines whether a poverty measure is subjective or objective. An analysis of the British Poverty and Social Exclusion Survey which combined the Leyden and Mack and Lansley methodologies⁴, found no divergence between subjective and objective poverty (Gordon, et al., 2000, p. 56).

The *capability approach* expertly expounded by Sen (1982) has remained a potential answer for multidimensional poverty measurement. The approach comes from dissatisfaction with income as a measure of wellbeing and poverty. This approach has been expounded more at the theoretical than empirical level. According to Nolan and Whelan (1996, p. 5), the capability approach is yet to be tested empirically. There are advances made though. The crude human development index developed and used by the UNDP is one of the few measures that are inspired by capability approach. Kakwani and Silber (2007; 2008) include potential tools for measuring multi-dimensional poverty as well as operationalising the capability approach.

There have been a few studies on multidimensional poverty or wellbeing. Stewart (2002) found that wellbeing studies conducted in Europe used material well-being, health, education and literacy, productive participation, social participation, housing, exposure to crime, political participation, and leisure pursuits as dimensions of wellbeing. Table 2.3 presents dimensions and indicators that have been used successfully in a number of studies.

⁴ The only difference was that instead of using three necessities for the multiply deprived, the analysis used two. In other words, it relaxed the deprivation criterion making it easier for a household to be defined as poor.

Table 2.3: Wellbeing dimensions and indicators

Dimension	Indicators	Other possible indicators
Material	<ul style="list-style-type: none"> ❖ Average equalised household income ❖ Poverty rate measured against a national poverty line ❖ Poverty rate measured against a region-specific poverty line ❖ Decile ratio ❖ Measure of housing quality 	Distribution of income Poverty incidence and persistence Poverty gap
Participation in productive life	<ul style="list-style-type: none"> ❖ Unemployment rate ❖ Long-term unemployment rate ❖ Share of working age adults 'not in employment' 	Jobless households
Education	<ul style="list-style-type: none"> ❖ Share of adult population with ISCED 3 qualifications or below ❖ Share of 17 year olds in full-time education 	Early school leavers
Health	<ul style="list-style-type: none"> ❖ Infant mortality rate ❖ Standardised mortality rate ❖ Self-assessed health measure 	Life expectancy
Social participation	<ul style="list-style-type: none"> ❖ Club membership ❖ Social contract with friends, relatives and neighbours 	

Source: Stewart (2002)

Bradshaw and colleagues (2006) analysed wellbeing of children in 25 European countries using eight dimensions (material situation, housing, health, subjective well-being, education, children's relationships, civic participation, and risk and safety) covering 23 domains and 51 indicators (Table 2.4).

Table 2.4 Child wellbeing dimensions and indicators

Cluster	Domain	Indicators
Material situation	Relative child income poverty	At risk poverty rate Relative poverty gap
	Child deprivation	Children reporting low family affluence (%) Children reporting < 6 educational possessions (%) Children reporting < 10 books in the home (%)
	Children living in workless families	Children aged 0-17 living in jobless households as a share of the total population of children 0-17
Child health	Health at birth	Infant mortality rate; Low birth weight
	Immunisation	Measles immunisation coverage; DPT3 immunisation coverage; and Polio3 immunisation coverage
	Health behaviour	Young people who brush their teeth > 1 a day Young people who eat a fruit everyday Young people who eat breakfast every school day Mean # days when young people are physically active for one hour or more of the previous/typical week Young people who are overweight by BMI
Education	Education attainment	Reading literacy attainment; Mathematics literacy attainment; and Science literacy attainment
	Education participation	Children aged 0-2 in registered childcare most recent yr Proportion of 15-19 year olds in education (%)
	Youth labour market outcomes from education	Proportion of the youth population aged 15-19 not in education and not employed (%) Proportion of pupils aged 15 yrs aspiring to low skilled work
Housing and environment	Overcrowding	Rooms per person in households with children
	Quality of the local environment	Proportion of h/holds with children that think it is unsafe or very unsafe to walk around in their area at night (%) Proportion of h/holds with children < 15 scoring six or more on a scale of physical environment problems (%)
	Housing problems	Proportion of h/holds with children < 15 reporting at least two housing problems (%)
Children's relationships	Family structure	Proportion of children living in single parent families Proportion of children living in step families
	Relationships with parents	Family meals around a table several times a week Just talking with parents several times a week
	Relationships with peers	Young people finding their peers kind and helpful

Table 2.4 Child wellbeing dimensions and indicators (contd.)

Cluster	Domain	Indicators
Children's subjective well-being	Self-defined health	Young people (11-15) rating their health as fair or poor
	Personal well-being	% above the middle of the life satisfaction scale % feeling like an outsider or left out of things % feeling awkward and out of place % feeling lonely
	Well-being at school	% feeling pressured by schoolwork % liking school a lot
Risk and safety	Child mortality	Accidental and non-accidental deaths under 19 years per 100000 most recent data
	Risky behaviour	Cigarette smoking; Drunkenness; Cannabis; Inhalants; Teenage pregnancy rate; 15-year olds who have had sexual intercourse; and Young people who used condoms during their last sexual intercourse
	Experience of violence	Young people involved in physical fighting in previous 12 months; and Young people who were bullied at least once in previous 12 months
Civic participation	Participation in civic activities	Young people's participation in two or more civic activities
	Political interest	Young people reporting political interest above median score

Source: Bradshaw et al. (2006, pp. 141-168)

In Mexico, Rojas (2007) reports of a study that avoided imposing wellbeing dimensions and indicators by using factor analysis. The analysis yielded seven domains of quality of life. These are presented in Table 2.5.

Table 2.5: Domains of life used in Mexico

Domain	Satisfaction with aspects of life
Health	Current health; and availability and quality of medical services
Economic	Housing; living conditions; income's purchasing power; and financial solvency
Job	Job's activity; job's responsibility; working shifts; and hierarchical working relations
Family	Spouse or stable partner; children; and rest of the family
Friendship	Friends; and availability of time to spend with friends
Person	Availability of time to pursue personal hobbies and interests; recreation activities; and personal growth and educational level
Community	Community services (rubbish collection; public transport; road conditions; public lights; neighbourhood safety); and trust in local authorities and neighbours

Source: Rojas (2007, p. 267)

Moller (2007) used seven dimensions (income, social security, access to jobs, material living conditions, housing, infrastructure services covering water and sanitation, electricity and education) to measure wellbeing in South Africa. She recommends the use of multiple measures instead of composite indices in poverty profiling if the objective is to inform policy. This is because “a profile of quality indicators would clearly pinpoint areas that fell short of citizen’s expectations of the good life, and needed urgent remedial action on the part of policy makers” (Moller, 2007, p. 246).

The OPHI’s Multidimensional Poverty Index has already been adopted by UNDP’s Human Development Report and covers 104 developing countries (UNDP, 2011)⁵. The index is reported alongside the Human Development Index and Gender Inequality Index and seems to replace the Human Poverty Index in the latest report. As for the multidimensional poverty index, it has been demonstrated that it is different from the human development index and the human poverty index based on how it ranks countries significantly different from any of the two indices (Alkire & Foster, 2007).

Batana (2008) also reports of the use of a WeD-inspired multidimensional poverty measure in fourteen Sub-Saharan African countries based on existing data. This measure covers four domains namely assets, health, education and empowerment (Alkire & Foster, 2007). On the other hand, the WeD methodology was implemented in four countries namely Bangladesh, Ethiopia, Peru and Thailand (Copestake, et al., 2009). The WeD Peru team used factor analysis to identify and analyse wellbeing components to “minimise reliance on the ideas (and values) of outsiders in selection and classification of items” (Copestake, et al., 2009, p. 24). The methodology is also being implemented in Zambia and India (WeD, 2011). The WeD research work has a number of breakthroughs that are of use to this study. The first is that it is possible to develop national-level assessment scales from a smaller set of local level items as long as the items are shared across the country (Copestake, et al., 2009). The second is that it is possible to identify components of wellbeing using factor analysis without imposing an expert conceptual framework.

The implication of the first breakthrough is that subjective wellbeing data from non-questionnaire tools can still be used across the country if the local specificity is sacrificed, albeit that it is best-suited for local analysis. This is important because it gives some credence to the use of SSI and FGD reports to get dimensions or household features that

⁵ The number of countries covered by the index continues to grow as countries with relevant data are added. By December 2011, the number of countries had reached one hundred and nine (OPHI, 2011).

are applicable across the country. The second breakthrough has two implications. The first is that it gives strength to the position taken in this study that it is not necessary to impose a conceptual framework when analysing data from field reports. The second implication is that the thesis has some basis for using factor analysis on data obtained from in-depth interviews and focus group discussions reports.

It is also noted that the subjective wellbeing assessment in WeD use open-ended SSI as opposed to questionnaire-based assessment as recommended by Dolan and others (2008). In the WeD methodology, instead of an integrated household questionnaire with a module covering the subjective wellbeing assessment, a multistage data collection strategy is employed to get different types of data that complement each other. Each methodology has advantages and disadvantages and which methodology to adopt depends on the objective of the study. Suffice to say that the goal of the WeD research programme is to “develop a conceptual and methodological framework for understanding the social and cultural construction of wellbeing in developing countries” (Copestake, et al., 2009, p. 3). Further, the WeD methodology is specific to developing countries where social and cultural factors are fundamental in shaping subjective assessments of wellbeing.

Whether the OPHI’s multidimensional poverty index is better than the WeD’s measure is an empirical question. These two measures share two domains (health and education/schooling). The OPHI index includes a domain on standard of living with six indicators. This is absent in the WeD measure and the WeD measure has assets and empowerment which are absent in the OPHI measure. On the other hand, these are just two of the many measures of wellbeing. With proliferation of multidimensional poverty measures⁶, it is only the objective of the study that assists in narrowing down the choice.

The absence of subjective wellbeing in national poverty or wellbeing profiling has been picked up as an issue in recent years (Dolan, et al., 2008). Indeed, there has been some urgency to include subjective wellbeing following the Report by the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz, et al., 2009). In the UK, steps are being made to ensure that subjective and objective wellbeing are treated equally in the official statistics (Beaumont, 2011). Of course, work on subjective wellbeing has been done in the UK for some time (Dolan, et al., 2008). What is missing

⁶ Batana (2008) discusses these measures in the introduction

is the systematically and consistent collection of subjective wellbeing data at the official level. This is what Dolan et al (2008) and Stiglitz et al (2009) recommended and what the Office of the National Statistics (Waldron, 2010; Beaumont, 2011) plans to do. This will put subjective wellbeing and objective wellbeing on equal footing in data collection, analysis and presentation. It is likely that once the UK government develops the system other countries, including Malawi, will learn and adapt the system for their own use.

2.5 Issues on wellbeing and poverty measures

2.5.1 Mismatches between concepts and measures

Given that a measure is a translation of the concept through the analytical definition, it is imperative that a measure matches the concept since a measure has no life on its own. However, mismatches are a common place and this has been a concern for some researchers. Ringen (2006) reports that some studies mismatch poverty concepts and measures, making their results misleading, if not invalid. Nolan and Whelan (1996) note that some poverty measures are inadequate to 'translate' the underlying poverty concept to the extent that they fail to correctly identify the 'poor' in line with the concept. Rein (1970, p. 47) gives an example of a programme whose goal is to improve wellbeing yet its evaluation uses subsistence poverty measure to check whether it achieved its goal.

Some of the mismatches are historical. In centuries before the industrial revolution, the concept of poverty was for the propertyless people who worked for other households to earn a living (Novak, 1995). In those days, all workers were classified as poor and the proportion of workers to the total population was the poverty incidence. Following the industrial revolution, the subsistence concept of poverty replaced the structural view of poverty as a group of the workers were now considered to be affected. From then on failure to meet subsistence levels of existence without begging and getting assistance defined poverty (Alcock, 2006). Measuring poverty meant estimating the level of income that enables the consumption of goods and services that keep soul and body together because the poor were uprooted from subsistence type of living.

With trade unions and marked development, the subsistence concept gave way to basic needs concept where the interest was to cover both subsistence and basic goods and services. To be poor under this concept means consumption of food that is less than the recommended minimum and consuming non-food goods and services is below the minimum acceptable. This concept also focused on workers in industry and still used

income as a measure because the worker only relied on income to acquire such goods and services. This means that anyone whose income earned was below the cost of the minimum food and non-food baskets the individual was classified as poor.

Use of income as a measure dominated even in all the concepts except the capability concept. The reasoning was the same. The poverty of interest was of workers who solely depend on wages for all their livelihoods. However, there is some mismatch when the consumption is measured by income earned. By using income to measure consumption it is assumed that income is used to purchase what is considered as basic or standard first before any other type of expenditure. This assumption may not always be true. Using expenditure would be an improvement over income because expenditure is a very strong indicator of intention. However, even then expenditure does not always translate to consumption. Thus an improvement over expenditure would be to measure the consumption itself because it is more direct than income. Others argue that even consumption is not wellbeing because the same consumption does not yield the same wellbeing. This is where the capability concept was hatched (Sen, 1982; 1991).

There are also others who argue for more open mindedness because not all poverty is amenable to measurement. According to Lister (2004) measureable poverty is no better than (or superior to) other forms of poverty that cannot be measured easily and measuring poverty using a single measure is but a 'technical artefact' because poverty is multisectoral as well as multidimensional. She contends that if concepts of poverty embrace 'how people talk about and visualise poverty' (Lister, 2004, p. 4) then it follows that conceptualisation of poverty should benefit from the involvement of the people who feel and talk about poverty.

The relative deprivation and consensual poverty concepts seem to get this idea because behind these concepts is an understanding that people themselves are better placed to define poverty than experts. For example, Mack and Lansley state that 'need has no meaning outside the perceptions of people' (1985, p. 41). The involvement of people under the relative deprivation and consensual poverty concepts is only at the measuring stage and not conceptualising or defining. It must be said that the Breadline Britain methodology as practised by Gordon and colleagues (2000) of conducting FGDs across the country to first determine the list of goods and services considered necessary for an acceptable style of life is one big step towards involving households in defining poverty. However, there is still need to involve the people even at those earlier stages so that their involvement at the measuring stage makes sense to them.

2.5.2 Comparison of quantitative measures

The commonest measures of wellbeing and poverty have been income, expenditure, and consumption. The application of the measures varies from study to study. In theory, measure is a derivative of a concept or theory. In practice, what drives the choice of a measure is pragmatism in the face of limited financial resources vis-à-vis required data and time. In developed countries, income is easier to collect than expenditure and consumption. In developing countries, none of the three measures is readily available. Data for the measures are collected through household surveys. Since one survey can be used to collect data for all the three measures, it is possible to use any of them. Probably the question is on the quality or appropriateness of each of the measures in the context of developing countries.

Income measure

The basic coverage of income as measure is wages and salaries. In general, income covers resources like money, financial and capital assets. Broad definitions also include employment benefits, social security benefits, and private income in kind (Table 2.6). To compute the measure, all non-cash income is valued and converted into cash income equivalent. Other estimations replace the holdings of stocks and shares, and value of property, land, and buildings with net additions to wealth in the reference period; i.e. flow instead of stock.

Table 2.6: Different types of income

	Dimension of income	Examples
1	Current cash	Wages and salaries, income from assets, dividends and interests, social security benefits and pensions
2	Capital assets	Cash and deposits in financial institutions, holdings of stocks and shares, value of property in businesses, land and buildings including household possessions and facilities, and education qualifications, especially beyond primary
3	Employment benefits	Income in kind like housing, cars and travel, education, meals and entertainment
4	Social services benefits	Value of public service benefits in kind – health, education and housing
5	Private income in-kind	Gifts of food and clothing, produce from land and gardens, help with outings, holidays and education

Source: Townsend (1970)

According to Townsend (1970), income has been defined variously in studies. Others use gross income while others net out taxes; others further net out housing costs while others gross them in. The question that needs to be answered in the choice of the

measure is which of these income best approximate wellbeing status or which would impact on wellbeing status most. Those who net out taxes and housing costs focus on finding a measure of available resource for 'commanding' a standard of living. Those who use gross-of-housing-costs income consider the type of housing to be an integral part of standard of living and that the level of housing costs (rent/mortgages) reflects more the quality of the housing than the type of financing. This effectively takes mortgage or rent as use value of the housing.

Collecting income is complicated in developing countries because of diversity of sources as well as intervals of receipt of the income (Townsend, 1970). On diversity, he mentions that one source of income can have multiple intervals of different amounts; one household can have different sources each with multiple periods of receipt and amounts. The result is that income earners have recall challenges and depending on the chosen recall period in the questionnaire the quality of the data would be affected if it is inappropriate for most of the respondents. To minimise the impact of these problems, studies use multiple report periods for various sources of income depending on commonly known frequency of receipt (Townsend, 1970). For example, the past seven days can be used for micro-enterprise income, the past one month for wages and salaries and the past twelve months for crop sales which are then annualised to normalise them.

Expenditure measure

Some poverty studies use the expenditure approach (Ravallion, 1994). It is one of the direct measures of economic welfare because it measures outcomes. In this method, all expenditures an individual or a household does are added up to come with a distribution of expenditure. It assumes that all purchases are for the individual's or household's use and good. The effect of tastes (and brand loyalty) is assumed away. At the least, the measure covers all cash expenditures on goods and services for current period consumption. The measure excludes expenditure on investment and durable goods because their consumption goes beyond the year they are purchased. It is the annual use value of all investment and durable goods which are included in the measure. In its broad usage, expenditure includes estimated value of non-cash acquisition of goods and services. This includes valuation of in-kind gifts.

In developed countries, the frequency and volume of purchases make the method impractical. Although it is theoretically better than income, it is rarely used. Even in developing countries where the frequency of purchases is relatively low, low

monetisation of household economies implies that expenditure covers wellbeing rather inadequately.

Consumption measure

The consumption measure pools non-cash and cash household economies together in that it benefits from expenditures as well as own production (Ravallion, 1994). In practice, the consumption measure replaces expenditure on durable goods with their use value of all durable services and also nets out expenditures on investment items (medical care and education) and cash donations. At the end of the valuation, a cash equivalent of consumption is established. Equivalent scales are used to normalise consumption across households of different demographic characteristics. According to Meyer and Sullivan (2003), consumption is the closest measure of wellbeing because it reflects current living standards but is blind to quality or sustainability of sources of the consumed goods

Comparison of the three measures

Income is supported as a measure by many. Baudot (2000) and Gordon and colleagues (2000) argue that income defined to include other resources is a vehicle for the satisfaction of material needs (Gordon, et al., 2000, p. 18); and lack of control over resources is inseparably linked to poverty (Baudot, 2000, p. 25). This echoes what Townsend (1970) stated earlier on that income is a sufficient measure of economic position when “all receipts which increase an individual’s command over the use of society’s scarce resources – net accretion of economic power between two points in time” are included (p. 24). Others do not agree with this.

For example, Meyer and Sullivan (2003) argue that it is likely that ‘all receipts’ highlighted by Townsend (Table 2.6) exclude in-kind transfers and illegal sources, which may be important for poor households. In fact, Meyer and Sullivan (2003) and Sen (1982) contend that consumption is a better measure of poverty than income because it is a direct measure. Ringen (2006, p. 160) gives five reasons why income is not a good proxy of consumption and by extension wellbeing or poverty. First, income is useful only in markets where income has some ‘power’ to command goods and services. Second, ‘the same income does not buy everyone the same consumption’. Third, the market is not the same for all because education, knowledge, and information influence how income interacts with the market. Fourth, when estimated from surveys, income is an inaccurate measure of economic resources since it excludes wealth. Fifth, and echoing

Nolan and Whelan (1996), low income is not the sole determinant of current consumption although low consumption is strongly influenced by low income.

Fields (1980) supports the argument that consumption is better than income. He gives a number of reasons. The first is that it directly measures the *flow* of utility-producing inputs. The second is that it approximates permanent economic position better than current income since income only measures the *potential* to acquire those inputs. This is why low income does not always imply low consumption as pointed out by Nolan and Whelan (1996). Since consumption manifests *actual* and not *potential* flow, income is only a proxy measure of poverty because it only approximates consumption. The third reason is that price differences of the same item drive a wedge between distributions of income and consumption. This wedge makes consumption a better measure of poverty than income because consumption already factors in price decisions. Conversion of income into a measure requires making assumptions on the prices of goods and services to ascertain how much an income 'can' command.

There are other reasons in support of consumption. One of them is that consumption is smoother than both income and expenditure (Meyer and Sullivan, 2003; Ringen, 2006). Unlike income, consumption is smooth also because it captures the effect of access to credit and previous acquisition of assets (Meyer and Sullivan, 2003). Further, household income distribution is more unequal than household consumption distribution (Novak, 1995). Sen (1982) argues that income is second best to consumption because it measures wellbeing indirectly. However, consumption does not have universal approval either.

Townsend (1970) argues that collecting and estimating consumption data from the poor is almost impossible. On the other hand, Meyer and Sullivan (2003) report that income is relatively difficult to collect among the poor, even in developed countries. Wilson (1996) and Chambers (1997) argue that income collected through household surveys is normally incomplete; it does not cover all resources. Meyers and Sullivan (2003) state that income is always lower than consumption and singles out self-employment earnings, private transfers, and public transfers as the most under-reported as respondents attempt to hide their income. In general, there is little bias in the collection of consumption data although measurement errors exist. On income and expenditure, Townsend (1970) states that income is generally understated compared to expenditure.

Thus conceptually consumption is a better measure of poverty than expenditure and income and expenditure is better than income. Practically, though, income is a preferred

measure in developed countries while consumption supported by expenditure carries the day in developing countries where all are measured with errors (Meyer and Sullivan, 2003). Gordon and colleagues (2000) also support the use of more direct measures. Fields (1980) recommends the use of both income and consumption as measures wherever possible.

Given this scenario, Chambers (1997) argues that both income and consumption measures, if determined from questionnaires surveys are researchers' social and personal constructs because of the 'reductionism' implicit in pre-coding responses to questions. He argues that by pre-coding the responses varied and dynamic needs experienced by the poor are replaced by researcher-standardised needs implicit in the codes. He instead recommends wealth ranking although he is quick to point out that wealth ranking is not always accurate if done incorrectly.

2.5.3 Unit of analysis – gender dimension of poverty

Most of poverty research in general uses household as a unit of analysis. This is also true for Malawi where consumption expenditure is used as a measure of household wellbeing (GoM & World Bank, 2007; GoM, 2000). The use of a household as a unit of analysis assumes that consumption is equal amongst household members and that expenditure on each household member is equal. This is hardly the case even in Malawi (GoM & UN, 1993). Even on the basis of human needs, men and women, boys and girls, adults and children, pregnant/lactating women and other women have different needs. While sophisticated adult equivalent scales can deal with these human needs differences, they fail to deal with other intra-household differences in general (Lister, 2004).

Given that poverty is a function of structures and processes in terms of its creation and perpetuation (Lister, 2004), there is bound to be unequal distribution of poverty amongst women and men because social, economic and political structures confronting women are different from those confronting men and the processes that create poverty are not gender blind (Ruspini, 2001). In particular, there are differences among men, women, parents, children, adults and the elderly emanating from differences in interests, power relations, division of labour, access to resources (e.g. food and clothing), space, warmth, light, and responsibilities say in ensuring the provision of basic necessities and needs of children (Ruspini, 2001; Pentazis & Ruspini, 2006). These differences mean that women and men, for example, could have different causes of poverty and therefore experience poverty differently (Pentazis and Ruspini, 2006). This implies that women, men, boys and girls in the same poor household, can experience poverty rather differently (Ruspini, 2001). On the other hand, even in a non-poor household, it is

possible to have a poor woman or girl because, as Ruspini (2001, p. 106) puts it, “a poor person may be a member of a rich family and that the burden of poverty falls mainly on women.”

Indeed most research has found that women are at a disadvantage because they generate less income than men, spend less of their income on themselves than men and more of their resources to ensure availability of basic necessities and child care; and consume less than other household members; (Chant, 2010; Pentazis & Ruspini, 2006). There is therefore a strong basis for a gendered analysis of poverty.

However, gendered analysis of poverty has implications on data collection as well as unit of analysis. Regarding unit of analysis, gendered poverty analysis requires analysis of data at individual, instead of household, level. Collecting data at an individual level allows not only gendered analysis but also other types as well. With individual level data, it is easier to group individuals by demographic characteristics like age, sex, education level and marital status. Such fine analysis is likely to lead to better policy formulation and programme design than otherwise. Thus one of the conditions for fine analysis is level of data aggregation. As Pentazis & Ruspini (2006) state, most of the data collected even in developed countries is mostly at household level. Further, Ruspini (2001) states that meaningful gendered analysis of poverty requires individual data on structures and processes that create and perpetuate poverty or enable people to escape from it.

This requirement is what has slowed down gendered analysis of poverty, even in developed countries (Pentazis & Ruspini, 2006). No wonder the household is still the used unit of analysis even for subjective wellbeing (Stiglitz, et al., 2009) with sex of the household head as the only possible channel for gendered analysis of poverty (Pentazis & Ruspini, 2001). Unfortunately, the use of women-headed households as a proxy for gendered analysis is misleading because of the diversity of such households (Chant, 1997).

On the other hand, Pantazis & Ruspini (2006) have demonstrated that once data at an individual level is available, gendered analysis of poverty is possible. This leaves the level of data aggregation as the main decider of the unit of analysis. The lesson from this discussion is that as long as women and men are different in Malawi, the individual should be used as the unit of poverty analysis. Again, since gendered poverty analysis is crucial for meaningful poverty reduction, data collection systems should be changed to allow for collection at individual level.

2.6 Operational definition of poverty: drawing a poverty line

Whatever measure is adopted, there is need to set a standard that identifies two groups in the sample; the poor and the non-poor. Quantitative measures like income, expenditure and consumption require three separate steps to identify the two groups; i.e. estimating the wellbeing status of each subject (household/individual), determining a point on that measure that separates the poor from non-poor, and determining the number or proportion of the poor out of the population. A poverty line is the point on the measure where the two groups are separated and it is therefore an operational definition of poverty.

There are many ways of determining the poverty line and in theory they should be inspired by the poverty concept is in use. Some poverty lines are imposed, for instance the US\$1 per day per person or the 60% of the median of the measure while others use minimum wages, and minimum benefits levels (Viet-Wilson, 1998). Some poverty lines represent estimated cost of expert-drawn budget standards (basket of goods and services) or family budget units drawn from actual consumption or expenditure levels (Viet-Wilson, 1998). Items in the basket are dependent on the poverty concept adopted. Market prices are the preferred source of costs although computed prices are used in cases where the market does not supply the goods and services.

The family budget units methodology was developed to get around the problem of using expert-drawn baskets of needs (Bradshaw, et al., 1987; Bradshaw, 1993). In this methodology, need is assumed to be implicit in the actual expenditure or consumption pattern. The role of experts in this methodology is to establish a range of family budget units for different family types based on actual expenditure patterns, calculate consumption needs of different family types, and establish weekly budgets for each family type based on actual expenditure patterns.

Under consensual poverty approach, there are two ways of drawing a poverty line, depending on the type of question asked. The minimum income question asks the respondent to estimate how much income a hypothetical family of certain demographic characteristics in their community would need to achieve a certain living standard. In this method, the poverty line is an average of the estimated incomes normalised by demographic characteristics. The income evaluation question requires respondents to indicate goods and services they regarded as necessities for some living standards. Those mentioned by the majority of the respondents make it into the basket of necessities. A

costing of the goods and services yields the poverty line in this consensual standard of living approach. The valuation of the basket is similar to that done for the budget standard.

Other than the consensual income poverty line and physical efficiency subsistence basket, poverty lines are arbitrary. They reflect more the value judgements of researchers than the condition of poverty. The arbitrariness comes in when drawing the basket of goods and services. This makes the poverty 'found' not as objective as it is supposed to be, especially when the objective is to influence policy. Uncomfortable with this 'subjectivity' some researchers set out to and derived a 'value-free' poverty line out of deprivation indices (Townsend, 1979; Mack and Lansley, 1985; Desai, 1986). There have been questions on the 'objectivity' of derived poverty line from this methodology (Piachaud, 1987) and even Mack and Lansley (1985) who also derived a 'poverty line' from deprivation indices, admit that as long as socially perceived necessities 'construct' a poverty line, that line is but subjective.

Thus there is no science available to help decide which method is most suited on what condition. Martin Rein (1970) likens the search for a value-free poverty line as the search for the philosopher's stone. Novak (1995) considers unrealistic the idea that a poverty line can 'objectively' separate the poor from non-poor because there is little qualitative difference between those around the poverty line since the experience of poverty is a continuum. Poverty lines are therefore political constructs (Lister, 2004) and therefore subjective. This makes poverty be 'in the eyes of the beholder' (Orshansky, 1965) because the amount of poverty found is dependent on its definition and measure (Ringen, 2006).

Consequently, most disagreements centre on the choice of goods included in the basket. The scientific concept of poverty clearly favours the limiting of the basket only to goods and services that would ensure survival and autonomy. The moral concept of poverty favours the use of a basket that caters for both physical and social needs. Granted that these are opposed views, an acceptable poverty line is but a dream. Apparently, what is important in poverty analysis is to make one's position clear (Bevan, 2007).

2.7 Identifying the poor

Most quantitative poverty analyses present measures at individual level. This facilitates statistical manipulation. However, there is no national database of the poor despite many studies. One of the reasons is that the basis of measures is sample surveys and not census. Even if the census is the basis of the results, changing circumstances make poverty

dynamic. The poor of yesterday may not be the poor of tomorrow and the rich of yesterday can as well be the poor of tomorrow. This means that identifying the poor requires fresh analysis of circumstances. Whether the analysis of the conditions is on household or individual level depends on the objective of the identification.

In theory, the operational definition of poverty provides a criterion for identifying the poor. If consumption of less than 3,000 calories per day per person defines the poor, then counting the amount of calories consumed by each individual leads to the identification of the poor. If being in a female headed household is defined as being poor, the poverty rate is the total number of members in female headed households relatively to total household population. In each of the examples, a register is required to identify the poor - of calorie consumption by households/individuals need to exist and population of households by sex of household head and the corresponding household population. In practice such registers do not exist. This means that the identification of the poor requires a census of all households or individuals in order to determine who meets the criteria.

Unless it is a small scale project, conducting a census is expensive and wasteful if the idea is to establish a database for identifying the poor because results of today may not be the same tomorrow since household and individual circumstances may change rapidly making the 'shelf life' of such data very short indeed. In practice, it is very rare to identify the poor just for 'record purposes'. It is also rare to identify the poor, individually and physically, in the entire population. Further, Malawi's population and housing censuses collect too rudimental data to use for the identification of the poor unless the operational definition of the poor is as crude as demographic groups like 'members of female-headed households' or 'double orphans'. Identification of the poor, in the real world, is associated with social transfers. The operational definition of poverty in such cases is generally dependent on the objective of the intervention. Once the definition is chosen, the poor are identified.

In developing countries, poverty profiles are mostly used to identify proxy indicators or categories for identifying the poor. Once the poverty line is established and the poor identified, the characteristics of the poor and non-poor are used to determine poverty correlates. The poverty correlates are used as proxy indicators. Project implementers use these to identify beneficiaries of social transfers (Conning and Kevane, 2002; Coady and Skoufias, 2004; Galasso and Ravallion, 2005). By implication, the poverty correlates reflect what the questionnaire covered and by extension the poverty concepts

and definitions included in the questionnaire. This is one of the areas this study is exploring.

2.8 Poverty analysis in developing countries

Apparently, poverty research is a shadow of capitalism-driven poverty as evidenced by its late arrival in developing world. Poverty discourses and poverty research in developing countries are 'imported' by international agencies most notably the World Bank, IMF, EU, and UN Agencies (Townsend, 1993). Starting in the 1990s, the EU and World Bank, among others, also embarked on face-saving poverty assessments in developing countries (Townsend, 1993). A review of poverty research in developing countries found that researchers used no theoretical frameworks or simply borrowed theoretical or conceptual frameworks uncritically and that most of them were externally financed, possibly explaining the absence of home-grown poverty discourses (Oyen, et al., 1996).

The advances in poverty analysis in developed countries are yet to filter to developing countries. For example, poverty analysis in developing countries rarely employs methodologies like relative poverty, relative deprivation, and consensual poverty. There are reasons for this. Apparently, the level of development justifies the use of some measures. Prevalence of hunger, poor shelter, overcrowding housing, poor clothing, ill health, illiteracy, and even totalitarian regimes justifies the use of absolute poverty measures (Rein, 1970). One other reason is that there is little monetarisation of consumption and production activities. Low monetarisation of household economies make any measure dependent on the level of income less effective because of the required estimation of income from a variety of resources.

International organisations only use the crude absolute poverty measurement US\$1 or US\$2 a day per person poverty lines to compare developing countries (Townsend, 1993). For country poverty reports, the absolute poverty measures dominate. The commonest status measure is consumption expenditure computed from a socio-economic survey (Ravallion, 1994). A poverty line is determined based on a food and non-food basket. In this methodology, WHO recommendations on calories per day per person are used for food component while observed expenditure at the mean/median economic measure determines the non-food component thereby replacing expert determination of the non-food component. Of late, subjective assessment of wellbeing has been included in integrated household survey questionnaires. Although they are not a permanent feature of poverty profiles, at least in Malawi, the inclusion of this aspect

shows a move towards including the voices of the people in poverty research in developing countries.

2.9 Factoring in of voices of non-experts in poverty research

Since Townsend (1979) and Mack and Lansley (1985) works on relative deprivation, there have been efforts to involve households in poverty research. The Leyden consensual poverty work added yet another angle to the household's role in determining the poverty line and by implication poverty rate (van Praag, et al., 1982). The participatory poverty assessments, which use rapid rural appraisal or participatory rural appraisal approaches, bring in communities into the poverty research arena. While the relative deprivation, Leyden consensual poverty and subjective assessment of wellbeing are done in the context of a household questionnaire, the poverty assessments are not. The rest of the chapter is then devoted to discussing the subjective assessment of wellbeing and the participatory rural appraisal approach as vehicles used to bring in the voices of the non-experts into poverty research.

2.9.1 Household voices: self assessment of wellbeing

The Leyden approach also introduced evaluation of wellbeing status by directly requesting respondents to indicate the level of income required either for a hypothetical 4-member family (or their own family) required to avoid living sub-optimally described various as 'to make ends meet' or 'to get along' or 'to live a decent life' or 'to avoid feeling poor' (Lokshin, et al., 2004; Mangahas, 1995; van Praag, et al., 1982). In some cases, respondents are requested to estimate level of income associated with various statuses of living like 'very bad', 'bad', 'insufficient', 'sufficient', 'good' and 'very good' (Bosch, 2001).

More progressive approaches request respondents to directly evaluate their wellbeing status (Moller, 2007; Ravallion and Lokshin, 2002; Van Praag, et al., 2003) represented by 'overall life satisfaction' or 'rights or power' or 'economic wellbeing' (Bosch, 2001, Narayan and Petesch, 2005). Thus there has been some progression of people's involvement in poverty analysis; from merely providing their income, consumption, and expenditure to indicating necessities and evaluating their own style of life.

In general, economists and poverty analysts prefer to estimate cardinal utility from data on income or expenditure or consumption questions to ordinal utility estimated through attitudinal questions (Sen, 1982; Van Praag, 1991). Critics are not sure whether respondents have the same understanding of the terms used when giving their perceptions. For example, Van Praag (1991) reports that sceptics are not sure whether

respondents have the same understanding of the verbal labels like 'very satisfied', 'satisfied', 'neither satisfied nor unsatisfied', 'unsatisfied' and 'very unsatisfied'. Mangahas (1995) argues that terms like 'to live a decent life', 'live decently', 'make ends meet', and 'to get along' used in the minimum income question (MIQ) are too vague to draw similar interpretations. Bosch (2001) also questions the uniformity of understanding of terms like 'in your circumstances' in some of the MIQs.

Lokshin and colleagues (2004) also argue that the concept of income is not uniformly understood in developing countries where a large proportion of consumption is non-monetary. In fact, Lokshin and colleagues report that subjective poverty lines derived from the MIQ 'do not seem to generate sensible poverty profiles' just as they 'show weak correspondence to both objective and [other] subjective poverty measures' (2004, p. 560). Actually Ringen (2006) rejects any measure that is based on feeling because "to be poor depends on how you live and not how you feel" (p. 146). In this line, Sen (1999) argues that a person's "well being is concerned with a person's achievement: how 'well' is his or her 'being' ... an assessment of the particular achievements of the person – the kind of 'being' he or she succeeds in having" (pp. 3, 33).

Others point to non-random biases in perceptions from the very poor and very rich. The very poor are said to have deformed preferences. For example, Gregor (2007) questions the truthfulness of the ratings of the poor arguing that deprivation mentally conditions the poor to adapt and that society shapes an individual's perceptions (p. 335). Further, Bradshaw and Finch (2003, p. 517) and Ringen (2006, p. 145) argue that limited knowledge of a better life elsewhere creates a false consciousness resulting in a situation where the poor feel non-poor. In Sen's words, "a thoroughly deprived, non-grumbling and resigned person with low expectations of life leading a very reduced life can rate him/herself as non-poor" (1999, p.55). The very rich are also said to have blurred vision of life lived by the poor. Bosch (2001) argues that the rich have limited knowledge of life experienced by the poor to the extent that when requested to estimate the minimum income needed to escape poverty, their average is generally much higher than others.

According to Kapteyn (1994) economists trust the indirect method of estimating wellbeing through people's revealed preference. They consider it objective because it is verifiable as opposed to the direct method of soliciting people's view which is generally unobservable. In particular, Gordon (2000) finds issue with the absence of 'ground truthing' in subjective methods because 'the elucidation of opinion takes precedence over the elucidation of behaviour' (p. 61). According to him, the perception of need,

just as it is important, should be complemented by documentation of behaviour when in need because it is when in need that genuine prioritisation is undertaken. Indeed as Mack and Lansley (1985) found out, some households identified as poor (based on their feelings of enforced lack of necessities) afforded, at the same time, to purchase goods and services judged as non-essential by the society at large. This is an example of feelings not matched by behaviour and therefore a cause of concern.

Multiplicity of influences on people's perceptions gives some critics some reason to discount the usefulness of subjective wellbeing measures. Elster (1989) states that rankings over life are generally incomplete and unreliable but argues that this is not necessarily due to irrationality because, as he puts it, 'irrationality is neither marginal nor omnipresent' (p. 28). Kalugina and Najman (2003) state that the disadvantage of subjective methods is that each answer can be influenced by a combination of different factors (attitudes, anticipations, social norms and rules, group references, current income, permanent income, among many others). They single out the influence of a reference group as the best deformer of perceptions as evidenced by people who feel poorer than their objective standard of living just because their reference group is objectively richer than them.

The issues of language and understanding of questions elucidating the perceptions have been dealt with or solutions found. For example, Van Praag (1991) conducted a study to determine whether people have the same understanding of verbal labels used in income or life satisfaction questions. The study found that verbal labels are understood similarly by respondents. The conclusion was that it is legitimate to include attitudinal variables in welfare models. Mangahas (1995) proposes using direct instead of vague terms in the minimum income question like 'how much would your family need each month for home expenses in order not to feel poor anymore' instead of a hypothetical 4-member family 'getting along' or 'making ends meet'. A similar approach is used by Ravallion and Lokshin (2002) in a study elucidating perceptions on the levels of economic wellbeing. They explicitly use the words 'poor', 'rich' or 'nonpoor' and requires the respondent to use own household as a reference. This keeps the perceptions of the respondents focused on what is being measured.

Kapteyn (1994) conducted a study to check whether feeling poor is the same as being poor. Kapteyn had the implicit hypothesis that subjective poverty is similar to objective poverty given the same sample. The study found that subjective poverty profile was different from objective poverty profile of the same population. Although he attributed this to possible model misspecification he concluded that the direct method (based on

feelings) and the indirect method (based on observed expenditure, income or consumption) do not measure the same poverty and are therefore not the same.

While there is a great temptation to compare, recognising that subjective poverty is different from objective poverty helps put the comparison in perspective. For example, even when the subjective poverty rate is similar to objective poverty rate, it does not mean that they measure the same poverty and this may be evidenced by differences in the households identified as poor. In general, it is rare to have same poverty rates because objective poverty generally covers defined dimensions unlike subjective wellbeing whose dimensions are dependent on the assessor's understanding. As Gordon (2000) notes, subjective poverty rates are generally higher than objective poverty rates and they are prone to change depending on changes in tastes and prices. Expecting the two to be the same and blaming any differences on poor value judgements is somewhat flawed.

Further, it is ironic that value judgements under subjective poverty measurement are frowned upon when objective poverty measurement is plagued by value judgements too. To begin with, the poverty line basic-needs basket requires value judgement which is dependent on social circumstances making the separating line between luxury and needs blurred over time (Pradham and Ravallion, 2000, p. 462). The question then is why is it that the value judgements made by experts on people's wellbeing are more acceptable than those made by people on their own welfare status?

Mangahas (1995) states that poverty as a normative concept needs norms for its measurement. The question is what and whose norms should be used. He argues that the objective poverty measurement is top down because it uses norms imposed by some institution on behalf of society with little or no regard to what the society feels. On the other hand, the bottom-up approaches use the norms given by people themselves 'who are the object of poverty measurement' (Mangahas 1995, p. 40). Until the norms used by the top down and bottom up measures are the same, objective and subjective poverty are bound to be measuring different 'strains' of poverty (Mangahas 1995). In fact, Mangahas (1995) takes the two approaches as two snapshots of the same subject from different angles thereby acting as complements of each other only that the bottom up approach picture is rather cheaper and faster 'to develop' than the top down one as echoed by Chambers (1997).

Apart from the different values attached to expert and people's value judgements, there is the question of different values attached to 'mistakes' made by the same person in

objective and subjective poverty. It is noted that objective poverty is better than subjective poverty because the former is based on 'facts' about standard of living and the latter on unobservable 'feelings' about the standard of living. However, the bottom line is that trusting objective poverty is trusting, for example, the accuracy a respondent's recall of how much income was generated or expenditure made on all goods and services or consumption done by all members in the household over say a day, week, month, or year prior to the interview.

Mistrusting subjective poverty is mistrusting what the same respondent feels about the adequacy of the same income, expenditure or consumption (as measures of wellbeing). In other words, those who trust objective poverty sweep respondents' recall problems, lies and gestimates under some statistical carpet while blowing out of proportion the same respondents' biases in their perceptions. One wonders whether it is the respondents who are rational fools (Sen, 1982) or the objective poverty analysts who like to fool themselves (Chambers, 1997). It makes sense to accept that there is no poverty measurement that is value free after all (Alcock, 2006; Mangahas, 1995).

Currently, there is no science that helps a researcher choose between the top down (expert) and bottom up (people's) norms; it is a matter of choice. While preferring the 'scientific' measurement of poverty and deprivation, Gordon (2000) recommends using subjective method in situations where there is limited time and resources. Gordon (2000) takes subjective poverty measurement as peripheral and only useful in providing some insights. He, just like Kalugina and Najman (2003), values the fact that the poverty line in subjective poverty measurement is not defined by experts but the society. There are others who consider subjective poverty research to offer more than a palatable poverty line.

Beresford and Croft (1995) recommend increased involvement of people in poverty research. According to them, if the objective of poverty research is to advance the interest of the people it is important that they be involved because "it is only with their involvement that poverty discussion is likely to accurately identify, reflect and advance their needs, concerns and interests" (Beresford and Croft, 1995, p. 91). They do not propose replacing experts in poverty analysis with experts in poverty, as ably proposed by Chambers (1997), but rather the involvement of both because there is a possibility that stigma may limit participation and low expectations and standards may result in deformed outcomes and that experts may be divorced from the reality of the poor. More importantly, Beresford and Croft (1995) believe that the involvement of both

experts has the potential of reducing mismatches between objective and lived poverty and number of unrealistic programme designs.

The study takes its inspiration from the recommendation that involving people who live in poverty or live with the poor enriches the poverty discourse. While accepting that people can be irrational, the study takes the conclusion that 'irrationality is neither marginal nor omnipresent' and the proposition that it is better to err on the assumption that people are rational (Elster, 1989, p. 28). Given that the objective poverty is based on the responses of the same person who does the self assessment, the study takes subjective assessment to be as good or bad as 'objective' assessment.

Self assessment in practice

For self assessment to be used in poverty research, some fundamental assumptions have to be made. One of the assumptions is that individuals are able to evaluate their satisfaction and that assessments are comparable across respondents (van Praag, et al., 1982 and van Praag, 1991). Related to this assumption is the assumption that verbal labels used in evaluation questions have the same emotional meaning to respondents and therefore understood similarly (van Praag and Wirnaar (1997). As van Praag and colleagues (2003) put it, the implication of these assumptions is that individuals who give the same response 'enjoy similar satisfaction levels' (p. 30). These assumptions were found to hold (van Praag, et al. 2003).

There are also a number of formulations self-assessment can take. The simplest is the minimum income formulation which simply asks for an income level using a number of verbal labels which are coded for analysis purposes. As reviewed by Ravallion and Lokshin (2002), self-rated wellbeing studies have ever used 3-point (Philippines), 5-point (South Africa), 7-point (Europe), and 10-point (Russia) scales. According to Ravallion and Lokshin (2002), the type of scale does not matter as long as respondents understand what each point on the scale means.

The use of self assessment also assumes that the approach is valid. A number of validation studies were conducted and found that self-rating as a measure of wellbeing or poverty is reliable, valid, and convergent valid when correlated with other methods of measurement (Ravallion and Lokshin, 2002). Likewise, Mangahas (1995) who analysed independently conducted studies at the same time on the same population in Philippines found that self assessment was valid. According to Mangahas (1995), subjective poverty lines are sensitive to prices, norms and household size. Thus self-rated

poverty is volatile because median poverty lines differ as long as there are differences and changes in norms and prices between areas and over time.

In self assessment, drawing of the poverty line depends on whether question asked for a minimum income (MIQ) or income evaluation (IEQ). For the MIQ, some studies use a median poverty line while others use regression analysis to compute it (Lokshin, et al., 2006). Pradham and Ravallion (2000), on the other hand, advise against using subjective poverty lines for poor countries because it is difficult to get sensible answers from the MIQ or IEQ since income as a concept is not well-defined. Further, Mangahas (1995) argues against constructing a societal poverty line out of the individual poverty lines because the latter “constitute an entire distribution of poverty lines” that cannot be substituted by a single line common to all (p. 41). On the other hand, using individual poverty lines implies that some households of similar household structure in the same area can be classified differently. According to Pradham and Ravallion (2000) that is unacceptable because it violates one of the assumptions that households on the same level (step on the ladder or income) have the same status.

Despite these methodological debates, research has continued with each researcher justifying positions taken. Just like with objective poverty analysis, once a poverty line is determined two groups of people emerge and with it poverty profiling. There have been a range of models that have been used to come up with self assessed poverty correlates and determinants. Ravallion & Lokshin (2002) used probit models by assuming that the dependent ordinal variable has nominally distributed random errors. On the other hand, Kalugina & Najman (2003) used logit models since they do not require any normality of the error terms.

As part of validity checking or otherwise, some studies compared the poverty rates and profiles obtained from self and objective assessments. Studies using the style of life approach find that necessities change and poverty lines fluctuate over time (Gordon, et al., 2000; Gordon, 2000; Mack and Lansley, 1985). They also show that those who are income poor have low expectations which influence their perceptions of necessities (Townsend, 1979; Mack and Lansley, 1985; and Gordon, 2000). Some studies have also found that, over time, people automatically modify their basic-needs basket.

On self assessment and objective poverty rates and profiles, Moller (2007) found that self-rated quality of life matched external observations and Groot and colleagues (2007) and Groot and Brink (2004) found that self-rating poverty correlated with objective poverty when the respective data are collected concurrently. Kalugina and Najman

(2003) also reported similar poverty rates for self-rated and objectively assessed poverty. In general though, it is found that subjective methods produce higher poverty rates than objective ones (Gordon, 2000, Ravallion and Lokshin, 2002; Mangahas, 1995; and Lokshin, et al., 2006).

According to Mangahas (1995), the differences could reflect mismatches between subjective and objective poverty among the very poor and very rich. He alleges that the former underrate and the latter overrate themselves vis-à-vis the observed status. Ravallion and Lokshin (2002) also found that 60% of those who felt poor were not necessarily income poor. Possibly more critical is that the difference in poverty rates does not explain the mismatches because Kalugina and Najman (2003) who found similar poverty rates still found mismatches.

Lokshin and colleagues (2006) blame the mismatches on fundamental differences between self and objective assessments especially considering that self assessment implicitly incorporates factors such as anticipated future shocks, perception of income security, perception of household lifecycle needs, and relativity of household welfare. Whether this is true is an empirical question. One has to compare the wellbeing or poverty dimensions or domains or indicators that are implicitly used in both assessments.

Ravallion and Lokshin (2002) undertook a subjective poverty determinants analysis using regression analysis model with a host of individual and household characteristics. They found that despite the long list of determinants the model had very weak explanatory power. They concluded that subjective poverty is difficult to explain even with a rich data set. In summary, these studies provide a number of important clues for this study which include the following:

Use of verbal labels in poverty models: Just like responses to income, expenditure and consumption or any other measure of wellbeing, responses to subjective questions if coded correctly are useful wellbeing proxies (van Praag, et al., 2003, p. 45).

Poverty line on the ten-step ladder: There are many ways of deriving the subjective poverty line. The method used has to be justified by the researcher because there is no hard and fast rule (Ravallion and Lokshin 2002; Lokshin, et al., 2006).

Sources of differences between subjective and objective poverty: It is likely that the mismatches between subjective and objective poverty come from fundamental differences on how they ‘measure’ wellbeing and operationalise poverty (Ravallion and Lokshin, 2002). Such differences are what this study would like to follow up.

Incompleteness of income as a measure: Income is not a good proxy measure of wellbeing and judging by the magnitude of the unexplained variation it is just one of the many dimensions of wellbeing (Ravallion and Lokshin, 2002).

Self-rated and income poverty are no substitutes: Subjective and objective measures of poverty are correlated but not perfectly enough to act as substitutes and, more importantly, the usefulness of a measure is not dependent on its high correlation with the objective measure but its usefulness in explaining poverty (Mangahas, 1995).

Use of self-rated wellbeing assessment: Subjective poverty approach can be used to assess policy interventions and evaluate tradeoffs between monetary and non-monetary wellbeing at household level (Lokshin, et al., 2006), validate objective poverty (Lokshin and colleagues, 2006), ‘design better poverty alleviation policies and channel limited ... resources’ (Van Praag and Wirnaar, 1997, p. 578). This latter conclusion runs counter to another conclusion which states that it is impractical to target anti-poverty initiatives using subjective poverty analysis because it identifies more people than objective poverty analysis (Lokshin, et al., 2006).

There are also a number of conclusions that are drawn from these studies. The first is that self assessment can legitimately be used to measure household wellbeing and be compared with other methods. The second is that objective poverty cannot be a substitute of self-assessment because it is too narrow just as self-assessment cannot be a substitute of objective poverty because they have different areas of focus. If anything, they are complements. The third is that just like in objective poverty analysis, researchers standpoint dominate the choice of the poverty line. What is important is to make the standpoint upfront. The fourth is that choice of model to use for poverty correlates or determinants under self assessment depends on the assumptions made regarding the characteristics of the dependent variable.

2.9.2 Community voices: wellbeing analysis and ranking

The use of a questionnaire to collect voices of the people is restricted by its rigid questions, codes and absence of probing (Lister, 2004 and Chambers, 1997). Advocates of community participation argue for the creation of space for ‘the voices of the people in poverty to be heard more clearly than hitherto’ (Lister and Beresford, 2000, p.284).

Robert Chambers (2007) calls for the transfer of responsibility of defining poverty from poverty experts to experts in poverty. Beresford and Croft (1995) argue that the exclusion of local voices in wellbeing and poverty conceptualisation and analysis is 'unfair' considering that almost everyone else (academics, researchers, policy makers, and civil society organisations) are invariably involved. According to them, it has been difficult to involve local people because such requires a major culture shift – a culture of who is better placed to conceptualise issues; decide on what goes into the poverty debates; and who is 'listenable', knowledgeable, unbiased and free. As Chambers (1994a) puts it, the problem is with the professionals:

'For the beliefs, behavior and attitudes of most outsiders have been similar all over the world. [They] ... have believed that their knowledge was superior and that the knowledge of farmers and other local people was inferior; and that they could appraise and analyze but poor people could not.' (p. 963)

Beresford and Croft (1995) also report that experts have a number of excuses for the exclusion which they tame as lame because the main reason is that they deliberately fail to create the right type of political space for everyone to get involved. Their contention is that it is better to involve both experts and non-experts because each would bring their expertise and biases to the discussions. Robert Chambers (1994b) considers the excuses as culture shift failure because involving the poor requires a change in rules of engagement between experts and local people. Some of the changes experts may be uncomfortable with like changing from 'learning after' to 'learning during data collection'; from leading to listening; from being rigid to being flexible; from being formal to being relaxed and not rushing.

Participatory rural appraisal (PRA) is one approach that opens the space for local people to articulate their understanding of wellbeing and poverty, including characterising, categorising households in groups, and sorting households into those groups with little or no help from experts⁷. According to Chambers (1994a), PRA is an approach for learning from, with and by people at community level that has developed to deal with questionnaire inadequacies like failure to give room for open discussion with the people whose wellbeing is being measured, and being time consuming, costly and user-

⁷ Most of works on PRA after 1994 (in their various forms) owe their inspiration from three *World Development* articles published in 1994 which were authored by Robert Chambers. The articles summarised works related to Rapid Rural Appraisal and Participatory Rural Appraisal (PRA). No attempt is made here to summarise the articles or others that came after. This section only picks those elements that are relevant to this study.

unfriendly. As an approach that challenges the dominance of survey questionnaires in data collection at local level for local level use, PRA uses principles that are in line with the need to give space to local people for them to take part in the debate on poverty definition and measurement. These principles work on the understanding that local people have capacities to undertake activities that may seem complicated as long as they are given the right type of atmosphere. While local people have a capacity to map, model, observe, quantify, estimate, compare, rank, score and diagram they need a relaxed and trusting facilitation to show it (Chambers, 1997). Table 2.7 presents some of the principles and their description.

Table 2.7: PRA Principles

Principle	Description
Participation	<ul style="list-style-type: none"> • Maximum input from local people and minimum input from researcher. • This principle requires facilitators to set aside their own biases and instead take time to listen to a free flowing discussion
Teamwork	<ul style="list-style-type: none"> • Maximum input from each local team member through informal interaction and brainstorming • Limited facilitators' role (politely probe or 'slow down' a dominant speaker or 'rev up' a silent member or change topic)
Flexibility	<ul style="list-style-type: none"> • Freedom to employ tools that are appropriate • Flexibility to change tools when need arises • Facilitator takes personal responsibility of the process (no rule book but best judgement)
Optimal ignorance	<ul style="list-style-type: none"> • Collect only required data (save time and money) • Measure only to appropriate accuracy • Allow researcher to explore, improvise, iterate & cross check
Triangulation	<ul style="list-style-type: none"> • At least three tools to collect the same information for cross checking or progressive learning
Maximum diversity	<ul style="list-style-type: none"> • Learn from exceptions, oddities, dissenters and outliers • Give space to contradictions, anomalies, and differences • i.e. Negative case analysis or maximum learning from diversity and richness of information
Self-critical awareness	<ul style="list-style-type: none"> • Turn facilitator errors into opportunity for learning • Continuous and critical examination of own behaviour to spot errors • Fall forward - embrace error, face it positively and correct it

Source: Chambers (1994a) Chambers (1994b), Chambers (1994c), Adebo, S. (2000), Luigi Cavestro. L. (2003); World Bank (1996b)

Chambers (1997) believes that PRA can replace survey questionnaire at local or project level except time-series and national sample surveys and specifically rules out one-off questionnaire surveys on account that they are costly for nothing and a discredit to

social sciences. Indeed, over time PRA has been used for various purposes. Exploratory PRA has been used to understand a phenomenon in order to fine tune a survey design (Mukherjee, 1993; Chambers, 1994a). In some cases PRA is used to collect data for a baseline as well as monitoring changes (Chambers, 1994c). Mukherjee (1993) and Robert Chambers (1994c) also report that PRA is used to evaluate the impact of projects at local level.

Topical PRA is used to understand a specific topic or issue from the perspective of local people. Deductive PRA comes into play when tackling sensitive topics like hunger and theft or prostituting for food in times of food insecurity as the openness of PRA allows the facilitator to skate around while nibbling into the topic by discussing related issues (Chambers, 1994a; Mukherjee, 1993). The openness of PRA allows the facilitator to steer away from any area a group or discussant is unwilling to discuss.

PRA is also a best companion of projects as it is used in problem and solution identification, project planning and implementation (Mukherjee, 1993) including selecting or deselecting beneficiaries (Chambers, 1994c). In general, PRA is used as a research and training tool (Mukherjee, 1993; Chambers, 1997). As a research tool, it is used to learn about local people's perceptions, experiences and capabilities; to evaluate the impact of past and current policies or programmes; to collect data and gather information; to estimate trends and ascertain conditions; and validate or cross-check data collected from other sources (Mukherjee, 1993; Chambers, 1994c). Thus PRA is employed in the appraisal, analysis and research of social, cultural and economic conditions of local people (Chambers, 1994a). PRA, in the form of participatory poverty assessments, is used to monitor impacts of programmes (Chambers, 1994a).

With this array of uses, PRA is used variously by governments, international and local NGOs, donor agencies, and universities (Van Campenhout, 2006; Chambers, 1994b). According to Chambers (1994a; 1994c), PRA is used as a research tool and topic for training in universities. Judging by works on PRA, this approach is popular in developing countries as there are relatively very few cases where PRA has been applied in the West (Chambers, 1997). But why is PRA most popular in poor countries? The popularity of PRA in poor countries is a reflection of the inadequacies of survey questionnaires. In developed countries data quality is relatively high due to high monetarisation of household economies. Unlike in developed countries, household economies are complex because of multiple and difficult-to-trace sources of income that determine consumption levels. Moreover, there are a multitude of small scale sources of cash income that are sparsely distributed among households and vary by area and

season. This is why survey questionnaires are not very good at tracking these. For example, van Campenhout (2006) argues that PRA has become popular because questionnaire-based analysis fails to identify local level development obstacles and acceptable solutions. The fact that PRA is cheap to conduct boosts the popularity even more (Chambers, 1997).

PRA is also popular because, unlike a questionnaire, its techniques are not a drain to the interviewee or interviewer or data analyst leading to accurate and reliable data, which leads to meaningful reports (Chambers, 1994a). As Mukherjee (1991) puts it, survey questionnaires are by design incapable of taking advantage of indigenous technical knowledge. Above all, according to Chambers (1994b), the purest form of PRA is better than the purest form of questionnaire because the former is empowering; it gives space to locals to present their knowledge and reality, reconstruct their world, and, in the process, learn enough to develop an action plan. Table 2.5 lists some of the most commonly used PRA methods and tools under each method.

Table 2.5: PRA Methods and techniques

Method	Specific tool
Semi-structured interviews	Guide for in-depth interviews with individuals (specialist or key informant) or groups (casual, specialist or focus, deliberately structured, community or neighbourhood)
Ranking and scoring	Matrix scoring; matrix ranking; pair-wise ranking; wellbeing analysis; wealth ranking; and proportional piling
Diagramming, mapping and modelling	Transect walks; mapping (resources, social, farm); Venn diagramming; Seasonal calendars; Institutional diagramming; trend and change analysis (time lines, trend lines, activity profiles); analytical diagramming (pie and bar charts, and flow diagrams)
Problem analysis (matrices)	Problem identification; problem specification; and casual chaining; prioritisation
Case studies	Portraits; profiles; case studies; and life stories

Source: Chambers (1994a); Chambers (1994b); Adebo (2000); Cavestro (2003)

Notwithstanding, PRA is not as popular as survey questionnaires among academics. When academics use PRA it is mainly to complement orthodox methods or to check whether it is valid or reliable (Chambers, 1997). According to Campbell (2001), not many academics use PRA in basic research or conduct basic research on PRA as little effort is expended to legitimise or denounce it as an academic method of inquiry. To begin with mainstream economists consider qualitative research, under which PRA falls, as too soft for policy formulation which requires rigor, a characteristic of quantitative techniques (White, 2002; Chambers, 1997). The dominance of economists in policy

formulation at country and international levels implies the dominance of quantitative methods over qualitative methods including PRA as a research tool and research area (Chambers, 1997). The result of this is that there are few academic works on PRA (Campbell, 2001).

The disquiet among some academics about PRA, does not take away the popularity of PRA among practitioners. Further, the increased use of PRA, even in universities, regardless of its rough edges implies a need for smoothing the edges (Chambers, 2006). Given that survey questionnaires have genuine shortfalls and that PRA is arguably 'one of the best players on the bench', the way forward is to deal with genuine issues surrounding PRA in order to make it a 'super-sub' or indeed a 'first choice player for some games'.

Possibly reflecting the dearth of academic literature on PRA, only one work by Campbell (2001) stand out as an objective critique of PRA as a method of inquiry. Apart from Campbell, Robert Chambers in his various contributions on RRA and PRA also highlight some of the issues that determine usability of PRA although written from an advocate point of view. These issues are summarised below.

Limited academic rigor in PRA works: Even within qualitative research, there are questions as to whether PRA meets set standards. For example, Campbell (2001) found that the bulk of works using PRA fail to follow conventions of qualitative research like giving a detailed account of the research methods and procedures used. Without such, he argues, it is not possible to assess the validity and reliability of the collected data and information (Campbell, 2001).

The pivotal role of facilitation in PRA: The success of PRA heavily depends on quality of facilitation (Chambers, 1997; Campbell, 2001) as facilitator skill and behaviour are crucial for achieving validity and reliability given PRA's openness. Further, objective learning requires the facilitator to set the arena and let the 'indigenous knowledge theatre group' act because correct facilitator behaviour and attitudes are more important than correct methods (Chambers, 1994a; 1994b). In particular, it is "showing humility, respect, patience and interest in what people have to say and show; wandering around and not rushing; paying attention, listening, watching and not interrupting ... [that] sustain and strengthen the participatory process of which they are a part' (Chambers, 1997, p. 134). As Campbell (2001) observes not many facilitators of PRA have these skills and it is no wonder that Chambers (1997) considers training of facilitators pivotal for PRA sustainability.

Documenting both the process and output: Since the value of PRA is in meaningful participation of local people, documenting the participation process covering selection of participants (why, how and who in terms of number, socio-economic background, and competence vis-à-vis techniques to be used and area of inquiry); techniques used (in terms of objectives, easiness of use by participants, the quality of output); group interaction and individual member actions; facilitator behaviour; and problems (Campbell, 2001). This includes recording the sessions (video or audio), taking note of non-verbal actions, movements, activities, problems areas, and outputs and transcribing the recordings. Since PRA stresses iteration and triangulation, the report should also discuss whether the process included any iteration or whether a technique was used to cross-check or obtain discrete types of data. This documentation, apart from informing the analysis, helps track whether the methodology was in accordance with standards for qualitative research.

Representativeness of indigenous knowledge and experience: PRA is meant to reverse roles; researcher learning from local people and local people learning from themselves (Chambers, 1994a). The researcher aims at getting individual and common but undocumented knowledge locked in each member of a community. To optimise the acquisition of the knowledge, the researcher needs to deal with a critical number of people who between them have most of the knowledge and experience on the research topic. Campbell (2001) argues that the complex local knowledge on any topic may not be grasped in a week or day's visit. Pottier and Orone (1995) argue that some PRA techniques like group interviews, which are consciously considered a public arena, are not suitable for sensitive topics. They give examples from their food insecurity coping study where group interviews did not bring out stealing or sex or marriage for food despite these being major coping strategies. Campbell (2001) recommends spending more time in a community to accommodate the application of various methods and techniques and as many people as possible to enable triangulation and cover more people. This problem is true for any discussion of a sensitive topic and any group discussion.

Matching participants and techniques: The validity and reliability of PRA data also hinges on competence and knowledge of participants in terms area of focus and technique used (Campbell, 2001; Chambers, 1997). Since not all community members are competent in all areas of research and techniques (Campbell, 2001), facilitators should take time to search for local experts (Chambers, 1997). In particular, Campbell (2001) is not in favour of using the same group of participants for a number of

techniques because some may be uncomfortable with some techniques, which may lead to getting less than the maximum possible out of the community. According to Campbell (2001) this extends to communities; some may be uncomfortable with some 'complex' techniques like diagramming, mapping and matrix ranking.

PRA data does not speak for itself: Contrary to popular thinking, PRA data and information does not speak for themselves. To get meaning out of PRA, there is need to analyse the outputs against the process account and conceptual framework relevant to the topic (Campbell, 2001). This re-enforces the need to document the process and outputs accurately.

The centrality of triangulation in PRA: Triangulation is important in PRA for validity and reliability of the results (Campbell, 2001). Methodological triangulation whereby PRA is compared with other methods is important because it legitimises PRA as a method. While some results of some PRA techniques have been collaborated and cross-checked with other methods (Chambers, 1994a), no basic research on the feasibility of the comparisons has been done making the triangulation precarious (Campbell, 2001). The absence of basic research (on the complementarity of the techniques) is also true for data triangulation (Campbell, 2001). Even if complementarity is established, most recent PRAs spend too little time in the field to cover at least three techniques (Campbell, 2001). Almost non-existent is investigator triangulation whereby different facilitators apply the same techniques (Campbell (2001). It is therefore not possible to determine whether PRA is valid.

Need for basic research on PRA: This issue has been emphasised by Campbell (2001). Noting the thin basic research on PRA, he calls for basic research on comparability of PRA and other methods including survey methods; suitability of combining PRA techniques for triangulation; strength and limitations of adding visualisation, ranking, scoring techniques on group interviews; and compatibility of various PRA techniques with other techniques (PRA, qualitative and quantitative). Campbell (2001) notes that most of the basic research has been wellbeing analysis/wealth ranking used either done individually or under group interviews.

Categorising and ranking households

Wellbeing analysis and wealth ranking, as noted above, fall under ranking and scoring methods. The terms wellbeing and wealth are different. Although the practice of wellbeing analysis and wealth ranking is the same, their difference lies with the criteria for ranking. Wealth is narrow and is more concerned with tangibles (material) while

wellbeing includes intangibles. As Chambers (1997) puts it “Unlike wealth, well-being is open to the whole range of human experience, social, mental and spiritual as well as material ... [may include] living standards, access to basic services, security and freedom from fear, health, good relations with others, friendship, love, peace of mind, choice, creativity, fulfilment and fun” (p.10). With this array of dimensions it is no wonder that Chambers (1997) states that people, individually or as a group, can define wellbeing in their own way.

Perhaps more relevant to the study is the point that extreme poverty and ill-being go together while wealth does not necessarily lead to improved wellbeing unlike reducing poverty which usually leads to reduced ill-being (Chambers, 1997). This implies that poverty is more akin to wellbeing than wealth. However, for the purposes of this discussion, wealth ranking and wellbeing analysis are used interchangeably. In both cases, poverty has the same meaning because the two are the same in practice.

Wellbeing analysis is a technique whereby households in a defined community are stratified in wellbeing groups based on well-defined criteria (Van Campenhout, 2006; Feulefack and Zeller, 2005; Adams, et al., 1997; Chambers, 1997). The ranking can be done by individuals (Chambers, 1994b) or a group and in the cases where several individuals are used to rank the same households separately the individual rankings are reconciled amongst them to come up with one final community ranking (Chambers, 1994a). The wellbeing groups and criteria are mostly defined by the community or the ranking group. In some cases, the number of groups and criteria are given by outsiders but this is becoming increasingly rare. Typical wellbeing analysis is undertaken by a selected group of community members who decide the number of wellbeing categories and criteria for each of category.

Wellbeing analysis is used for a variety of reasons. The first is to provide insights on local definitions and characterisation of wellbeing (Feulefack, et al., 2006; Bergen, et al., 1998; Adams, et al., 1997; Chambers, 1997). The second is to identify poorest households in a community for anti-poverty project participation (Feulefack, et al., 2006; Bergen, et al., 1998; Adams, et al., 1997; Chambers, 1997). Wealth ranking is also used to track wellbeing changes for project monitoring and evaluation (Bergen, et al., 1998; Adam, et al., 1997; Chambers, 1997). The similarities of the uses of wellbeing analysis with those of questionnaires force a comparison of the two data collection techniques.

Jeffries and colleagues (n.d.) argue that wellbeing analysis came into being because analysts were interested to go beyond statistical abstracts. More importantly, wellbeing analysis is considered better than the use of questionnaires because it is personal, incorporates intangibles, flexible; and reduces the risk of biases and misreporting (Feulefack, et al., 2006; Adam, et al., 1997; Bergen, et al., 1998). Wellbeing analysis is considered quicker, and less costly and skills-intensive, and more detailed and intuitive than survey questionnaire-based wellbeing analysis, which requires data entry, data analysis and weighting (Bergen, et al., 1998; Chambers, 1997). Thus wellbeing analysis has the advantage of combining both qualitative and quantitative assessments by different people with different perspectives over different time periods (Scoones, 1995).

Use of a group of informants in wellbeing analysis has the advantage of getting a spread of knowledge which can cover a number of topics; real time gap filling, correcting, and cross-checking (Chambers, 1994b). At a practical level, wellbeing analysis is easy to replicate at community level because it is easy to teach the technique to community based organisations or practitioners and also reduce the cost of identifying project beneficiaries (Adam, et al., 1997; Bergen, et al., 1998). Again, wellbeing analysis takes the burden of determining the criteria for identifying the poor from academics or project implementers since these are easily developed in the process (Adams, et al., 1997).

There are, nonetheless, issues wellbeing analysis has to contend with to maintain its advantages over survey questionnaires. One of the key issues is that the people undertaking the ranking should, amongst themselves, know the households to be ranked very well. Wellbeing analysis needs the right mix of people bearing in mind that men are less open than women to talk about others and that people know more about people of their wellbeing status than about those in other groups (Bergen, et al., 1998). If the group does not have a good mix of knowledge, it may categorise some households incorrectly or fail altogether (van Campenhout, 2001; Jeffries, et al., n.d.). This is why recruitment of participants in wellbeing analysis is crucial. As recommended earlier, the facilitator should invest time in that process. The need to have good knowledge of all households in the community brings in another issue. Wellbeing analysis is best-suited for remote and closed communities in traditional societies that have high social cohesion (Bergen, et al., 1998). Thus wellbeing analysis cannot produce good results if used in urban settings. One other issue is that the higher the number of households to be ranked, the poorer the quality of ranking. Thus, apart from the knowledge, the size of the community is also important such that if the number of

households in a community is more than one hundred, the recommendation is to split it into sections (Bergen, et al., 1998; Chambers, 1997).

The quality of facilitation is another issue. Wellbeing analysis requires quick rapport establishment and a very good explanation of the objective of the study (Bergen, et al., 1998) because if results of the ranking are perceived to benefit the identified poor, misreporting and general untruthfulness may creep in to position own households or those of family and close friends for the benefits (Jeffries, et al., n.d.). Since wellbeing analysis is frequently used to identify the poorest for some project participation, wellbeing analysis has an inherent bias problem that needs to be reduced with good facilitation. A related issue is that some group members may not want their household or those of their family or friends to be ranked (Chambers, 1997; Chambers, 1994b; Jeffries, et al., n.d.) and this can be dealt with by good facilitation. Good facilitation is also required for dealing with the issue of dominant group members who overrule others; a common feature in group interviews (Chambers, 1997; Chambers, 1994b; Chambers, 1994c).

Even when wellbeing analysis is done well, there are still some issues. One of the issues is that wellbeing analysis cannot identify and quantify differences in specific dimensions of household wealth because the implicit weights attached to various elements of the criteria used for the ranking are not known (Adams, et al., 1997). The other is that wellbeing analysis is not amenable to cross-regional comparisons because local level characterisation and categorisation of wellbeing and categorisation are area specific (Adams, et al., 1997). This also applies to a community whose population is split to have manageable households for ranking. If different groups rank the same households using different characterisation and criteria, their rankings would not be comparable.

In summary, wellbeing analysis is scientific and comparable where those responsible for ranking have common knowledge and use commonly held and well understood criteria; and where the wellbeing dimension used is of intense interest to the community and the results of the ranking are not used to advantage or disadvantage anyone (Chambers, 1997; Chambers, 1994b). Does this not open wellbeing analysis to criticism considering that some of the conditions are too stringent? Indeed, it is reported that the majority of academics, policy makers and programme designers perceive wellbeing analysis as less scientific, therefore suitable for comparisons across studies such that as early as mid-nineties, wellbeing analysis needed scientific credibility to answer the critics (Bergen, et al., 1998; Adams, et al., 1997). In an effort to deal with the perceived scientific cloud

over wellbeing analysis particularly its validity, reliability and accuracy, a number of studies were undertaken.

According to Chambers (1994b), validity has to do with closeness to reality while reliability is concerned with constancy of findings. Thus validity of a technique is checked by comparing its results against another technique whose results are closest to reality; i.e. standard measure. Reliability is checked by repeating the technique and checking the consistency of the results. Chambers (1994b) argues that a technique can have high reliability and low validity if it has systematic bias. On the basis of principles of optimal ignorance and appropriate imprecision and the fact that validity and reliability are not absolute values, Chambers (1994b) posits that high validity and reliability can be traded off with cost-effectiveness, utility and timeliness. This implies that it is not in the spirit of PRA to always insist on validity and reliability.

Wellbeing analysis: validity and reliability checks

Bergen and colleagues (1998) report of one study that found wellbeing analysis to be valid and three studies that found it unreliable and this led them to conclude that wellbeing analysis can only be used to complement or supplement survey-based socio-economic ranking. The unreliability emanated from knowledge differences among group members (including between men and women), facilitator bias and skills, and rigidity in the ranking criteria. They observed that reliability of wellbeing analysis was heavily influenced by the design of the study, particularly facilitator training, choice of criteria and participant selection.

Adam and colleagues (1997) give three types of validity; content, empirical and construct validity. Content validity covers face validity, which is subjective assessment of the accuracy of the measure, and sampling validity or theoretical construct, which is concerned with whether the sample population is adequately measured by the instrument. Empirical validity or predictive validity assesses whether the measure outcome and standard measure outcome are related using computed correlation or validity coefficient. Construct validity has two parts; external validity (whether there is a link between the instrument and the theoretical basis for the research) and generalisability (whether the instrument's results are applicable to a larger population). In terms of wellbeing analysis, construct validity implies establishing whether household characteristics (collected using household survey) of one category (determined by wellbeing analysis) significantly differ from those of another category. Adam and colleagues (1997) found that wellbeing analysis is construct valid; empirically valid,

generalizable and externally valid. It is judged construct valid based on differences amongst wellbeing categories across health, demographic, and socio-economic measures of household wellbeing and externally valid on the basis of comparisons with similar studies. They, nonetheless, failed to establish content validity because this particular wellbeing analysis used a pre-determined criteria and the technique does not provide details of how the criteria were used in ranking households (Adam, et al., 1997).

Most validity tests of wellbeing analysis are concerned with empirical validity using survey questionnaire-based household income or consumption as a standard measure. This is also true of accuracy tests. For example, Van Campenhout (2006) found that wellbeing analysis is a valid method such that it can even replace survey-based questionnaires. Chambers (1994b) reports of a study in India that found that wellbeing analysis is more accurate than the questionnaire method; whereas the survey method was 67% accurate the wellbeing analysis was 97% accurate. Scoones (1995) also found that wellbeing analysis is more accurate than the survey method. In terms of validity, Scoones (1995) found that wellbeing analysis is valid when its results are compared with those from a household survey of the same households. This was evidenced by high correlation between most of the indicators in wellbeing analysis and household survey data indicators. Scoones (1995) also found that some wellbeing analysis indicators were insignificantly correlated to household data and attributed these differences to inconsistent application of the implicit weightings and variables used in wellbeing analysis across the households.

Feulefack and colleagues (2005; 2006) tested the accuracy of wellbeing analysis. Feulefack with Zeller (2005) found that wellbeing analysis had predicting accuracy of between 70% and 79% for the entire sample and 60% for the very poor. They also found that the higher the number of households ranked the lower the predictive accuracy and attributed the differences between the wellbeing analysis and the survey-based rankings to the differences between the dimensions implicit in each of the measures (Feulefack and Zeller, 2005). Feulefack and colleagues (2006) found that wellbeing analysis is more accurate when used on the well off than the poorest. However, the level of accuracy changes if tests are conducted by dimension. They conclude that accuracy of wellbeing analysis depends on wellbeing group and the dimensions under consideration

Campbell (2001) reports of a 20-year study that found divergence between wellbeing statuses measured by consumption-expenditure and wellbeing analysis and this was explained by differences in the wellbeing dimensions in the two measures. Thus while

there could be overlaps between the two, it is possible that the overall impact of the factors could be different; the qualitative measure showed improved wellbeing while the quantitative measure showed the opposite (Campbell, 2001). He further reports of a study that compared the extent variables from wellbeing analysis and survey converged or diverged. The study found that 12% were completely different and 88% of the variables were similar but revealing details differently; 42% were similar with the focus group wellbeing analysis revealing more details, 17% were similar with the survey providing more details, and 28% were similar with the same details (Campbell, 2001). It showed that validity tests fail to highlight similarities and differences between the two measures because of the need to use one as a standard. The study showed that wellbeing analysis is more than valid; it is better at revealing more factors than the survey method.

The use of survey questionnaire-based measures to validate wellbeing analysis, implicitly assumes that the former is the standard measure of wellbeing. Adam and colleagues (1997) argue that the questionnaire is not a gold standard because wellbeing analysis, apart from covering more wellbeing dimensions, is capable of successfully covering those dimensions covered by survey questionnaires. While that sounds reasonable, it does not take away the fact that those dimensions covered by survey questionnaires are taken as a standard for measuring the validity of wellbeing analysis. Then what about the extra dimensions the wellbeing analysis uses to rank the households? What about the possible differences in the weights attached to dimensions even when they are the same?

Using survey method standard to check the validity of qualitative research methods is therefore difficult to understand. After all, advocates of PRA like Chambers (1997) and Jeffries and colleagues (n.d.) show that the questionnaire method is inferior in many respects when identifying the poor. Moreover, too much emphasis on quantitative data analysis of wellbeing analysis outputs is counter to the ideals of qualitative research (Jeffries, et al., n.d.). It is therefore paradoxical, if not hypocritical, for Chambers (1994b; 1997) to propose the use of household survey data results to check the validity of wellbeing analysis results. The only way wellbeing analysis's validity can be checked against a survey-based measure is when the criteria for analysis is exactly the same as the measure of poverty in the survey method.

Another area of interest for the study is complete ranking of households in a community using PRA tools. This is important because survey data provides an opportunity to rank households from the highest to the lowest on a number of criteria like income, food consumption, expenditure or any factor that is collected. Wealth ranking only

categorises households in wellbeing groups. There are no published studies that present a complete ranking of households on some criteria. Few if any have ranked even the poorest in some order. One of the reasons is that to rank households well is time consuming. The closest PRA technique that can assist in the ranking of households is pairwise ranking.

Pairwise ranking

Pairwise ranking is a technique that is used to systematically compare items to come up with an ordered list. In this technique, each item is compared with every other item (Heyden, 2010). Pairwise ranking requires some criteria for the comparison. As Russell (1997) states, pairwise ranking is used to prioritise, or rank lists of problems or projects or commodities prepared by a community. For each pair under comparison, the idea is to get the item considered first on the basis of the chosen criterion. In cases where more information is required, the question 'why' can be added to give the pairwise rank some colour (Mearns and Bayartsogt, 1994). Apart from giving a rank of the items, this gives a list of reasons that can be turned into criteria for scoring the items under a matrix or preference ranking (Mearns and Bayartsogt, 1994).

Pairwise ranking can be done by an individual or a group. In most cases, pairwise ranking is done in a group discussion (Mulhall and Taylor, 1998; Chambers, 1997) facilitated by a semi-structured interview guide which has the advantage of bringing out important issues since participants take charge and feel relaxed (Kersten, 1996). The ranking is computed by adding the number of times an item is picked over the other (Mulhall and Taylor, 1998). The topmost has the highest number while the bottommost has the lowest number of times it became first.

Just like in many PRA techniques the choice of participants is crucial to get the best out of pairwise ranking. Pottier and Orone (1995) used the gatekeeper to recruit equal number of men and women to participate in a group interview based on a criteria agreed with the facilitators. They report that the discussion went on well but realised later on that some socio-groups were not 'represented' in the group. Whether that is a problem depends on the topic because what is important is whether the group was the best representation of the community in terms of common knowledge (Chambers, 1997). They also found that the group discussion did not discuss some issues that were considered sensitive. This problem is true for any discussion of a sensitive topic and any group discussion. It is rarely reported as a problem in pairwise ranking, if at all.

Probably the main issue against pairwise ranking is its failure to yield systematic reasons for the ranking. Granted that each comparison may give reasons why an item is considered to be 'better' than the other, pairwise ranking does not have the mechanism of synthesising these reasons (Saville, et al. (2000). In fact, pure pairwise ranking does not require the reasons to be given explicitly. It is preference ranking that goes beyond just ranking the items. Preference ranking ranks the items by a criterion and the item with the most scores is ranked first. The absence of weights for each criterion makes the preference ranking only better than pairwise ranking but not ideal (Fielding, et al., 1998; Maxwell and Bart, 1995).

Considering that pairwise ranking compares an item against all items in pairs, it would be tiresome and less interesting for an individual or group to do pairwise ranking of fifty to one hundred households. A combination of wellbeing analysis and pairwise ranking can assist to get around such a problem. In this scenario, pairwise ranking can be applied to households within a wellbeing category. With say five categories, a 50-household community would have an average of ten households per category. That is manageable for pairwise ranking. The Moving Out Poverty Study (Narayan and Petesch, 2005) developed a methodology that made pairwise ranking manageable.

Using a focus group discussion, semi-structured interview techniques and wellbeing analysis, a community group superimposed wellbeing categories on a ten-step ladder and then placed each household in the community on a step. This approach meant that the community was sub-divided in at most ten wellbeing sub-groups⁸. No further ranking of the households was recommended in that study. However, it is clear that pairwise ranking of households on each step would produce a complete ranking of households. This study takes this extra step to produce a complete ranking of households in order to compare it with the ranking from the objective wellbeing measure. This completes the needs of the study because self assessment and wellbeing analysis provides the wellbeing characteristics which are compared with those from objective poverty and the pairwise ranking provides an ordered list of households that is compared with an ordered list of the same households using the objective wellbeing measure.

⁸ At most ten because community groups were free to place households in less than ten steps.

2.10 Lessons from the literature review

This chapter aimed at reviewing theories, concepts, definitions and measures of poverty as a basis for the study design. A number of lessons on these issues have been learnt which have a fundamental impact on the methodology of the study including analysis of the data as highlighted below.

Theory on poverty: There is no poverty theory and what are presented as theories are but just characterisations of various aspects of poverty. The main lesson is that these seen together show various aspects of poverty. These aspects play a crucial role when analysing the characterisation of wellbeing and poverty by households and community members.

Concepts of poverty: There has been a progression of concepts of poverty ever since poverty analysis started in earnest at the turn of the twentieth century. From the simplistic subsistence poverty to capability failure, there has been increasing light thrown on poverty. That said, each of the concepts has its place empirically and limitations such that no one concept deals with poverty wholly. The lesson is that the choice of a concept should be accompanied by a justification and highlight of its limitations.

Measures of wellbeing status: The common measures (income, expenditure and consumption) as well as multidimensional measures (composite indices) have merits and demerits. The one dimensional measures are easy to collect and analyse but limited in their coverage while the multidimensional ones are best suited but require advanced technical skills. Subjective measures (self and peer assessment) are holistic but considered technically weak. There are three lessons. The first is that there is no measure that covers wellbeing satisfactorily and use of multiple measures may reveal more of poverty. The second lesson is that it is not how good a measure is but its relevance to the poverty concept. The third is that choice of measures is also influenced by the competence and standpoint of the researcher.

Operational definition of poverty: Poverty analysis hinges on the choice of a poverty threshold yet there is no 'clean' way of determining it. Some of the advances in poverty research have sprung from trying to improve the objectivity of the poverty lines to the extent that one constructed based on views of the population is viewed as more realistic than that based on expert opinion. The lesson is that involving the people whose wellbeing is being assessed constitutes advancement in poverty research.

Role of non-experts in conceptualisation process: The use of relative deprivation, consensual poverty and subjective assessment of poverty in poverty research underlines

the increased involvement of households in poverty measurement. PRA has provided even a bigger space for individuals and groups of people to get more engaged in wellbeing and poverty analysis. However, their involvement at the conceptualisation stage is almost non-existent, at least in Malawi. Such absence begs a number of questions: Do wellbeing dimensions, domains and indicators in poverty profiles in Malawi reflect what people consider as important? Do the voices of local people 'recorded' in various forums in Malawi support them?

Inspiration for methodology: Two things are needed if voices are to be used in wellbeing analysis in Malawi. The first is to check whether there are any differences between the official wellbeing measure and the subjective assessments. The second is whether the differences are reconcilable to the extent that the official wellbeing analysis system can be modified to reflect what is on the ground. This requires using the same communities and households to assess their wellbeing and poverty status using official measure, self assessment and peers assessment.

Chapter 3: Methodology

3.1 Introduction

The chapter presents the research questions, methods that are employed to answer the questions. It details the methodological framework, data collection tools, data sources and analytical framework. Apart from a detailed discussion of how the secondary data is used the chapter also describes how the complementary primary data collection was conducted and its data processed to come up with the required output to deal with the research problem. The chapter also presents how the secondary and primary data are used to respond to the research question.

3.2 The study domain: research questions

This study is interested to assess the relevance of a consumption-based measure in identifying the poor generally. Consumption-expenditure is the official wellbeing measure in Malawi. It is on its basis that poverty profiles are developed. To check the relevance of the official measure, the study compares the dimensions of poverty implicit in the measure and those of the public in Malawi. Three specific research questions follow from this quest.

- (a) Do official and people's wellbeing and poverty measures identify the same or different people?
- (b) Do official and people's dimensions of wellbeing and poverty in Malawi converge or diverge?
- (c) Can the official and people's wellbeing or poverty dimensions be reconciled to improve the measurement of poverty and identification of the poor in Malawi?

3.3 Value/normative standpoint of the study

One critical standpoint adopted in the study is that poverty is located within the concept of poverty such that if wellbeing is a continuum, poverty would be located at the poor side of the continuum (Gough, et al., 2007). Thus given any measure of wellbeing one adopts, it is possible to identify those that are in poverty using the same measure by isolating those that are 'endowed' with relatively less of what is measured. This standpoint enables the research to term consumption expenditure as a measure of wellbeing just as it assumes that self and peer assessments use implicit measures of wellbeing.

Another key standpoint is summarised well by the *Voices of the poor* report which states that that “There are 2.8 billion poverty experts, the poor themselves. Yet the development discourse about poverty has been dominated by the perspectives and expertise of those who are not poor – professionals, politicians and agency officials” (Narayan, et al., 2000, p, 2). The research is premised on the belief that villagers are expert enough to be meaningfully engaged in conceptualising wellbeing and poverty and devising ways of measuring them as advocated by Narayan and colleagues (2000) as well as Lister and Beresford (2000), Robb (2000), Chambers (2007) and Van Praag and Ferrer-i-Carbonell (2007).

Another standpoint, but related to the above, is that there are reconcilable differences in perspectives on wellbeing and poverty between the *community* (where the poor are) and the *official world* (where designs, funding and evaluations of anti-poverty programmes come from). The reconciliation is premised on the understanding that if the official version is for the population then it should reflect the concepts of the population and not those of experts. This standpoint provides the justification for the evaluation and modification of the official version of wellbeing and poverty using the population’s inputs.

In summary, the study starts from the standpoint that local people’s conceptualisation is critical for coming up with realistic operational definition of poverty for identifying the poor. This involves interrogating the policy-dominant neo-classical economics approach by a populist participatory approach. The study subjects the household-level income/consumption wellbeing and poverty to community scrutiny. This standpoint ascribes to the notion of the centrality of people in the poverty research (Bevan, 2007). By giving ‘power to the people’, the study accepts the views of the people regardless of whether they are structuralist, post-structuralist, or welfarist, or any standpoint. In some ways, the study’s approach fits the normative theory of democratic liberalism (Bevan, 2007).

3.4 Study’s methodological framework

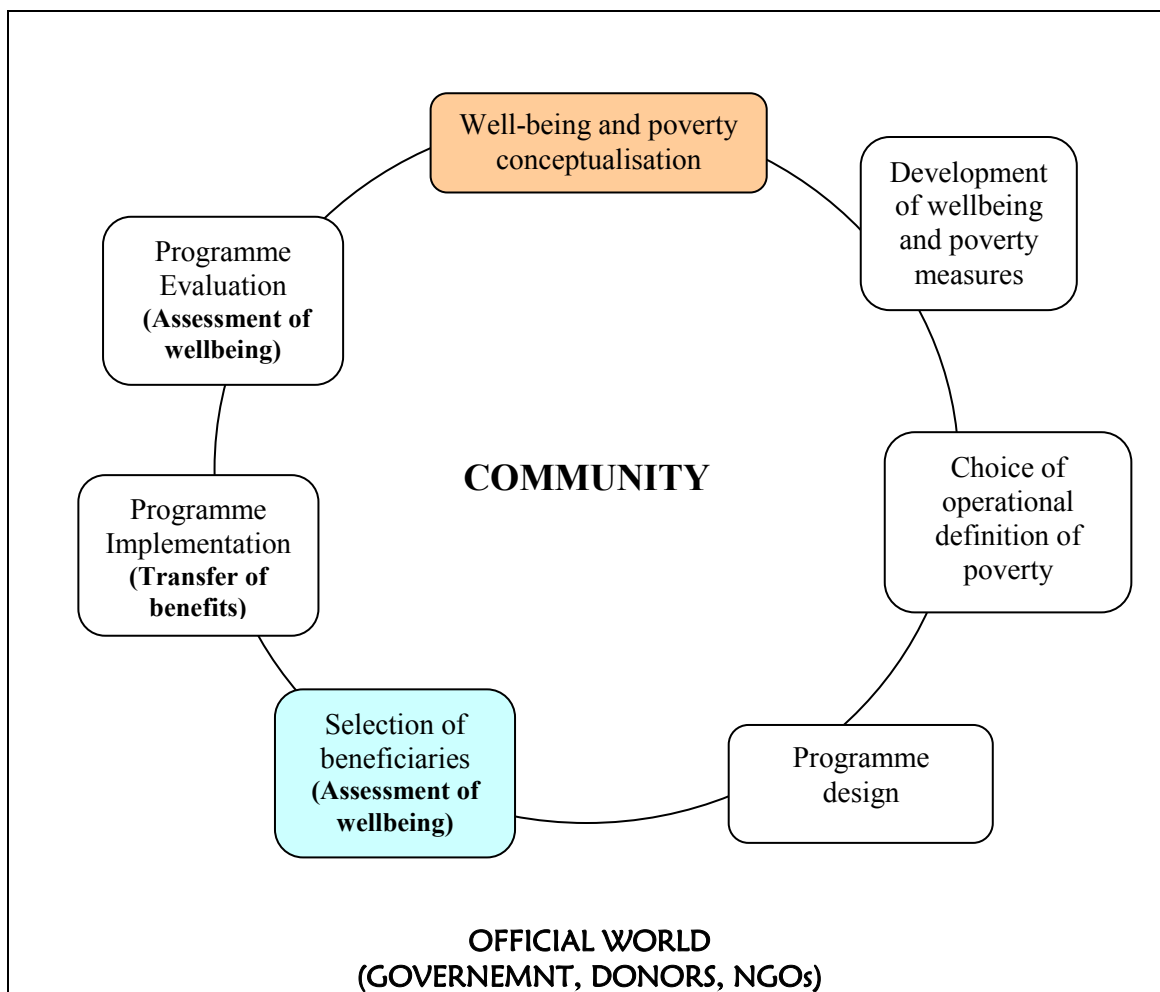
The study aims at injecting the official wellbeing and poverty discourse with concepts, domains or indicators from local people. According to Lister (2004) a poverty concept provides a framework for understanding its related definition and, by extension, measure. By operating at a general level, concepts comprise meanings or understandings as well as discourses and images of poverty. A poverty definition breaks down a general meaning or understanding into a precise characterisation of poverty or being poor while a poverty measure operationalises the definition by providing ways of counting those in

poverty and the extent or severity of their poverty (Lister, 2004). The move from concept to measures necessarily means narrowing down the focus, from a framework of poverty to a state of poverty to people in poverty.

In the context of the research problem, the point is to trace the potential and actual role of people in the process of conceptualising and defining poverty which drives the design, implementation and evaluation of projects and programmes. Using Figure 3.1 to illustrate the point, people should play a role in conceptualising wellbeing and poverty. For example, people should define wellbeing and characterise its various categories. This is also true when breaking down the concepts into measureable indicators and coming up with the operational definition of poverty. In this case, people should be come up with the definitions and indicators of poverty. Beresford and Croft (1995) also argue that people should be involved in programmes meant to benefit their community. This is true for selection of beneficiaries, and programme implementation and evaluation. The extent of people's involvement in these stages is dependent on the type of programme. However, for programmes where community based targeting is used people's involvement in the design, implementation and evaluation is necessary.

Of all these stages it is the development of the wellbeing measure and the choice of the operational definition that are critical because poverty profiles, targeting criteria, programme designs, beneficiary identification and programme evaluation are based on these. The study is therefore focussing on these two stages because of their impact on the other stages. The research problem is that people are mostly involved at the stage of selecting beneficiaries but rarely, if at all, at any other stage. This is what creates the mismatches at the stage of evaluation.

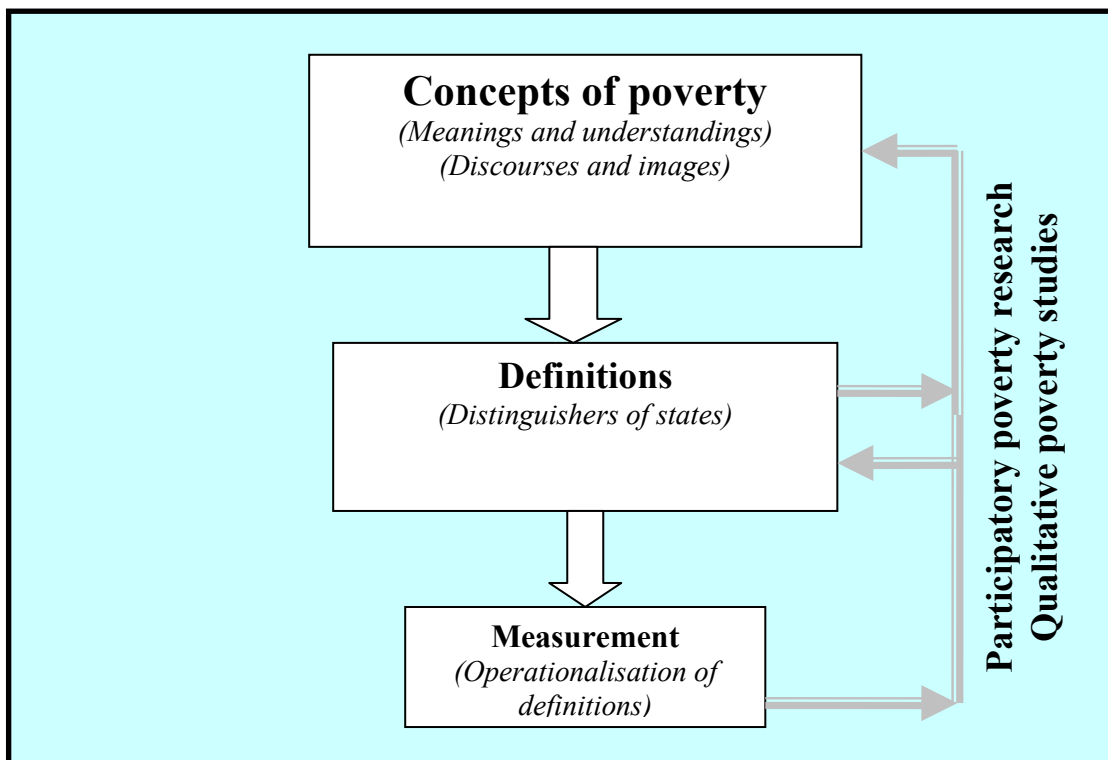
Figure 3.1: People's participation in poverty discourse and programmes



Source: Adapted from Lister (2004) and Lister and Beresford (2000)

Concepts, definitions and measures are not static. These change based on changes in the economic, social, cultural and political circumstances of the concerned population. These changes can be filtered back into the main process through research and studies that are meant to interface the official process and the people. For example, participatory wellbeing and poverty research may expose deficiencies in concepts, definitions and measures that are in use which can then be addressed by factoring in the research results. This is also true for qualitative wellbeing and poverty studies. In fact, given that concepts, definitions and measures are never static, it is incumbent upon officials to purposively undertake the research and studies at the community level to enrich the discourse. Figure 3.2 summarises the process.

Figure 3.2: Wellbeing and Poverty Analysis Process



Source: Adapted from Lister, 2004, p. 6 Figure 0.1

The study uses results from participatory poverty research and qualitative studies to interrogate the concepts, definitions and measures current in use by government and development partners in Malawi for the identification of the poor.

3.5 Research objects and approach

This is an evaluative study. As such it has to use what is in use to be comparable. This is why the household is used as the unit of analysis. This does not mean that the gender dimension is not recognised in Malawi. Rather it is a symptom of a data collection system that uses the household as the level of aggregation. In fact, the gender dimension of poverty was established as early as early 1990s (GoM & UN, 1993). In cases where the sex of the household was used as a proxy for gendered analysis of poverty, women-headed households have been found to be more disadvantaged than men-headed ones (Mukherjee & Benson, 2003; GoM & World Bank, 2007a). Malawi Government also recognises that a gendered analysis of poverty is necessary if resources towards the reduction are to be directed well (GoM, 2006).

The study has two types of poverties to follow; consumption poverty and subjective poverty. The measurement of the consumption poverty comes from an integrated household survey questionnaire covering consumption of food, expenditure on non-

food items, and use value of durable goods. For the purposes of conducting correlates and determinants analyses, the questionnaire also covers household production, income covering all possible resources as proposed by Townsend (1970) and Ravallion (1994) over and above demographic characteristics, education and health status and labour use. The questionnaire is an adapted version of the Second Malawi Integrated Household Survey 2004/05 questionnaire (NSO, 2004), whose data was used for the latest Malawi poverty analysis.

The measurement of subjective wellbeing comes from household heads and community groups. Household heads, in a questionnaire scenario, are requested to assess their households' status on a number of areas including using a ten-step wellbeing ladder of life running from 1 to 10; step 1 being the worst and 10 the best. The head also states whether the household is poor or non-poor. After the rating, the household head gives reasons for the rating. So far no study has done this. This is a modification of the methodology used by the Moving out poverty study (MOPS) as proposed by Narayan and Petesch (2005). The reasons given provide a glimpse of factors considered important for household wellbeing. These are the factors that are taken as dimensions, domains or indicators coming from households.

The subjective wellbeing of households also comes from a group of community members working under a facilitated group discussion using wellbeing analysis and pairwise ranking. In line with the Narayan and Petesch (2005) methodology, the group first provides wellbeing characteristics for wellbeing categories. It then superimposes the wellbeing categories on a ten-step wellbeing ladder similar to the one used in the questionnaire. For poverty analysis, the group decides the poverty line on the ten-step ladder (i.e. the step below which the poor are). The group then places each household in the community on an appropriate step on the ladder and provides the reasons for the placement. This is a modification to the MOPS methodology meant to bring out wellbeing and poverty dimensions, domains or indicators. After step placement, the group ranks households from the poorest to the richest on each of the ten steps. This gives a complete ranking of households from the poorest (poorest on step 1) to richest (richest on step 10).

3.6 Data collection tasks, data sources, and expected outputs

The study employs a five-task approach to answer the research questions. The first task involves mapping wellbeing and poverty dimensions implicit in the *official* wellbeing measure and *community* wellbeing categorisation and characterisation. The second is the ranking of households from poorest to the richest using the official measure and peers

assessment. The third identifies a set of poor households. The fourth compares the characteristics, rankings and sets of the poor. The fifth determines aspects of the official wellbeing analysis system that needs to be modified based on the differences found during the comparisons. Table 3.1 presents some details for each stage including sources of data and expected outputs.

Table 3.1: Study's tasks in response to research questions

Task	Source of data	Output
1. Mapping dimensions	(a) Poverty analysis – Secondary data (IHS1 & IHS2 data) (b) Secondary data analysis (33 KII and FGD reports and CSP5 and MOPS) (b) Primary data analysis (3 site FGD reports)	(a) Poverty correlates and poverty determinants (b) National level wellbeing features (c) Community level wellbeing features
2. Ranking households	(a) Primary data analysis (3 site FGD reports) (b) Primary data analysis (statistical analysis of 164 households in 3 sites)	(a) Ordered list of households by peer assessment (b) Ordered list of households by level of consumption expenditure
3. Identifying the poor	(a) Primary data analysis (3 site FGD reports) (b) Statistical analysis of primary data (164 households in 3 sites) (d) Statistical analysis of primary subjective assessment data (164 households in 3 sites)	(a) List of the poor by peer assessment (b) List of the poor by self assessment (c) list of the poor by consumption expenditure measure
4. Comparing dimensions, features, the rankings and poor	(a) Outputs in Tasks 1-3	(a) Similarities/differences of measures judged by characterisations, rankings, poverty rates and the identified poor (b) Community features that are absent and weak in the official wellbeing analysis system
5. Factoring in critical dimensions of poverty	(a) Outputs of task 4	(a) Proposals for modifying the official wellbeing analysis system

IHS1=First Malawi Integrated Household Survey 1997/98; IHS2=Second Malawi Integrated Household Survey 2004/05; KII=Key Informant Interview; FGD=Focus Group Discussions; CPS5=Complementary Panel Survey Fifth Round; MOPS=Moving Out of Poverty Study

3.6.1 Secondary data sources for wellbeing characteristics

A number of studies that used wellbeing analysis provide a glimpse of the characterisation of wellbeing and poverty as well as categorisation of wellbeing. For wellbeing characteristics associated with the official wellbeing and poverty, the main sources are the poverty profiles produced in 2000 and 2007 based on the 1997/98 and

2004/05 integrated household surveys, respectively (GoM, 2000; GoM & World Bank, 2007a). For ease of reference the 2004/05 integrated household survey is termed IHS2 in this study. Likewise the profiles are referred to as 2000 analysis and 2007 analysis.

General wellbeing characteristics from community groups are obtained from a number of reports. These include: 'A study to develop research policy and operational definition of poverty in Malawi' (Machinjili, et al., 1998); 'Qualitative Impact Monitoring (QIM) of the Poverty Alleviation Policies and Programmes in Malawi'; 'Consultations with the Poor' (Khaila, et al., 1999)⁹; and 'Sources of risks and vulnerability for Malawian Households and communities' (Kadzandira, 2002). Popular (national level) wellbeing characteristics come from field reports from nationally representative study conducted in 2005 titled 'Moving out poverty study'¹⁰ (CSR, 2005c). This is the only study with field reports.

The Machinjili study was conducted in 1998. One of the objectives of the study was to define poverty from three perspectives; local Malawian, policy makers and practitioners. It used wellbeing analysis under group discussions in twenty communities in both rural and urban areas from 9 districts in all regions. QIM was conducted in 2000. It combined participatory poverty assessment and policy impact monitoring covering eighteen sites in all regions. The Voices of the Poor study (Khaila, et al. 1999) covered ten sites in ten districts in all the three regions and used wellbeing analysis to come up with the wellbeing characteristics. The Kadzandira study was conducted in 2001 covering nineteen sites across the country. It used wellbeing analysis as well. The moving out study (MOPS) covered fifteen sites spread across the country and yielded thirty-three reports from key informant interviews and group discussions both of which characterised wellbeing categories. The reports are used to get the national level wellbeing characteristics from peers-assessment.

For self assessment, there is no nationally representative survey that provides unrestricted household voices on wellbeing characterisation¹¹. The IHS2 included a subjective assessment of wellbeing module which was used to determine correlates and determinants of self assessed poverty (Devereux, et al., 2006; GoM & World Bank, 2007b). To fill the gap, the primary data collection includes a question that specially

⁹ This was part of a World Bank global study on poverty led by Dr Deepa Narayan mostly referred to as Voices of the Poor meant to inform the 2000 World Development Report (Narayan, et al, 2000).

¹⁰ This was also part of a World Bank global study also led by Dr Narayan generally referred to as Moving out Poverty study (Narayan and Petesch, 2005).

¹¹ Household voices are generally collected using pre-coded responses under the subjective assessment of wellbeing module. The small studies conducted by CSR also closed questionnaires and focused on mobility rather than status. They are therefore not reviewed for self assessment. Only the IHS2 data is included.

requests the households to give reasons for their status. The reasons are analysed to get the wellbeing characteristics but this is only at village level therefore limited.

3.6.2 Data collection methods and tools

The study uses three methods of data collection namely document review, questionnaire and PRA. Document review is used to collect and analyse wellbeing characteristics from summary reports and field reports. The questionnaire is used to collect data for a number of tasks. The first is the construction of the wellbeing measure for each household. The second is the determination of wellbeing/poverty correlates. The third is the conduct of regression analyses to come up with wellbeing/poverty determinants. The fourth is the analysis of subjective wellbeing assessment to come up with self-rated poverty rates, correlates and determinants. Under the PRA, two tools are used in the context of group discussions; wellbeing analysis which is used to bring out household wellbeing characteristics and sort households into various categories and pairwise ranking which is used to rank households in each category.

The questionnaire, a word by word copy of the IHS2 questionnaire (NSO, 2004), covered household demography, education of all household members, status of all household members, time use and employment, housing characteristics including household utilities, consumption of food, consumption of non-food items, ownership of durable assets, livestock and household enterprises, crop production and sales, non-farming sources of income, gifts, credit, social safety nets and subjective assessment¹². Modules that were not important for the study were excluded and these included Module F 'Security & Safety', Module AB 'Recent shocks to household welfare', Module AC 'Deaths in household' and Module AD 'Child Anthropometry'. The subjective assessment module was modified to replace the 7-step ladder by a 10-step ladder in line with the MOPS methodology. Further, a question was added to get reasons for a household's category placement (rich, poor, in-between).

The group discussions used a guide modified from the MOPS. The guide has four areas; discussion of wellbeing/poverty concepts and definitions, identification and characterisation of wellbeing categories and superimposition of wellbeing categories and poverty line on a ten-step ladder, placement of households on the ten-step ladder and justification for the placement, and ranking of households by step and its justification. The discussion guide is in Appendix 1. Although placement of households in categories

¹²As already discussed all modules and questions that pertain to poverty analysis were maintained. The subjective assessment module was substantially re-worked. A copy of the PDF format questionnaire is available from NSO and its website www.nso.malawi.net as of September 30, 2011.

or on steps is assumed to use the group's own defined category characteristics, the household level characteristics were requested to produce household level characteristics which can then be compared with poverty correlates and features from the objective and self assessments. More features are obtained during pairwise ranking.

3.6.3 Primary data collection

The secondary data is used to respond to only one of the research objectives. They provide national level wellbeing and poverty characteristics for each of the three measurement methods. Primary data is therefore needed to respond to the rest. In particular, primary data is needed for comparison of all the three types of assessments wellbeing applied to the same households at the same time. What is required as a minimum is a community where all the three assessments are applied and outputs like rankings, poverty rates, lists of the poor from the same set of households produced and compared. However, to strengthen the results the study visited three communities as case studies.

Sampling of the three villages

The use of a community group to undertake wellbeing and pairwise ranking requires a choice of a community with a well-defined boundary and known households falling under it and a group of people in that community who know the wellbeing status of all households in the community. A village in Malawi meets these conditions. A village is the smallest administrative unit headed by a hereditary traditional leader. Village sizes vary since family ties and geographical features are the basis for village formation. To put the size of a village in perspective, a typical primary sampling area or enumeration area (EA) comprises a number of villages. On average an EA has 300 households. Villages in an EA are available in the Malawi housing and population census reports.

Due to limited resources and time, the three villages were randomly selected from a population of villages within a radius of one hundred kilometres from Zomba, the base of the author. This radius covered 8 districts (out of 26 in the country) in the South of the country. Since there was no reason to give a higher chance to large villages, the villages were selected using simple random sampling. The three villages sampled were Ngochera in Zomba district, Chikhwaza in Thyolo district and Dzilekwa in Ntcheu district. In all these villages the household population was in excess of seventy-five. With the help of the traditional leaders of the villages, the villages were subdivided into sub-villages. The study was then conducted in the main sub-village. Profiles of the three villages are presented later.

Selection of group discussants

In accordance with recommendation by experts (Chambers, 1997; Bryman, 2008), a total of ten village members were recruited for the FGD at each site. The study used a mixed-sex group. The experience during the MOPS showed that wellbeing and ranking of households were neutral enough topics for mixing the sexes (Tsoka, et al., 2006). In fact, the differences in perspectives between men and women make them complementary and good for the study. The only conditions imposed on their recruitment were that each should have almost complete knowledge of the households in the village and be willing to donate at least six hours to the group discussions¹³. Since outsiders would not know who would meet these conditions, the village head was requested to recruit an equal number of men and women.

Management of the primary data collection at each site

Data collection fieldwork in the three sites commenced on 19th July, 2010 and was completed on 6th August, 2010. Three research assistants were used to administer the household questionnaire. Filled-in questionnaires were checked in the field and in cases where responses were not clear, research assistants were asked to re-visit the household. This was possible because the team worked in a site for six days. All households in each selected village were visited. A total of one hundred and sixty-four households were visited in the three villages; forty-nine in Ngochera, fifty-nine in Chikhwaza and fifty-six in Dzilekwa.

The group discussion was preceded by households listing. The household listing provided the group discussion with name of the household heads and household size to remind the group of the household when placing and ranking it. The discussions were tape recorded after obtaining permission from discussants. Two outsiders took part in the FGD; one facilitated while the other took notes and taped the discussions. The author was assisted by a note taker who also played a major role during pairwise ranking as that process required tracking every household on every step. The note taker participated in the 2005 study when a similar methodology was applied.

Data collection quality control

The study used five strategies to minimise measurement errors that may also lead to mismatches between the consumption-expenditure measure and wellbeing analysis. The

¹³ The study provided refreshments (mid-morning and mid-afternoon) and lunch and token amount of money (roughly £1.50) at the end of the discussions. No one was told of this token money before hand.

first strategy was an intensive training regime of the research assistants. The training took five days, including a field trial. The second was close supervision and further training during the field work. Where there were common data collection problems, group discussions were used. Otherwise a one-on-one system was used to deal with consistent enumerator-specific problems. The third strategy which is related to household pairwise ranking was to limit the number of households to less 75. The fourth strategy was the use of consistent and clear introduction of the study to the community, discussants and questionnaire respondents. In particular, the group discussants were informed that the exercise was not a precursor of any welfare benefits since similar exercise lead to social transfer projects. This was meant to reduce the propensity to strategically misreport a household status¹⁴. The fifth strategy was good facilitation of the group discussion whereby every member was given a chance to speak. The note taker, as a seasoned facilitator, also acted as good referee in difficult circumstances. This helped both the facilitator (author) and the group discussants.

Data entry and cleaning

Data entry commenced thereafter and was completed in September 2010. Data cleaning was undertaken in September 2010 but finalised during the preliminary data analysis in October 2010. Basic methods of data cleaning were used; frequencies and sorting were used to check for outliers/underliers while cross tabulations were used to check inconsistencies. Data entry errors were corrected by referring to the original questionnaires. Data collection errors were corrected by checking consistencies with other related questions. Data with unresolved data collection errors were deleted.

Data entry was done using either Microsoft Excel or SPSS. Data from questionnaires were entered in SPSS. Where necessary, data in Microsoft Excel were transferred into SPSS for merging and later analysis. Electronic copies of IHS2 were provided by Malawi's National Statistical Office. Permission was obtained from the World Bank to use the MOPS dataset. Regarding the group discussions, all were taped, transcribed and translated into English.

Wellbeing characteristics from secondary sources were entered in MS Excel then coded before being transferred into SPSS. Open ended responses in the subjective assessment module and the household category and ranking justifications given during group discussions were coded similarly. This means a similar coding system was used for all data on wellbeing characteristics to ensure comparability. The coding did not use any

¹⁴ This did not always work, as will be seen later.

framework to avoid squeezing the data into a 'box' they do not belong (Chambers, 1997).

3.7 Constructing the wellbeing measure and poverty line

To ensure that the aggregate is comparable to that constructed for the 2007 poverty analysis, the methodology used then is used in the analysis of the primary data with necessary adjustments. That methodology is documented in Box 1.1 and Annex 1B of the Malawi Poverty and Vulnerability Assessment (Malawi Government and World Bank, 2007a and 2007b, respectively). Further, to ensure that all adjustments made are in line with the procedure used in the 2007 poverty analysis, the steps taken as documented in data analysis syntax file was obtained¹⁵ are used with necessary modifications. The aggregate has three components namely food, non-food and use value of durable goods. Use value of housing was not included in 2007 analysis and is not in this analysis as well.

3.7.1 Food consumption aggregate

The value of food consumption is a sum of food consumption from own production, gifts and purchases. Two key procedures are applied to the cleaned food consumption data set. The first is converting all quantities into grams and the second is annualising the quantities. The study used the same conversion factors used in the 2007 analysis¹⁶. The unit adjustments are required because the questionnaire used different units for the same item, a technique meant to minimise data conversion during data collection. No attempt is made to correct seemingly 'wrong' conversion factors to ensure that the procedure adopted is the same as used in 2007 poverty analysis.

The methodology also requires making adjustments for outliers and underliers for quantities consumed and prices paid to take care of data collection errors. Each item has its cut off points for outliers and underliers¹⁷. Again, to get value of food consumed from own production and gifts there is need to use unit prices. Since respondents are not requested to estimate these, the unit prices are derived from purchases of the same item. To ensure that the unit prices generated from purchased food are credible several checks and adjustments are made. The first check is whether the quantity consumed is an outlier. Using the quantity cut off points, outlier quantities are replaced by median quantities. The second is whether the amount paid for the quantity purchased is an

¹⁵ A copy of the manual was obtained from World Bank's Dr. Kathleen Beegle who led the analysis. Copies of the syntax files and notes for the construction of the aggregates are in Appendix 2.

¹⁶ Given that their food consumption covered over hundred items and each item has a maximum of twenty possible units, the list of conversion factors is long. The list is not included.

¹⁷ These are placed in Appendix 2.

outlier. Unlike quantities, however, there are no given cut off points for the amount of money paid. Instead, each item's upper and lower limits are determined using the following formula:

Upper limit = mean + limiter; and Lower limit = mean - limiter

Where:

mean = mean of the log of the amount spent

limiter = 2.5 x standard deviation of log of amount spent.

This means that any value that falls outside the lower and upper limits is considered an outlier and it replaced by the median. The third check is on purchased items with given quantities but no amount of money paid for it (i.e. a respondent remembered the amount bought but not how much was paid for it). Subject to an outlier check of the quantity purchased, a median unit price for the item is used. This also goes for cases where amount of money paid for the purchase is given without its quantity. In such a case, the median quantity replaces the blank. The fourth is when an item consumed from own production or gifts was never purchased by any household from the three villages. In this case, IHS2 unit prices, adjusted for inflation, are used. The inflation-adjusted IHS2 unit prices are also used when there are less than seven purchases of an item in the entire sample¹⁸. The median quantities or value or unit prices used are first those from relevant village. If the village does not have at least seven purchases, then the median for the three villages is used and when purchases of the item from the three villages is less than seven then the IHS2 median is used.

Before valuation of food consumption from own production and gifts is done, the quantities are also checked for outliers using the same procedure used to check quantity consumed from purchases. Outliers are replaced with medians from the site or from the three sites or IHS2 depending on the number of cases of consumption of the item. All in all, there were few adjustments made on quantities just as there were very few adjustments on the amount paid for the purchases.

After all the adjustments on quantities is done the sum of the amount of food consumed from own production and gifts in grams is calculated. This sum is valued using the median unit prices of each item computed from purchases. A total value of food consumption is calculated by adding this value to the value of purchases. Since all food consumption used a-seven day recall period, this total value is multiplied by fifty-two to

¹⁸ The 2007 analysis adopted seven purchases as the minimum for calculating a median. Though seven is too high for the study's small sample, this rule is still used to ensure comparability of the measure.

obtain an annual food consumption aggregate for each household. This completes the construction of the food component of the consumption expenditure aggregate.

3.7.2 Non-food expenditure aggregate

The non-food expenditure aggregate is constructed from various modules and items. These have different recall periods. The items include education and health expenses, cost of utilities, household and personal expenses, clothing and footwear, glassware, furniture and entertainment, purchase of skin and mouth care products, household utensils, cleaning products and decorations, and other household expenses.

The education expenses cover tuition fees, school books and other material, school uniform and clothing, boarding fees, contribution for school building or maintenance, fees for parent associations and other education related expenditures individually. The health expenses include three categories. The first is curative health services covering purchase of prescribed drugs and payment of tests, consultation and inpatient fees. The second is the cost of preventative health care services including prenatal visits and checkups as well as purchase of over the counter non-prescription drugs. The third is cost of hospitalisation and admission either at a health facility or traditional or faith healer. The cost of utilities covers the cost of firewood, electricity, telephone, mobile phones, and water.

A host of household item purchases under three modules (based on recall period) are included. In fact, almost all the items listed in these modules¹⁹ are included with the exception of donations, mortgage and repairs and maintenance to dwelling unit, building materials, losses due to theft, fines and legal fees, lobola, marriage ceremony costs and funeral costs. Just like in the case of food consumption, the first step is to deal with outliers. Using the 2007 analysis cut off points but adjusted for inflation, outliers are replaced by medians using the same method where priority is given to the median from the village then the three villages combined and then inflation adjusted IHS2. The final stage is annualising the expenditures. Each recall has its own multiplier; 52 for a one-week recall, 13 for a four-week recall, 12 for one-month or 30-day recall, and 4 for three-month recall. Once the expenditures are annualised, they are added to compute the total non-food expenditure for each household.

¹⁹ The modules include J for weekly and monthly expenditure (24 items), K for three months expenditures (39 items) and L for annual expenditures (17 items).

3.7.3 Use value of durable goods

The objective is to construct annual value for the use of durable consumer goods in the household. The annual use-value is a quotient of the current value and remaining lifetime of each durable asset. To calculate remaining lifetime, there is need for have an expected life time of each asset. The 2007 analysis methodology provides expected life time for each durable asset. Given that the questionnaire collects data on current age of each asset, then the remaining life time is the difference between the expected life time and the current age. Before the collected current value and age are used, they are checked for outliers and underliers. Those found to be outliers or underliers are replaced by computed median values or inflation-adjusted IHS2 median values, depending on the respective number of cases in the villages visited.

3.7.4 Wellbeing measure: per capita consumption expenditure

The first step towards constructing a comparable welfare indicator among the household is to normalise the total household consumption expenditure on the basis of household composition. Differences in ages and numbers of members imply that household needs are different such that the same total household consumption may be adequate or inadequate. One of the ways to normalise the consumption is to use the household size²⁰. A superior method is to consider the varying needs according to age, sex and activity status of members. Both the 2000 and 2007 analyses used the 1985 WHO scales for medium activity in East Africa (GoM 2000, GoM & World Bank, 2007a).

Although both analyses recognised the superiority of the adult equivalents over household size, they decided against using them. The reasons given were that using household size ensured simplicity, comparability and consistency. Another justification was that adult equivalence only makes sense when used on food consumption but not non-food expenditure. Although the latter problem can be solved by using the adult equivalent scales for the food component and household size for the non-food component, the study has used household size to standardise the household consumption expenditure to ensure that the method used mimics that of 2007 analysis. Thus the household wellbeing measure per capita consumption expenditure which is the sum of food and non-food consumption divided by household size.

²⁰ This assumes that each member of the household regardless of age and other features has the same needs.

3.7.5 Adjusting the poverty line

This study does not construct a poverty line for the three villages. It instead uses the 2007 poverty line and adjusts it for price changes since then. The food component of the poverty line in the 2007 analysis was a consumption estimate of 2,400 calories, computed from the WHO recommendation. It used the median unit price of food consumption for households in 5th and 6th deciles. The non-food component was computed from expenditure of households around the food poverty line. All prices were converted to March 2004, the first month of the twelve-month data collection exercise (GoM & World Bank, 2007a). To bring that poverty line to this study's period (July/August 2010), the 2004 prices-poverty line is adjusted by finding a multiplying it with the change in consumer price index (CPI) between March 2004 and July 2010. Since all the three villages are in rural areas, the rural CPI is used. The 2004 annual CPI was 172.0²¹ and the July 2010 is 261.6 (NSO, 2010). This gives a conversion factor of 1.520930233. On the basis of this, the poverty line in 2004 prices of MK16,165 per capita per annum and the ultra poverty line of MK10,029 per capita per annum (GoM & World Bank, 2007a) are adjusted to MK24,586 and MK15,253 per capita per annum, respectively. These using July 2010 exchange rates translate to £107 (or \$163) and £66 (or \$101) per capita per annum, respectively (RBM, 2010).

3.8 Ethical considerations

This study has a direct link with Malawi Government policy and practice on poverty analysis. The strength of the funding proposal which was approved by the Commonwealth Scholarship Committee (the funder of my PhD programme) was this direct policy link, especially the implications on poverty reduction programming in Malawi. The implication is that to be relevant and comparable, the study uses research protocols used in Malawi for poverty studies as opposed to those normally adopted in UK for such studies. However, the ethical guidelines established by the Government of Malawi and University of Malawi were approved by the Department of Social Policy & Social Work at the University of York's Graduate School before fieldwork commenced. (The researcher has been nominated by the Government of Malawi and seconded from the University of Malawi to complete this study. The University of Malawi also financed the primary data collection including the research assistants).

What is required for a socio-economic survey in Malawi is permission from traditional leaders of the sampled villages (after a thorough introduction of the study) and verbal consent from the households or individual participating as questionnaire respondents or

²¹ The dataset does not have monthly price indices for 2004

focus group discussants. Verbal, as opposed to signed, consent is used in Malawi because of high illiteracy levels. In the case of the study's focus group discussion, the traditional leader was requested to select ten participants who were willing to spend some time. Given that it was known that the exercise would take time, the traditional leader was informed of the time requirement. For both the questionnaire and focus group discussants, participants were given the option to opt out after explaining the objective of the study. Further, it was made clear that they were free to quit even after the start of the interview or discussion.

In general, only health-related research requires government level approval in Malawi. No such official approval is required for socio-economic studies, as long as the traditional leader and the people are willing to participate, so this permission was not sought in this instance.

3.9 Study's challenges

The main challenges of the study are concerned with a number of uncharted territories it has gone into. One such area is the use of pairwise ranking by step of the 'ladder' to produce a complete ranking of households in a community. This puts faith in the order on the steps. Further, it would have been better if this faith was tested with pairwise ranking of households at the top of one step and bottom of the following to check continuity of the ranking at the ends. For example, it would have been ideal if it was shown that the 'richest' on step 1 is the poorest on step 2 and that the poorest on Step 8 is indeed the richest on Step 7. This was the plan which could not be implemented in the field due to time constraint and fatigue. It was apparent having spent almost half day proposing pairwise ranking for eight more pairs (top of Step 1 and bottom of Step 2 to top of Step 9 and bottom of Step 10) was out of question. Thus the study still keeps faith that placement of households on the steps was reasonable.

Another area is the comparison of poverty correlates and wellbeing determinants with wellbeing features obtained from wellbeing and pairwise ranking. The challenge has to do with the fact that household characteristics are derivatives of questionnaire data. Likewise, variables for determinants models are constructed from the household characteristics hence related to the questionnaire data. On the other hand, household features from wellbeing analysis come unrestricted by codes or questioning. This is like a fight of handcuffed and free fighters; it is unfair. On the other hand, this perceived 'unfairness' may force one to unconsciously 'handcuff' the free data for a fair 'fight'. This leads to loss of the original meanings given by the people. To avoid leaching the community data of its richness, the study resisted using any analytical framework that

would impose shape to the data. It is hoped that the attempt to make the data from peers and self assessments comparable with the correlates and determinants did not unduly distort the meaning of the reasons/factors given by the households or community groups.

Another challenge was that the study works on the equality of voices. The study has taken the position that the household and community should be 'heard' as well as experts are heard on issues regarding their wellbeing and poverty. However, during fieldwork it becomes clear that the study does not have enough tools to deal with 'unreasonable' voices. While experts have developed ways of dealing with 'out of line' data, qualitative data collection methods like PRA does not believe in using the 'hedge' approach where the data is trimmed to size. They instead trust in good facilitation to deal with such 'out of line' voices. However, it does not have 'an answer' for wholesale out of line voices. The implication is that there is some unfairness because PRA allows in 'outliers' while quantitative data analysis trims them in. To deal with this challenge the study arbitrarily adopted standards like only considering those that pass the half-way mark or having a frequency of 5% as important. These levels are challengeable but they should be understood as an attempt to introduce some 'fairness' in the comparison.

Another challenge has been the treatment of the three villages. In quantitative analysis, these three villages are mostly taken as one unit. However, these are almost always treated separately when looking at the qualitative data. This switch from 'communal' to individual treatment can be confusing. Quantitative data analysis works better with large numbers and working with the three as one unit yields better quantitative results than individual village analysis. Separating the villages in qualitative data analysis does not pose any problem and yields clear patterns. It is hoped that switches are clear enough for the reader to understand the objective in each case.

As an evaluation of the current government practice, the study used the most recent methodology which was recently used in the government's poverty analysis. Unfortunately that analysis was done four years earlier and the next one is due in 2012. The implication is that some observations made in this study on that methodology may have already been incorporated. Further, although the study may find that the current system needs to be overhauled and replaced, the proposals have largely been on improvements of the current system because there has been no time to undertake sophisticated work like factor or principal component analyses needful for the use of indices. Thus even with the knowledge that a better system can be proposed, the absence of supporting analyses forces such recommendations to future work.

Chapter 4: Country background and poverty studies

4.1 Introduction

This chapter reviews some poverty studies that were undertaken in Malawi. These are meant to provide a background for the analysis of the data collected from the three villages. It reviews the poverty profiles so far done and some qualitative studies that were undertaken in 2005, just after the large scale 2004/05 integrated household survey was under conducted. The studies cover objective and self assessment. The chapter also cover some wellbeing characterisation from some of the qualitative studies which covered both self and peers assessments.

4.2 Country background and poverty commentaries

There are a number of factors that have been used to understand the status and persistence of poverty in Malawi. Some point at some of the characteristics of the country. Others at what has been done to the country in terms of policies, programmes and projects. A detailed presentation of these is in Appendix 3. This section presents a summary of the factors from that presentation. The objective is lay a background that can be used to understand the findings that are later presented.

4.2.1 Country background

Malawi is located in the East African Rift Valley and is locked away from the Indian Ocean by Mozambique and Tanzania. Zambia covers most of its Western side. Malawi, with a 2,881 km border and area of 119,140 km² of which 20% is water, is small (GoM, 1986). With a population 13.1 million in 2008 and density of 139 per km², Malawi is densely populated by African standards (NSO, 2008; UNDP, 2010).

Malawi became independent in 1964 after being a British protectorate since 1892, a republic in 1966 (GoM, 1986), a constitutional one-party dictatorship in 1971, and a multiparty democracy in 1993 (Chijere Chirwa, 1998). From 1971 to 1993 the dictator President was a cold war buddy of the West because Malawi was a capitalist island among socialist neighbours. With the collapse of communism Malawi was forced to adopt multipartyism in 1993 following aid freeze and a little of internal pressure. With multiparty elections in 1994 the change was complete (Chijere Chirwa, 1998).

On the economic front, Malawi adopted managed liberalism at independence which was changed somewhat with the introduction of structural adjustment in the early 1980s following serious economic crisis induced by the two oil shocks of the 1970s. On the

social front, the government did not have any social policy and expenditure on social services was the lowest (Tsoka, 2008). To support the poor, the government opted for an economic policy in the form of price control and inputs subsidies but these were systematically erased over the course of SAPs such that by 1994, there was no official protection of the poor (World Bank, 2008). The Poverty Alleviation Programme launched in 1994 included some safety nets for the poor but were few and small (Smith, 2002).

Malawi has two major religions namely Christianity and Islam (NSO, 2005). On the other hand, traditional culture dominates lives and practices. With very low urbanisation rate, high illiteracy, and slow development changes in culture are very slow and religion is the most potent driver of change of Malawi culture.

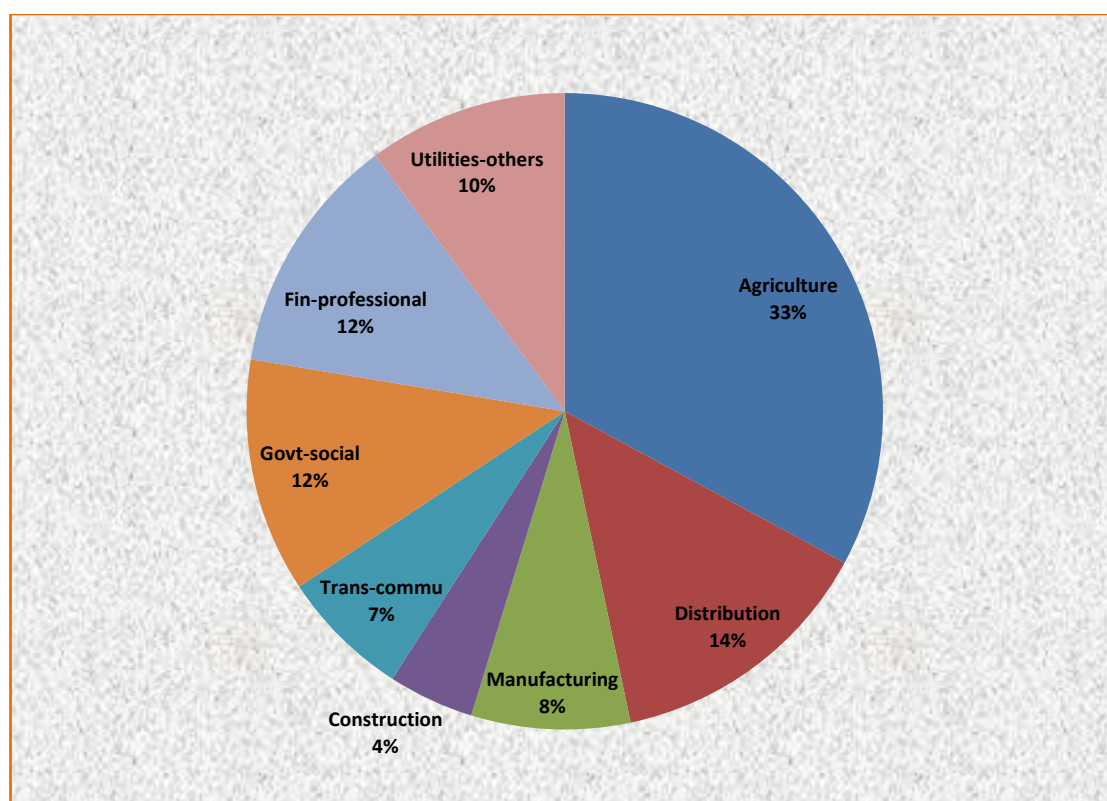
Malawi has three strands of public administration namely central government, local government and traditional authority. Of these, the Central Government is the strongest and the local government almost non-existent given that since 1994 councillors only existed between 2000 and 2004.

Malawi has survived on aid since independence. From independence to 1970, British Government fully funded the Malawi Government recurrent budget up to 1970. However, it refused to fund the development programme because it was assessed to be non-viability. In the 1970s, the World Bank funded some projects while South Africa and international commercial banks funded most of what was considered by the British as unviable (Gulhati, 1989). Following exogenous shocks of the 1970s, Malawi was faced by economic crisis which forced it to adopt structural adjustment programmes since 1981. From then on, management of development financing was in the hands of the World Bank (WB) and International Monetary Fund (IMF) with IMF becoming a donor leader such that if there is no IMF programme, other like-minded donors suspended their aid with the result that it has been forced to reform in line with policy dictates of donors (Chirwa, 2008).

The Malawi economy is dominated by the agriculture sector. Most of the agricultural land is devoted to smallholder maize production mainly for subsistence. Tobacco is by far the largest cash crop in the country and is the single-largest export commodity and foreign exchange earner. The manufacturing sector is small and has been diminishing. The share of the distribution sector has increased over time to fill the gap created by liberalisation-induced de-industrialisation. The government also plays a major role in the

economy through its own services and those of its parastatals. Figure 4.1 presents average sectoral shares for the period.

Figure 4.1: Sectoral shares in GDP, 2002-09



Source: Author's computation from Annual Economic Report (MEPD, 2010)

4.2.2 Why Malawi is poor

Malawi is and has been poor. This is evident in various descriptions of the country over time. In 1989, Gulhati (1989) described Malawi as a low-income small country with a rapidly growing, underdeveloped, and short-life population engaged in traditional technology agriculture. Chilowa (1998) described it as a very poor country dominated by the agriculture sector with a narrow economic base and rapid population growth. Mukherjee and Benson (2003) described it as an agriculture-dependent food insecure poor country whose population is faced with unmet consumption needs, declining life expectancy and dwindling employment opportunities. In 2007, Malawi was described as a poor and vulnerable country with little arable land, high population density, and a young and rapidly growing population and its economy as very fragile and unstable due to its dependence on agriculture which is itself dependent on weather (GoM & World Bank, 2007a).

The descriptions are supported by data as well (see Table 4.1).

Table 4.1: Key socio-economic indicators

Indicator	1970-79	1987	1998	2007
Population (millions) ^{1/}	5.5	8.0	9.9	13.1
Population density (persons per sq km) ^{1/}	59	85	105	139
Urbanisation rate (% population in urban areas) ^{1/}	7.7	8.1	11.0	11.8
Life expectancy	42	48	39.5	52.4
Total fertility rate (births per woman) ^{2/}	7.6	7.4	6.5	6.0
Maternal mortality rate (per 100,000 live births) ^{2/}		620	620	984
Under-5 mortality rate (per 1,000 live births) ^{2/}	330	262	213	133
Infant mortality rate (per 1,000 live births) ^{2/}	189	167	125	76
People living with HIV/AIDS (% of 15-49 year olds)			14.9	11.8
Children under weight for age (% aged under 5) ^{3/}	25.9	24	30	19
Adult literacy rate (% aged 15 and above)	30	42	58.2	71.8
Adult literacy rate (male)	42	52	73.2	79.2
Adult literacy rate (female)	18	31	44.1	64.6
Combined gross enrolment ratio in education (%)			75	61.9
Male			79	62.1
Female			70	61.7
GNP Per capita (1995 US\$ for 1975, 1987, 1998)	157	160	166	256
GDP per capita PPP (US\$)		476	523	761
Poverty incidence (%) ^{4/}		76.6	54.1	52.4
Gini Index (income/consumption expenditure) ^{5/}	44.8	59.9	39	39

1/ The 2007 figures are for 2008; 2/ The 2007 are for 2004; 3/ The 1970-79 figure is for 1981 (after harvest); 4/ The 1987 figure is a population weighted average of urban and rural poverty; 5/ The 1970-79 figure is for 1968/69

Source: UNDP (various); GoM & World Bank (2007); NSO (2008); NSO (1998); Macro & NSO (2004); World Bank (1996a); and Pryor (1989)

The persistence of poverty has been blamed on colonialism, poor policy and programme design, the MCP dictatorship, and structural adjustment, bad luck and nature. The colonial government is blamed for adopting policies that favoured settlers over the natives (Pryor, 1989; Kydd & Christiansen, 1982). The independent government is blamed for adopting policies that favoured capitalists including agriculture estate owners at the expense of workers and smallholder farmers (Gulhati, 1989); Pryor, 1989; Kydd and Christiansen, 1982). The MCP dictatorship is blamed for suppressing entrepreneurship (Chingaipe Ng'oma, 2010). Natural factors that are blamed include erratic weather patterns, absence of sea ports, and lack of minerals. Bad luck in the form of exogenous factors like declining terms of trade and independence and civil wars in Mozambique have been blamed for increasing the import bill. Structural adjustment gets the most of the blame because its stabilisation phase (1980s) paid no attention to the impact of the policies on the poor and doing too little too late when

the negative impact was realised (Chirwa, 2008; Ellis, et al., 2006; Sen & Chikunda, 2002; Orr & Mwale, 2001; Chilowa, 1998; Sahn & Arulpragasam, 1991a).

Of course, there are positives related to colonialism, government policies and SAPs. For example, colonialism is credited for opening the country to trade and development including agricultural development (Kydd and Christiansen, 1982). According to Gulhati (1989) SAPs saved the economy from total collapse (Gulhati, 1989) and when it turned to sectoral policies, it specifically dealt with policies that specifically disadvantaged the poor (Chirwa, 2008; Tsoka, 2008). Governments especially after 1994 have strived to develop policies and programmes that target the poor like the liberalisation of tobacco growing and market, free and subsidised inputs programmes, business loans to small enterprises, and free primary education (Tsoka, 2008). What is of interest to the study is whether these are picked up either in the poverty profiles (next section) or the people themselves in describing their wellbeing.

4.3 Official poverty status from poverty profiles

Malawi has had four poverty profiling whose results were presented in World Bank (1990), World Bank (1996a), GoM (2000) and GoM and World Bank (2007a and 2007b). In this chapter, these are respectively referred to as the 1990 analysis, 1996 analysis, 2000 analysis and 2007 analysis. The 1990 analysis was conducted by the World Bank and was based on an agriculture survey conducted in 1984/85 from which income data on rural smallholders was determined. The 1996 analysis was also conducted by the World Bank. It was based on two unrelated datasets; a nationally representative 1990/91 Household Expenditure and Small-Scale Economic Activities (HESSEA) survey and a nationally representative 1992/93 National Sample Survey of Agriculture (NSSA). HESSEA provided household consumption and expenditure data nationwide while NSSA provided household income data for rural smallholders only.

The 2000 analysis was conducted by Malawi Government with technical assistance from International Food Policy and Research Institute (IFPRI) paid for by the World Bank. Unlike the first two analyses, this was based on a household survey specifically designed for poverty analysis in the tradition of the World Bank consumption expenditure method (Ravallion, 1994). The same approach was adopted for the 2007 analysis, which was conducted jointly by the Malawi Government and World Bank. The 2007 analysis also includes self-rated poverty.

Due to differences in methodologies for collecting and analysing the data, the results are not always comparable. The differences in the data collection methods also means that

even the use of international poverty lines like US\$1 or US\$2 per person per day or US\$40 per person per annum are not entirely safe. However, there is some comparability between the 2000 and 2007 analyses in some aspects because the 2007 analysis made an effort to re-compute the 2000 poverty rates using the 2007 methodology.

4.3.1 Determining the poverty line

The 1990 analysis used an arbitrary absolute poverty line of US\$40 per annum per person which was converted to Malawi Kwacha, the local currency, and equalised by household size. The 1996 analysis used absolute and relative poverty lines. Absolute poverty lines included the equalised US\$40 per person per annum, food poverty line (cost of 200 kilogramme of maize per person per annum) and basic needs poverty line (food poverty line plus clothing and housing costs). The relative poverty lines were 40th percentile and 20th percentile. The 200 kilogrammes of maize were assumed to yield annual equivalent calorie requirements for an adult using WHO equivalent scales for Sub-Saharan Africa.

The 2000 analysis used consumption-based basic needs poverty line, which is a cost of acquiring a set of daily basic food and non-food individual requirements in Malawi Kwacha. The poverty line, just like the 1995 basic needs line, had food and non-food components only. The 2000 analysis refined the basic needs poverty line; it included total value of food consumption; total expenditure on non-food durable goods; estimated use-value of durable goods like vehicles, furniture, appliances; and actual or imputed rental value of housing for the household. These were adjusted to daily consumption or expenditure and then equalised to yield per capita consumption-expenditure. The food component was the cost of per capita expert-recommended daily calorie requirement. It used 1987 WHO Eastern, Central, and Southern Africa scales factoring in age, sex, and moderate activity for adults, all children under the age of 12 months as lactating and no woman as being in the last semester of her pregnancy (Benson, et al., 2004).

Based on the food consumption patterns revealed by the data set, this yielded an estimated mean recommended per capita requirement of 2,198 calories for Malawi (Benson, et al., 2004). The non-food component was determined on the basis of non-food expenditure pattern of households on and around the objectively determined food poverty line. According to Benson and colleagues (2004), this meant considering households whose total consumption was within 20 percent of the food poverty line (10% below and 10% above) but using a weighting scheme that overvalues

consumption of those near and undervalues those far from the poverty line such that, for example, those within 1% get a weight of 10 and those within 9% and 10% get a weight of 1.

The 2007 analysis followed a similar procedure only that it used median instead of mean calorie requirement. This resulted in a median of 2,400 calories per day per person (GoM & World Bank, 2007), which is higher than the 2,198 calories. The 200 calories difference, in a poor country like Malawi, could be significant in terms poverty rates. Table 4.2 presents US\$ poverty lines used in the four analyses

Table 4.2 Poverty line in US\$ equivalent

Type of poverty line	1985	1993	1998	2005
20th Percentile	n.a.	13	74	106
Ultra/calorie needs	n.a.	23	90	113
40th Percentile	n.a.	27	108	141
Basic needs	n.a.	35	150	182
<i>MK/US\$</i>	<i>1.7</i>	<i>4.3</i>	<i>25.4</i>	<i>88.6</i>

Note: the 1998 and 2005 20% and 40% per capita equivalent were read from Figures 2 (GoM 2000) and Figure 1.5 (GoM & World Bank, 2007a); n.a. = Not available

Source: World Bank (1990), World Bank (1996a), GoM (2000), GoM & World Bank (2007a)

It is advisable not to compare the levels of the poverty lines even when they are presented in US\$ because of the differences in the actual baskets. As already indicated, the food poverty line used different calorific values and the non-food component is dependent of the household expenditures around the food poverty line. Thus that component is not fixed and changes with every survey. Another issue is that for the 12-month surveys used in 1997/8 and 2004/5, the prices used to value the per capita non-cash consumption matters. For example, the 2000 analysis used prices as at the end of the survey while the 2007 analysis used prices as at the start of the survey. In an economy where inflation is high, it matters from which side of the 12-month survey the prices are taken.

4.3.2 Poverty prevalence

Poverty prevalence was determined by superimposing the poverty line on the relevant wellbeing measure. In the 1990 analysis, the equivalent of US\$40 in Malawi Kwacha was superimposed on the household's total reported household income, taking into consideration household composition and regional prices. In the 1995 analysis, poverty incidence was determined on the basis of both expenditure (HESSEA) and income (NSSA) data. The expenditure measure from the HESSEA was computed from the cash

expenditure and own-account consumption data adjusted for differences in regional prices and the level of monetarisation between urban and rural areas and between the rich and the poor. The non-food component included per capita spending on education (based on enrolment) and imputed rent (zero for rural households). The income measure from the NSSA data was computed from all sources of income collected in various modules covering off-farm employment, income from casual work, farm income, and other sources. Both the expenditure and income measures were converted to adult equivalents using age and gender as the main factors. Relative poverty in that case was read from the distribution of households on either measure. The other absolute poverty lines (calorie needs and basic needs) were superimposed on either measure as well.

The 1998 poverty line was superimposed on a wellbeing measure computed as total daily per capita consumption expenditure reported by a household, expressed in April 1998 Malawi Kwacha prices. The 2005 poverty line was similar to the 1998 poverty line and was also superimposed on a similar measure but expressed in February/March 2004 Malawi Kwacha prices. Table 4.3 presents the poverty rates by poverty lines.

Table 4.3: Poverty incidence in percent reported in the four analyses

Poverty line	1990	1993	1998*	2005
Food poverty line	n.a	30	24	22
Basic needs line	n.a	43	54	52
US\$40 (rural income)	60	54	n.a	n.a

* These are based on MPVA report. The original rates were 29% and 65%, respectively (GoM, 2000)

n.a. = Not available

Source: World Bank (1990), World Bank (1996a), and GoM & World Bank (2007a)

These national poverty figures hide subtle regional differences as evidenced by Table 4.4²². For example, poverty is predominantly rural but urban poverty is apparently rising. Further, poverty is also deep and severe in rural areas.

²² Poverty prevalence or rate is the proportion of households/individuals below the poverty line to total population. Poverty gap also termed in poverty depth measures the total gap between household's or individual's wellbeing level and poverty line. Poverty severity measures weighted poverty gap, with the poorest getting highest weights. These definitions are based on Foster, et al. (1984).

Table 4.4: Rural and urban poverty incidence in Malawi

Year	Prevalence (%)		Poverty gap (%)		Poverty severity (%)	
	Urban	Rural	Urban	Rural	Urban	Rural
1985	9	60	n.a	n.a	n.a	n.a
1993	20	42	7	17	4	10
1998	19	58	5	20	2	9
2005	25	56	7	19	3	9

Source: World Bank (1990), World Bank (1996a), GoM (2000), GoM & World Bank (2007a)

Other estimates of urban poverty in 1980s put the incidence at 65%, which is much higher than the World Bank estimate of 9% (GoM & UN, 1993). At least between 1998 and 2005, urban poverty appears to have increased although its depth and severity, it has not changed as much. In terms of regions, poverty is highest in Southern Region; making it a disproportional host of the poor (Table 4.5) and Figure 4.2.

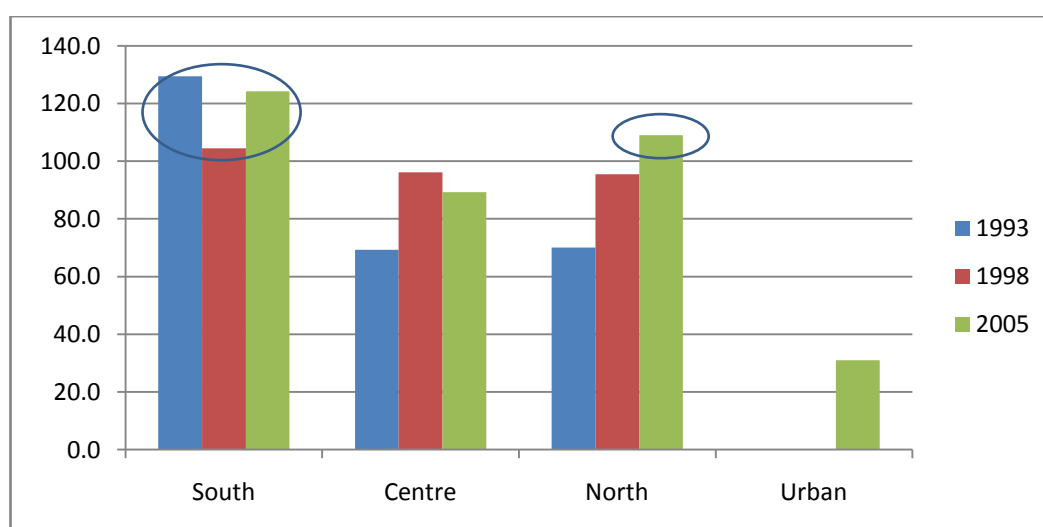
Table 4.5: Regional poverty incidence and population shares in percent

Year	Population share			Poverty rate			Poor people's share		
	South	Centre	North	South	Centre	North	South	Centre	North
1993	51	39	10	n.a.	n.a.	n.a.	66	27	7
1998	47	42	11	68	48	56	62	57	62
2005	40	38	10	64	47	56	50	34	11

n.a. = Not available. Regional poverty rates would have been determined by superimposing the 40% poverty line on the regional income measure. This was not done.

Source: World Bank (1996a), GoM (2000); GoM & World Bank (2007a)

Figure 4.2: Regional poor population share to total population share (%)



Source: World Bank (1996a), GoM (2000), and GoM & World Bank (2007a)

Only in 2005 did the share of the poor in the North surpass the share of the regional population share. Central Region has always contributed to the population of the poor below its total population share. Likewise, urban areas are underrepresented in the population of the poor based on the 2005 statistics²³. See Table 4.6.

Table 4.6: Poverty measures by region

Region	1998			2005		
	Incidence	Gap	Severity	Incidence	Gap	Severity
Urban areas	18.5	4.8	1.8	25.4	7.1	2.8
Rural areas	58.1	20.2	9.2	55.9	19.2	8.6
<i>Northern Region</i>	<i>56.3</i>	<i>19.5</i>	<i>8.9</i>	<i>56.3</i>	<i>19.6</i>	<i>8.8</i>
<i>Central Region</i>	<i>47.6</i>	<i>14.4</i>	<i>6.0</i>	<i>46.7</i>	<i>14.1</i>	<i>5.9</i>
<i>Southern Region</i>	<i>68.4</i>	<i>25.7</i>	<i>12.3</i>	<i>64.4</i>	<i>23.8</i>	<i>11.2</i>
MALAWI	54.1	18.6	8.5	52.4	17.8	8.0

Source: GoM & World Bank (2007a)

According to the 2007 analysis (GoM & World Bank, 2007), there are pockets of poverty all over the country but poverty is deepest in the tips of the country (i.e. Nsanje, the Southernmost, and Chitipa, the Northernmost) and severest in the Southern Region. Although there were some differences between the 1998 and 2005 data sets in quality and the 2000 and 2007 methods of analysis, Southern region emerges as the poorest of three. The poorest district in both analyses was from the Southern Region, although it was not the same district. Of the poorest five districts in the 2007 analysis, four are from the Southern region and out of the five richest districts, only one is from the Southern Region. Again, based on the 2007 analysis, ten of the eleven districts in the Southern Region had poverty rates above the national average as opposed to three out of nine districts in the Central Region. Poverty in cities is generally low. See Table 4.7 which is based on the two latest poverty analyses²⁴.

This is also true for the 1995 analysis. In the 1995 analysis, major cities had lowest prevalence of poverty, except for Lilongwe city (World Bank, 1996). Since then the status of the cities has been fluid; Lilongwe was richest in 1998 but second richest in 2005. The 1996, 2000 and 2007 analyses starting from 1995 shows that poverty is generally rising in urban areas.

²³ Note that in the 2007 analysis, urban areas were considered separately while in the 2000 analysis the various urban areas were within the regional totals.

²⁴ The district results, unlike the regional results, are not directly comparable. The focus is on the proportion of districts above or below the national average as calculated in that analysis rather than whether district poverty has changed or not.

Table 4.7: District poverty rates, 1998 and 2005

Region/district	1998	2005	Region/district	1998	2005
<i>Northern Rural</i>	62.5	56.3	<i>Southern Rural</i>	68.1	64.4
Chitipa	71.3	67.2	Chiradzulu	74.0	63.5
Karonga	42.1	54.9	Mangochi	69.8	60.7
Rumphi	65.8	61.6	Machinga	63.5	73.7
Nkhata Bay	47.7	63.0	Phalombe	83.9	61.9
Mzimba	67.5	50.6	Mulanje	67.2	68.6
<i>Central Rural</i>	62.8	46.7	Thyolo	76.8	64.9
Nkhotakota	65.3	48.0	Zomba Rural	71.9	70.0
Ntchisi	76.3	47.3	Blantyre Rural	65.3	46.5
Dowa	53.6	36.6	Mwanza	71.4	55.6
Kasungu	48.9	44.9	Chikwawa	54.8	65.8
Mchinji	68.0	59.6	Nsanje	51.3	76.0
Lilongwe Rural	65.6	37.5	Mzuzu City	70.9	34.0
Salima	60.8	57.3	Lilongwe City	37.9	24.6
Dedza	73.3	54.6	Zomba City	78.0	28.7
Ntcheu	84.0	51.6	Blantyre City	60.5	23.6

Source: GoM (2000) and NSO, 2010

4.4 Self-rated poverty from the subjective assessment studies

The bases of this section are three surveys all of which included a subjective wellbeing module in household living standards questionnaires all of which were conducted in 2005. As described in Chapter 3, one of the 2005 surveys, IHS2 was conducted jointly designed and analysed by Malawi Government and World Bank officials the officials (GoM & World Bank, 2007a and 2007b). Apart from the officials, the dataset including the subjective assessment wellbeing module was analysed by Devereux and colleagues (2006). Again, the two small nationally representative surveys (CPS5) and MOPS were conducted by the Centre for Social Research but the data was not analysed as part of poverty analysis²⁵. The presentation starts with two small studies.

4.4.1 Self-assessed poverty under CPS5

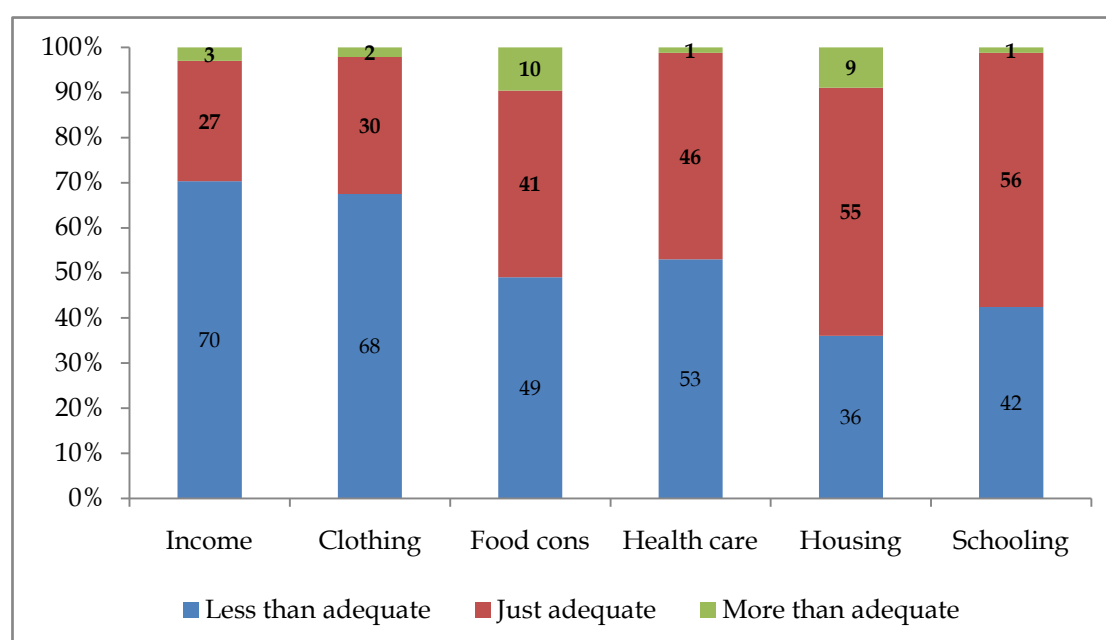
The subjective module in CPS5 included perception questions on life satisfaction, adequacy of food consumption, housing, clothing, health care, child education, and total income. It also covered perceptions on economic situation and circumstances compared to a year, three years and ten years earlier. The respondents were requested to give reasons for the given household status. Further, the questionnaire used a ten-step ladder for the respondent to position the household in terms of economic wellbeing, rights, and ability to change circumstances.

²⁵ These two studies have already been introduced in Chapter 3 Section 6.

Consumption adequacy question

The consumption adequacy question covered six dimensions of wellbeing namely food, housing, clothing, health care, schooling and income. Judging from the proportion of households that had less than adequate in terms of their household needs, income is the most binding dimension followed by clothing and health care. Of all the six dimensions, adequacy rates (a sum of 'just enough' and 'more than enough') are highest in housing (64%) followed by schooling (58%) and food consumption (51%). Income and clothing have the least proportion of households with 'at least adequate income' (30%) and 'clothing' (33%), respectively. See Figure 4.3.

Figure 4.3: Consumption adequacy in various wellbeing dimensions
(% of respondents)



Source: Author's computations from CPS5 dataset

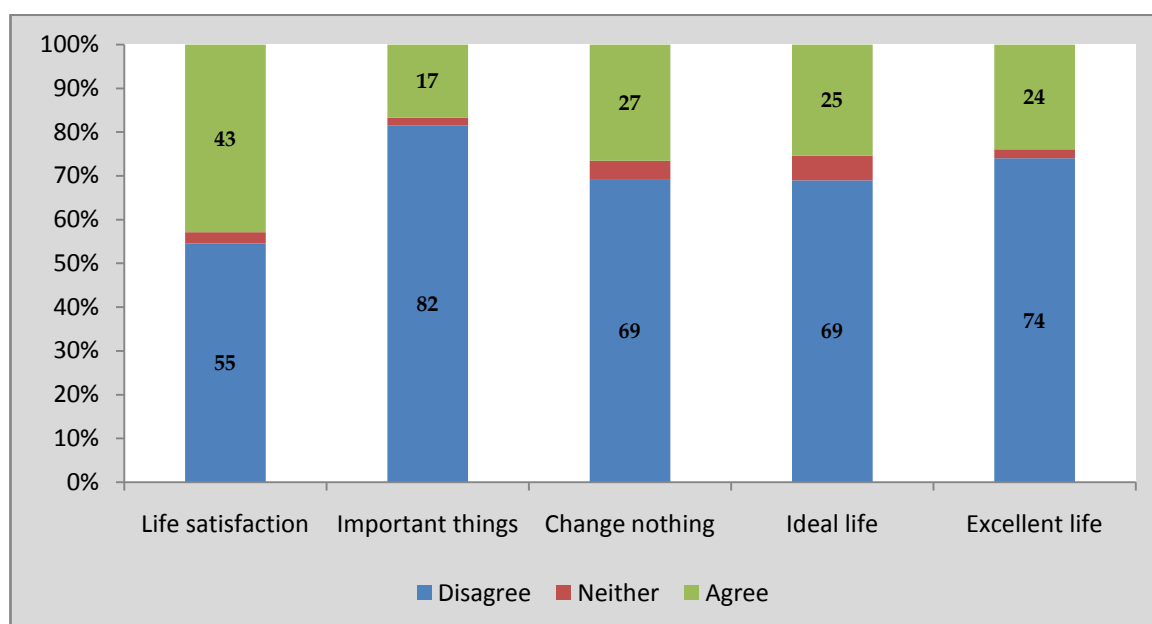
Taking those that indicate having less than adequate as being poor in that wellbeing dimension and averaging across the six dimensions, the poverty rate is 53%. Using this crude method, the subjective perceptions in the six dimensions approximate the poverty rate in the same year of 52% (GoM & World Bank, 2007a). This is also matched by the evaluation of current household status if 'struggling' and 'unable to meet needs' are combined to represent the poor status; the poverty rate is 56 percent²⁶. As concluded earlier on, having similar poverty rates does not mean similarities of dimensions these different questions are dealing with.

²⁶ The codes for the question are 'struggling', 'unable to meet needs', 'doing just okay' and 'doing well'.

Life evaluation statements

The CPS5 had five life evaluation statements that required the respondent to indicate the strength of agreement or disagreement. These are (i) 'I am satisfied with my life', (ii) 'so far I have gotten the important things I want in life', (iii) 'If I could live my life over, I would change almost nothing', (iv) 'In most ways my life is close to my ideal' and (v) 'the conditions of my life are excellent'. The options were 'strongly disagree', 'disagree', 'neither agree nor disagree', 'agree' and 'strongly agree'. Figure 4.4 presents the findings after the five options are collapsed into three categories 'disagree' for 'strongly disagree' and 'disagree' and 'agree' for 'strongly agree' and 'agree'. Note that the proportion of households that are neutral is generally small compared to the others.

Figure 4.4: Respondents perceptions on various aspects of life in percent



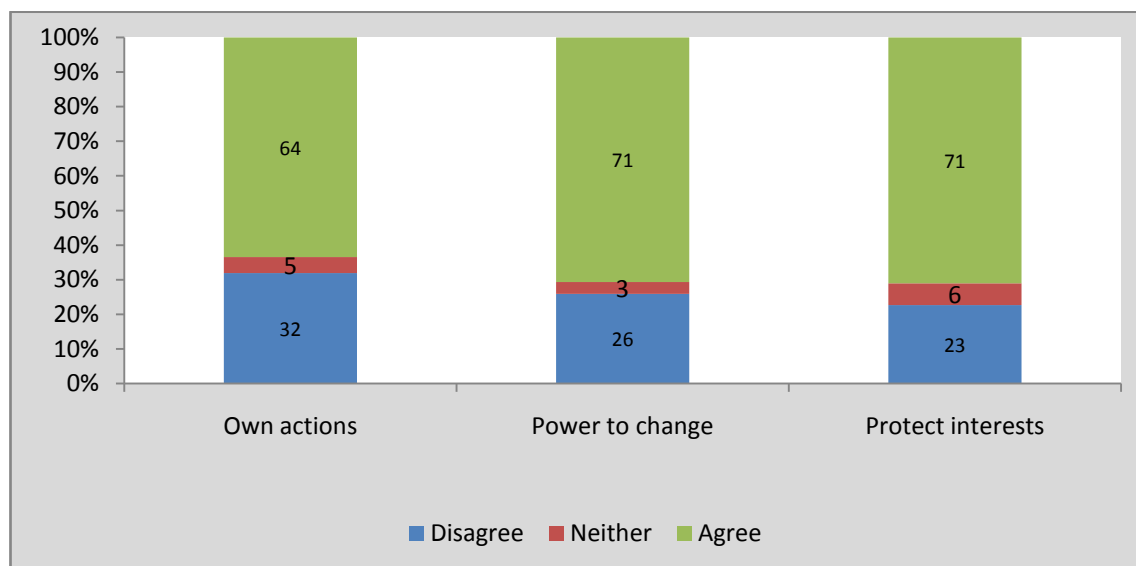
Source: Author's computations from CPS5 dataset

What is noteworthy is that the perceptions display some consistencies. For example, the proportion that disagreed that their life was satisfactory (55%) is close to the average obtained from the six wellbeing dimensions (53%) seen above. The findings could imply that the majority of people do not have what they would like to have and given a chance to turn back the clock and capability they would change almost everything. In other words, although some people are satisfied with their current life, that life is not excellent and ideal since it lacks some elements they feel are important.

Considering that the majority implicitly said that given a chance to live their life over they could change some things, it may be worthwhile to check their perceptions on their agency (i.e. power to change things). CPS5 had three statements on people's agency.

These are ‘my life is determined by my own actions’, ‘I have the power to make important decisions that change the course of my life’, and ‘I am usually able to protect my personal interests’. Figure 4.5 gives the picture.

Figure 4.5: Proportion of respondents holding the perceptions on agency in percent



Source: Author’s computations from CPS5 dataset

Judging from the high proportion of households who agree with the statements on responsibility of actions, power to change course of life and ability to protect personal interests, people in Malawi are not particularly fatalistic (64%, 71% and 71%, respectively). This reduces the probability of blaming either government, god or somebody else for their condition. Indeed only a small proportion attributed their state affairs to god (2% of those who had improved status) or bad luck (0.2% of those whose status declined).

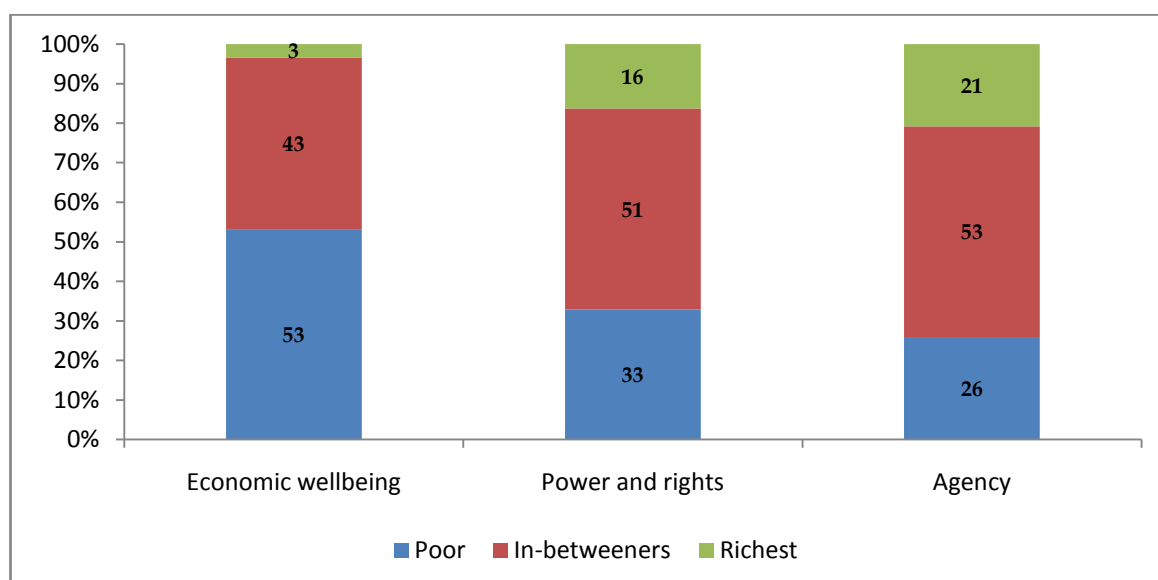
Ladder of life ratings

Three ten-step ladders were presented to respondents to rate their households in terms of economic status, power and rights and agency dimensions. On economic wellbeing the question was: 'imagine that at the bottom, on the first step, stand the poorest and worst off, and the highest step, the tenth, stand the richest and best off. On which step of this ladder are you located today?' On power and rights the question was 'And now imagine, please, another 10-step ladder, where at the bottom, on the first step, stand people who are completely powerless and without rights, and the highest step, the tenth, stand those who have a lot of power and rights. On which step of this ladder are you today?' The third, on power to change things, the question was 'Now imagine,

please, another 10-step ladder, where at the bottom, on the first step, stand people who are completely powerless to change the course of their lives, and the highest step, the tenth, stand those who have the power to change the course of their lives. On which step of this ladder are you today?'

To facilitate discussions, three arbitrary wellbeing groups are imposed. The first (poor) covers steps 1 to 3, the second (in-betweeners) covers steps 4 to 7, and the third (richest) covers the rest. Further, borrowing from Devereux, et al. (2006), a poverty line is imposed on step 4 thereby labelling all households in the first group 'poor'. Figure 4.6 presents the proportion of the three groups in the three dimensions of wellbeing. Note that the economic poverty rate of 53% is very comparable to the objective poverty rate of 52%.

Figure 4.6: Proportion of respondents in various categories in percent by dimension



Source: Author's computations from CPS5 dataset

Again, the low agency poverty rate (26%) mirrors the findings on the perceptions on agency reported above. In particular it is the same as that reported for power to change the course of one's life. In any case, just like when six dimensions of wellbeing were examined using a five point scale, economic wellbeing is the most constrained of all dimensions amongst households in Malawi. The group of the richest dramatically increase from only 3% under economic wellbeing to 16% in power and rights and 21% in agency. Apparently, the Malawi bill of rights introduced in 1995 liberated many but may not have translated into access to economic resources.

Changes in household economic situation and circumstances

CPS5 has two different types of questions that compare the current with previous economic status. The first compares the current household circumstances with circumstances three, five and ten years ago and has seven possible read-out responses: 'rich', 'comfortable', 'manage to get by', 'never quite enough', 'poor' and 'destitute'. The second question enables the respondent to consider all wellbeing dimensions they find important and reads: 'comparing the current overall economic situation of your household with that one year ago, would you say it is much better now, a little better now, the same, a little worse now, or much worse now?'.

Responses to the first question show that over the ten year period between 1995 and 2005, the rich did not grow richer as the poor grew poorer because both grew poorer. For example, 2% of the population were very rich in 1995 but by 2000 this group had vanished as poverty measured by the sum of those that were 'destitute', 'poor' and 'never quite enough' increased from 46% to 51% by 2002. Apparently, the gainers have been those who simply 'managed to get by' whose proportion increased from 24% to 28% to 33% over the ten year period. See Table 4.8.

Table 4.8: Respondents rating of household circumstances in percent

Rating	3 years ago (2002) <i>n=480</i>	5 years ago (2000) <i>n=476</i>	10 years ago (1995) <i>n=460</i>
Very rich	0	0.2	1.7
Rich	2.7	4.0	5.7
Comfortable	13.3	16.8	23.0
Managed to get by	33.3	28.4	23.9
Never quite enough	25.8	27.1	25.9
Poor	21.3	19.5	15.4
Destitute	3.5	4.0	4.3

Source: Author's computations from CPS5 dataset

The growth in the 'middle class' is supported by the findings from the question on overall economic situation. If three groups are constructed from the responses i.e. those who did better (much better now and a little better now), those whose situation did not change (same) and those who did worse (much worse now and a little worse now), the proportions are 22%, 41% and 37%, respectively. Taken together, these findings also show that inequality has improved between 1995 and 2005. The findings also show that economic poverty can co-exist with food adequacy and that income poverty does not imply food poverty.

4.4.2 Self-assessed poverty under MOPS

The MOPS also used ten-step ladders for respondents to rate their households' economic wellbeing status, power and rights, and happiness. The question for the economic wellbeing was: "Here is a picture of a 10-step ladder. Imagine that at the bottom, on the first step, stand the poorest and worst off people, and on the highest step, the tenth, stand the richest and best off. On which step of this ladder are you located today? And on which step were you located 10 years?' The question for the power and rights dimension was similar only that on the first step 'stand people who are completely powerless and without rights', and the highest 'stand those who have a lot of power and rights'. For the happiness dimension step 1 is for the sad and step 10 is for happiest.

General changes between 1995 and 2005

In line with the assumptions made for CPS5, the poorest are on steps 1 up to 3, the richest are on steps 8 to 10 with the rest as in-between, again to facilitate discussions. Table 4.9 presents the proportions for the three wellbeing dimensions for 1995 and 2005 for each step.

Table 4.9: Self-assessed household positions on 10-step ladder in 1995 and 2005
(% of households)

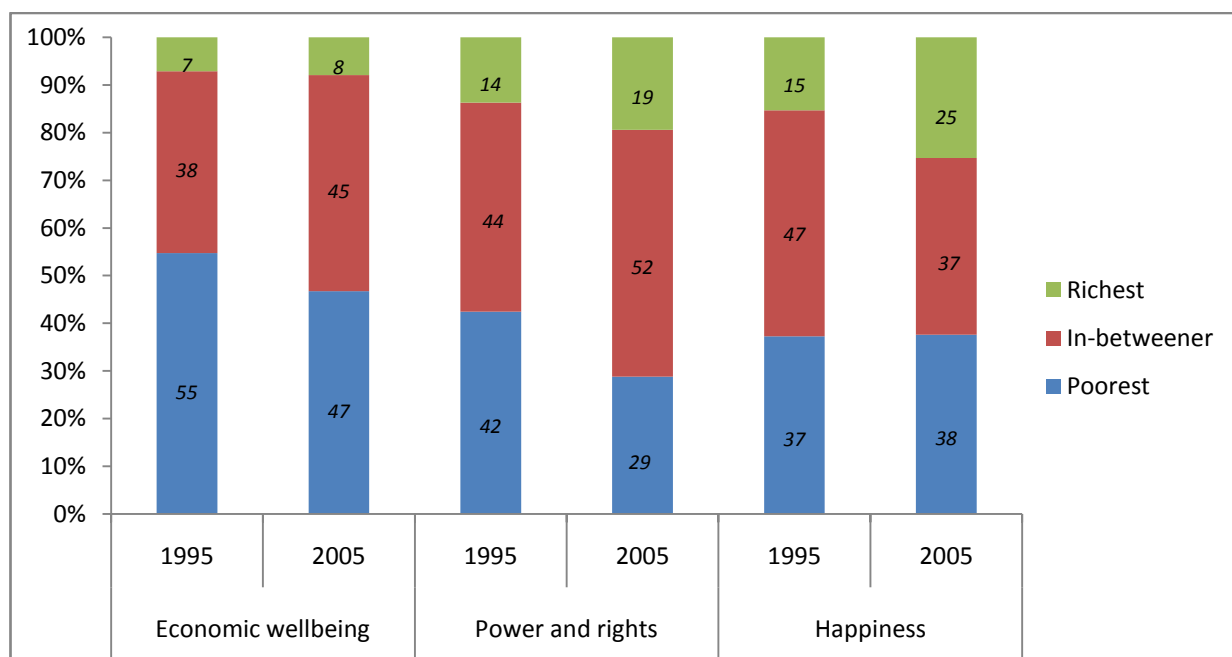
Ladder step	Economic wellbeing		Power and rights		Happiness	
	1995	2005	1995	2005	1995	2005
	<i>n=139</i>	<i>n=139</i>	<i>n=132</i>	<i>n=139</i>	<i>n=137</i>	<i>n=138</i>
Step 1	18.0	20.1	12.9	10.1	11.7	12.3
Step 2	18.7	13.7	15.9	7.9	11.7	13.0
Step 3	18.0	12.9	13.6	10.8	13.9	12.3
Step 4	10.8	12.9	12.1	18.0	10.2	8.7
Step 5	16.5	15.1	12.1	13.7	19.0	11.6
Step 6	5.0	7.9	9.8	12.2	10.9	8.0
Step 7	5.8	9.4	9.8	7.9	7.3	8.7
Step 8	5.0	4.3	6.1	7.2	7.3	12.3
Step 9	0.7	2.2	2.3	7.9	2.2	3.6
Step 10	1.4	1.4	5.3	4.3	5.8	9.4

Source: Author's computations from MOPS dataset

Just like in the case of CPS5, poverty is more prevalent in the economic wellbeing dimension and the situation improved over the ten year period. The proportion of the poor economic wellbeing and power-rights respectively declined over the ten-year period from 55% to 47% and from 42% to 29%. On the other hand, the proportion of the saddest marginally increased as the proportion of the happiest significantly increased.

Of the three dimensions, the economic wellbeing and power-rights seem to have similar patterns. They both saw the proportions of the non-poor groups increase between 1995 and 2005. On the other hand, the happiness dimension registered declines in the proportion of the in-betweeners and increase in the proportion of the richest in the same period (Figure 4.7). This implies that there are other factors that influence happiness over and above economic wellbeing, power and rights.

Figure 4.7: Proportion of households in wellbeing categories in percent, 1995-2005



Source: Author's computations from MOPS dataset

Mobility status

The data on the three ladders can also be analysed in terms of simple mobility status; those that moved at least one step up or down or none at all since 1995. The economic wellbeing ladder can also be analysed in terms of poverty mobility status, assuming step 4 to be the poverty line. It can also be analysed in terms of wellbeing category mobility status among the three groups (poorest, in-betweeners and richest) as defined under CPS5 and used above. Table 4.10 presents the household mobility status in the three wellbeing domains on the basis of at least one step movement.

Table 4.10: Proportion of households in percent by mobility status and dimension

Type of move	Economic wellbeing	Rights	Happiness
	<i>n=139</i>	<i>n=132</i>	<i>n=137</i>
Upward movement	48.9	44.7	46.0
No change	14.4	29.5	16.1
Downward movement	36.7	25.8	38.0

Source: Author's computations from MOPS dataset

In all domains, there were more households that improved their status than those whose status declined or remained the same. In general, there is more change than stability and that instability is most prevalent in economic wellbeing and least in power and rights. It is noted that the movements in economic wellbeing are mirrored by those in the happiness dimension.

It is, therefore, tempting to link economic wellbeing and happiness seeing their similarities. Indeed a correlation analysis of household mobility from 1995 to 2005 shows strong relationship between economic wellbeing and happiness. The two have a Pearson Correlation coefficient of 0.642 which is significant at 1% level. As expected, the mobility becomes reduced when the three groups are used because movements within a group are not considered. Using the economic wellbeing dimension, 27% of households moved up (from poorest to either in-betweeners or richest and from in-betweeners to richest) and 19% moved down (from richest to in-betweeners or poorest and from in-betweeners to poorest). The largest movement was from poorest to in-betweeners (22%) followed by in-betweeners to poorest (14%). Only two households managed to move from being among the poorest in 1995 to being among the richest in 2005. On the other hand, only one household had the misfortune of becoming one of the poorest in 2005 from being one of the richest in 1995.

The general picture is that maintenance of one's economic wellbeing group was more prevalent than change as evidenced by the fact that 55% of the households did not change their group over the period. This is represented by the diagonal in the mobility matrix presented in Table 4.11 (i.e. 32% poorest, 20% in-betweeners and 3% richest). The implication of this is that most of the movements presented in Table 4.9 were small step movements.

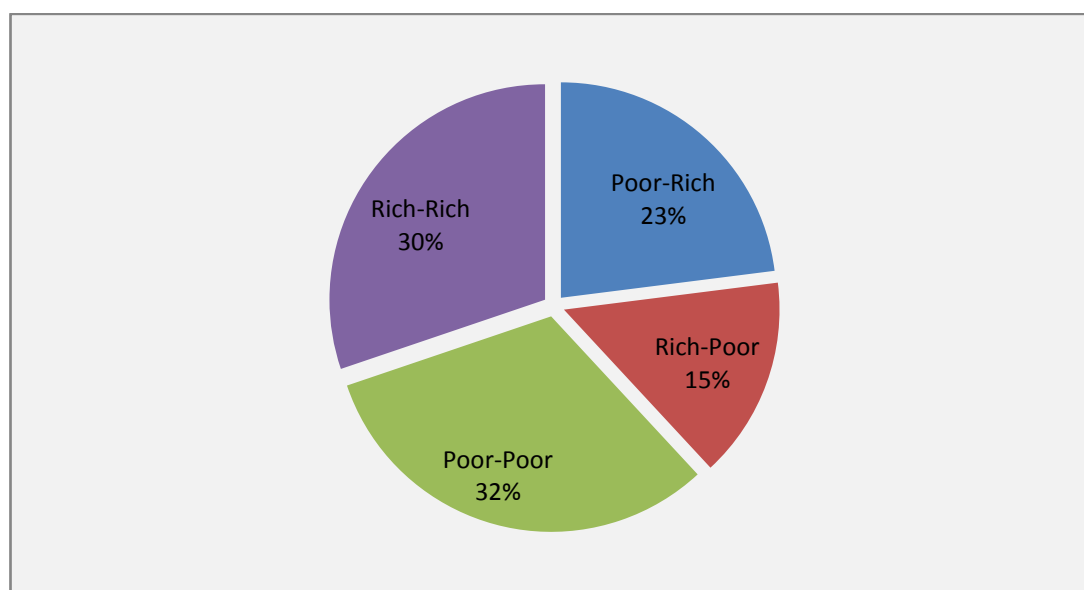
Table 4.11: Proportion of households in wellbeing categories in percent 1995-2005

Group	Poorest	In-betweeners	Richest	2005
Poorest	31.7	21.6	1.4	54.7
In-betweeners	14.1	20.2	3.7	38.0
Richest	0.7	3.7	2.9	7.3
1995	46.5	45.5	8.0	100

Source: Author's computations from MOPS dataset

When the households are divided between poor and nonpoor with step 4 as the poverty line, the mobility is further constrained. Only 23% poor households crossed the poverty line and 15% nonpoor households moved into poverty (Figure 4.8). This implies that 37% of the households changed their economic status while 32% remained poor and 30% remained nonpoor between 1995 and 2005.

Figure 4.8: Household economic status mobility status between 1995 and 2005

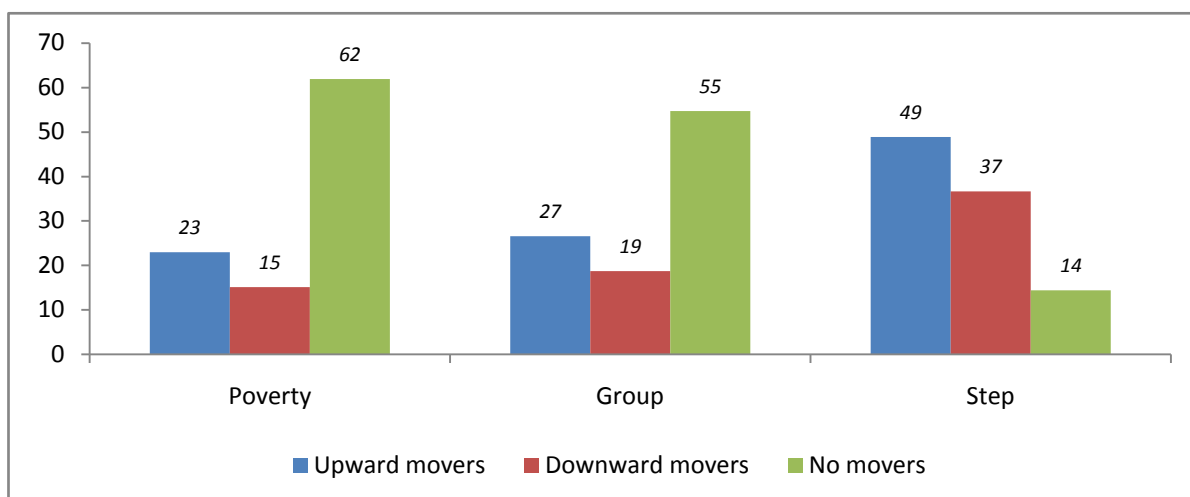


Source: Author's computations from MOPS dataset

The trend is what is expected as the households are aggregated. With ten groups (each step representing a group) very few households maintained their positions. With three groups and two groups, the mobility was highly checked because most of the moves were very small. In fact, if only 3-step movements are considered to be meaningful²⁷, only 17% of households would qualify to have improved their status and 13% lost out over the period. As Figure 4.9 shows, more households moved up than down.

²⁷ Although the three is an arbitrary number it is chosen because with three steps, a household can change welfare groups especially if it is in the poorest or richest groups.

Figure 4.9: Household mobility status by type of movement, 1995 and 2005
(% of households)



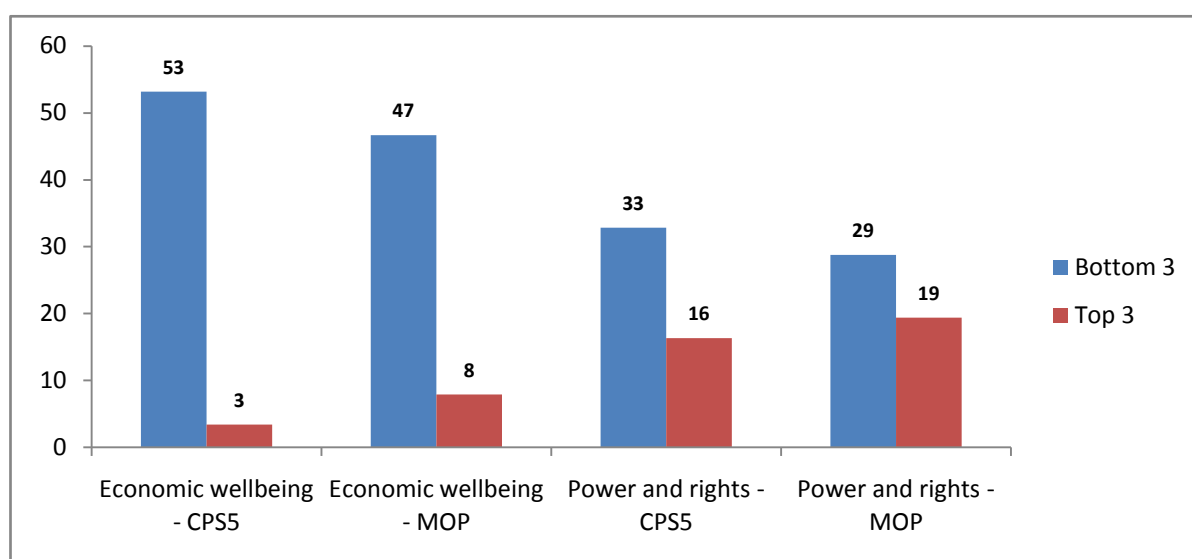
Source: Author's computations from MOPS dataset

When the ratings under the CPS5 and MOPS are compared it can be concluded that by and large people's perceptions are consistent and differences between the two studies can be explained by differences in questionnaire design²⁸. For example, both studies were conducted in the same year and households and by the same institute, researcher (the author) and field manager and research assistants. This fixes most of the factor that can introduce differences.

For simplicity, the comparisons are based on the proportions of the top and bottom three steps on the ladder of economic wellbeing (poorest and richest). Figure 4.10 presents the proportions of households in the bottom and top 3 steps on economic wellbeing and power and rights ladders for the two surveys.

²⁸ Both studies were conducted in the same year and households and by the same institute, researcher (the author) and field manager and research assistants. This fixes most of the factor that can introduce differences.

Figure 4.10: Comparison of CPS5 and MOPS poorest and richest categories
(% of households)



Source: Author's computations from MOPS dataset

In terms of pattern, it is safe to conclude that there is some consistency. The biggest difference between the two studies is for the bottom three rungs of the economic wellbeing ladder. However, the difference for in-betweeners (not shown) is even small; 2% for economic wellbeing and 1% for the power and rights.

4.4.3 Self rating from the 2004/5 dataset

Just like in the case with CPS5, there were two questions that requested the household to rate the adequacy of its food consumption, housing and clothing. The question was: 'Concerning your household's food consumption over the past one month, which of the following is true? 1. It was less than adequate for household needs, 2. It was just adequate for household needs, 3. It was more than adequate for household needs'. The second is an economic ranking question which read: 'Imagine six steps, where on the bottom, the first step, stand the poorest people, and on the highest step, the sixth, stand the rich. On which step are you today?'

On the adequacy question, the MPVA reports that the least poverty (based on less than adequate) was in housing while clothing recorded the highest poverty (Table 4.12).

Table 4.12: Proportion of households in percent by type of adequacy and dimension

Domain	Less than adequate	Just adequate	More than adequate
Food	57.2	36.5	6.1
Housing	55.4	40.0	5.6
Clothing	72.6	25.6	1.8
Health	60.9	35.9	3.11

Source: GoM and World Bank (2007b) Table A3.1

This varied by region. Using those reporting less than adequate consumption or expenditure, the least poverty was recorded on food consumption in Rural North and the highest was recorded on expenditure on clothing in Rural Centre (Table 4.13). In general, households in Rural North have the least self-assessed poverty based on the four domains. Rural Centre households in general feel the most poor. This is because they feel most poor in all domains except in food consumption.

Table 4.13: Proportion of households with adequate consumption in percent

Region	Food	Housing	Clothing	Health
Urban	48.3	44.1	54.5	51.8
Rural North	35.1	36.1	52.1	43.0
Rural Centre	59.2	60.3	84.2	65.6
Rural South	63.9	58.8	71.8	63.7

Source: GoM and World Bank (2007b) Table A3.2

On the economic ranking question, the MPVA found that step 2 (1.8) was the average for the population, implying on average people rated themselves as mostly poor. The ranking varied by region with urban households having the highest average rank of 2.3 followed by Rural North (1.9) then Rural Centre (1.7) and finally Rural South (1.6). Unlike the consumption/expenditure adequacy where Rural Centre was the poorest, Rural South is the poorest on economic wellbeing analysis. Using regression analysis to determine the poverty line from the MIQ following the Leyden methodology (van Praag, et al., 1982), MPVA found a subjective poverty rate of 80% (GoM & World Bank, 2007b).

MPVA did not impose a poverty line on the six-step ladder to directly determine the subjective poverty from the ladder. On the other hand, Devereux, et al. (2006) created a poverty status dummy variable with code 1 standing for the poor for households that rated themselves to be on steps 1 and 2 and 0 for the non-poor on steps 3 to 6. This implies step 3 was designated as the poverty line 'after examining the data and

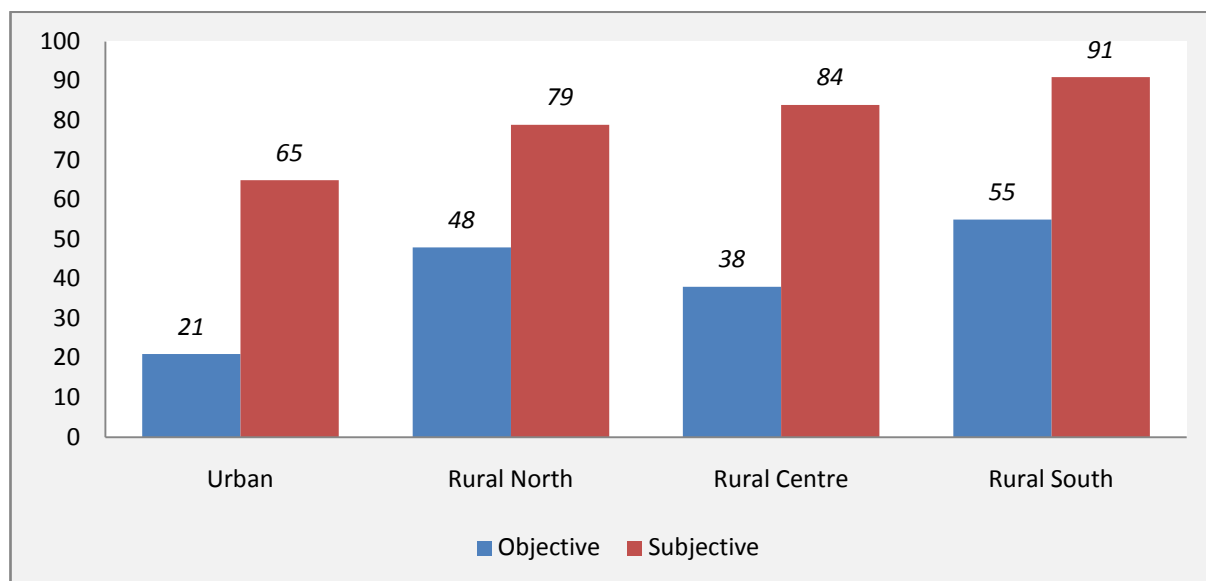
frequencies of households falling into each category'²⁹. The data was categorised into four regions, namely Urban, Rural North, Rural Centre, and Rural South. The respective self-assessed poverty rates were 65%, 79%, 84% and 91%. The poverty rates show that self-assessed poverty incidence increases as from the North to South and from urban to rural areas.

4.5 Comparisons of objective and subjective assessments

The Malawi Poverty and Vulnerability Assessment (GoM & World Bank, 2007b) found that the objective and subjective poverty lines are consistent with each other. They also found that that per capita consumption is a strong predictor of subjective poverty. When household per capita consumption and the ladder step were compared, they found that they are strongly correlated (GoM & World Bank, 2007b). The conclusion was that self-rated poverty and objective poverty are related. On poverty rates, The Malawi Poverty and Vulnerability Assessment (GoM and World Bank, 2007b) used regression analysis to determine the poverty line from the MIQ following the Leyden methodology (van Praag, et al., 1982) and found a subjective poverty rate of 80% which is higher than 52% for the consumption-expenditure poverty. Devereux and colleagues (2006) found that subjective poverty is higher than objective poverty by at least 30% (Figure 4.11).

²⁹ This is still arbitrary because the six steps have no categories. The poverty line is set by the experts. Possibly, the best was to state that the step was arbitrary but useful for some analysis or state 'we are convinced that step 3 is the best poverty line'.

Figure 4.11: Objective and subjective poverty rates by region



Source: Devereux, et al. (2006) Figure 20

Thus both studies on IHS2 found that subjective poverty rate is higher than objective poverty rate. This confirms the finding other studies elsewhere that subjective poverty rate is generally higher than objective poverty rate. Whether this is also true in the three villages is examined next.

Chapter 5: Wellbeing status from three perspectives

5.1 Introduction

This chapter is dedicated to responding to the research question whether the official measure of wellbeing and poverty is the same as peer assessment and self-rating in terms of poverty rates and the households each identifies. This is done by presenting and comparing findings from the three perspectives of experts, community and households using countrywide data and that from the three sampled villages. The chapter starts with profiling the three villages. It then presents the poverty rates by type of wellbeing assessment. Comparisons of the rates and the people each assessment found in the three are made before concluding the chapter with the responses to the research questions.

5.2 Profiles of the three visited villages

Before going into poverty analysis, this section sketches the characteristics of the three villages in the sample. The qualitative information was gathered during the field visits through observation and the focus group discussions. The profiles start with presentations of basic facts about each village. This is followed by a presentation of the basic socio-economic data from the questionnaires administered in the villages. The idea is to give an idea of what the villages are like in order to appreciate the findings that follow.

Ngochera Village

Ngochera village is under Area Chief Mlumbe in Zomba district. The village lies at the foot of the western side of Zomba plateau and situated between Chinseu and Chingale trading centres. Each of these trading centres has its market day, giving the village (and many others in the area) two main trading days in a week. Just like many villages in Chingale area, land is not a binding constraint.

The area, and by extension Ngochera village, is relatively closed. The nearest main road is approximately thirty kilometres away. It is served by some dirty roads, one down the mountain from Zomba district headquarters and another parallel the mountain range joining the Zomba-Lilongwe Road close to Machinga district headquarters. Just like the mountain road, the parallel road is almost impassable during the rainy season because the many streams from the mountain cross and cut or flood it. Bicycle taxis thrive in the area and operating a bicycle taxi is one of income earning opportunities. As an isolated area, manufactured goods are relatively expensive and produce relatively cheap as the

law of demand and supply force farmers to reduce their asking prices to attract buyers into the area.

The village is one of the closest to the closed Chingalume cement quarry, now an army barracks. Before the quarry was closed the livelihood of the village depended on the quarry. After the closure of the quarry, the most enterprising in the village have turned to natural resource exploitation in the form of charcoal making, firewood collection, bamboo collection and basket making for sale at the barracks or Zomba district headquarters. Subsistence farming is one of the few constants. Those with some capital venture into vending.

There is limited presence of government in the area in general and village in particular. A school exists nearby but in another village. Likewise, a health centre operates within a walking distance. The most common safety net programme operating in the village in the past three years has been a Government inputs subsidy. An NGO, World Vision International, has successfully run irrigation projects in the area but this village has never benefited. There is no organisation offering credit to village members and indeed running any activity in the village.

Chikhwaza Village

This village falls under area chief Chimaliro of Thyolo district. It is roughly 20 kilometres from the district headquarters. Blantyre, the commercial capital of the country, is roughly 30 kilometres away. The village is located on sub-prime land in the fringes of tea estates. Household landholding sizes are very small. Farming without fertilizers is virtually useless because the soil is overused. One of the key features in the village is that its people are enterprising since almost everything in the village, including firewood, has to be purchased.

The village is accessible. It is about five kilometres from the main road and it is fed by a gravel road that is generally passable even during rainy season. A dirt road leading to the centre of the village (where the village head is located) is not passable during the rainy season because of the quality of the road and terrain. Two major produce markets within ten kilometres of the village are available to the village. Many take advantage of these as sellers or buyers or traders while more enterprising ones go as far as Blantyre city.

The village has no school but the nearest school is located in the next village and pupils easily walk there even during the rainy season. There are no clinics in the village.

However, the closest clinic is less than 8 kilometres. More present in the village than anything else are buildings of Christian denominations. In this village of possibly 300 households, there are over ten denominational church buildings. Some of the buildings are used as pre-school and adult education classes. The village has at least one borehole working.

Being close to estates, a few members of the village are estate workers and their pay is more poverty alleviating than reducing. Close to the village is a dairy farm which purchases milk from smallholder farmers and also breeds milk cows for sale. A number of village members participate in the dairy business. The village also boasts of a number of grocery shops run by village members. Some households with land in the dambo area have taken on winter cropping to grow vegetables and green maize for sale. These as well as dairy farmers are considered the well-to-do of the village.

The houses are mostly built with bricks and roofed with iron sheets, mainly out of necessity and not riches. The village does not have trees (mostly used for house building) and grass suitable for house thatching. Most of building materials, including poles and grass have to be bought. Since grass and poles are not permanent, any time a household gets some money, building a semi permanent or permanent house becomes a priority since such structures save money in the long run.

Although there are no national or international organisations operating in the village, there are a number of CBOs including those dealing in credit extension, managing pre schools and adult education classes and caring for the elderly and orphans. The presence of these organisations, though small scale, combined with the proximity to the road, major produce markets and the city puts Chikhwaza at a relative advantage compared to Ngochera; they enable Chikhwaza adopt intensive agriculture to maximise land use to take advantage of available markets. On the other hand, lack of markets and access to markets make the relative abundant land enjoyed by Ngochera of no major consequence.

Dzilekwa Village

This village is under area chief Mpando of Ntcheu District. It is five kilometres away from the district headquarters (slightly less using foot paths). The village lies along a permanent gravel road that leads to a main source of Irish potatoes in the country. The road also acts as a boundary between Malawi and Mozambique. Thus Dzilekwa is a border village. Some relatives of residents of Dzilekwa are Mozambican (i.e. across the

road) and many members of the Dzilekwa village cross into Mozambique to farm and collect firewood.

Farming is the main occupation of the village. Apart from maize and beans, Irish potato is the major poverty reducing crop. Other crops, though not as lucrative include cabbage, tomato, onions and carrots. Progressive farmers grow these crops thrice a year. Some rent land on the Mozambican side where irrigatable land is relatively abundant. A major trading centre at the edge of village on the main road connecting the South and Centre of the country provide opportunities for produce trading, casual work (*ganyu*) and trading in general. Produce marketing is done on Tuesday and attracts farmers, buyers, and traders from Malawi as well as Mozambique. The farming in the village owes its viability to this market and that at the district headquarters.

Transporting of produce especially Irish potatoes, cabbages, tomato, carrots and onions to the market also provides some business opportunities for village members around the market including Dzilekwa. Transporting the produce from farm gates to the market provides some income generating opportunities for head, bicycle and ox-cart transporters, apart from those with trucks. More importantly, the market is the major 'wholesale' market for Irish potatoes, tomatoes, cabbages, onions and carrots. The processing of the goods provides casual work village members who bulk and load the produce for onward transport. The process also provides business for empty bag and basket makers and sellers. According to some informants of Dzilekwa village, the market acts as a mine for the village. The majority of young men in the village offer themselves as packers and loaders. Enterprising women are mostly engaged in produce trading; they buy on the market day from farmers and sell at a profit at the roadside vendor market close by operational twenty four hours.

Dzilekwa Village members also have the opportunity to trade at the district headquarters whose market days are Wednesday and Saturday. As a market at a district headquarters, Ntcheu Market offers more variety but less quantity than the produce market at the edge of the village. Thus Dzilekwa Village members have the advantage of trading two busy markets and sourcing of their needs at both markets with minimum cost. Dzilekwa also boasts of a market in the village, easy access to energy sources, and grass and trees for house construction. Very few houses have roofs with corrugated iron sheets. This is even true for households considered relatively well off. Most of residents enjoy drinking beer and excessive drinking especially at the trading centre is said to be common especially for young and middle aged men who spend most of their time at the market. The market offers a combination of income generation, beer drinking and

prostitutes. On the basis of the focus group discussions, it is very common to make and misuse money at the market before the rest of family benefits.

Of all the villages visited, Dzilekwa is the easiest to access. It also has the most income earning opportunities, although employment is not necessarily one of the opportunities. Irish potato farmers and traders can make a lot of money. Again, those with strength to work as loaders can also make money. Chances of generating sizeable income by many people are slim in Chikhwaza and almost non-existent in Ngochera. Dairy farming and winter cropping is open to a few in Chikhwaza and their returns are not as high. Natural resource exploitation in Ngochera has limits as its returns are very low.

A comparison of the villages based on data collected

The three villages are ‘measured’ based on a national rural average obtained from the integrated household survey conducted in 2004/5. The idea is to check whether the villages visited are way out of the ordinary. Such information helps put the findings in perspective. Although the three villages are compared, the focus is on the position of each village against the national picture.

Table 5.1 presents the average household sizes in the three villages. Ngochera household size is the farthest from the national rural average of 4.6 persons. Chikhwaza is the closest. Nonetheless Ngochera is not atypical of villages in rural Southern Region where the regional average is 4.2 persons. It is in fact Chikhwaza that is not a typical Southern Region village. The Central Region average, under which Dzilekwa Village falls, is 4.5 persons. In general, Chikhwaza Village has households resembling the national picture.

Table 5.1 Household size by village

Indicator	Ngochera	Chikhwaza	Dzilekwa	IHS Rural
Number of households	49	59	56	9,840
Population	202	271	238	49,192
Household size	4.1	4.6	4.3	4.6

Source: Calculations from primary data and IHS2 data set

Females generally outnumber men in the population. The 2008 census report that 52% of the population comprise women (NSO, 2008). Similar findings are reported in the IHS2. According to Table 5.2 and on this characteristic, Dzilekwa village is atypical as it has more male than female residents. It is Chikhwaza that is closest to the national average. On proportion of unmarried women in the village, Ngochera is closest to the

national average. In terms of proportion of female heads, no village is typical. All the three villages have more female heads than the average but Chikhwaza has the closest proportion.

Table 5.2: Proportion of females by village

Indicator	Ngochera	Chikhwaza	Dzilekwa	IHS Rural
Proportion of females	50.5	52.2	48.7	51.7
Proportion of unmarried women	34.7	35.8	35.6	32.7
Proportion female heads	38.0	27.1	34.5	24.0

Source: Calculations from primary data and IHS2 data set

Table 5.3 presents some characteristics on household composition. Considering the population of the single heads or heads with their spouses, Chikhwaza is the closest to the national average although the others are not too far off. In terms of the proportion of children whose parent is the head, Dzilekwa is the closest to the average with Chikhwaza as the furthest. Dzilekwa is again the closest on average age of the village population with Ngochera as the furthest.

Table 5.3 Household composition by village

Indicator	Ngochera	Chikhwaza	Dzilekwa	IHS Rural
% of heads & spouses in hh	39.2	37.3	38.6	36.9
% of head's children in hh	43.6	54.2	50.4	48.1
Average age (years)	28.3	20.8	22.1	21.6
% of the aged in hh	7.4	3.3	5.1	4.0
% of children in hh	54.9	54.7	51.9	52.9
Dependency ratio	1.7	1.4	1.3	1.3

Source: Calculations from primary data and IHS2 data set

The proportion of the population 65 years or older is closest to the national average in Chikhwaza although Dzilekwa is not too far off. It is Ngochera that still has highest proportion of senior citizens. Dzilekwa village has the proportion of children to the total population that is closest to the national average. However, Chikhwaza and Ngochera are not very off from the average either. It is Ngochera's dependency ratio that shows that the village is laden with dependents unlike Dzilekwa, whose ratio is similar to that of the national average.

The proportion of children living with both parents in the three villages is way above the national average. The closest is Ngochera Village, though. Chikhwaza Village has twice as many children living with both parents as the national average. This

characteristic is apparently more area dependent and therefore more notable for its diversity. That said all the three villages are in matrilineal societies as such being a maternal orphan is generally worse than a paternal one because fathers are less attached to children. In fact in all the villages there are more paternal than maternal orphans. Double orphanage is, nonetheless, severest in Dzilekwa Village. Table 5.4 presents the details on children characteristics.

Table 5.4: Proportion of children in household by village

Indicator	Ngochera	Chikhwaza	Dzilekwa	IHS Rural
Living with both parents (%)	56.8	73.5	61.0	36.8
Maternal orphans (%)	4.5	4.1	8.9	3.0
Paternal orphans (%)	9.0	6.8	16.3	7.4
Double orphans (%)	3.6	2.7	6.5	2.6

Source: Calculations from primary data and IHS2 data set

Table 5.5 presents a number of characteristics on religion, education and health. In terms of religion, Chikhwaza Village which hosts more than ten Christian denominations has 96% of its population Christian as opposed to the national average of 83%. It is Dzilekwa that has the closest to the national average.

Table 5.5: Education and health status of household members by village

Indicator	Ngochera	Chikhwaza	Dzilekwa	IHS Rural
Christianity rate (%)	63.9	95.7	84.7	82.8
% of illiterate adults	48.0	39.1	39.5	40.8
% of no-school adults	17.3	9.6	8.9	30.6
% no-interest drop outs	17.8	19.0	33.3	20.2
% of out of school children	51.1	63.2	60.0	56.1
Morbidity rate (%)	21.3	17.0	21.8	29.1
% suffering from malaria	31.1	21.1	19.6	26.5

Source: Calculations from primary data and IHS2 data set

As for adult literacy, Chikhwaza and Dzilekwa are the closest. The national average for the proportion of adults that never attended school is so much higher than those in the three villages although Ngochera is closest. While lack of money for fees or uniform top the list of reasons why some household members dropped out of school, lack of interest also plays a major part. Of the three villages, Chikhwaza is closest to the national average in this respect. On the proportion of children in the school-going age (6-13 years) who are out of school, Dzilekwa has the closest proportion of school-going age children who are out of school. Using the proportion of household members who were

ill or injured in the two-weeks preceding the visit, all the villages report low incidence of illness and injury compared to the national average. However, Dzilekwa is marginally the closest. In terms of malaria incidence, Dzilekwa Village has the closest proportion of household members that suffered from malaria although the rest are not too far off.

Table 5.6 presents the characteristics of household heads are thought to determine the welfare outcome of the household.

Table 5.6: Characteristics of household heads by village

Indicator	Ngochera	Chikhwaza	Dzilekwa	IHS Rural
Average age (years)	49.1	42.0	41.5	43.2
Those 65 years or older (%)	22.0	11.9	14.5	13.0
Unmarried heads (%)	35.4	29.3	32.7	26.6
In polygamy (%)	6.3	6.9	10.9	10.5
Never attended school (%)	22.0	11.9	12.5	29.4
Illiterate heads (%)	44.0	23.7	23.2	37.6

Source: Calculations from primary data and IHS2 data set

The first is age. On average, Ngochera heads of households are much older than those of the other two villages. It has by far the highest proportion of household heads that are older than 64 years. Chikhwaza is nonetheless closest to the national average age although Dzilekwa is also close. Regarding marital status, the proportion of unmarried heads in Chikhwaza village is the closest to the national average. On the other hand, although the incidence of polygamy is lower than average in Ngochera and Chikhwaza, it is Dzilekwa Village that has a proportion closest to the national average.

Engagement in IGA activities is season dependent, just like self-employment. The best method to capture the seasonality is to use a year round rolling survey. This is what the IHS2 did. It is not surprising that the national averages clearly differ from those obtained from the three sites as depicted in Table 5.7.

Table 5.7: Household enterprises and time allocation by village

Indicator	Ngochera	Chikhwaza	Dzilekwa	IHS Rural
Has an enterprise (%)	71.4	55.9	66.1	33.4
Adults in self-employment (%)	21.1	15.8	26.3	3.8
Worked on some IGA (%)	50.9	46.0	49.3	64.8
Spent time in enterprise (%)	15	13.3	13.9	8.1
Time spent in enterprise (hours)	2.3	1.7	5.2	1.8

Source: Calculations from primary data and IHS2 data set

For example, the proportion of those that ever worked on an IGA over the preceding week was high at national level relative to those calculated for the three villages. Likewise the time spent on the IGAs at the national level was relatively low compared to those for the three sites. However, when it comes to the average hours spent on the household enterprise, it is only in Dzilekwa where the average is very different from the national average with Chikhwaza reporting average hours closest to that of the national average. Table 5.8 presents a number of characteristics on housing and ownership of assets. In terms of the average age of the dwelling units, the national average is above every village average.

Note that the village averages are closer to each other than any of them is to the national average. The proportion of dwelling units whose walls are made of burnt bricks in Dzilekwa village is closest to the national average. As a testimony of its proximity to natural resources, the proportion of dwelling units with burnt bricks is more than 20% higher in Ngochera. The reverse is true for the type of roof. While Ngochera and Dzilekwa are close to the national average for the proportion of households with iron sheets, Chikhwaza which has no grass around has by far the highest proportion of dwelling units with iron sheets.

Table 5.8: Housing and assets by village

Indicator	Ngochera	Chikhwaza	Dzilekwa	IHS Rural
Age of dwelling units (years)	7.6	6.8	6.9	13.6
Houses with burnt bricks (%)	57.1	32.2	26.8	29.3
Roofs with iron sheets (%)	16.3	69.5	19.6	18.2
Houses with cement floor (%)	8.2	25.4	12.5	13.6
HHs with cellular phone (%)	34.7	42.4	42.9	1.0
HHs using borehole (%)	0.0	81.4	90.9	49.9
HHs with no toilet (%)	30.6	18.6	14.3	18.2

Source: Calculations from primary data and IHS2 data set

While Chikhwaza village has the best floors, Dzilekwa is closest to the national average. One of the developments since 2005 when IHS2 was conducted is the increase in mobile phone use. It is almost meaningless to compare the national average with the proportions in the three villages. Nevertheless Ngochera seems to have lagged behind the other two villages and is therefore closest to the (2005) national average. In terms of access to potable water, Chikhwaza and Dzilekwa are well off and way above the national average. At the time of the visit, the Ngochera had a borehole that was not working. As for having no toilets, Ngochera is the worst but Chikhwaza is closest to the

national average. Ownership of assets in Malawi is generally low as depicted in Table 5.9.

Table 5.9 Housing and assets by village

Indicator	Ngochera	Chikhwaza	Dzilekwa	IHS Rural
Persons per one bed	8.8	8.7	11.3	18.5
Households per radio	1.7	1.5	2.2	1.8
Households per bicycle	4.9	2.4	2.4	2.6
Chickens per household	5.3	5.0	6.5	4.6

Source: Calculations from primary data and IHS2 data set

For example, there are 18 persons per beds in Malawi just as they are 2 households per radio and 3 households per bicycle. Although all the three villages have similar ownership patterns of beds, radios and bicycles, Dzilekwa is closest to the national average on beds, Ngochera on radio ownership and both Chikhwaza and Dzilekwa on bicycles. In terms of livestock, the national average for number of chickens per household is lower than any village but the closest to the national average is Chikhwaza.

Overall comparison

One of the objectives of the profiling was to show that the villages are typical as evidenced. In some instances a village is closest to the national average on one feature and but furthest in another. Overall, Chikhwaza is the closest site to the national average (Table 5.10)³⁰. However, the difference between the sites is minimal when only socio-economic indicators are considered. Using number of times a site is closest to the national average, Chikhwaza and Dzilekwa are similar on socio-economic indicators. Using the dispersion measure, Chikhwaza is still the closest but Ngochera is closer to the national average than Dzilekwa.

³⁰ Three measures are used. The first measure is constructed by assigning a 1 for the site that is closest to the national average and zero for the other two. The second assigns a 3 for the one closest and 1 for the furthest with 2 for the middle site. The third measures dispersion between the national average and the site. It is constructed by calculating the proportion of the site level to the national average in percentage terms.

Table 5.10: Summary measures for closeness to national average

Indicator	Ngochera	Chikhwaza	Dzilekwa
<i>All indicators</i>			
Number of times site is closest	10	18	13
Total score (3=closest, 2=middle, 1=furthest)	75	90	83
Proportion of the average (% IHS rural =100)	127	114	134
<i>Demographic Indicators</i>			
Number of times site is closest	2	9	5
Total score (3=closest, 2=middle, 1=furthest)	25	38	33
Proportion of the average (% IHS rural =100)	124	107	136
<i>Socio-economic indicators</i>			
Number of times site is closest	8	9	9
Total score (3=closest, 2=middle, 1=furthest)	50	52	50
Proportion of the average (% IHS rural =100)	130	120	132

Source: Calculations from Tables in the chapter

5.3 Poverty status in the three villages

So far, there has been no study that used three wellbeing assessment methods at the same time. The primary data collection was designed to address that shortfall. What is presented in this section, are findings from the primary data collection in the three sampled villages. These are meant to squarely respond to the research question. This is done by presenting and, later, comparing poverty status for each village for each assessment starting with consumption expenditure, self-assessment and peer assessment. This subsection only presents the statistics. Comparison is done later.

5.3.1 Consumption poverty and distribution

On the basis of the per capita consumption expenditure measure, 31% of the households in the three villages are poor. The overall ultra poverty rate is 12% implying that 19% of the households are moderately poor³¹. There are differences among the three villages. Ngochera is the poorest village while Dzilekwa is the richest. This is true even for ultra poverty. As Table 5.11 depicts, Chikhwaza is twice as poor as Dzilekwa and Ngochera almost three times as poor as Dzilekwa village.

³¹ Ultra poor households are those whose total consumption expenditure is below the food poverty line. The moderately poor households are those whose total consumption is between the food and overall poverty line.

Table 5.11: Consumption expenditure poverty rates by site

Poverty rates (%)	Ngochera	Chikhwaza	Dzilekwa	All sites
Poor	46.9	32.2	16.1	31.1
<i>Ultra poor</i>	<i>20.4</i>	<i>10.2</i>	<i>7.1</i>	<i>12.2</i>
<i>Moderately poor</i>	<i>26.5</i>	<i>22.0</i>	<i>9.0</i>	<i>18.9</i>
Non poor	53.1	67.8	83.9	68.9

Source: Author's computations from primary data

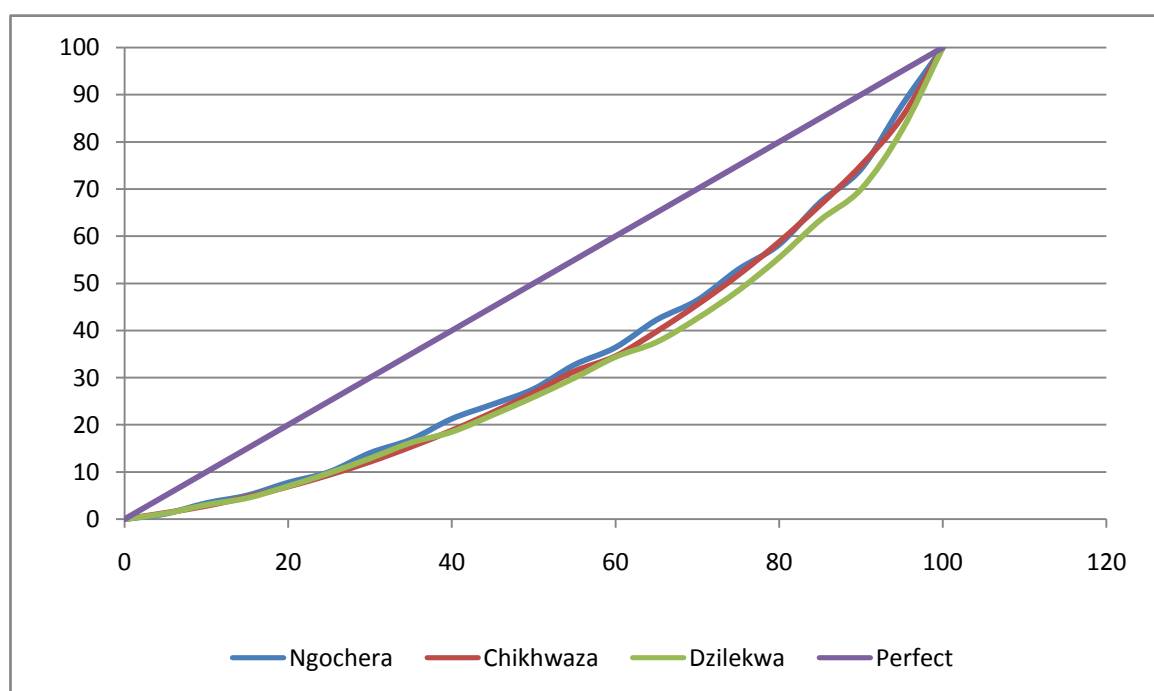
Overall, the poorest 20% consume between 8% and 7% of the 'cake'. Considering only the richest and poorest quintiles, Dzilekwa has the worst and Chikhwaza the best distribution of consumption. See Table 5.12. In fact, using Lorenz Curves as presented in Figure 5.1, it is clear that Dzilekwa is the worst in terms of inequality because its curve is the furthest away from the perfect distribution line on almost every point of the distribution.

Table 5.12: Household distribution by level of consumption expenditure in percent

Group	Ngochera	Chikhwaza	Dzilekwa	All sites
Share of the top 20%	42	41	44	44
Share of bottom 50%	28	26	26	26
Share of bottom 20%	8	7	7	7

Source: Author's computations from primary data

Figure 5.1: Cumulative distribution of household pc consumption by village



Source: Author's computation of primary data

The Lorenz curves for Chikhwaza and Ngochera are very close to each other although Ngochera's is closest to the perfect distribution line on many points. This is confirmed by the Gini-coefficients for each of the three villages. For example, the Gini Coefficient for Dzilekwa is 0.37 while that for Ngochera is 0.32. As expected, the Gini coefficient for Chikhwaza lies between the two at 0.34, which is closer to that of Ngochera. The overall Gini coefficient for the three villages is 0.36.

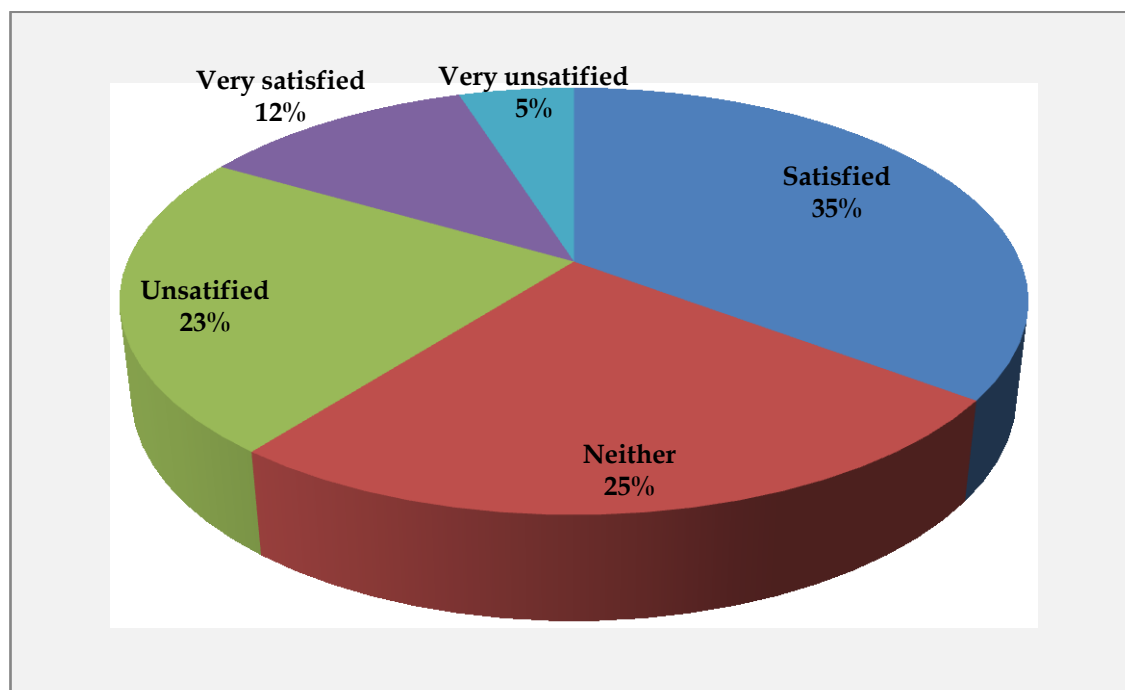
5.3.2 Self-assessed wellbeing status in the three villages

There are four domains which are assessed namely overall life satisfaction, economic wellbeing changes, economic wellbeing analysis, and wellbeing group. Since the questions were similar to those asked in IHS2, the system used to analyse the responses from the three villages is similar to that used for the objective poverty assessment (Section 5.2).

Overall life satisfaction

The subsection is based on the question: 'Overall, how satisfied (content, happy) are you with your life? Are you (1) very satisfied, (2) unsatisfied, (3) neither unsatisfied nor satisfied, (4) satisfied; or (5) very satisfied?' Figure 5.2 presents the proportions for each of the responses.

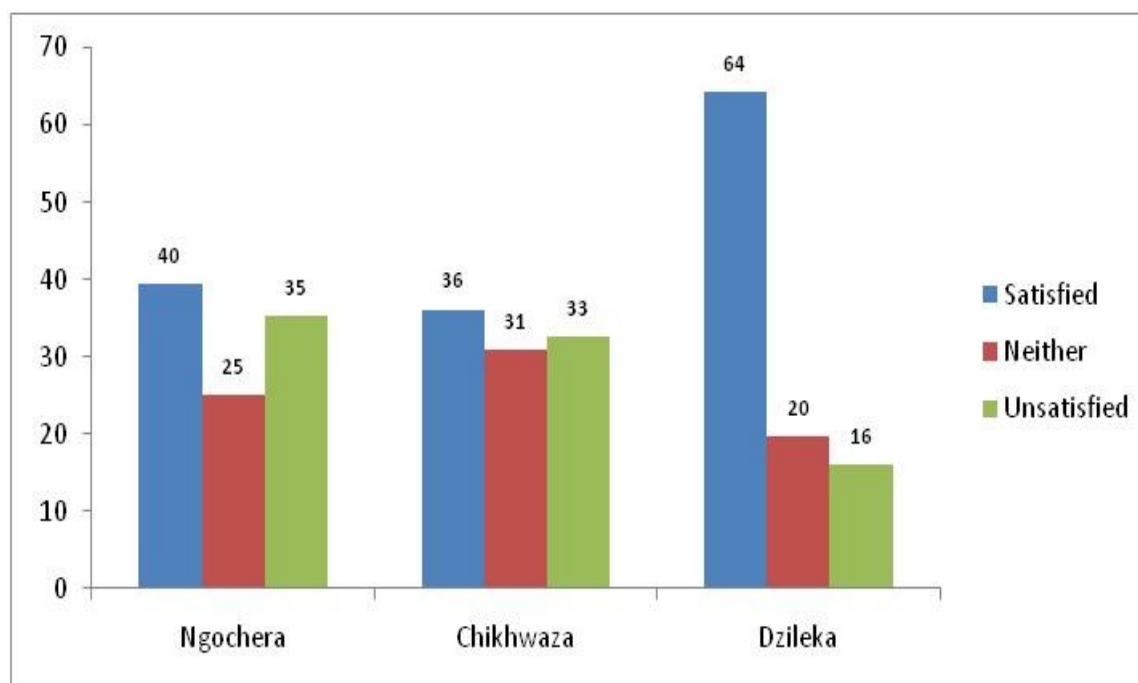
Figure 5.2: Overall life satisfaction: percent of respondents by type of satisfaction



Source: Author's computation of primary data

Combining the positives as ‘satisfied’ and the negatives ‘unsatisfied’, 47% were satisfied while 28% were unsatisfied with their life and a quarter were neutral. There are differences among the three villages, though (See Figure 5.3).

Figure 5.3: Perceptions on life satisfaction in the three villages
(% of households)



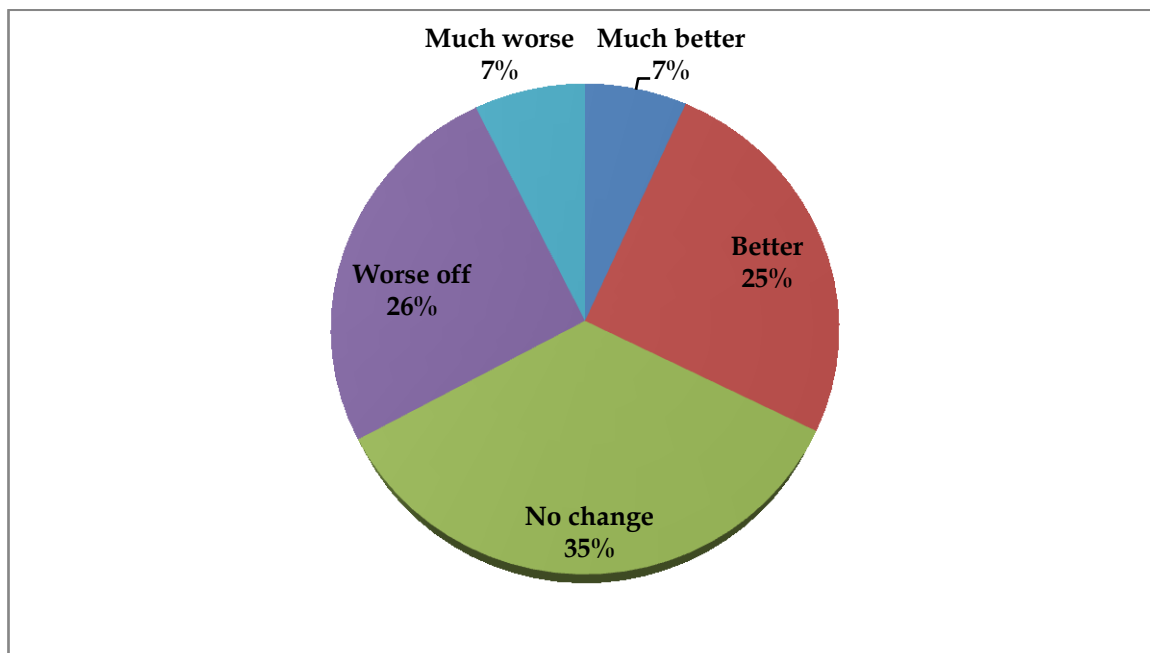
Source: Author’s computation from primary data

While life satisfaction is highest in Dzilekwa where the poverty is least, in Ngochera residents perceive their life in more positive light than Chikhwaza residents yet Ngochera is poorer than Chikhwaza.

Changes in economic wellbeing over a year

The question was ‘In terms of your household economic wellbeing, are you better off, the same as, or worse off than the same time a year ago? The responses run from much better (1) to much worse (5) with no change (3) in the middle. Overall, the highest proportion of households fell under ‘no change’ but the rest of the categories were almost mirror images of each other as depicted in Figure 5.4.

Figure 5.4: Proportion of households in percent by type of change over a year

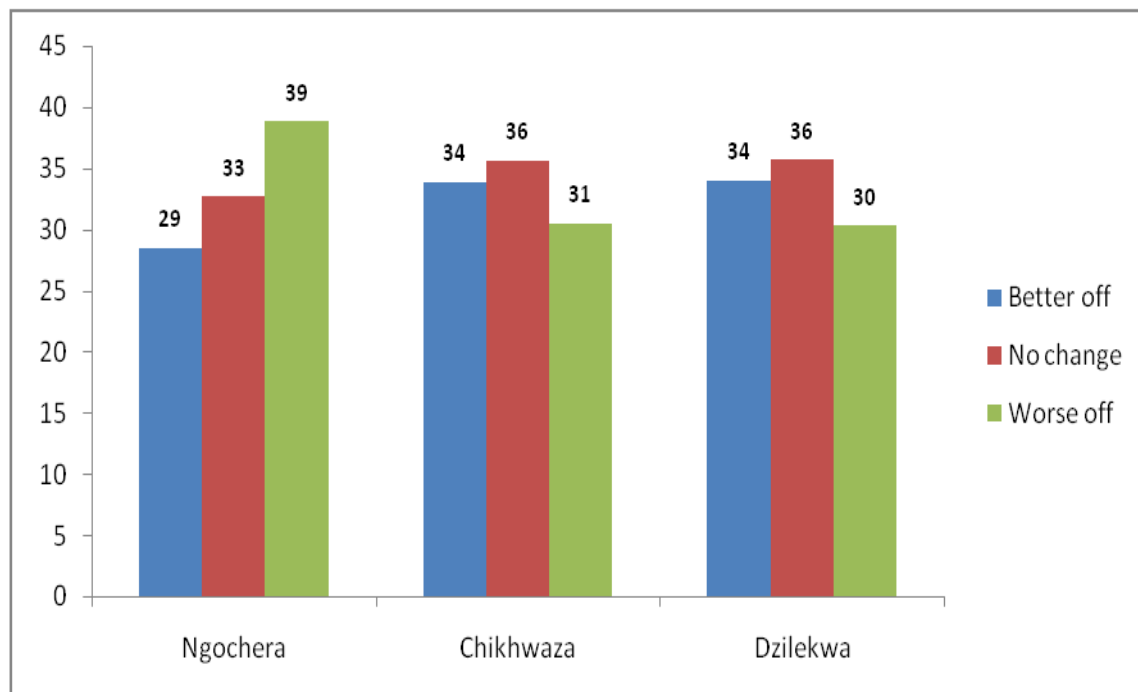


Source: Author's computation from primary data

Indeed when positives and negatives are put together, the proportions are almost the same; better off (32%), no change (35%), and worse off (33%). The picture is somewhat different for each of the three villages. In Ngochera, perceptions on changes in economic wellbeing are more varied than in the other two villages; only in Ngochera Village is the proportion of those that became worse off more than those that became better off. In fact, the perceptions in Chikhwaza and Dzilekwa villages 'agree' in direction and magnitude. See Figure 5.5

Comparing the perceptions on life satisfaction and changes in economic wellbeing between Ngochera and Chikhwaza gives the impression that life satisfaction is derived possibly from a variety of sources, one of which (but not the most important) could be economic wellbeing. Chikhwaza residents whose economic wellbeing improved more than those in Ngochera gave lower life satisfaction rates than those in Ngochera. The differences between the two wellbeing dimensions in the three villages show how complex perceptions on wellbeing are.

Figure 5.5: Proportion in percent by type of change in economic wellbeing by village

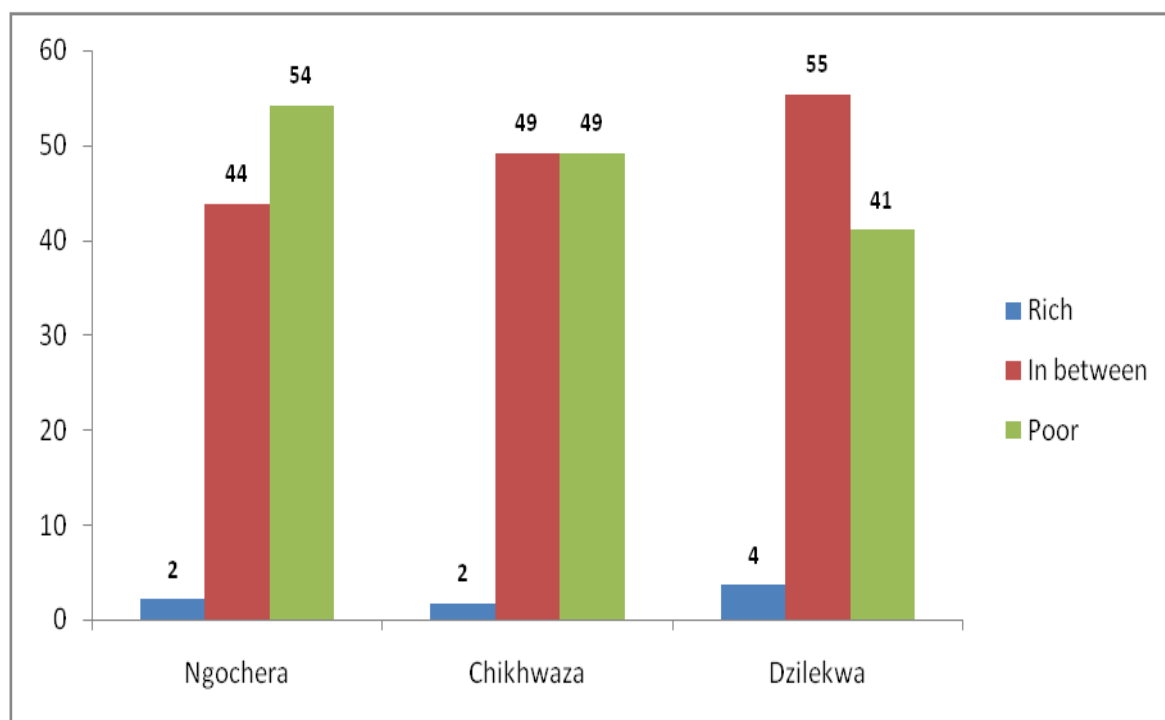


Source: Author's computation from primary data

Perceptions on household's wellbeing group

Residents in the three villages were directly asked to rate the wellbeing of their household in one of three groups. The exact question was: 'Concerning your household's wellbeing compared to other households in the community, do you consider your household to be poor, rich, or in-between?' Analysis of the responses to this question shows that very few identified themselves as rich. They instead identified themselves as poor (48%) or in between (50%). The distribution of these three groups in the three villages varied. Mirroring the economic wellbeing changes over the year, Ngochera Village had the highest proportion of people who identified themselves as poor. In Dzilekwa Village, the in betweeners outnumbered the poor. On the other hand, the poor and in-betweeners had equal proportions in Chikhwaza as depicted in Figure 5.6.

Figure 5.6: Proportion of households in wellbeing groups in percent by village



Source: Author's computation of primary data

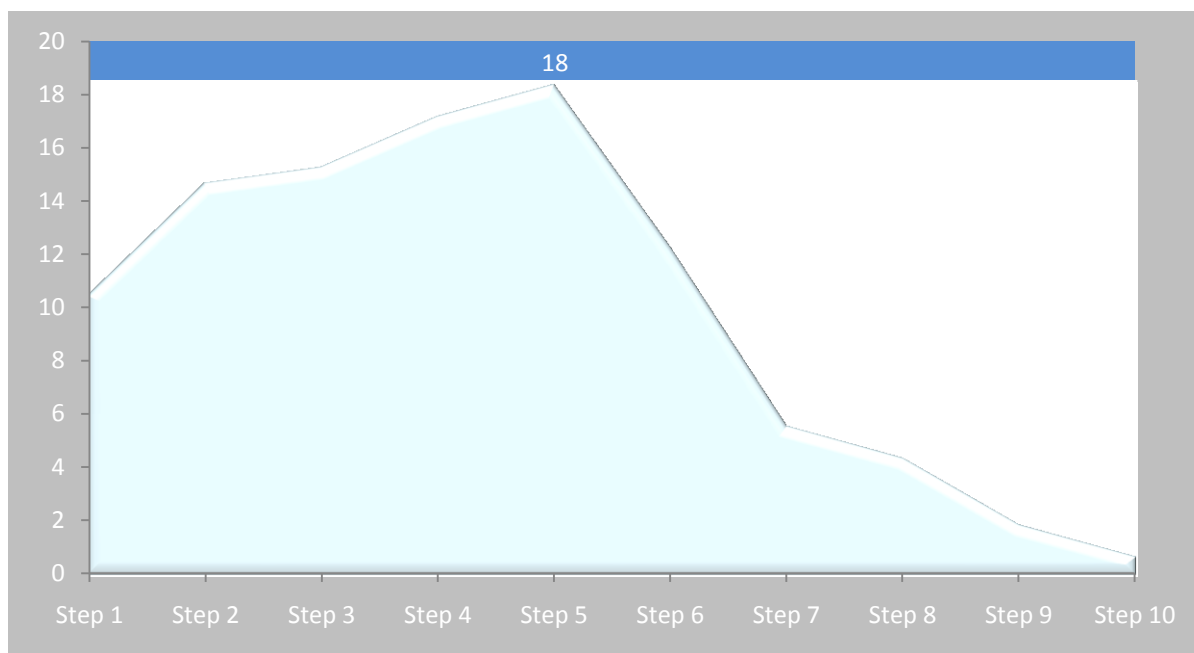
Apparently, the issue of stigma does not come into play as evidenced by the high proportion of respondents that rated their households as poor. In fact based on the wellbeing analysis conducted in the three villages, it is not 'normal' to identify one's household as rich even if it is³².

Poverty status based on a ten-step wellbeing ladder

Household respondents were asked two questions; one that set the poverty line (the step under which households are perceived to be poor) and another that positioned the household on the ladder. The questions, based on a shown picture of a ten-step ladder, were: 'Concerning households in this community, which step is the top most poor households take up? On which step is your household now?' By responding to this question, the respondent not only drew a poverty line but also classified itself as either poor or non-poor. Most of the residents rated themselves among the low level step; seven placed own household on step 8, three on step 9 and only one step 10. There was a very big 'drop' between step 6 and step 7 as depicted in Figure 5.7. The bottom 3 steps host 40% of the residents while the top three host only 7% of the households.

³² During the FGD, group members were first asked to rate themselves before other group members commented on their rating. In general, very few overrated themselves. Members who were known to be rich by the community's standards rated themselves low and 'waited' for their colleagues to 'push' them up. They rarely complained of being 'overrated' by their peers.

Figure 5.7: Proportion of households in percent by step in the three villages



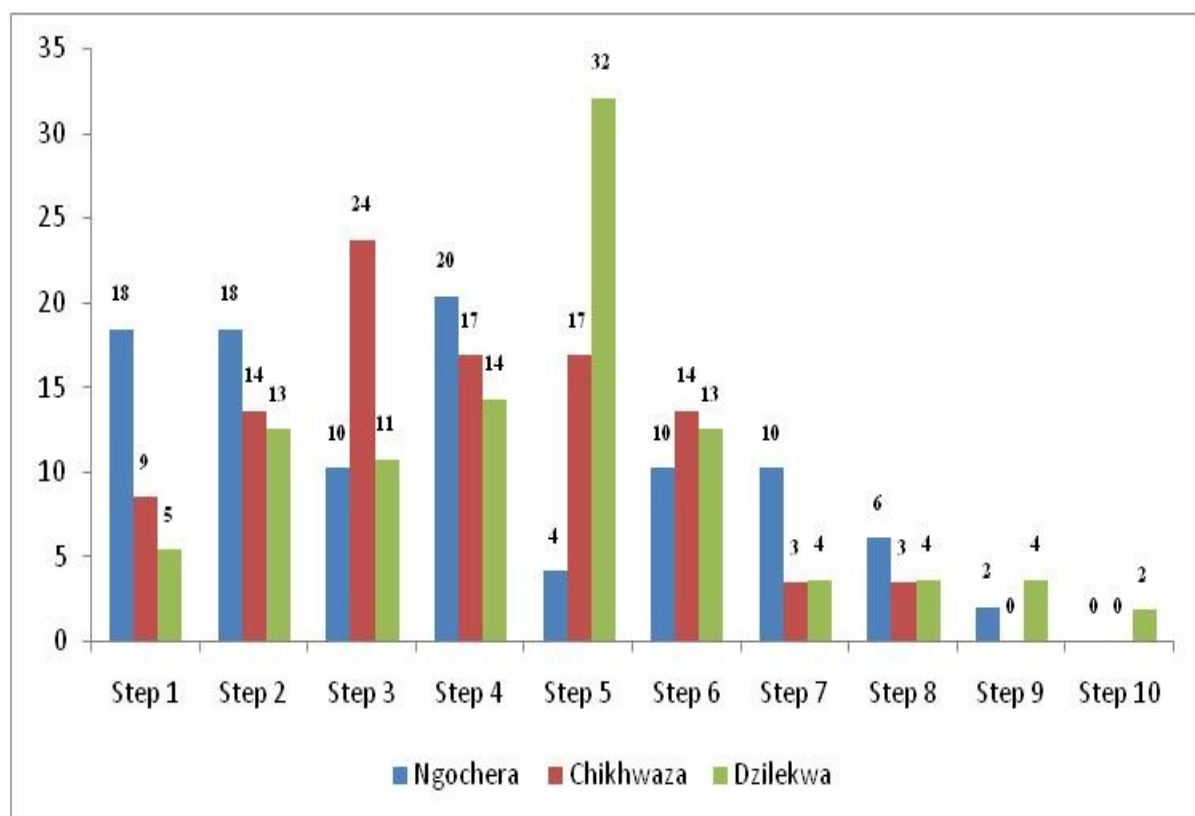
Source: Author’s computation from primary data

There is some variation among the three villages. For example, there are no households on step 10 in Ngochera and none on steps 9 and 10 in Chikhwaza. In fact, residents in Chikhwaza are ‘packed’ between steps 2 and 5 (71%) unlike Ngochera where the majority placed themselves in the first four steps (68%). Dzilekwa residents are spread but step 5 was the most popular. However, the residents are concentrated between steps 3 and 6 (70%). See Figure 5.8.

Given the distribution of the households on each step, to compute a poverty rate there is need for poverty line. There are three ways of ‘drawing’ the poverty line. The first way is to impose a step, say step 4, as was the case with CPS5 and MOPS data in section 5.2. The second way is to compute a village median out of the poverty lines given by each respondent in the village. The third way is to use a poverty line given by the household itself. Table 5.13 presents poverty rates by each type of poverty line³³.

³³ It is noted that the imposed and median poverty lines for Ngochera and Chikhwaza villages are all at step 4. Only Dzilekwa Village has a median poverty line at step 3.

Figure 5.8: Proportion of residents in percent by step and village



Source: Author's computation from primary data

Table 5.13: Poverty rates by type of poverty line

Poverty line	All sites	Ngochera	Chikhwaza	Dzilekwa
Imposed	40.2	46.9	45.8	28.6
Median by village	36.6	46.9	45.8	17.9
As given by self	56.7	63.3	61.0	46.4

Source: Author's computation of primary data

Just as is the case with the consumption poverty, Dzilekwa Village is by far the least poor community by any type of poverty line. However, although Ngochera village has the highest proportion of the self-rated poor, the difference between it and Chikhwaza is marginal. Overall, about 17% of the households that are classified as non-poor by the imposed poverty line consider themselves poor. This is worse in Dzilekwa where as many as 29% of the households are classified as non-poor when they consider themselves poor. For the purposes of the comparison, the poverty rates based on the poverty line given by the household itself are used. This is in line with the ideal of giving the 'power to the people' to decide.

5.3.3 Peer assessed wellbeing and poverty status

Peer assessment of poverty included defining wellbeing categories, superimposing the categories on a ten-step ladder, deciding the poverty line (step) on the ladder and placing households on the steps of the ladder. The placing of households meant that proportions of households in each category or those that were poor could be determined. Likewise, the actual households that are poor were implicitly identified.

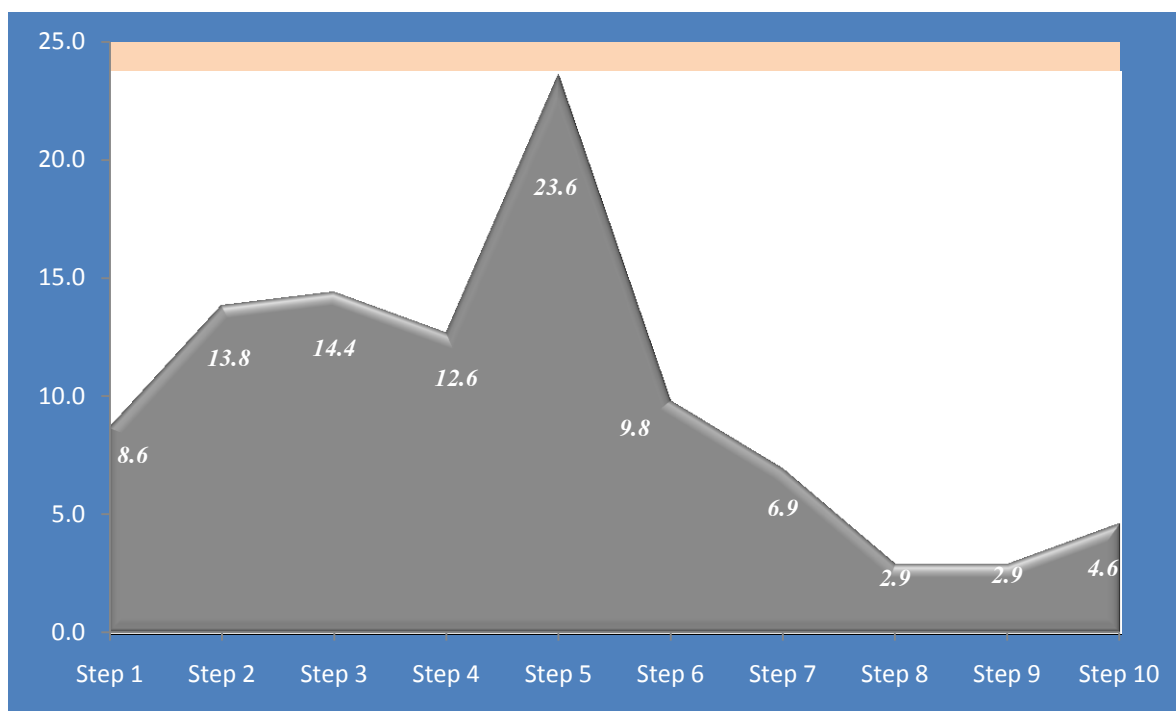
Wellbeing categories and poverty line

In Ngochera village two categories were identified; the poorest and the poor. The group insisted that there were no rich households in the community. The poorest category covered steps 1 to 4 and the poor steps 5 to 10. The poverty line in Ngochera was placed on Step 5 implying that all households in the poorest category were defined as poor. In Chikhwaza, the group identified four wellbeing categories. These were superimposed on the ladder with the 'poor' category covering steps 1 to 4, the 'moderately poor' covering steps 5 and 6, the 'moderately rich' covering steps 7 and 8 and the 'richest' covering steps 9 and 10. The group made step 6 as the poverty line. This meant that some of the moderately poor households (at step 5) were defined as poor. The group in Dzilekwa decided on three wellbeing categories with the 'poorest' covering steps 1 and 2, the 'poor' covering steps 3 to 5, the 'rich' covering the rest of the steps. Just like in Chikhwaza, the poverty line was placed on step 6 thereby defining the poorest and poor as poor. These definitions had profound link to the placement of households on the ladder steps.

Placement of households on the ladder steps

Overall, households are concentrated in the first steps. The most popular step is 5, which 'received' 24% of the households in the three villages. Step 2 and 3 were almost the same with 14% of households each. As Figure 5.9 shows, few households made it the top three steps. This marks some differences among the three villages. Table 5.14 presents the distribution of households on the ten step ladder.

Figure 5.9: Proportion of households in percent on the steps for the three villages



Source: Author's summary of FGD Transcripts

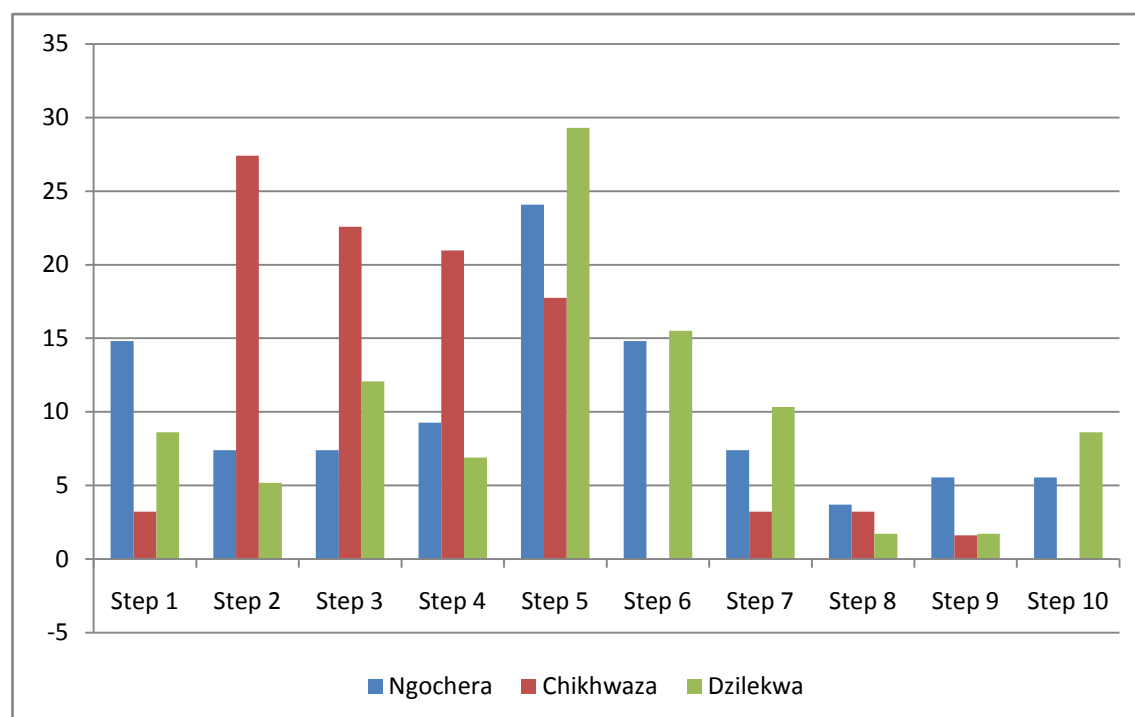
Table 5.14: Number and proportion of households on each step

Step	Ngochera		Chikhwaza		Dzilekwa		All	
	#	%	#	%	#	%	#	%
Step 1	8	14.8	2	3.2	5	8.6	15	8.6
Step 2	4	7.4	17	27.4	3	5.2	24	13.8
Step 3	4	7.4	14	22.6	7	12.1	25	14.4
Step 4	5	9.3	13	21	4	6.9	22	12.6
Step 5	13	24.1	11	17.7	17	29.3	41	23.6
Step 6	8	14.8	0	0	9	15.5	17	9.8
Step 7	4	7.4	2	3.2	6	10.3	12	6.9
Step 8	2	3.7	2	3.2	1	1.7	5	2.9
Step 9	3	5.6	1	1.6	1	1.7	5	2.9
Step 10	3	5.6	0	0	5	8.6	8	4.6
Total	54	100	62	100	58	100	174	100

Source: Author's summary of FGD Transcripts

In Ngochera, step 5 was the mode while in Chikhwaza it was step 2 and Dzilekwa was step 5. Apparently, the group in Ngochera spread the households over the steps while the group in Chikhwaza spread the households in the first five steps while Dzilekwa spread them up to step 7. See Figure 5.10

Figure 5.10: Proportion of households in percent on the steps by village



Source: Author's summary of FGD Transcripts

5.4 Comments on household placement

The exercise of placing households on the steps revealed that local people have the capacity to independently differentiate households' wellbeing status using implicit weights. The placement also highlighted some features that were frequently used as tie breakers during pairwise ranking. The exercise also exposed the limitations of PRA where 'power is given to the people'. A number of examples from Ngochera illustrate the point of weighting. This is followed by a discussion of pitfalls of PRA in Chikhwaza and Dzilekwa.

A 'rich' old woman was initially placed on step 8 based on the quality of her house. After some short discussion (not even heated) she was placed on step to 3. The reason given for the radical change was that the basis for the original placement was outweighed by her other living conditions because the house was built by her son who had since died together with the support the woman was getting from him. On the other hand, a 'doing well' young family was not placed at a step that would qualified it as well off in line with its current income and consumption levels because it did not have a good house. Considering that a good house was discounted in the case of the old woman, such a judgement meant that the group viewed the two households differently. The group used different weights for the households. For the old woman, failure to

consume basic goods was considered worse than enjoying a good house while failure to construct a good house discounted the high consumption in the young family.

Another example concerns a physically challenged 'rich' beggar whose household was ranked among the poorest on Step 1 although the household had features far superior features for the poorest category (i.e. steps 1-4) as defined by the group itself. The group insisted that the household should be on Step 1 and could not even be 'promoted' to step 2 because according to the group physically challenged people are, by definition, amongst the poorest of the poor and that the livelihood strategy used (begging) was demeaning. Thus affording to 'do well' (i.e. buy clothes for wife, send children to school, buy a radio, and buy food) was not good enough to place the household among the well off. They seemed to imply that such a move would 'glorify' begging and discount the disadvantages people with disabilities face.

A similar case involved a very old and immobile woman who was placed on level 2. At that step, she was assessed to be the richest because she gets external support and has a goat, a feature absent in any of the households from step 1 to 4. However, the group did not 'promote' her household to any step higher despite her high consumption level because she was very old and immobile. It was like: 'what is the point of eating well if you cannot move about'?

These examples, apart from showing that people use some value system, they also give a glimpse of why local level judgement of poverty can differ with one-dimensional official version of poverty. To local people and in some circumstances, quality of life is more important than 'quantity' of life. Consumption-expenditure cannot pick that. For example, a questionnaire cannot pick the fact that loss of dignity implicit in begging outweighs consumption of donated goods. Likewise, it cannot pick that loss of mobility cannot be compensated by the 'sound of bleating goats' or a very good meal.

The placement of households also revealed the value of a 'man in the home'. In Ngochera a man is useful in farming and exploitation of natural resources like charcoal making and selling by bicycle. In Dzilekwa, a man is useful in farming and/or *ganyu*³⁴ during off-season. According to the Dzilekwa group a man that 'fears a hoe' is no good

³⁴ This local term '*ganyu*' is extensively used in field reports and consequently the next three chapters. *Ganyu* is the hire of labour or offer of labour services for a specific task. Its payment is based on a completed task. The task can take minutes, hours, half day, whole day or days or weeks. *Ganyu* is popular for its flexibility in form of payment (cash or in-kind like food, clothes or any agreed commodity) and payment-as-you complete system. One goes for *ganyu* if there is a need for instant cash or food. An employer goes for *ganyu* for quick completion of a task. *Ganyu* is the dominant source of quick cash. *Ganyu* is generally more rewarding than wage employment. Its downside is that its frequency is unpredictable.

for household wellbeing. The group dubbed households headed by such men as 'women-run households', especially if the wife takes on farming seriously and trading during the off-season. In the main, the presence or absence of a husband in the household was used to break ties during pairwise ranking.

The placement also revealed the role of a wife too. If households with husband and wife tied, the group used the characteristics of the husbands to break the tie first. In cases that did not produce a 'winner' the group used the wives' characteristics. In some cases even the woman's characteristics were good enough such that a female headed household was not always placed below a male-headed household. There were a number of cases where female-headed household were ranked higher than male-headed households based on the criteria set by the group.

In Chikhwaza, placement of households was marred by mismatches between household features and criteria set up by the group itself. What was remarkable, though, was the reluctance to 'promote' or 'relegate' households that were obviously 'out of place'. The possibility that some households may have been 'wrongly' assessed brings to the fore the limitations of the use of group interviews for wellbeing assessment. Given that the group was 'unwilling' to deal with mismatches it could acknowledge itself (or at least some members did) gives the impression that the group was wrongly motivated. Perhaps more serious is the question of usability of the data. Since the group 'ensured' that most households are placed in the poor category, the village has a very high poverty rate. This is made worse by the mismatches between wellbeing status and the set wellbeing category features.

These two have implications on the study. If the poverty rate from this village is not truthful comparing it with the others from the other sites is unfair because the comparison assumes truthfulness from donors of the data. Wholesale untruthfulness in a group discussion renders the data less useful. The mismatch between criteria and household features also violates the assumption that placement of households is based on the criteria laid by the group. The mismatch means that the household features cannot be taken as correlates or determinants and therefore not proper to compare them with others from other assessments. This is taken as a limitation of the comparisons for this site.

In Dzilekwa placement of households was also unorthodox. There was one household each on steps 8 and 9 but five on step10. Can this be explained? Although wellbeing analysis is not a science, one is tempted to speculate why in this seemingly 'rich' village

the moderately 'rich' are scarce. There are two possible related explanations for this. The first is the criteria used to determine the rich. The second is composition of the group discussants.

Judging from the reasons given for the placement of the households, it is possible that the group did not approve of certain livelihoods strategies like *ganyu* at the local market and by implication abandonment of farming. According to the group, money made through *ganyu* at the market does not translate into any tangible household investment but drunkenness. This is a confirmation of the finding in Chapter 6 where involvement in *ganyu* was a negative determinant of wellbeing. The group rarely placed a household dependent on *ganyu* on steps for the moderately rich or the rich.

Another possible explanation is the membership of the group. The group mostly comprised farmers because traders were away and could not afford to join the discussions that were to last over six hours. Further, one of the discussants was assessed to be the 'richest' man in the village through intensive farming. In his frequent contributions he emphasised features related to own production of maize, hardworking in cash cropping and amount of maize stocks. Thus the group was apparently biased towards agricultural livelihoods against non-farm income generating activities.

The implication was that some well off small scale traders, middlemen, and *ganyu* workers could not be placed among the moderately rich or the rich as long they did not have maize stocks. Likewise by emphasising intensive farming and large scale trading as gateways to joining the 'club of the richest', the few that qualified were placed on Step 10 leaving very few on steps 8 and 9. It is probable that if the emphasis on farming and maize stocks was relaxed, some households on steps 5, 6 and 7 could have been placed on higher steps and that some households on Steps 9 and 10 could have been on lower steps. This, it must be said, is speculation.

What is noted is that the quality of the exercise was relatively high because there were very few 'out of place' households during the pairwise ranking. Out of the fifty-eight households only one household, on step 9, was promoted to step 10. To prove that the promotion was genuine, the promoted household ended up being third amongst the richest five. Another sign is that the placement of households was generally good there were many households that tied and difficulty to break. Thus data from Dzilekwa is therefore useable because the criteria were seriously used to place households unlike in Chikhwaza. The discussion above is simply questioning the basis of the criteria especially since such would make some poor households be classified as non-poor and some non-

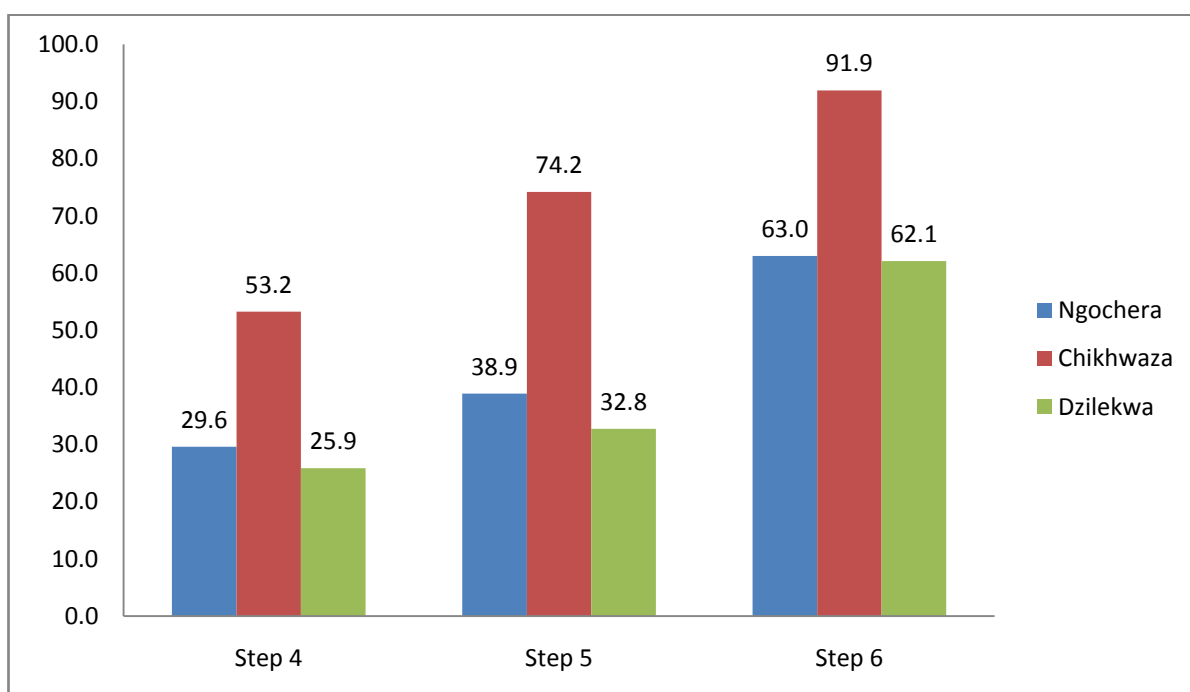
poor households as poor. The net of this is not known. It is assumed its net effect on the poverty rate is minimal.

Poverty rates in the three villages

Based on the poverty lines defined by each village group and the placement of the households on the steps, poverty incidence in Ngochera is 39% because 21 out of the 54 households were placed on steps 1 through 4. In Chikhwaza the poverty rate is 92% since only 5 households were placed above the poverty line. In Dzilekwa 36 out of 58 households were ranked below the poverty line giving a poverty rate of 62%.

It is noted that if the Ngochera poverty line (Step 5) was imposed on Chikhwaza and Dzilekwa their poverty rates would come down to 74% and 33%, respectively. On the other hand if the poverty line applicable in Chikhwaza and Dzilekwa were imposed on Ngochera the poverty rate in Ngochera would rise to 63%. This implies that if a uniform poverty line was used for all the three villages, Dzilekwa would have the least and Chikhwaza highest poverty prevalence. However, Ngochera and Dzilekwa would have rates that were close to each other. Figure 5.11 clearly shows how Chikhwaza ratings are atypical with three different poverty lines.

Figure 5.11: Poverty rates in percent using different steps as poverty lines



Source: Author's summary of the site FGD transcripts

5.5 Households identified as poor in the three sites

The list of households listed here are only those that were interviewed. Some households that were considered during peers assessment were not interviewed for a number of reasons. One of the reasons is that what passed as a household during listing may not have passed during questionnaire administration because the household definition was applied strictly. Unfortunately the peer assessment was based on the listed households. This meant that in Ngochera the number of households dropped from 54 to 49 and Chikhwaza from 62 to 59 and in Dzilekwa from 58 to 56 giving a total of 164 households. This affects the poverty rates already presented but does not change the status of any household.

The three different types of assessments found different number of households in Ngochera. The consumption-expenditure found that 23 households were poor. At the same time, 26 households were self-assessed as poor while peers assessed 21 households to be poor. In Chikhwaza the consumption expenditure measure found that 19 households out of the 59 households were poor. When the same respondents assessed their households, 30 felt that their households were poor. Peers assessed almost every household as poor as 52 of the 59 households were classified as poor. In Dzilekwa, the official measure found only 9 households out of the 56 households but self-assessment found 17 of them to be poor while peers assessed 34 households to be poor.

An analysis of the lists of the poor identified by each type of assessment shows that in Ngochera as many as 40 out of the 49 households were ever identified as poor, representing 82 percent. In Chikhwaza, 56 of the 59 households (95%) were identified as poor by at least one type of assessment. In Dzilekwa, it was three-quarters of the households that were ever identified as poor (i.e. 42 of the 56 households). The study is interested to check whether or not the bulk of the households identified as poor are the same for the three assessments. In other words, do the assessments converge or diverge and if so to what extent? These comparisons are taken on in the next section

5.6 Comparisons of poverty rates and the identified poor

This section is devoted to respond to the research question on whether the three assessments are the same in terms of their poverty rates and the households they identify as poor. This question is dealt squarely by the findings in the three villages. All the three villages are used in the comparisons the results for Chikhwaza are taken with some pinch of salt because of the exaggerated poverty rate as discussed before.

5.6.1 Comparison of households ranking

Before comparing the different lists of poor households by wellbeing measure, this subsection makes two comparisons. The first compares two sets of ranked households; one based on per capita consumption expenditure and the other on subjective assessment of each household guided by wellbeing analysis and pairwise ranking. The second comparison is between two sets of step assignments given to each household by peers and self. For test of significance of differences, if at all, the comparisons are done using correlation analysis in each of the villages.

Regarding household's wellbeing position as assessed by peers and using consumption expenditure, the results of the correlation analysis shows that there is no relation in all the three villages separately or combined (Table 5.15).

Table 5.15: FGD and CE rankings correlation using Spearman's rho

	Ngochera	Chikhwaza	Dzilekwa	All sites
Coefficient	0.19	0.16	-0.09	0.08
Significance level	0.205	0.242	0.498	0.300
Cases	48	58	56	162

Source: Author's analysis of data from primary data sets and FGD transcripts

However, when the steps assigned by peers and self are compared, there is very close relationship, except in Chikhwaza Village (Table 5.16).

Table 5.16: FGD and Self assigned steps correlation using Spearman's rho

	Ngochera	Chikhwaza	Dzilekwa	All sites
Coefficient	0.44	-0.067	0.61	0.33
Significance level	0.001	0.613	0.000	0.000
Cases	49	59	56	164

Source: Author's analysis of data from primary data sets and FGD transcripts

It is noted that the comparison in Table 5.15 is between the official and community versions of poverty while Table 5.16 is between two local level assessments. The mismatch in Chikhwaza Village is an echo of the finding that the peer assessment was deliberately biased. The message from these two tables is that the official measure of wellbeing does not always match those at local levels. This gives an indication that those identified as poor by the official measure could be different from those identified by the local level assessments. This is checked next.

5.6.2 Comparing the lists of poor households

There are two comparisons here. The first is poverty rates and the second is the actual households identified as poor by each measure in each village. For each village, the list of households identified as poor by any of the three measures makes the population of the households for comparison. Out of these, three types of households are expected. The first set is of households is for those only identified by one measure. The second set is of those identified by two measures and the third those identified by all the three measures. The features of each are analysed in the next sub-section. In this section, the focus is on the implication of sizes on potential errors of inclusion and exclusion, the genesis of this study.

In the introduction of the study it was hypothesised that some errors of inclusion and exclusion can come about due to differences in conceptualisation of wellbeing between the official measure of poverty, which evaluators use, and local people's measures which implicitly use when identifying the poor. Some studies in Malawi reviewed herein have shown that indeed there are some identification errors attributable to such differences. Based on the poverty rates presented in this chapter the next step is then to check whether identification errors exist, using the official version as the standard.

Table 5.17 presents the poverty rates in the three villages under each measure.

Table 5.17: Poverty rates by measure and village

	Ngochera	Chikhwaza	Dzilekwa	All sites
Consumption expenditure	46.9	32.2	16.1	31.1
Peer-assessment	42.9	88.1	60.7	65.2
Self-assessment - self-given PL	53.1	50.8	30.4	45.5

Source: Author's analysis of data from primary data sets and FGD transcripts

In Ngochera Village, the poverty rates are close to each other unlike the other two villages. In fact, unlike in the other two villages peer assessed poverty rate is below the official poverty rate. In Chikhwaza and Dzilekwa villages, peer assessed poverty rates are, respectively, almost three and four times higher than the official poverty rate. These 'exaggerated' results have been explained earlier. While the Chikhwaza results can be discounted because they went against their own laid down criteria, the same cannot be said of the Dzilekwa because they followed the criteria rather well. That said the finding that the official poverty rate is higher than peer assessed poverty in Ngochera is not in line with previous studies while those in Chikhwaza and Dzilekwa are.

On the surface, these findings and in the context of errors of inclusion and exclusion, one can conclude that in Ngochera there are more households that have been identified as non-poor when in fact they are poor by the official standard than those that have been wrongly identified as poor when otherwise non-poor. Similarly one can expect the opposite for Chikhwaza and Dzilekwa because they have poverty rates that are way above the standard measure. However, there is more to errors of inclusion and exclusion than the difference between the poverty rates. For example, it is not always true that measures with similar poverty rates identify the same households. Likewise, it is not always true that those with different poverty rates identify very different households. For the first case, two measures with similar poverty rates can identify mutually exclusive sets of households. Likewise, those with different rates could have a set of households that are common in both assessments. There are 138 households out of the 164 households that are identified as poor. Some of these are identified by consumption expenditure (CE) measure only, self-assessment (SA) only, peer-assessment (PA) only; and others by a combination of these. Table 5.18 presents the results of an analysis of those households.

Table 5.18: Poor households by method of identification and village

Type	Ngochera		Chikhwaza		Dzilekwa		All sites	
	N	%	N	%	N	%	N	%
Poor by CE only	7	17.5	1	1.8	3	7.1	11	8.0
Poor by SR only	7	17.5	3	5.4	4	9.5	14	10.1
Poor by PA only	3	7.5	18	32.1	19	45.2	40	29.0
Poor by CE and SA	6	15.0	2	3.6	1	2.4	9	6.5
Poor by CE and PA	4	10.0	7	12.5	3	7.1	14	10.1
Poor by SA and PA	7	17.5	16	28.6	10	23.8	33	23.9
Poor by all	6	15.0	9	16.1	2	4.8	17	12.3
Total poor	40	100	56	100	42	100	138	100

Source: Author's analysis of survey data and FGD transcripts

In terms of the research question of whether the three wellbeing assessment methods are the same, the table clearly shows that the assessments are different in all the three villages. Even in Ngochera where the poverty rates were similar, there are minimal overlaps. The implication is that the local wellbeing assessments identify different households as poor from those the official one does. This does not mean that self rating and peer assessment are similar either. They also identify different households as poor. The magnitude of differences also varies by village.

The Ngochera data shows that convergences are as prevalent as divergences. Households identified as poor by all the assessments (15%) are as many as those identified by only one assessment or jointly by two measures only (17% or 15%). Thus despite the poverty rates being close to each other each agreement and disagreements almost matched. The small proportion of households identified only by peer assessment (7%) reflects the low peers-assessed poverty rate. Thus in Ngochera, it is difficult to conclude that self and peer assessment are closer to each other than each is to the official measure. What is safe to conclude is that the three measures are different based on the different households each identifies.

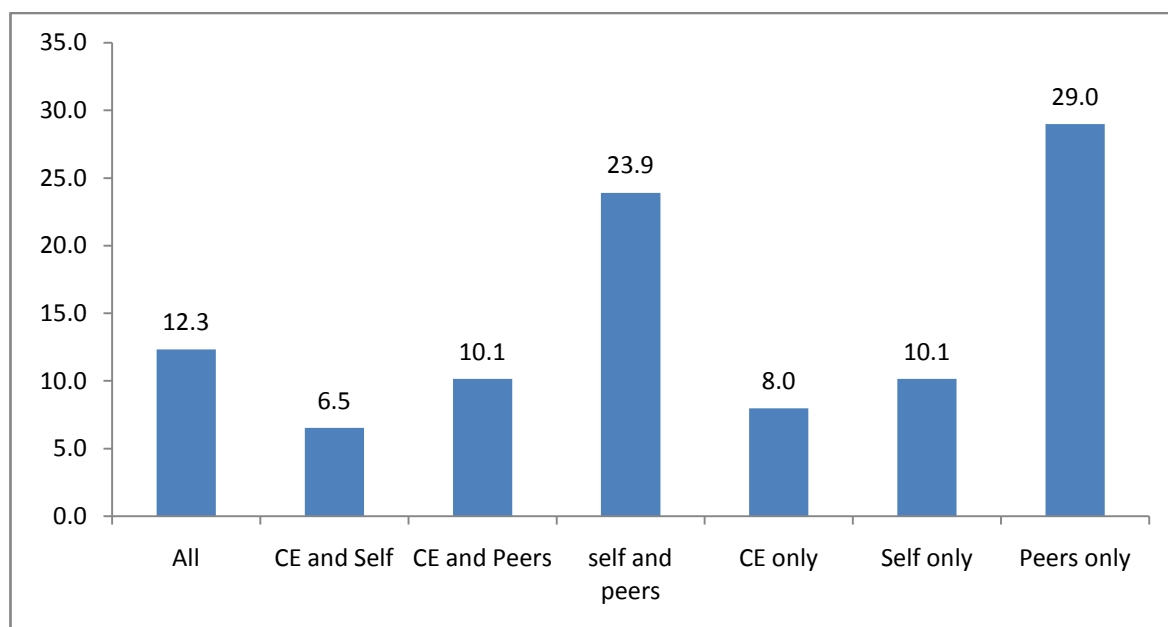
As expected the picture is somewhat different in Chikhwaza village. Peer assessment identified more households as poor when no other measure considered them as thus. In fact, peer assessment identified so many households as poor when the households themselves considered themselves non-poor. The least measure to identify households as poor when no other measure did was the official measure. In terms of agreement of measures in Chikhwaza, the least is between the official measure and self-rating (4%) and the highest is between peer assessment and self rating (29%). The proportion of households jointly identified as poor by all is 16%, which is close to that witnessed in Ngochera. The high peer-assessed poverty rate ensured high joint identification with the official measure (12%) as well. If the community group that identified 88% of the population as poor is given the benefit of the doubt, Chikhwaza shows that local level assessments are more similar than dissimilar and that local people's assessment is different from that of experts.

This conclusion is echoed in Dzilekwa where the agreement between self and peer assessment (24%) is almost twelve times that between the official measure and either self rating (2%) and more than three times that between the official and peer assessment (7%). However, Dzilekwa is more prominent for a combination of divergences and convergences than Ngochera. For example, 62% were identified as poor by only one assessment, leaving 38% as those which were jointly identified as poor. In fact, Dzilekwa has the least proportion of households identified as poor by all the three assessments (5%). A similar conclusion is therefore reached that the three types of assessing wellbeing and poverty are different in Dzilekwa.

In the hope that the low peers-assessed poverty rate in Ngochera compensates for the high peers-assessed poverty rate, the one hundred and thirty-eight households identified as poor are put together to check once again whether the three assessments have similar traits. Only 12% of the households were identified as poor by all the three assessments.

Those identified by only one assessment (a sign of divergence of assessments) were as many as those jointly identified by at least two assessments (an indicator of convergence); 47% and 51%, respectively. The highest proportion of households (29%) fell under sole identification of peers-assessment. This was followed by joint identification by self and peers assessments (24%). Figure 5.12 presents the proportions of households identified as poor by various assessments.

Figure 5.12: Proportion of poor households by type of assessment in percent



Source: Author's computation from primary data

This confirms the conclusions reached above. The first conclusion is that the three types of wellbeing and poverty assessments are neither the same nor mutually exclusive. Apparently their cores are different while other aspects are the same. The second conclusion is that self- and peers assessments are closer to each other than each is to the official standard. Whether this is reflected in the features implicit in each of these assessments is the subject of the next chapter.

5.6.3 Characteristics of the different groups of poor households

As a precursor for the next chapter and in the spirit of Bradshaw and Finch (2003)³⁵, this subsection closely looks at the seven sub-groups of the poor. Given that the end result of the exercise is to make the official measure incorporate community level wellbeing features in order to reduce the prevalent divergences, learning from the overlaps would

³⁵ In their article, they recommend that making a comparison of characteristics of those jointly identified as poor by all the measures with those identified as poor by two measures or only one.

assist in the exercise³⁶. The most important overlap is where all the three measures agree that a household is poor. According to Table 5.19, households identified as poor by all the assessments are not necessarily the poorest in terms of per capita consumption expenditure, whether the mean or median is used.

Table 5.19: Per capita consumption in British Pound by group of the poor

Type of sub-group	Mean	Median	Cases
CE only	60.2	64.6	11
PA only	209.3	151.0	40
SA only	184.1	143.3	14
CE & PA	55.3	54.9	14
CE & SA	52.6	60.9	9
PA & SA	159.6	124.9	33
All poor	59.7	61.2	17
Nonpoor	155.1	162.5	26
ALL HHs	141.3	111.4	164

MK300=£1

Source: Author's analysis of survey data and FGD transcripts

The main lesson from the table is that peers assessment, and to some extent self-assessment, are insensitive to current consumption evidenced by the high per capita consumption of households assessed as poor by these on their own or jointly. This is an important finding because it shows fundamental differences between the official and local assessments. This finding still holds even when the households are analysed by village (Table 5.20).

Table 5.20: Per capita consumption in British Pound by group of the poor by village

	Ngochera			Chikhwaza			Dzilekwa		
	Mean	Median	Cases	Mean	Median	Cases	Mean	Median	Cases
CE only	58.5	64.6	7	58.7	58.7	1	64.7	66.0	3
PA only	233.5	223.4	3	196.2	163.0	18	217.8	141.3	19
SA only	137.2	130.2	7	158.0	146.5	3	285.6	250.3	4
CE & PA	63.2	61.1	4	57.0	57.8	7	40.7	42.8	3
CE & SA	45.0	40.7	6	65.1	65.1	2	73.1	73.1	1
PA & SA	106.3	102.9	7	203.7	194.0	16	126.3	112.8	10
All poor	57.3	58.1	6	61.5	61.2	9	58.8	58.8	2
Total poor	151.4	119.2	9	142.3	159.0	3	160.1	167.3	14
ALL HHs	102.9	86.6	49	149.7	125.5	59	166.0	123.5	56

MK300=£1

Source: Author's analysis of survey data and FGD transcripts

³⁶ It is recognised that divergences between the measures cannot be eliminated because they are fundamentally different and have inherit biases that cannot be dealt with tinkering of the wellbeing measure.

The small differences are in the group which has the highest and lowest averages. Using median as the basis for the comparisons, the lowest was recorded for the group of the poor jointly identified by official and self assessments while the highest was recorded for those only identified as poor by peers. The same is true for Ngochera. In Chikhwaza it was the group of households identified by the official measure that had the lowest median while the group jointly identified by self and peers assessments had the highest median. Dzilekwa has yet a different scenario. The highest is recorded for those assessed as poor by themselves only while the lowest for those jointly assessed by the official measure and peers. In all the three villages, the official measure is associated with lowest median. Clearly, those households jointly identified as poor by all the measures are not necessarily consumption poor in any of the villages or in all the three villages combined regardless of whether the mean or median is used (shaded cells in the table).

To check whether there are other features apart from per capita consumption, the variables that were used for the poverty correlates analysis are also used³⁷. Some of the variables showed no discernible differences among the seven groups and they are, therefore, dropped. The variables found significant by poverty group are presented in Tables 5.21a and 5.21b. To make sense of the table, lowest and highest median for each characteristic are highlighted. Where there is more than one case, no shading is done.

Table 5.21a: Household characteristics by poverty group

<i>Scale variables</i>	CE only	PA only	SA only	CE-PA	CE-SA	PA-SA	All	Nonpoor
HH size	6.0	4.5	3.0	5.0	5.0	4.0	5.0	4.0
Depend. ratio	1.5	1.5	1.0	2.0	1.5	1.0	2.0	1.3
Age HHH	34.0	35.5	40.0	36.5	39.0	38.0	42.0	43.0
IGA hours	12	11	7	8	6	6	6	10
Inputs cost (£) *	3.33	25.08	11.00	4.08	2.00	7.67	3.33	14.42
Non-agric Y (£) *	34.00	82.00	197.33	6.58	40.00	40.00	20.00	124.00
Labour Y (£) *	0.00	0.00	1.67	0.08	0.00	4.33	16.67	0.00
# durables	2	6	1	3	1	2	1	6
# children	3	3	1	3	3	1	3	2
% in school	0	25	100	0	0	0	25	0
Land owned (ha)	1.00	0.61	0.51	0.91	0.50	0.61	0.51	0.91
# crops	3	4.5	5	3	4	4.5	5	5

* MK300/£1

Source: Author's analysis of survey data and FGD transcripts

³⁷ The ideal method is to use factor analysis. Unfortunately the small number of cases for most of the sub-groups makes such an exercise futile. Most of the characteristics selected are scale variables which are amenable to calculations of mean and median. There are a few dummy and nominal variables.

Table 5.21b: Comparison of household characteristics by poverty group

<i>Nominal variable</i>	CE only	PA only	SA only	CE-PA	CE-SA	PA-SA	All	Non poor
HHH sex (M=1/F=0)	0.73	0.72	0.71	0.57	0.67	0.67	0.71	0.62
HHH married (1/0)	0.82	0.75	0.71	0.57	0.67	0.64	0.65	0.62
Employed (1/0)	0.27	0.10	0.07	0.21	0.11	0.09	0.18	0.08
Enterprise (1/0)	0.64	0.63	0.57	0.43	0.67	0.67	0.47	0.69
Gave gifts (1/0)	0.91	0.80	0.93	0.79	1.00	0.88	0.71	0.92
Fertilizer (1/0)	0.82	0.97	0.71	0.79	0.56	0.76	0.59	0.92
Coupon (1/0)	0.91	0.72	0.86	0.71	0.56	0.64	0.65	0.81
Livestock (1/0)	0.82	0.80	0.57	0.50	0.44	0.67	0.59	0.73
HHH illiterate (1/0)	0.73	0.83	0.71	0.71	0.56	0.64	0.65	0.69
HHH class (1-21)	4.55	6.20	4.36	5.50	3.56	5.03	5.65	5.19
Adult class (1-23)	5.18	6.78	5.43	5.71	6.89	6.18	4.24	7.88

Source: Author's analysis of survey data and FGD transcripts

These tables show that households that are jointly identified as poor are unique only in five characteristics namely age of the household head, source of income, extending of gifts to others, application of fertilizer and education status of adults in the household. These households are just as good and bad as the other sub-groups of the poor. On age, the finding implies that households headed by old people are likely to be assessed as poor by households themselves and peers in the community groups, apart from having very low consumption levels. Likewise, the finding on the source of income implies that those that rely mostly on *ganyu* are likely to be identified as poor by all the assessments. It also makes sense that those jointly identified as poor have the least proportion of households that give out gifts to other households and apply fertilizer, and with educated adults.

In general, however, this group of the poor is not necessarily the poorest. Depending on a characteristic, it is as poor as the poorest group. For example, just like at least one other group, it has the highest dependency ratio, lowest number of hours spent on IGAs, and least number of durable goods. On some characteristics, the group is among those in the middle. Finally, poor households (regardless of the measure used to identify them) do not have features that are markedly different from the non-poor. The implication of this is that these household features do not necessarily help to distinguish the poor from the nonpoor, especially when community assessment is used.

5.7 Policy implications on the measures

So far it has been established that the three wellbeing assessment methods are neither the same nor mutually exclusive. It has also been established, based on the proportion of households jointly identified as poor, that peer assessment and self-rating are more related to each other than each is to the official measure.

The findings in the three villages also show that there should be no illusion that qualitative methods or quantitative methods are better than the other. Village groups, if not properly motivated or if wrongly oriented, can turn wellbeing analysis upside down. That is possible even with a well motivated and resourced facilitation team. There is no guarantee that every time a method of learning or data collection is implemented in a certain community the process and results will be as expected.

Further, the high levels of discordance between the official and local level assessments of wellbeing may also imply that there are fundamental differences in poverty conceptualisation between official and locals. In this case, if the official version was used to check the 'truthfulness' of the other methods of assessment the verdict would be that self and peers assessment are not good at identifying the poor³⁸. More importantly, given the value standpoint that the official version ought to reflect local conceptualisation of poverty, it is important that a comparison of wellbeing characteristics between the official version and local concepts of poverty be done. This is the subject of the next chapter.

³⁸ Appendix 4 provides the exact levels of errors of inclusion and exclusion in the three villages.

Chapter 6: Official version of wellbeing and poverty

6.1 Introduction

The previous chapter has shown that the three methods of assessing the wellbeing status of households are different in many ways. This chapter and two others that are to follow intend to find out the characteristics that are implicitly or explicitly used when assessing the household wellbeing or poverty status or those that are associated with wellbeing and poverty. This chapter brings out those characteristics associated with the official measure, which are in the form of correlates and determinants. The main source of the correlates and determinants are the 2000 and 2007 analyses. The correlates and determinants from the three villages are meant just to check whether the villages are atypical or not.

6.2 Wellbeing and poverty features from 2000 and 2007 profiles

The 2000 and 2007 analyses used purpose-designed integrated household surveys covering income and expenditure, demographics, health, education and livelihoods strategies. They were complemented by community questionnaires that collected instrumental variables like access to markets, roads, health facilities, financial institutions, and safety nets, among others. The 2004/5 questionnaire also included modules like Security and Safety, Social Safety Nets, Credit, Subjective Assessment of Well-being, and Recent Shocks to the Household. These extra modules were meant to provide data for vulnerability and subjective wellbeing assessments.

6.2.1 Poverty correlates

Table 6.1 presents poverty correlates or proxies or predictors gleaned from the 2000 and 2007 analyses. There are twelve factors that are common in both analyses and there are some factors that were only reported in one analysis. For example, the 2000 analysis had eleven and the 2007 analysis had six unique factors. Some of the differences can be explained more by differences in the correlation models than changes in the characteristics of the poor. Some of the mismatches are due to differences in the factors used in the correlation models. For the purposes of the study, any factor that was ever found to be a correlate under either model is taken as an important factor. Thus Table 6.1 provides the poverty correlates that form part of the characteristics of wellbeing and poverty from official wellbeing and poverty analysis.

Table 6.1: Poverty correlates in 2000 and 2007 analyses

Characteristic	2000	2007
<i>Demographic factors</i>		
Large household size	✓	✓
Being a child	✓	✓
Having little or no education	✓	✓
High dependency ratio		✓
Being a female		✓
Being a widow/divorcee		✓
Being in some age group	✓	
Having high fertility rates	✓	
<i>House head characteristics</i>		
Household head has little or no education	✓	✓
Household head is female	✓	✓
Households head not in wage employment	✓	✓
<i>Socio-economic characteristics</i>		
Households with low education children - out of school	✓	✓
Households reporting not being ill or not seeking medical care	✓	✓
Household with little or no livestock	✓	✓
Low per capita landholding size	✓	✓
Low prevalence of non-farm businesses	✓	✓
Household with low value dwellings/no bike/furniture	✓	✓
Household with no access to improved sanitation		✓
Having no fixed or mobile phone		✓
Births attended by unskilled health personnel		✓
Poor or no entrepreneurship abilities	✓	
Household members not in wage employment	✓	
Low maize yields due to use of low technology farming	✓	
Limited income sources and low income levels	✓	
Low amounts of loans received	✓	
Bad luck	✓	
Household spends most of income on food	✓	
Household consumes less food	✓	
Household receives remittances	✓	

Source: GoM (2000), GoM & World Bank (2007a)

6.2.2 Wellbeing determinants

The results of the first wellbeing determinants analysis in Malawi was produced in 1996. The 1996 analysis used income as a measure of wellbeing. The subsequent ones the 2000 and 2007 analyses, used consumption expenditure as the measure of wellbeing.

As already stated earlier, wellbeing determinants analyses use regression models³⁹. However, the models used do not determine causality but test the relationships posited by economic theory. It is when a relationship is confirmed that a factor is deemed as a determinant (Mukherjee & Benson, 2003; GoM & World Bank, 2007a). In this subsection only the consumption expenditure determinants analysis are presented. Results of the 1996 analysis are given in Appendix 5. Two poverty determinants analyses were conducted on the 1997/8 data. The first used bivariate analysis (GoM, 2000a). The second used multivariate analysis (Mukherje and Benson, 2003). To facilitate comparison, the multivariate analysis results are used because 2007 analysis used the same.

It is noted that the two analyses treated the samples and some factors differently. The 2007 used regional dummies instead of splitting the national sample as did the 2000 analysis, which had four separate regional samples. Since the three villages are mostly in the South, the discussion uses the results of that region's model estimation. As for variables, the 2000 analysis used age, education level of household head, age of household head, age of children, and size of household as corrected while the 2007 analysis categorised them into groups or made dummies out of them based on their theorised differentiated impact on household consumption expenditure.

Table 6.2 presents the variables that were at least significant at 5% level from the two analyses. The non-linear effect of household size is only one demographic determinant that is common in both analyses. However, age of household split or otherwise show that it has some effect on wellbeing. The 2007 analysis shows that household wellbeing declines with age of its head. It also shows that being a child is associated with being poor. For non-demographic factors, only wage income and production of tobacco are common determinants. Related to the wage income, education and employment have strong influence on wellbeing. Further, it is apparent that it is not the size of rain-fed land owned but land under cultivation. In other words, landholding size is not a binding constraint but resource-dependent cultivation because land constraint can be overcome by land renting. It is irrigatable land ownership that is important.

³⁹ These are referred to wellbeing determinants instead of poverty determinants because the dependent variable is not poverty status (as is the case with correlates) but the wellbeing measure (per capita consumption)

Table 6.2: Wellbeing determinants in the 2000 and 2007 analyses

Factors (Regressors)	SR Rural 2000	Rural 2007
Size of the household squared	+ **	+ **
Size of the household		- **
Number of adult males	- *	
Female household head		- **
Widowed household head		+ **
26-35 years household head		+ **
36-45 years household head		+ **
56-65 years household head		- *
66 + years household head		- **
Age of household head	- **	
Number of 0-9 year children	- **	
Number of 0-4 year children		- **
Number of 5-10 year children		- **
Number of 10-17 year children	- **	
Household has wage/salary income	+ **	+ **
Household grew tobacco last season	+ **	+ **
Head completed some primary education		+ *
Head completed primary education		+ **
Head completed post-primary education		+ **
Household owns any <i>dambo</i> plot		+ **
Household has a non-farm enterprise		+ **
Area of rain fed plots (logarithm)		+ **
Whether clinic in community		+ **
Whether EA at <i>BOMA</i> or trading centre		+ **
Takes >30-45 minutes to nearest <i>BOMA</i>		- **
ADMARC in community		- **
Tarmac road in community		+ **
Takes >45-60 minutes to nearest <i>BOMA</i>		- *
Members in tertiary industry	+ **	
Maximum education level by any adult	+ **	
Cultivated land (per capita)	+ **	
Value of livestock (log per capita)	+ **	
Whether PWP in TA	+ **	
Mean time to community facility (hrs)	- **	
Members in primary industry	+ *	

*Significant levels: ** 1% level; * 5% level*

Source: Mukherjee and Benson (2003); GoM & World Bank (2007a)

A confounding finding in the 2007 analysis was that having the government marketing agency (ADMARC) was associated with reduced consumption expenditure. A similar finding is reported by Sharma, et al. (2002). However, access to other socio-economic facilities like the trading centre, district headquarters or being near an all-weather road have the expected impact on wellbeing.

6.2.3 Way forward for the official wellbeing characteristics

Tables 6.1 and 6.2 provide the characteristics that are associated with consumption expenditure the official measure of wellbeing and poverty regardless of they are correlates or determinants or whether they are unique to one analysis. Peers and self assessments of wellbeing and poverty are holistic since they incorporate causes, effects and manifests. In recognition that poverty correlates and determinants for self-assessed poverty and wellbeing, respectively, come from the same model and dataset (Chapter 8), they are taken forward to Chapter 9 for comparison as they are.

6.3 Community level poverty correlates and wellbeing determinants

The correlates and determinants in Tables 6.1 and 6.2 are at national level. Whether these obtain at local level is what this section is interested to determine. Once community level correlates and determinants are found, they are compared with the national ones to check whether there is some relationship between them. Without a strong relationship, the study's goal of modifying the official wellbeing analysis system using community level findings is not justifiable. To produce comparable community level poverty correlates and wellbeing determinants, the study adapts the models used for the 2000 and 2007 analysis.

6.3.1 Model for poverty correlates in the three villages

Tables 6.3a and 6.3b present the list of the factors and descriptive statistics. It is noted that in some 'system missing' cases, zeroes were used instead. For example, where no member of the household was ill or injured, the number of days lost due to illness/injury is zero although the data has system missing because the question was not asked. It is also noted that percent replaces mean for the dummy variables because the mean effectively runs between 0 and 1 which is then conveniently converted to percent and easy to explain or understand. For the ordinal variables, the reference code is used in describing the variable. For example, for the type of house where there are three codes (for modern, mixed and traditional), the modern house is taken as the reference and is therefore used in describing the variable. Just like the dummy variables, the mean is converted to percent.

Table 6.3a: Descriptive statistics for the scalar profiling variables

Scale variables	N	Min	Max	Mean	S D
Household size	164	1	10	4.3	1.8
Adult equivalent	164	1	8	3.8	1.5
Members less than 15 years old	164	0	7	2.3	1.6
Members 65 years or older	164	0	2	0.2	0.5
Members between 15 to 64 years old	164	0	5	1.8	0.8
Dependency ratio	151	0	5	1.4	0.9
Age of household head	164	15	100	44.1	18.3
Proportion of school going age children in school	120	0	100	31.7	39.7
Average years in school for all adults	164	0	12	5.3	3.0
Highest class attended by head	163	0	12	5.3	3.7
Highest class attended by any adult member	164	0	12	6.3	3.7
Proportion of members reporting being ill (%)	164	0	100	22.3	27.4
Days lost by adults due to illness/care of the ill	164	2	80	4.4	10.2
Average hours adults spent on IGAs	164	0	65	11.5	11.6
Total land owned by household	164	0	11	0.9	1.0
Total dimba land owned by household	164	0	2	0.1	0.2
Inputs cost (MK'000)	164	0	251	11.6	26.6
Tropical livestock units	164	0	1	0.1	0.2
Agriculture income (MK'000)	164	0	325	6	28.4
Non-agriculture income (MK'000)	164	0	932	60.5	122.7
Annual income from work (MK'000)	164	0	624	32.4	96.6
Share of food in total consumption	164	3.7	94	57.6	16.1
Share of <i>ganyu</i> income in work-related income	75	0	100	68.4	45.52
Number of different crops	161	1	14	4.6	2.0
Number of different types of livestock	164	0	4	1	0.9
Number of durable assets in the household	164	0	23	4.4	4.5

Source: Author's computation from primary dataset

Table 6.3b: Descriptive statistics for non-scalar profiling variables

Dummy/nominal variables	N	Min	Max	Percent	S D
% headed by females	164	0	1	32.3	0.47
% of heads who are illiterate	164	0	1	29.3	0.46
% wage income heads	164	0	1	11.6	0.32
% with a member in wage employ	164	0	1	13.4	0.37
% with non-farm enterprise	164	0	1	61.0	0.49
% that gave no gifts to others	164	0	1	14.6	0.36
% of households with a bike	164	0	1	26.7	0.44
% whose member has a cell phone	164	0	1	40.2	0.49
% with no toilet	164	0	1	20.7	0.41
% that did not apply fertilizer	164	0	1	18.9	0.39
Ordinal variables	N	Min	Max	Percent	S D
% employed by non-formal employer	19	1	3	73.7	0.34
% of households without coupon	164	1	3	28.7	0.49
% of head with no spouse	164	1	6	32.3	1.69
% of heads with post-primary qualification	163	1	5	12.2	0.87
% of households with modern house	164	1	3	4.9	0.54

Source: Author's computation from primary dataset

The analysis uses a two-tail test because such avoids imposing the type of relationship between the dependent and independent variable⁴⁰. For cardinal factors, Pearson correlation statistics are used while Kendal tau B statistics are used for factors with ordinal values. Pearson Chi-Squared statistics are used for nominal variables, including dummy variables. In all cases, a difference is considered significant if it falls outside the 95% confidence interval. The correlation analysis uses the poverty status (poor or nonpoor) as the dependent variable, which takes the value 1 if the household is poor and 0 if nonpoor.

Table 6.4 presents factors that are strongly associated with household poverty status. Some of these factors can be hypothesised to determine the household wellbeing level while others are mere effects of the level. For example, having too many dependents reduces labour supply without reducing consumption requirements. By this token, the demographic factors can be considered as determinants of household welfare status. However, having a bicycle or cell phone can be a sign of high income in the household. In turn, household income is highly associated with household consumption. Therefore ownership of assets cannot be considered as a determinant of household consumption

⁴⁰ Ordinarily poverty profiling starts with simple comparisons of the descriptive statistics for the poor and non-poor. That simple analysis is done in Appendix 6a.

poverty because ownership of bicycle is not independent of income which is strongly related to consumption.

Table 6.4: Poverty correlates for the three villages

Factor	Sig level	Group
Household size	1%	Demographic
Dependency ratio	1%	Demographic
Number of dependent children	1%	Demographic
Household applied fertilizer	1%	Agriculture
Amount of money spent on inputs	1%	Agriculture
Food consumption share	1%	Economic
Durable assets diversity	1%	Economic
Household has cell phone member	1%	Economic
Household has a bicycle	1%	Economic
Highest class by all adults (mean)	5%	Education
Amount of credit assessed	5%	Enterprises
Income from agriculture	5%	Agriculture
Livestock diversity	5%	Agriculture
Highest class by adult	5%	Education
Time spent on IGAs (hours)	5%	Enterprises

Source: Author's computation from primary dataset

Just like in the case of the national level correlates, these will be compared with poverty correlates for self-assessed poverty. This is also true for the wellbeing determinants that are found in the next sub-section.

6.3.3 Model for wellbeing determinants in the three villages

For comparison purposes, this analysis uses the conceptual frameworks used in the 2000 and 2007 analyses (Mukherjee & Benson, 2003, p. 340; GoM & World Bank, 2007b, p. 49).

The model takes the form

$$\ln c_j = \beta x_j + \eta_j$$

Where

c_j is total annual per capita consumption expenditure of household j in Malawi Kwacha,

x_j is a set of explanatory variables (factors) for household j , and

η_j is a random error term.

To be in line with the 2000 and 2007 analysis, the model that is used is an adaptation of models used in those analyses. In particular, the models used by Mukherjee and Benson (2003, p.344) and GoM & World Bank (2007b, p. 196) are rationalised. The process of modification is presented in Appendix 6b. What is presented here is the final model. Table 6.6 presents the descriptive statistics and partial correlation coefficients.

Table 6.6: Descriptive statistics and correlation coefficients the villages model

Model variables (n=164)	Min	Max	Mean	S.D.	Coefficient	T-statistic
Log per capita consumption	9	12	10.7	0.7		
Household size **	1	10	4.3	1.8	-0.214	0.006
HH size squared (/100) *	0	1	0.2	0.2	-0.172	0.028
Under-5 children	0	3	0.7	0.8	-0.026	0.744
5-10 year old children **	0	3	0.9	1.0	-0.228	0.003
11-14 year old children	0	3	0.5	0.7	-0.138	0.077
Highest class by any adult *	0	12	6.3	3.7	0.187	0.017
Members in agriculture	0	6	1.2	1.1	0.063	0.423
Members in enterprise	0	6	0.7	0.8	0.011	0.888
Members engaged in <i>ganyu</i> *	0	3	0.4	0.6	-0.184	0.018
Members in employment	0	1	0.1	0.3	-0.141	0.072
Household has wage income *	0	2	0.2	0.4	-0.179	0.022
Harvest (tonnes/ha) **	0	21	2.0	3.1	0.238	0.002
HH owns dimba land **	0	1	0.3	0.5	0.268	0.001
Value of livestock (log) **	5	13	9.0	1.7	0.297	0.002
Loans accessed (MK '000) **	0	60	2.51	8.42	0.21	0.006
Inputs costs (MK '000) **	0	251	11.6	26.6	0.24	0.002
Loans accessed (log)	6	11	8.8	1.2	0.300	0.090
Inputs costs (log) **	5	12	8.2	1.6	0.465	0.000
Ngochera village **	0	1	0.3	0.5	-0.349	0.000
Chikhwaza village **	0	1	0.4	0.5	0.242	0.002
Dzilekwa village	0	1	0.3	0.5	0.092	0.244
Household accessed credit **	0	1	0.2	0.4	0.306	0.000
Applied fertilizer last season **	0	1	0.8	0.4	0.283	0.000

** Significant at 1%; * significant at 5%

Source: Author's computation from primary data

In the table, access to inputs and application of fertilizer are measured in three different ways. The amounts are either in thousands of the local currency or logarithm of the amount. They are also turned into dummies with the code '1' if they accessed credit or applied fertilizer. These three are not used in the same but alternative models. The first to be used are the logarithm versions. To ensure that only the most suitable factors are used in the model, the stepwise linear regression analysis is adopted. Table 6.7 presents a summary of the findings.

Table 6.7: Wellbeing determinants in the three villages – scale variables

Explanatory variables	B	S. E.	Beta	t-statistic	Sig.
(Constant)	9.787	0.793		12.344	0
Household size	-0.165	0.059	-0.466	-2.768	0.012
Amount spent on inputs (log)	0.247	0.085	0.444	2.89	0.009
Children from 11 to 14 old	-0.397	0.178	-0.375	-2.236	0.038

$R^2 = 0.573$; $Adjusted R^2 = 0.505$; $S.E. = 0.416$

Source: Author's computation from primary dataset

This model has an explanatory power of 50% with only three explanatory variables. As indicated, dummy variables can replace the scale variables for loans and inputs cost. When the model is re-estimated using the dummy variables in place of the scale versions (Table 6.8), the number of determinants increases from 3 to 7 at the cost of the explanatory power of the model (i.e. from 50% to 43%). For the purposes of the study, the reduction of the explanatory power is not a problem. What is important is the addition of factors.

Table 6.8: Wellbeing determinants in the three villages – dummy variables

Explanatory variables	B	S. E.	Beta	t-statistic	Sig.
(Constant)	10.823	0.294		36.855	0.000
Ngochera village	-0.488	0.119	-0.350	-4.105	0.000
Household size	-0.144	0.03	-0.414	-4.751	0.000
Value of livestock (log)	0.069	0.03	0.182	2.277	0.025
Members engaged in <i>ganyu</i>	-0.223	0.083	-0.202	-2.667	0.009
Household owns dimba land	0.278	0.115	0.205	2.410	0.018
Household accessed credit	0.252	0.125	0.159	2.019	0.046
Children less than 5 years old	0.132	0.066	0.164	1.995	0.049

$R^2 = 0.465$; $Adjusted R^2 = 0.428$; $S.E. of estimate = 0.492$

Source: Author's computation from primary dataset

This model has yielded new factors in place of some in Table 6.7. For example, under-five children replace the 11-14 year olds and 'amount of money spent on inputs' is replaced by 'household has access to credit'. Only the household size survives. Further, the use of dummies brings out the fixed effects of Ngochera Village as the single-most important factor in the model, explaining almost half of the variation. Applying the same model to the specific village data reveals some village differences. Table 6.9 lists the factors that are found to be significant contributors of per capita consumption expenditure by village. The table only presents the coefficients to show the direction and strength of relationship.

Table 6.9: Wellbeing determinants by village

Explanatory variables	Coefficients		
	Ngochera	Chikhwaza	Dzilekwa
Village -->			
Constant	10.96	11.32	10.92
Household size	-0.15		-1.23
Household size squared		2.23	
Children from 5 to 10 years old		-0.46	
Children from 11 to 14 old		-0.46	
Members in wage employment		-0.44	
Members engaged in <i>ganyu</i>			-0.29
Household accessed credit			0.50
Harvest in tonnes per hectare			0.05
R^2	0.193	0.487	0.475
Adjusted R^2	0.168	0.429	0.402
<i>S.E. estimate</i>	0.507	0.425	0.475

Source: Author's computation from primary dataset

The table shows that only one factor explains the variation in per capita consumption in Ngochera. This is because most of the variation in per capita consumption is explained by the village fixed effects (Table 6.8). On the other hand, other factors are prominent in Chikhwaza and Dzilekwa. In fact, they explain per capita consumption variations much better (43% in Chikhwaza and 40% in Dzilekwa) although the specific factors are totally different. Ngochera and Dzilekwa share one factor, household size. The issue of *ganyu* in Dzilekwa is picked up in group discussions in Chapter 7, where *ganyu* is associated with poverty, vindicating the findings here.

It is clear that the determinants are dependent on the type of model and the scale of measurement. Given that the study is interested to get as many legitimate determinants as possible, different measures of the factors 'livestock ownership', 'access to credit' and 'access to inputs' are used⁴¹. Four models are estimated using stepwise regression analyses. The first (Model 1) uses the amounts for the three variables in thousand. The second (Model 2) uses the natural logarithm of the original amounts for the three variables. The third (Model 3) uses two dummies for credit and fertilizer with value of livestock in thousands. The fourth (Model 4) uses the two dummies with logged value of livestock. The results of these four regressions are presented in Table 6.10.

⁴¹ Note that differences between scaled and not scaled amounts are only in the size of the coefficients and not the model results in terms of factors and explanatory power. The scaled values are generally used because they give higher coefficients. However, when using logarithm, the original values are used since logarithm are used basically to scale down large values.

Table 6.10: Wellbeing determinants in the three villages – effect of measurement

Explanatory variables	MK'000	Log	Dummies for credit & inputs	
	All three	All three	Livestock('000)	Livestock (log)
	Model 1	Model 2	Model 3	Model 4
Constant	11.195	9.787	10.653	10.823
Ngochera village	-0.376		-0.27	-0.488
Household size	-0.118	-0.165		-0.144
Children less than 5 years old				0.132
Children from 5 to 10 years old			-0.19	
Children from 11 to 14 old		-0.397		
Value of livestock	0.002		0.001	0.069
Members engaged in <i>ganyu</i>	-0.136		-0.217	-0.223
Household owns dimba land	0.298			0.278
Amount spent on inputs		0.247		
Amount of loans accessed	0.011			
Household accessed credit			0.373	0.252
Applied fertilizer last season			0.311	
<i>R</i> ²	0.319	0.573	0.331	0.465
<i>Adjusted R</i> ²	0.293	0.505	0.306	0.428
<i>S.E. of estimate</i>	0.562	0.416	0.557	0.492

Source: Author's computation from primary dataset

Each one of the four models has unique results. The use of scale variables (Models 1 and 3) produces the least explanatory power but twice the number of factors compared to the models with logged variables while the use of dummies allows many factors to 'claim some stake' in per capita consumption although the factors differ depending on the measure of the value the livestock. Possibly comforting is the finding that not every model yields complete new factors. For example, out of the six factors from Model 1, only one 'amount of loans accessed' is unique.

The use of dummy variables generally yields a variety of factors that are not necessarily unique. For example, the combination of the dummies and logged value of livestock yields the highest number of factors (7) but only one of them (number of under-five children) is unique. When the dummies are combined with scaled value of livestock, the number of factors is six out of which two are unique ('number of children in the age group 5-10 years' and 'household applied fertilizer'). None of the other two models has these three factors.

What these models demonstrate is that it is not the use of either dummies or natural logarithm that increases the number of explanatory factors. Further, it is not the number of explanatory variables that increase the explanatory power of the model.

Finally, regardless of the scale of the measurement, some variables are consistent contributors of per capita consumption. At the top are household size, being in Ngochera village, number of household members engaged in *ganyu* and value of livestock. Apparently, numbers of children in various age groups are important in different specifications in different ways. Amount of money spent on inputs, amount of loans accessed and application of fertilizer are also important but in specific model specifications.

Just as was the case with the national level determinants, all factors that have been found to be a determinant in any of the models are taken forward for comparison. Table 6.11 puts them together

Table 6.11: Wellbeing determinants in the three villages

Factor	All sites	Ngochera	Chikhwaza	Dzilekwa
Ngochera Village	√			
Household size	√	√		√
Household size squared	√		√	
Number of under-five children	√			
Number in 5-10 year age group	√		√	
Number in 11-14 year age group	√		√	
Number involved in <i>ganyu</i>	√			√
Number in wage employment			√	
Household has a dimba plot	√		√	
Value of livestock	√			
Amount of money spent on inputs	√			
Household accessed credit	√			√
Amount of loans accessed	√			
Yield of all crops (tonnes/hectare)				√
Household applied fertilizer	√			

Source: Tables 6.7 to 6.10

A summary of the table is that there are thirteen factors that impact per capita consumption in three villages combined six of which are not important at individual village level. On the other hand, there are two factors that are only important at village level. Wage employment is important for Chikhwaza village. This is expected because this is the only village with the highest wage employment. The crops yield is important in Dzilekwa, the most agriculturally-driven of the three. The only factor that is important in all the three villages is household size or its quadratic form implying that apart from household size, all village level contributors are unique to the village.

6.3.4 Comparison of the national and village level characteristics

The numbers of national level correlates and determinants are expected to be more than community level ones because (i) the sample sizes are different (12,000 and 164); (ii) the study covered three out of thousands of villages; and (iii) the villages are confined to a radius of 100 kilometres, mostly in the poorest region⁴². What of interest to the study is, given these differences, there are some convergences. Given that poverty correlates are used as identifiers for the poor, any matching of factors implies there are factors that can be used as identifiers. Indeed according to Tables 6.12 and 6.13, there are nine correlates and eight determinants that are common.

Table 6.12: Common poverty correlates and wellbeing determinants

Characteristics	National	Local
Poverty correlates		
Access to telephone/mobile phone	√	√
Amount of credit assessed	√	√
Food consumption share	√	√
Household applied fertilizer/low use of technology	√	√
Household has a bicycle	√	√
Livestock: ownership and/or value	√	√
Number of dependent children	√	√
Number of dependent members/dependency ratio	√	√
Number of household members/fertility rate	√	√
Wellbeing determinants		
Household size	√	√
Household size squared	√	√
Number of 0-4 year old children	√	√
Number of 5 to 10 years old children	√	√
Number of 10-17/11-14 year old children	√	√
Household has wage/salary income	√	√
Household owns dimba land	√	√
Value of livestock (log)	√	√

Source: Tables 6.2 and 6.11

There are, of course, other correlates and determinants that are unique at each level. For example, income from agriculture is only important at local level while remittances are only at national level. Likewise, education level of adults is only significant at local but not national level. As for wellbeing determinants, there are also some unique factors worth mentioning. For example, age, sex and education level of household head are important only at the national level. While wage employment is positively important at

⁴² In fact, Dzilekwa is in Ntcheu in the Central Region. Its poverty rate at 52% was the lowest among the three districts which had 70% for Zomba for Ngochera and 65% for Thyolo for Chikhwaza.

national level, *ganyu* employment is negatively so at local level. The point is that using national level factors that are not important at local level as identifiers is likely to lead to identification errors. These issues are picked up in the concluding remarks.

6.4 Concluding remarks

This chapter has presented poverty correlates and wellbeing determinants based on previous poverty profiles and data collected from the three villages. The methodology used to come up with the correlates and determinants in the three villages was the same as that used in previous two poverty analyses in Malawi. Very minor and necessary modifications were made. Such modifications do not make the methodology adopted in any way different. The lessons and conclusions presented herein are based on this methodological comparability.

1. What obtains at the national level does not always apply at local level. In other words, a clear picture at national level may not always be understood at local level. As such the national picture may be good for national level policy and programme development but may not be appropriate for local level application. The uniqueness of the three villages (combined and individually) from the national picture has been demonstrated.
2. What applies in one village does not always apply in another even when they are close to each other. For example, the absence and presence of robust markets make Ngochera a different village from Dzilekwa. Likewise, the availability of diverse income generating activities in Chikhwaza village compensates for the low landholdings.
3. It is easier to pinpoint what produces poverty in some villages than in others. For example, an average household in Ngochera can be poor just because it is located there. A similar household in Chikhwaza and Dzilekwa is likely to take advantage of poverty reducing opportunities to move out of poverty. That is almost impossible in Ngochera apart from reducing number of children.
4. Just as national level factors cannot be 'transferred' down, local level factors cannot be 'scaled up'. Further, the uniqueness of villages implies that local level characteristics cannot be applied across villages either. This calls for localisation instead of centralisation of poverty studies. In other words, having more local level poverty studies is better than having one good national level study.

5. If a situation dictates that national level proxy indicators be used, careful analysis of national and local level data can yield some common proxies as demonstrated in this study. Where such a study is not possible, it is imperative that each national level proxy indicator be examined by local experts to determine whether it is applicable.

All in all, the chapter has managed to identify factors that have some association with the official version of wellbeing and poverty. Although the list of factors does not, on its own, respond to a particular research question, it provides a comparator required to deal with the research question: 'Do conceptualisation of poverty by official, self and peers converge or diverge in a given community in Malawi?' The question is ultimately dealt with in Chapter 9 by comparing the characteristics found in this chapter with those that are gleaned from community groups (Chapter 7) and households themselves (Chapter 8).

Chapter 7: Community characterisation of wellbeing

7.1 Introduction

The objective of this chapter is to identify popular features and dimensions of wellbeing from a countrywide qualitative study and in the three sites that were visited during the primary data collection. The features and dimensions of wellbeing are used to interrogate the official operational definition of poverty in Chapter 9. The main source of wellbeing features for interrogating the official wellbeing analysis system come from the MOPS already discussed in Chapter 3. As explained in the methodology chapter, a fresh analysis of the 33 field reports was done by the author to come up with the common features that are used across the country.

The first part of this chapter presents findings of other qualitative studies. This is followed by findings from the MOPS. The final part presents findings from the three villages. The ultimate output of the chapter is a list of prominent wellbeing features that can apply across the country and wellbeing categories. Since the research problem centres on the use of community groups in targeting the poor, these features are taken as serious candidates for incorporation in the official wellbeing analysis system.

7.2 Characteristics of wellbeing and poverty from qualitative studies

This section presents the findings from studies that were designed to be nationally representative in the sense of covering areas that had to be seen to be diverse in terms of culture and livelihood strategies. The idea is to provide a national picture while highlighting area specific differences. A number of studies that used wellbeing analysis provide a glimpse of the characterisation of wellbeing and poverty as well as categorisation of wellbeing. Some defined as well as characterised wellbeing and poverty. Others concentrated on characterising wellbeing and poverty.

7.2.1 Definition of poverty

According to Machinjili and colleagues (1998), poverty was said to describe “a situation of low income, denial of the right to participate in social development and human capital formation; and lack of access to productive assets” (p. 57). Aspects of the Malawi rural poverty definition are many but the commonest are food insecurity, poor clothing, low or no cash income, and poor housing (NEC, 2002). Although most of the aspects are at household level, there are others that operate at community level. As Table 7.1

shows, it is the lack of basic necessities that are frequently mentioned in the definition of poverty.

Table 7.1: Aspects of rural poverty definition in Malawi

Aspect	Men FGD	Women FGD	All
	<i>n=13</i>	<i>n=13</i>	<i>n=26</i>
Food shortage	12	12	24
Poor clothing	11	13	24
No money	7	8	15
Poor quality house	8	5	13
No potable water	4	2	6
No livestock	2	2	4
Inaccessibility	3	1	4
No fertilizer/inputs	1	2	3
No health facilities	1	2	3
No drugs in health facilities	1	1	2
Land shortage	0	1	1
Unemployed	1	0	1

Source: NEC (2002) Table 2.1

Lack of access to community-level basic social services like potable water, health services and drugs and public transport or passable roads are rarely highlighted as attributes of poverty in rural Malawi. Judging priority by the number of groups mentioning an attribute, access to socio-economic infrastructure is not among the top. This is confirmed by the attributes of poverty presented in Table 7.2 as lack of basic necessities of life is the most frequently mentioned attribute. Non household attributes were rarely mentioned. For example, only the study by Machinjili and colleagues (1998) did infrastructure come up. It is noted that not all attributes were mentioned in the three studies. In fact only lack of food, shelter, clothing and money were mentioned in the three studies. Some attributes were unique to a study while others were mentioned in two of the three studies reviewed here. This is significant because each of the studies had at least 15 group discussions. If an attribute does not appear in at least one it may imply that it is not very important. Most of these attributes re-appear when discussing characteristics of households in various wellbeing groups. In fact the NEC (2002) study uses the same attributes as criteria for categorising households.

Table 7.2: Attributes of poverty in Malawi

Attribute	Machinjili	Khaila	NEC	Sites *
Lack of sufficient food	√	√	√	18
Poor/inadequate shelter	√	√	√	15
Inadequate clothing/beddings	√	√	√	13
Few or no livestock			√	9
Dependency on casual work		√	√	7
Inadequate Income/money	√	√	√	6
No assets/poor living conditions		√	√	5
Lack of employment opportunities	√		√	4
Poor health		√	√	4
Inputs unavailability	√		√	3
Dependency on begging		√	√	2
Credit unavailability	√		√	1
Insecurity	√			
Lack of adequate infrastructure	√			
Lack of entrepreneurship spirit	√			
Transport unavailability	√			
Inadequate farmland		√		
Mat instead of timber coffin		√		

** Only the NEC report gave the number of sites mentioning the attribute*

Source: Machinjili, et al. (1998); Khaila (1999); NEC (2002) Table 2.3

7.2.2 Causes of poverty in rural households in Malawi

It is instructive to present what people consider to be causes of their poverty in their communities before discussing the characteristics of households in various wellbeing categories. Causes of poverty are the equivalent of poverty determinants. The impact monitoring study (NEC, 2002) discussed causes of poverty in the sites they visited. The study on sources of risks (Kadzandira, 2002) also discussed conditions that trap people in poverty.

An analysis of the causes of poverty shows that no one factor dominated. In fact no factor was mentioned in more than half of the group discussions. The top five causes of poverty are laziness, lack of employment opportunities, poor health, failure to apply farm inputs and lack of credit facilities for farm inputs or start-up capital for businesses (Table 7.3).

Table 7.3: Number of groups mentioning the cause of poverty

Cause	Men FGD n=13	Women FGD n=13	All n=26
Laziness	6	6	12
Unemployment	6	6	12
Poor health	5	7	12
Failure to apply farm inputs	5	6	11
Lack of credit facilities	5	6	11
Erratic weather pattern	4	3	7
No money for essentials/business	3	4	7
Inadequate or no farmland	4	2	6
Low produce prices	4	2	6
Over population	3	2	5
Theft	3	2	5
Soil degradation	1	4	5
Illiteracy	2	2	4
Inaccessible markets	2	2	4
Crops destroyed by animals	2	2	4
Reliance on casual work/ <i>ganyu</i>	2	1	3
Large families	1	1	2
Orphanhood	1	1	2
Lack of food	1	1	2
Deforestation	1	1	2
Low agricultural productivity	1	1	2
Lack of extension services	1	1	2

Source: NEC (2002) Table 2.2

It is noted that there are no significant differences between the sex groups, especially on the major causes of poverty. What are noteworthy are the differences on poor health, inadequate land, low produce prices and soil degradation. The factors are not independent of each other and this is what makes no one factor be the most prominent factor. This inter-linkage of factors demands careful and 'respectful' analysis. A similar pattern emerges when the poverty-producing conditions obtained by Kadzandira (2002) from 19 sites are analysed. According to Kadzandira (2002) people link food insecurity to adverse weather conditions (droughts and floods), declining soil fertility, declining landholdings and high incidence of illness and death. The discussants said food insecurity pushes and keeps people in poverty because in times of food insecurity households abandon their farms and resort to work elsewhere either for food or cash to buy food. This creates a vicious cycle because by abandoning their farms, they harvest little which leads to subsequent food insecurity. This was mentioned in all the 19 sites visited.

Another condition that was reported to push people into poverty or keep them in poverty is constant rise of prices of inputs and basic necessities. By referring to various years in the past when there were price spikes, Kadzandira (2002) concluded that SAP-inspired exchange rate and inputs subsidy policies were to blame. What the people reported, however, was that commodity price increases constantly squeezed the purchasing power of the little they made and that inputs price increases led to a decline in agricultural productivity due to reduced use of inputs especially fertilizer and hybrid maize seed. People stated that this was exacerbated by wages and produce prices that did not keep pace with inflation. According to Kadzandira (2002), the low produce prices were a result of yet another structural adjustment policy that reduced the role of a state run produce trader and allowed private traders to take its place. This low produce price was mentioned as a condition that pushes and keeps people in poverty in 8 sites. The groups concluded that a combination of ever rising commodity and inputs prices on one hand and stagnant or declining income results in increasing poverty.

Frequent diseases and deaths as a condition that pushes and keeps people in poverty were also mentioned in all the 19 sites (Kadzandira, 2002). The point the people made was that morbidity affects food production through lost days by those ill and taking care of the ill. The severity of HIV and AIDS related illnesses were also blamed for asset and livestock depletion. Deaths, especially those related to AIDS, were said to be devastating since they rob families of 'breadwinners' and therefore plunge otherwise 'safe' households into immediate poverty. Worse still, funerals require the bereaved families to feed those who attend the service with 'good' food, which invariably means meat. This further means either losing more money to buy the food or slaughtering some livestock both of which are poverty producing for the remaining household members. Related to the funeral ceremony, people mentioned that culture demands that no work be carried out during the days of the mourning which means suspension of income generating activities.

With 'kid-glove' handling of criminals that came with the bill of rights in mid-1990s, crime and insecurity increased to the extent that loss of property, livestock and crops were common place. This affected the livelihoods strategies in rural areas where wealth was previously stored in livestock and productive assets. The increased insecurity meant that a household by saving in livestock or groceries shops would be reduced to a poor household overnight. With increasing crime, the people said, the incentive to invest was reduced and many income generating activities were limited to more safe but less lucrative ventures. Apart from pushing households into poverty, crime and insecurity

ensured that households that could otherwise have moved out by setting up businesses remained poor. This condition was mentioned in 10 of the 19 sites.

The causes of poverty or poverty-producing conditions gleaned from the two nationwide studies provide a good background for the analysis of reasons given during the pairwise ranking of households and, to some extent, during wellbeing ranking under which households are categorised into wellbeing groups. In the meantime, the criteria used to categorise households in the three studies are presented next.

7.2.3 Characteristics of wellbeing categories

Wellbeing analysis gives participants an opportunity to decide the number of wellbeing categories the households in the community should have. The number of categories varies by group. Khaila and colleagues (1999) report of four wellbeing categories in all FGDs, except one that defined three. FGDs in the impact monitoring study (NEC, 2002) defined three wellbeing categories, except one FGD that defined only two. On the other hand, Kadzandira (2002) reports of wellbeing categories that ranged from two to five.

After the categories are decided, the participants are asked to give characteristics associated with households in each⁴³. While Khaila and colleagues (1999) presented characteristics for the four wellbeing categories and the unique three categories, NEC (2002) and Kadzandira (2002) used three categories. For the purposes of combining the results of the three studies, three groups are used. The top and bottom categories are left intact. All categories in between are collapsed into one category termed 'middle'. As observed in all the three studies, one characteristic can be a criterion for two different categories in different areas. It is therefore proper that some discussion is presented for the key characteristics.

Table 7.4 presents the characteristics of rich households arranged in descending order of number of groups mentioning the characteristic in the policy impact study (NEC, 2002). Discounting possible differences in frequency of mention, it can be concluded that there is considerable agreement amongst the studies. For example, there is agreement on access to basic household necessities like food, housing, and clothing just as there is on access to money and inputs and ownership of livestock, land, and assets (productive, durable and vehicles).

⁴³ It is noted that in wellbeing ranking these characteristics are not weighted. However, people implicitly use the weights when they categorise or 'pairwisely' rank the households.

Table 7.4: Characteristics of rich households in rural Malawi

Characteristic	NEC	Khaila	Kadzandira
Food secure	√	√	√
Good quality house	√	√	√
Decent clothing	√	√	√
Have livestock	√	√	√
Have one or more bicycles	√	√	
Have stable IGA	√	√	
Enough money	√	√	√
Uses inputs (seeds/fertilizer)	√	√	√
Have motorised vehicle(s)	√	√	√
Can employ or hire labour	√	√	
Have access to credit	√		√
Have productive assets	√	√	√
Household members are healthy	√	√	√
Have plenty of farmland	√	√	√
Have household durables	√	√	√
Have charms		√	
Children continue with education			√
Have town working children			√
Have peace of mind			√

Source: NEC (2002) Table 2.2; Khaila (1999) Table 4; Kadzandira (2002) Table 2

However, these characteristics have different shades, depending on area and emphasis of a study⁴⁴. For example, food security is measured in terms of food availability throughout the year (NEC, 2002; Khaila, et al., 1999), the size and fullness of a maize granary (Khaila, et al., 1999) and eating thrice a day (Khaila, et al., 1999; Kadzandira, 2002). A good quality house has to look good and have burnt bricked wall, cemented floor (NEC, 2002; Khaila, et al., 1999), and should have a roof with iron sheets (NEC, 2002; Khaila, et al., 1999; Kadzandira, 2002). While Kadzandira did not breakdown what ‘decent clothing’ meant, Khaila and colleagues (1999) and NEC (2002) broke it down to cover ‘enough’, or ‘several that were also good quality’. Khaila and colleagues (1999) added that children in rich households have change of clothes.

On ownership of livestock, the number and type is important. NEC (2002) gives numbers and types but stress that the numbers and types are dependent on location. For example, it states that in one site, four or five goats was a criterion for categorising the

⁴⁴ Raw data on how different each group discussion broke down the characteristic is difficult to establish. It is not clear whether the difference shades represent true differences or lack of detail in summarising or indeed poor facilitation. However, in some cases the reports give an idea that they note the differences in the shades. A deeper analysis of the differences is attempted later as field reports are used instead of expert summaries of the reports.

rich while in another it had to be five to ten cattle to be categorised in the rich category and four to five goats to be in the middle category (NEC, 2002, p. 16). In the other studies, it is generally lots of high value livestock like cattle or goats or pigs or sheep that are considered as a criterion for the rich category (Khaila; et al., 1999; Kadzandira, 2002). This implies that chickens on their own, no matter how many, are not considered as a characteristic of the rich.

There is also variety in the characterisation of the rich in terms of ownership of durable assets. Just like the case of livestock, NEC (2002) found that in one site owning a bicycle was a criterion for the rich while in another it was for the middle group. Ownership of radio and beds were mentioned in all studies (NEC, 2002; Khaila, et al., 1999; Kadzandira, 2002) while beddings and furniture in general were mentioned in two studies (NEC, 2002 and Kadzandira, 2002). Some assets were mentioned only in one study and these include metallic plates; mosquito nets; cassette players (Khaila, et al., 1999) and mattresses and pillows (Kadzandira, 2002). Differences are also observed on ownership of productive assets. While all studies mentioned oxcarts as one of the characteristics of the rich, maize mills were mentioned in two studies (Khaila, et al., 1999 and Kadzandira, 2002). Some only feature in one study: motorised boats, fish nets and ploughs (Khaila, et al., 1999); merchandise shops or hawkers (Kadzandira, 2002).

There is little variety given on the kinds of activities rich households undertake to generate income. The only examples given in the reports include selling fish for those with boats (Khaila, et al., 1999) and produce trading (Kadzandira, 2002). The implication is that some of the known businesses and activities are the preserve of the not-so-rich households, as will be seen later. What is true in all the studies is that the rich households have 'enough' money. This is variably described as finding money without struggling (Khaila, et al., 1999) or producing a lot of cash crops like Irish potatoes or tobacco (Khaila, et al., 1999 and Kadzandira, 2002), or affording not to work for anyone (Khaila, et al., 1999); and ability to purchase laundry and bath soap, cooking oil, meat frequently, and perfumes or lotions (Khaila, et al., 1999 and Kadzandira, 2002).

All studies agree that the rich can afford to buy farm inputs like fertilizer and seeds and, according to Khaila and colleagues (1999), can afford to employ or hire labour to work in their gardens or fishing boats or as domestic servants. The absence of education and employment status among the characteristics of the rich is noteworthy. It is also noteworthy that the rich are said to keep their children in school and also have children working in urban areas. This has the connotation that while education status of parents

is not a determinant of current wellbeing status, the current wellbeing status of parents is a critical determinant of the current and future wellbeing status of the household. In one study, charms are said to either make the poor become rich while others keep the rich. One wonders why Malawi cannot just mass produce them to magically move the desperately poor out of poverty. It is, however, refreshing that some mentioned ‘peace of mind’ as one characteristic of the rich. Apparently this peace of mind is a product of food, income and health security which are in short supply among the poor.

Unlike the characteristics for rich households, there are very few characteristics for the middle households that are reported in all the three studies. For example, out of the 15 characteristics, only three are reported in all the three studies⁴⁵. This diversity possibly reflects the difficulty in characterising households that are neither poor nor rich. In most cases these are best distinguished by the absence of the characteristics that distinguish the rich or poor. Table 7.5, nevertheless, presents what was gleaned from the three studies.

Table 7.5: Characteristics of households in between in rural Malawi

Characteristic	NEC	Khaila	Kadzandira
Almost food secure	√	√	√
Some livestock	√	√	√
Decent clothing	√	√	√
Have household durables	√	√	
Fails to use inputs (seeds/fertilizer)		√	√
Have some farmland		√	√
Adequate house	√		
Have an income generating activity (IGA)		√	
Employed as a casual labour		√	
Have some productive assets		√	
Have working children		√	
Make low income			√
Low scale cash cropping			√
Limited access to credit			√
Susceptible to illnesses			√

Source: NEC (2002) Table 2.2; Khaila, et al., (1999) Table 4; Kadzandira (2002) Table 2

These households are said to have incomplete food security. The months it takes for their stocks to last vary by study; 10 or 11 months (NEC, 2002) or 3 to 4 months (Kadzandira). They generally do not go to sleep without a meal because they can buy

⁴⁵ The point is ‘reported’. It does not necessarily mean that, for example, the type of clothing distinguishes the middle-class in the 19 sites (and 71 FGDs) covered by sources of risks study. It could be that the facilitator or note taker did not record or there are other better criteria than clothing. This is also true for a characteristic like housing which is only highlighted in the Impact study.

food when food runs out (Khaila, et al., 1999). According to Kadzandira (2002), they are said to have two or three meals a day. On ownership of livestock, they are said to own few (NEC, 2002) mainly goats or chickens (Khaila, et al., 1999) if not chickens only (Kadzandira, 2002).

There is also some variety on the quality of clothing. In some sites, those in the middle categories were said to have no enough clothes while in others they were said to have enough clothes (Khaila, et al., 1999). Kadzandira (2002), on the other hand, reports that some sites mentioned that these households are known to buy clothes once or twice a year. There is no mention of the quality of the 'enough clothes' or the clothes they buy once or twice a year. As for ownership of durable assets, the middle category households own radios, bicycles, metallic plates (Khaila, et al., 2002) and some chairs but no sofa sets (Kadzandira, 2002). Just like in the case of the rich, these households do not have land as a constraint because they can cultivate between 1 and 2 acres (Khaila, et al., 1999) or if they need more land to cultivate they can rent (NEC, 2002).

Unlike the rich who can afford to purchase and use inputs and employ others, these households are said to fail to purchase inputs and spend at least 6 months offering themselves as casual labourers (Khaila, et al., 1999). Some are said to be involved in small-scale fishing while others distil a local spirit called *kachasu* or operate a myriad of micro enterprises just to earn money to purchase basics (Khaila, et al., 1999). These sources of income are said to yield incomes that are too low with the result that they fail to make purchases or payments that require a lump sum like secondary school fees or a bag of maize or fertilizer (Khaila, et al., 1999). Some of the consequences are that their children drop out of secondary school or they buy maize and fertilizer in smaller quantities which are more expensive or sell their produce too early just to get the much needed cash for their essentials (Khaila, et al., 1999).

The characteristics for the poorest category are presented in Table 7.6. There is more agreement on most characteristics among the three studies. Of the 16 characteristics, nine are reported in all the three studies and six in two of the studies leaving only one characteristic (i.e. laziness) reported in one study. Perhaps behind the similarities are differences in shades. For instance, the food insecurity criterion is variously described by the amount of food stocks as well as quality and frequency of meals. On stocks, poor households have stocks that last few months (NEC, 2002) or 1 to 2 months to be exact (Kadzandira, 2002). Since their stocks last early, poor households are said to be pre-occupied with securing food supply at the expense of other basics (Khaila, et al., 1999).

Table 7.6: Characteristics of poorest households in rural Malawi

Characteristic	NEC	Khaila*	Kadzandira
Lack of sufficient food	√	√	√
Poor/inadequate shelter	√	√	√
Inadequate clothing/beddings	√	√	√
Dependency on casual work	√	√	√
Inadequate Income/money	√	√	√
No assets/poor living conditions	√	√	√
Poor health	√	√	√
Inputs unavailability	√	√	√
Dependency on begging	√	√	√
Few or no livestock	√	√	
Lack of employment opportunities	√		√
Credit unavailability	√		√
Small farmland		√	√
Labour constrained - no support		√	√
Children out of school		√	√
Lazy		√	

* *Combines 'Have nots' (3 sites); 'The poorest' (3 sites); 'Strugglers' (one site) and 'The stunted' (one site)*

Source: NEC (2002) Table 2.2; Khaila, et al., (1999) Table 4; Kadzandira (2002) Table 2

Again, this 'food hunting' forces the food insecure to abandon their farms. This reduced attention to own farm when combined with no fertilizer application and small farmland results in poor harvests. The frequency of food consumption in poor households is said to be erratic such that they may stay days without food or eat once a day (Khaila, et al., 1999; Kadzandira, 2002). This may force some children to eat in their friends homes or indeed beg for food (Kadzandira, 2002). In hard times poor households are said to be forced to use bran flour or even a mixture of sawdust and maize/bran flour instead of pure maize flour (Khaila, et al., 1999; Kadzandira, 2002). Khaila and colleagues (1999) also report that during the hungry period when even bran is not available, poor households survive on vegetables-only meals.

The food insecurity in poor households is compounded by inadequate income. Most of the poor are not employed or engaged in any IGAs (NEC 2002; Kadzandira, 2002). The poor household's main source of income, casual work, is undertaken at the cost of future food insecurity as they are forced to abandon their farms to work for money elsewhere (Kadzandira, 2002; Khaila, et al., 1999). Further, this source, just like selling firewood or fishing with small nets, line and hook or growing sweet potatoes for sell yield very low incomes (Khaila, et al., 1999). It is also reported that poor households that are labour-constrained rely on alms to survive (Khaila, et al., 1999). In general,

poor households generate income that is said to be so low that they can't afford cooking oil let alone meat or fresh fish (Khaila, et al., 1999; Kadzandira, 2002). This makes vegetables their main relish with cheap small dried fish sporadically breaking the monotony (Kadzandira, 2002). The low income is compounded by lack of access to credit facilities as they are excluded on account that they are not credit worthy (NEC, 2002; Kadzandira, 2002).

The poor's housing situation is also precarious. In some cases, the poor are said to have no house of their own (NEC, 2002) while in others their house is said to be grass thatched (NEC, 2002 and Khaila, et al., 1999) which leaks when it rains (NEC, 2002). Yet in others, the roof of the poor's house is said to have half-fallen in or blown out (Khaila, et al., 1999; Kadzandira, 2002) and the wall is said to be made of mud (NEC, 2002) which is half-fallen (Khaila, et al., 1999; Kadzandira, 2002). Some houses of the poor are said to have no windows at all (Kadzandira, et al., 2002). The poor are also said to sleep rough even in their own houses. Some poor are reported to sleep on mats because they have no beds (Kadzandira, 2002; NEC, 2002) while others do not even have a mat (Khaila, et al., 1999). Further, the poor do not have blankets or beddings (NEC, 2002; Khaila, et al., 1999; Kadzandira, 2002) and to compensate for this they sleep by the fire for warmth (Khaila, et al., 1999).

The houses of the poor are said to be empty too. It is reported that the poor own very few utensils (Kadzandira, 2002) most of which are made of plastic (Khaila, et al., 1999). Otherwise, the poor are reported to have no furniture (Kadzandira, 2002). They are said to have no durable assets including bicycles, oxcart and radio (NEC, 2002). The poor lack basic household items including hoes, chairs, plates, plate drying rack, latrine, kitchen and bathroom (Khaila, et al., 1999). They also do not have adequate clothes as a result their dressing is poor (NEC, 2002; Kadzandira, 2002) and some children of the poor are reported to have no clothes (Khaila, et al., 1999). In terms of numbers, some sites reported that the poor have very few clothes or one change clothing or only one which they put on until it is tattered (NEC, 2002; Khaila, et al., 1999). Poor households are reported to rely on clothes handouts (Khaila, et al., 1999). Kadzandira (2002) also reports that the poor do not have shoes.

The poor are also said to have poor health. This is mostly in terms of the appearance of their bodies and hair as well as susceptibility to illness. For example, Khaila and colleagues (1999) report that the poor are said to have unhealthy or stunted or thin bodies that do not 'shine' even after a bath. In fact the poor are said to rarely take a bath because they cannot afford to buy soap (Kadzandira, 2002). On account of the

unhealthy bodies, the poor are said to be susceptible to diseases (Kadzandira, 2002; Khaila, et al., 1999) and are also inactive (Khaila, et al., 1999). Further, the hair of the poor is said to be pale (Khaila, et al., 1999) and their children are said to be malnourished (Kadzandira, 2002).

7.3 Identifying popular wellbeing features

The three studies reviewed in the previous section have yielded wellbeing characteristics from across the country. Since the point of the study is to find local level dimensions of wellbeing that are likely sidelined in the official version of wellbeing poverty, the focus is on characteristics that are common in most of the areas visited. The section answers questions like ‘is goats ownership a countrywide characteristic of the ‘middle’ class?’ or ‘Are children from most rich households in (good) school or well educated across the country?’ or ‘is poor clothing a common characteristic of the poor across the country?’ To answer such questions more detailed data than reviewed is required. The 33 MOPS field reports (CSR, 2005c) provide such data. The reports provide features of wellbeing categories as well as detailed characteristics of households in those categories.

7.3.1 Wellbeing categories and their characteristics

Each village group defined the number of wellbeing categories prevalent in the village. The categories ranged from three to six, one group had six and another had five categories. Otherwise, 18 groups identified four and 13 groups identified three categories. Table 7.7 provides the details by site. Three steps are taken to analyse the category characteristics. The first involves establishing the ‘importance’ of a characteristic based on the number of times it is mentioned within a category. In this simple analysis, absence of mention implies less importance attached to the criterion by the group. It is understood that this is simplistic but in the absence of purpose-built survey this is the best that can be done. Moreover, the spontaneous mention of a characteristic gives an impression that it is important to the one that mentioned it⁴⁶.

⁴⁶ Weights can be ‘scientifically’ established by including a comprehensive list of criterion for, say the four common wellbeing groups, and asking a representative sample to check factors deemed important in the spirit of Townsend (1979) and Mack and Lansley (1985). The proportions for each factor can be used as weights.

Table 7.7: Number of wellbeing categories by site and type of group

FGD name and type	Richest	Rich	Moderate Rich	Moderate Poor	Poor	Poorest	Categories
Phaso Women LOL	1	1	1	1	1	1	6
Nkanile Mixed LOL	1		1	1	1	1	5
Sosola Mixed CM	1		1	1		1	4
Sosola Men LOL	1		1	1		1	4
Zidyana Mixed CM	1		1	1		1	4
Zidyana Women LOL	1		1	1		1	4
Zidyana Men LOL	1		1	1		1	4
Fombe mixed LOL	1		1	1		1	4
Nkanile Mixed CM	1		1	1		1	4
Kasimu Mixed CM	1		1	1		1	4
Kawiliza Mixed LOL	1		1	1		1	4
Kumwanje Mixed CM	1		1	1		1	4
Kuchilimba Mixed CM	1		1	1		1	4
Malonda Women LOL	1		1	1		1	4
Mchoka Mixed CM	1		1	1		1	4
Mchoka Men LOL	1		1	1		1	4
Phaso Men LOL	1		1	1		1	4
Mwachilolo Mixed LOL	1		1	1		1	4
Siwinda Mixed LOL	1		1	1		1	4
Yokoniya Mixed CM	1		1	1		1	4
Fombe mixed CM	1		1			1	3
Kasimu Mixed LOL	1		1			1	3
Kawiliza Mixed CM	1		1			1	3
Kuchilimba Mixed LOL	1		1			1	3
Mchoka Women LOL	1		1			1	3
Tsoyo-Undi Mixed LOL	1		1			1	3
Siwinda Mixed CM	1		1			1	3
Yokoniya Mixed LOL	1		1			1	3
Sosola Women LOL	1			1		1	3
Kumwanje Mixed LOL	1			1		1	3
Malonda Men LOL	1			1		1	3
Mwachilolo Mixed CM	1			1		1	3
Tsoyo-Undi Mixed CM	1			1		1	3
Total/average	33	1	28	25	2	33	3.7

Note: LOL = FGD on ladder of life; CM = Key informant interview on community mobility

Source: Author's summary of MOPS field reports

The second step involves highlighting how different levels of the same characteristic are used to describe households in the same category or how the same level of a characteristic can be used to describe households of different categories in different sites. The third step focuses on identifying characteristics that are consistent within and across

categories and sites. Given that there is ‘no science’ behind the number of wellbeing categories, this third step is meant to determine whether a characteristic consistently changes over the wellbeing continuum. This third step is necessary to identify characteristics that can be said to be national in nature. Those characteristics that pass the third ‘test’ are the ones that are later used to interrogate the official operational definition of poverty in Chapter 9.

7.3.2 Important characteristics for various wellbeing categories

The field reports show that groups find it easier to characterise the richest and poorest categories than those in between. Categories in between are variants of the extremes and they rarely have unique characteristics. Considering that the majority of the 33 groups defined four categories, the analysis in this sub-section uses four categories⁴⁷ as well. For convenience, these are termed ‘the richest’, ‘the moderately rich’, ‘the moderately poor’, and ‘the poorest’⁴⁸. Further, for a characteristic to be considered important it must be mentioned by at least half of the groups (i.e. at least 17 groups). However, there is some discussion of less popular but unique characteristics.

Important characteristics for the richest category

There are ten characteristics that meet the criterion and these are ownership of livestock, amount of maize stocks, type of house used, ability to hire labour, type and number of changes of clothes, support of child education, quality of food consumed, number of meals taken per day, ownership of durable assets, and ability to purchase fertilizer. See Table 7.8.

Access to labour refers to casual labour (*ganyu*) because use of salaried labour is rare in rural areas. In line with the findings in Chapter 5, education and health status are both not important features for the richest. This is also true of access to credit. Hidden within most of the characteristics is access to cash. Although availability of cash was mentioned by only 8 groups, cash underwrites most of the popular characteristics like food quality, quantity and diversity. In a rural setting, having milk tea breakfast is a feat because such requires the availability of tea itself, then sugar, milk and some bread/bun/scones all of which require cash. For lunch and supper, money for vegetable oil, salt, soda for vegetables and maize milling is frequently required just as it also needed to purchase

⁴⁷ This collapses the six and five categories into four to simplify analysis. The rich in Phaso become part of the richest. Likewise the poor in Phaso and Nkanile become part of the poorest.

⁴⁸ The original (local language) labels for the categories describe them well. The labels given here are for convenience because no group described any category in terms of ‘richest’ or ‘moderately rich’. The common literal translations for the top category include ‘those who eat well’ and ‘those who do well’,

meat/fish/pulses that are consumed daily by the richest. Likewise, cash for soap/detergents and lotion is required for baths and washing clothes. This is why some groups summarised the richest category as one in which money is not a problem.

Table 7.8: Number of groups using the dimension to characterise the richest

Dimension	#	Dimension	#	Dimension	#
Livestock ownership	33	Productive assets	13	Footwear quality	5
Food stocks	30	Farmland size	12	Access to land	5
House structure	30	Child clothing	10	Access to basics	4
Access to labour	28	Body condition	10	Health status	4
Clothing	27	Access to shock absorbers	10	Dimba ownership	4
Child education	24	Relationship	9	House amenities	4
Food quality	24	Crops for sale	8	Child quality of life	3
Food consumption	23	Access to cash	8	Child food	3
Durable assets	21	Employment status	7	Crops for food/sale	3
Access to inputs	18	Life style	7	Access to credit	2
Access to nutrition	16	Number of children	6	Crops in dimba	2
Bedroom conditions	15	Child body condition	6	Personal traits	1
Quality of life	14	Home care	5	Utensils	1
IGA	14	Child behaviour	5	External support	1

Source: Author's summary of MOPS Field Reports

In general, a household that affords even lumpy outlays like hire of labour or rent of land or purchase of inputs or child education (especially secondary school) is expected to have access to cash or shock absorbers (livestock/crop sales, savings, and remittances) on regular basis. The limited mention of access to cash may imply the groups used cash manifests to describe the rich because of limited knowledge of how much money a household has. By labelling a household as a tea-drinking, for example, challenges the listener to imagine what it takes to have a cup of tea. Likewise, affording meat/fish everyday tells a story of how much money a household has. Thus the absence of access to cash for the richest may be due to discussants' concentration on what money does when available.

Important characteristics for the moderately rich

The characteristics for **the moderately rich** are similar to those for the richest only that fewer groups mentioned them. Using the 50% rule, the commonest criteria for this wellbeing category include livestock ownership, amount of food stocks, type of house and type of education a household affords the children. See Table 7.9.

Table 7.9: Number of groups using dimension to describe the moderately rich

Dimension	#	Dimension	#	Dimension	#
Livestock ownership	26	Productive assets	6	Relationship	2
Food stocks	22	Quality of life	5	Footwear quality	2
House structure	20	Income generating activity	5	Dimbaland ownership	2
Child education	19	Child clothing	5	Access to credit	2
Food consumption	15	Body condition/appearance	5	Crops in dimba	2
Clothing	14	Access to nutrition	4	Personal traits	1
Access to labour	12	Access to shock absorbers	4	Child behaviour	1
Durable assets	12	Home care	4	Child quality of life	1
Food quality	10	Life style	3	Child food	1
Access to inputs	9	Access to basics	3	Access to <i>ganyu</i> income	1
Employment status	7	Access to cash	3	Access to land	1
Crops for sale	7	Household utensils	3	Crops for food/sale	1
Bedroom conditions	6	Farmland size	2	House amenities	1
Number of children	6	Health status	2		

Source: Author's summary of MOPS Field Reports

Important characteristics of the moderately poor

There are also four characteristics that are mentioned by at least 50% of the groups in describing the **moderately poor**. These are offer of labour services, amount of maize stocks, type of livestock owned and type of house. In this category, child education and type and number or changes of clothing are not mentioned by the majority. It is the offer of labour services that is mostly used. See Table 7.10.

The prominence of non-farm income generation in this category is noteworthy. Apparently, this category depends more on resources generated outside the farm. Thus the moderately poor are identified by their struggle to 'make ends meet' through the operation of micro enterprises, exploitation of natural resources for sale and involvement in *ganyu*.

Table 7.10: Number of groups using dimension to describe the moderately poor

Dimension	#	Dimension	#	Dimension	#
Employment status	22	Farmland size	7	Body condition/appearance	1
Food stocks	21	Crops for sale	7	Productive assets	1
Livestock ownership	21	Personal traits	6	Access to shock absorbers	1
House structure	20	Quality of life	4	Home care	1
Child education	16	Child clothing	4	Relationship	1
Clothing	16	Life style	4	Child behaviour	1
Food quality	11	Access to basics	4	Child quality of life	1
Ownership of IGA	11	Access to cash	4	Crops for food/sale	1
Access to inputs	10	Footwear quality	4	House amenities	1
Food consumption	9	Health status	3	Crops in dimba	1
Number of children	8	Access to nutrition	2	Access to external support	1
Access to labour	7	Household utensils	2	Child footwear	1
Bedroom conditions	7	Child body condition	2	Child sleeping conditions	1
Durable assets	7	Access to <i>ganyu</i> income	2		

Source: Author summary of MOPS Field Reports

Important characteristics for the poorest category

When characterising **the poorest** category, groups mostly used the opposite of the characteristics used for the richest category (see Table 7.11). The characteristics that meet the 50% cut off point include amount of maize stocks, type of dwelling unit, number of livestock owned, type and number or changes of clothes, number of meals taken per day, involvement in *ganyu*, and sleeping conditions.

This list includes two characteristics that have never been mentioned by the majority of the groups in the three categories already discussed. These include the number of meals a household takes in a day and where household members lay their heads and how they get warmth in the night. Thus sleeping conditions come to the fore when characterising the poorest. It is also noteworthy that *ganyu* (employment status) so prominent for the moderately poor is not as prominent for this category.

Table 7.11: Number of groups using the dimension to describe the poorest

Dimension	#	Dimension	#	Dimension	#
Food stocks	27	Access to basics	10	Child quality of life	4
House structure	26	Food quality	9	Child food	4
Livestock ownership	21	Child clothing	9	Access to safety nets	4
Clothing	21	Personal traits	9	Access to shock absorbers	3
Food consumption	21	Household utensils	7	Access to <i>ganyu</i> income	3
Child education	20	Access to cash	6	Durable assets	2
Employment status	17	Labour capacity	6	Access to nutrition	2
Bedroom conditions	17	Crops for sale	5	Productive assets	2
Access to inputs	13	Health status	5	Ownership of IGA	1
Number of children	13	Child behaviour	5	Relationship	1
Life style	13	Access to credit	5	Dimbaland ownership	1
Farmland size	11	Home care	4	Crops for food/sale	1
Body condition/ appearance	11	Child body condition/ appearance	4	Availability of external support	1
Quality of life	10				

Source: Author summary of MOPS Field Reports

Prominent characteristics across all categories

Given that wellbeing status is a continuum (McGregor, 2007) it follows that a good wellbeing measure would also apply across the continuum. Since wellbeing categorising is an attempt to ‘chop’ the continuum into manageable bits, a good characteristic would show different magnitudes at different sections of the continuum. Table 7.12, which is a summary of Tables 7.8 to 7.11, shows that some characteristics apply across the continuum while others are category specific. The table also includes some characteristics that are not prominent but are related to the prominent measures.

The commonest criteria for categorising households include livestock ownership, amount of own produced maize in stock, type of dwelling unit, type of clothing and capability to educate children. Others that come close include number of meals taken per day and access to inputs. It is, however, noted that the emphasis for both of these criteria, is reduced for the ‘moderates’. There are a number of characteristics that are more popular for richest and poorest categories and less popular for the moderately rich and poor. For example, sleeping conditions is one characteristic that is used to mainly characterise the richest (i.e. the presence of beds, blankets, mattresses and linen) and the poorest (i.e. absence of mats or blankets). This is also true for type of clothes and farmland size.

Table 7.12: Number of groups using the important dimension by category

Dimension	Richest	Moderate Rich	Moderate Poor	Poorest
<i>Ownership of assets</i>				
Livestock ownership	33	26	21	21
Durable assets	21	12	7	2
Productive assets	13	6	1	2
Household utensils	1	3	2	7
Access to shock absorbers	10	4	1	3
<i>Food availability and consumption</i>				
Food stocks	30	22	21	27
Food quality	24	10	11	9
Food consumption	23	15	9	21
House structure	30	20	20	26
<i>Cash-dependent characteristics</i>				
Access to labour	28	12	7	0
Access to inputs	18	9	10	13
Access to nutrition	16	4	2	2
Access to basics	4	3	4	10
<i>Clothing and beddings</i>				
Type of clothing	27	14	16	21
Child clothing	10	5	4	9
sleeping conditions	15	6	7	17
<i>Others</i>				
Child education	24	19	16	20
Employment status	7	7	22	17

Source: Tables 7.9 to 7.12

There are other characteristics not listed in the table that are mostly used to characterise the extremes. Examples include quality of life ('lacking nothing', 'happy', 'free', 'having peace of mind', 'being worry-free' as unique for richest and 'being in constant worries and unhappy', 'having no peace of mind', 'lacking everything' and 'looking miserable' as unique features for the poorest) and behaviour or conduct of household members. The poorest are variably described as lazy or liars or thieves or argumentative or beggars or gamblers or poor managers of own resources or not creditworthy or drunks or cannabis abusers. On the other hand, the richest are said to be prudent managers of resources or good planners but proud, boastful and not courteous if not sarcastic.

There are also some characteristics mainly used for one side of the spectrum. For example, the hire of labour and type of meals a household takes (consumption of meat and fish and the use of cooking oil in the preparation of food), ownership of durable and productive assets, and access to shock absorbers and land are almost exclusively used to describe the richest category. The drop in number of groups using food quality

from 24 to 9 groups signify that the poorest are described alternatively rather than whether they only eat *nsima*⁴⁹ with vegetables. Likewise, ownership of assets (durable and productive) is used to describe the rich but lack of these is not used to describe the poor or poorest.

Another characteristic that is mainly used to describe the poor is offer of labour services for casual work. The moderately poor are more described as being heavily involved in *ganyu* than the poorest. One of the possible reasons is that group discussants use labour-constraint as a criterion for the poorest, implying that some of the poorest lack labour by definition. Another characteristic mostly used for the poorest category is number of children. The few groups that used number of children to describe the rich or moderately rich, praised them for practising family planning. When used for the poor category households, groups 'blamed' them for ignoring family planning. Absence of utensils is also used mainly to describe the poorest households yet the presence of utensils is rarely used to describe any other category.

Thus group discussants use unique (as opposed to common) characteristics that easily distinguish a category. This is consistent with what experts do when selecting indicators. The group discussants consistently selected characteristics that showed differences. For example, the rich are easily recognised by presence of assets while the poor are described by the absence of the '**must have**' utensils. Again, sale of livestock or surplus food crops to meet cash flow problems is mostly used to describe the rich while involvement in *ganyu* at the expense of future consumption is used to describe the poor. For example, it is not the absence of durable assets in the poor man's home or the absence of a fallback position for the poor that is used to identify them but failure to have the basics (plate, pot, salt, soap, mat, shirt/blouse, short/skirt and blanket) or absence of able-bodied members or laziness or misuse of resources.

There are three points here. The first point is that there are characteristics that are common in more than two categories. Such characteristics are potential candidates for incorporation in the operational definition of poverty, if they are not already incorporated. They however need to pass a popularity test; they must apply across the country. This then implies that for all characteristics that were ever mentioned by at least half of the groups are potential candidates for the popularity test. The second point is that there are some characteristics that are used mostly for one side of the spectrum

⁴⁹ Nsima is a product of maize flour and water stirred to taste over a fire. It is the main dish which MUST be accompanied by a side dish (relish). Nsima is food because it goes with any type of relish. A rich household takes nsima with a number of relish dishes, preferably protein-based and vegetables. This is what is commonly referred to as diet diversity.

because they are best for that side. Again, if these are popular across the country they are better used as dummy variables. The third point is that each potential candidate ought to have different levels or qualities that are different at various sections of the wellbeing spectrum. This type of analysis is the subject of the next subsection.

7.3.3 Different shades of the prominent wellbeing characteristics

This sub-section analyses the prominent characteristics to determine their varying attributes, termed features in this discussion, across categories. To do so, 'measurable' features mentioned by discussants are checked for consistency across sites but within a category. To facilitate the consistency check across sites, the fifteen sites are placed in four regions namely South, East, Centre and North.

Livestock ownership

As Tables 7.13 to 7.15 shows, ownership of livestock diminishes with poverty. This is in terms of number of sites using livestock as a characteristic and the types of livestock owned. While the richest own a variety of livestock, the commonest types of livestock for this category are cattle, goats and chickens. For the moderately rich, the commonest livestock are goats and chickens while chickens are the commonest for the moderately poor. The poorest are mostly known for having no livestock. It is noted that although pigs are found in all the regions, they are most prevalent in the Centre⁵⁰. These tables also show that ownership of sets of livestock is mostly used to characterise categories. It is common to have cattle, goats and chickens mentioned together as a characteristic for the richest. This is true for goats and chickens for the moderately rich, and chickens for the moderately poor and no livestock for the poorest.

⁵⁰ The assumption made in this analysis is that by not being mentioned, the attribute is considered less important for characterising the category. The absence of an attribute in the characteristics of the category does not necessarily mean its absence in the households in the category or indeed in the community. Importance is determined by mention. The openness of the discussion is assumed to be good enough for any important attribute to be remembered.

Table 7.13 Shades of livestock ownership for the richest category

Site	Region	Cattle	Goats	Chickens	Pigs	Sheep	Pigeons	G/fowls	Ducks
Fombe	South	Yes	Yes	Yes	Yes				
Kawiliza	South	Yes	Yes	Yes				Yes	
Kumwanje	South	Yes	Yes			Yes			
Kasimu	East	Yes	Yes	Yes					
Kuchilimba	East	Yes	Yes	Yes			Yes		Yes
Sosola	East	Yes	Yes	Yes					
Zidyana	East	Yes	Yes	Yes	Yes		Yes	Yes	
Malonda	Centre	Yes	Yes	Yes	Yes		Yes		
Mchoka	Centre	Yes	Yes	Yes	Yes	Yes			
Nkanile	Centre	Yes	Yes	Yes	Yes	Yes	Yes		
Siwinda	Centre	Yes	Yes	Yes	Yes	Yes			Yes
Tsoyo-Undi	Centre	Yes	Yes	Yes	Yes				
Mwachilolo	Centre		Yes	Yes	Yes		Yes	Yes	Yes
Phaso	North	Yes	Yes	Yes				Yes	
Yokoniya	North	Yes	Yes	Yes	Yes				
Sites		14	15	14	9	4	5	4	3

Source: Author's summary of MOPS field reports

Table 7.14: Shades of livestock ownership for the moderately rich category

Site	Region	Goats	Chickens	Cattle	Pigs	Ducks	Guinea	Other
Fombe	South	Yes	Yes		Yes	Yes	Yes	
Kawiliza	South	Yes	Yes				Yes	Yes
Kumwanje	South	Yes	Yes					Yes
Kasimu	East	Yes	Yes			Yes		Yes
Kuchilimba	East	Yes	Yes	Yes		Yes		
Sosola	East	Yes	Yes		Yes	Yes		
Zidyana	East	Yes	Yes	Yes	Yes			
Mchoka	Centre	Yes	Yes	Yes	Yes			
Nkanile	Centre	Yes	Yes					
Siwinda	Centre	Yes	Yes	Yes	Yes			Yes
Phaso	North	Yes	Yes	Yes			Yes	
Yokoniya	North	Yes	Yes	Yes	Yes			
		12	12	6	6	4	3	4

Source: Author's summary of MOPS Field Reports

Table 7.15: Shades of livestock ownership for the moderately poor

Site	Region	Chicken	Goats	Pigs	ducks	Cattle
Fombe	South	Yes		Yes	Yes	
Kawiliza	South	Yes				
Sosola	East	Yes	Yes			
Zidyana	East	Yes	Yes			
Malonda	Centre	Yes	Yes	Yes		
Mchoka	Centre	Yes	Yes			
Mwachilolo	Centre	Yes				
Nkanile	Centre	Yes	Yes			
Siwinda	Centre	Yes				
Tsoyo-Undi	Centre	Yes	Yes	Yes		
Phaso	North	Yes				Yes
Yokoniya	North	Yes				
		12	6	3	1	1

Source: Author's summary of MOPS Field Reports

Food security and consumption

Food attributes used to characterise categories vary. For the richest, the popular attributes are having (i) maize stocks that last harvest to harvest; (ii) every lunch and supper with protein-rich relish; (iii) breakfast tea; (iv) at least three meals in a day. For the moderately rich features that are common across the country are inadequate maize stocks and two meals a day. For the moderately poor category moderately poor households are characterised by having maize stocks that last less than 12 months, averaging five and half months. The poorest category is mostly known for having no stocks of maize and only one meal in a day. There are variations by site and region. However, Tables 7.16 to 7.19 show that food security and consumption is popularly used across the country in varying ways. In some sites some moderately rich have annual stocks and take three meals a day.

The food security feature is strengthened when used in conjunction with strategies households use to fill the maize stock gap. Reading through the reports, the rich have surplus maize stocks which they use to sell or pay labour, the well off moderately rich sometimes have a surplus but they also buy stocks by selling livestock or durable goods. The moderately poor sell their labour services to bridge the gap but also attend to their land. The poorest with labour work the entire year to get or purchase maize and the labour-constrained survive on handouts.

Table 7.16: Shades of food for the richest category

Site	Region	Enough stocks	Surplus maize	Three meals	B/fast tea	Protein relish	Vegetable oil	Snacks
Fombe	South	Yes		Yes	Yes			Yes
Kawiliza	South	Yes		Yes	Yes	Yes	Yes	Yes
Kumwanje	South	Yes	Yes	Yes	Yes	Yes		
Zidyana	East	Yes	Yes	Yes	Yes	Yes		
Kasimu	East	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kuchilimba	East			Yes	Yes	Yes	Yes	
Sosola	East	Yes	Yes		Yes	Yes		
Mwachilolo	Centre	Yes			Yes	Yes		
Tsoyo-Undi	Centre	Yes		Yes	Yes	Yes		
Malonda	Centre	Yes	Yes	Yes	Yes	Yes		
Siwinda	Centre			Yes	Yes			Yes
Mchoka	Centre	Yes	Yes	Yes		Yes		
Nkanile	Centre	Yes	Yes	Yes	Yes	Yes		
Phaso	North	Yes			Yes	Yes	Yes	
Yokoniya	North	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		13	8	12	14	13	5	5

Source: Author's summary of MOPS Field Reports

Table 7.17: Shades of food for the moderately rich category

Site	Region	12 months	< 12 m	2 meals	Good food	Tea	Porridge
Fombe	South		Yes	Yes	Yes		
Kawiliza	South		Yes	Yes	Yes		
Kumwanje	South		Yes	Yes			
Kasimu	East	Yes	Yes	Yes			Yes
Kuchilimba	East		Yes	Yes			
Sosola	East	Yes	Yes	Yes			
Zidyana	East	Yes	Yes			Yes	Yes
Mchoka	Centre	Yes	Yes				Yes
Mwachilolo	Centre	Yes					
Nkanile	Centre		Yes	Yes			
Siwinda	Centre	Yes	Yes	Yes	Yes		
Phaso	North	Yes			Yes		
Yokoniya	North		Yes	Yes	Yes	Yes	
		7	11	9	5	2	3

Source: Author's summary of MOPS Field Reports

Table 7.18: Shades of food for the moderately poor category

Site	Region	Stocks in months	< 12 months	Two meals	One meal	No diversity	Porridge
Fombe	South			Yes			
Kawiliza	South	4	Yes	Yes	Yes	Yes	
Kumwanje	South	0	Yes				
Kasimu	East	3	Yes	Yes			Yes
Kuchilimba	East	0	Yes		Yes		
Sosola	East	12		Yes			
Zidyana	East	5	Yes				
Malonda	Centre	6	Yes				Yes
Mchoka	Centre	12				Yes	Yes
Mwachilolo	Centre	3	Yes			Yes	
Nkanile	Centre	5	Yes		Yes		
Siwinda	Centre	4	Yes				
Tsoyo-Undi	Centre	5	Yes	Yes	Yes	Yes	
Phaso	North	12				Yes	
		5.5	10	4	4	5	3

Source: Author's summary of MOPS Field Reports

Table 7.19: Shades of food for the poorest category

Site	Region	Number of meals	day meal skip	Eat meat	Stock months	Eat bran	Before harvest	Diet diversity
Fombe	South	1	Yes	rare	0			No
Kawiliza	South	1	Yes		0	Yes	Yes	
Kasimu	East	1	Yes		0	Yes	Yes	No
Kuchilimba	East	1			0			
Sosola	East	1			0/3	Yes		
Zidyana	East	1			0/3	Yes	Yes	
Malonda	Centre	2		rare	0/1		Yes	No
Mchoka	Centre	2/1	Yes	rare	0/2		Yes	No
Mwachilolo	Centre	1			0		Yes	
Nkanile	Centre	1	Yes		0/1	Yes		
Siwinda	Centre	1	Yes		0			
Tsoyo-Undi	Centre	1		rare	0		Yes	No
Phaso	North	1	Yes		0			No
Yokoniya	North	1	Yes		0			

Source: Author's summary of MOPS Field Reports

Quality of housing

There is some variety on this dimension across the country and categories. Except in one district (two sites), having corrugated iron roof is the commonest feature for the richest category. The moderately rich category has a mixed bag of features and there is no one feature commonly used to characterise the group. For the moderately poor households, a grass thatched house is commonest. The feature that is common for the poorest category is dilapidation⁵¹ in terms of the condition of either walls or roof and desolation in terms of the surrounding. In fact, it appears the richer the household the more the care given to the dwelling unit and surroundings. However, the picture presented is stylised because, as evidenced in Tables 7.20 and 7.21, there is so much variety. In some cases, one feature is used to characterise more than one category, even at the same site and group discussion.

Table 7.20: Shades of housing for richest category

Site	Region	Iron roof	Brick wall	Cement floor	Glass window	Grass thatch	Home care	Amenities
Fombe	South	Yes	Yes	Yes				
Kawiliza	South	Yes	Yes					
Kumwanje	South	Yes						
Kasimu	East	Yes		Yes	Yes	Yes	Yes	
Kuchilimba	East	Yes				Yes	Yes	Yes
Sosola	East	Yes	Yes	Yes	Yes	Yes		Yes
Zidyana	East	Yes		Yes	Yes			Yes
Malonda	Centre	Yes		Yes	Yes			
Mchoka	Centre	Yes	Yes	Yes	Yes		Yes	
Nkanile	Centre	Yes	Yes	Yes	Yes	Yes	Yes	
Siwinda	Centre	Yes			Yes			
Mwachilolo	Centre		Yes		Yes	Yes		
Tsoyo-Undi	Centre		Yes				Yes	
Phaso	North	Yes		Yes	Yes	Yes		Yes
Yokoniya	North	Yes	Yes	Yes	Yes			Yes
		13	8	9	10	6	5	5

Source: Author's summary of MOPS Field Reports

⁵¹ Some of factors were fallen wall or roof (one side), sooty interiors due to in-house fire, rugged walls, untidy surrounding, overcrowding, and not well-maintained roofs to the extent that some have grass growing on their roofs.

Table 7.21: Shades of housing for the moderately rich category

Site	Region	Grass roof	Iron roof	Cement floor	Burnt bricks	Other wall	Mud floor	Glass window
Fombe	South	Yes	Yes	Yes	Yes			
Kawiliza	South	Yes	Yes					
Kumwanje	South		Yes					
Kuchilimba	East	Yes						
Sosola	East	Yes	Yes			Yes	Yes	Yes
Zidyana	East		Yes					
Malonda	Centre	Yes					Yes	Yes
Mchoka	Centre	Yes		Yes	Yes	Yes		
Nkanile	Centre	Yes			Yes		Yes	
Siwinda	Centre		Yes					
Phaso	North	Yes	Yes		Yes		Yes	
Yokoniya	North	Yes		Yes	Yes			
		9	7	3	5	2	4	2

Source: Author's summary of MOPS Field Reports

Clothing and footwear

This dimension is used to characterise the richest and poorest categories only. The richest are characterised as having quality clothes variously put as having 'decent', 'nice-looking' and 'wearing expensive' clothes. The most common feature for the poorest is that their clothes are torn or dirty because they are rarely changed and washed (with detergents), respectively. In general, the poorest have poor quality clothes in terms price, quality and appearance. They also have no or few changes of clothes. On the other hand, the richest have expensive clothing (a translation of *'zodula'*). Expensive takes a number of meanings including pricey, high quality (a translation of *zapamwamba*) or rare (*zosowa* meaning not common in the area or 'out of this world'). It is noted that the feature that the richest have clothes that are 'clean' (meaning they are washed) and 'tidy' (meaning they are iron pressed) is only prevalent in the East and Centre and having changes of good clothes (on daily basis, i.e. 'they can change their clothes everyday') is sparsely popular. Table 7.22 gives the features used for the richest category.

Table 7.22: Shades of clothing for the richest category

Site	Region	High quality	Good care	Have changes	Suits	New	Good shoes
Fombe	South	Yes			Yes	Yes	
Kawiliza	South	Yes	Yes	Yes			
Kumwanje	South	Yes					
Kasimu	East	Yes	Yes				
Kuchilimba	East	Yes	Yes				
Sosola	East	Yes	Yes	Yes			Yes
Zidyana	East	Yes		Yes			
Malonda	Centre	Yes	Yes	Yes		Yes	
Mchoka	Centre	Yes	Yes			Yes	Yes
Mwachilolo	Centre	Yes	Yes				
Tsoyo-Undi	Centre		Yes	Yes			Yes
Nkanile	Centre	Yes	Yes				
Siwinda	Centre	Yes			Yes		
Phaso	North	Yes			Yes		Yes
Yokoniya	North	Yes		Yes			
		14	9	6	3	3	4

Source: Author's summary of MOPS Field Reports

Child education

This dimension is used for all categories except the moderately poor. The richest are described by their ability to support children's education up to or beyond secondary school. The commonly mentioned features include fees for secondary school or money for private or boarding fees in public secondary schools. As Table 7.23 shows, child education as a dimension is not popularly used to characterise the moderately rich given that only 11 out of the 15 used it. However, the feature that is common is that children attend school and complete primary school (PS) but not secondary school (SS). For the poorest, the most popular feature under child education is that children of the poor drop out of primary school. The drop out for the poorest category is associated with lack of food and presentable clothing (washed and not torn). For the moderately rich, the drop out is due to failure to pay school fees and other school expenses and those who complete do so through the sale of their livestock.

Table 7.23: Shades of children education for the moderately rich category

Site	Region	Attend	Drop out	Complete PS	Complete SS	Dropout SS
Fombe	South	Yes		Yes	Yes	Yes
Kawiliza	South	Yes		Yes	Yes	Yes
Kasimu	East	Yes	Yes	Yes		Yes
Kuchilimba	East	Yes	Yes			
Sosola	East	Yes		Yes	Yes	Yes
Zidyana	East	Yes	Yes	Yes	Yes	Yes
Mchoka	Centre	Yes		Yes	Yes	
Nkanile	Centre	Yes				
Siwinda	Centre	Yes	Yes	Yes	Yes	Yes
Phaso	North	Yes				
Yokoniya	North	Yes		Yes		Yes
		11	4	8	6	7

Source: Author's summary of MOPS Field Reports

Hire and offer of labour services

Only households in the richest category are said to use paid labour. Any household that can consistently hire 'hands' to work for them is considered rich. In general, the richest households do not do hard jobs, especially farm work. They instead hire other people to do such jobs for them. Given that the richest have 'surplus' money or food, they are best known as local safety nets as the poor rely on them when in need. Some of the richest households are said to 'create' work just to help out the needy seeking help from them. On the other hand, the poor (moderately poor and poorest) are best known for offering their labour services in *ganyu* activities. Since the poorest category also include labour-constrained households, offer of labour services is mostly used to characterise the moderately poor. In fact, apart from sites in Mangochi (Kuchilimba and Kasimu), where fishing is the main livelihood strategy, all sites used offer of labour services to describe the moderately poor (Table 7.24).

Table 7.24: Shades of work status for the moderately poor category

Site	Region	<i>Ganyu</i> *	Always **
Kasimu	South	Yes	Yes
Kawiliza	South	Yes	Yes
Kumwanje	South	Yes	Yes
Sosola	East	Yes	Yes/no
Zidyana	East	Yes	No
Malonda	Centre	Yes	Yes
Mchoka	Centre	Yes	Yes/no
Mwachilolo	Centre	Yes/no	No
Nkanile	Centre	Yes	Yes
Siwinda	Centre	Yes	No
Tsoyo-Undi	Centre	Yes	Yes
Phaso	North	Yes/no	No
Yokoniya	North	Yes	No

**Under ganyu, yes means ganyu and no means wage employment; ** Yes means always/relies and no means works only when in need*

Source: Author's summary of MOPS field reports

Where and how they sleep

In sites where this characteristic was discussed the descriptions were detailed⁵². This is mostly used to describe households in the poorest category. The poorest of the poor sleep on the floor and depend on in-house fire for warmth. Various 'improved' conditions for the poorest households include using sack for a mat and a sack for a blanket and using tattered mat and a cloth for a blanket. No household in the poorest category was said to use a mat and a blanket unless they are donated. Thus the absence of a mat and blanket combine to give a feature for the poorest category.

Asset ownership

Ownership of assets is mostly used to characterise the richest. Table 7.25 presents asset ownership features. There is no asset that is popular across the country. The ownership of a bicycle is the most popular feature in all the regions but less so in the Centre. Oxcart ownership for the richest is mostly popular in the tobacco growing Centre while ownership of furniture (sofa sets, dining sets, wooden chairs and tables, and cupboards) is popular in all the regions except East where ownership of electronics (TV, video players, fridges and vehicles) are mostly used. Like housing, this dimension is noisy because preferences; apart from the level of income, plays a major role. Serious use of

⁵² The sites that did not include this dimension include Fombe, Kumwanje and Malonda.

this dimension requires a study meant to determine whether the noise is manageable statistically and, if manageable, establish district level weights for the popular assets.

Table 7.25: Shades of asset ownership for the richest category

Site	Region	Bike	Oxcart	Furniture	Electro	Radio	Vehicles	Produc.*
Fombe	South	Yes	Yes				Yes	
Kawiliza	South	Yes		Yes				Yes
Kumwanje	South			Yes				
Kasimu	East	Yes					Yes	
Sosola	East	Yes	Yes		Yes	Yes	Yes	
Zidyana	East	Yes	Yes		Yes			Yes
Kuchilimba	East			Yes	Yes	Yes	Yes	Yes
Mwachilolo	Centre	Yes	Yes	Yes				Yes
Tsoyo-Undi	Centre	Yes						Yes
Mchoka	Centre		Yes	Yes				
Nkanile	Centre		Yes	Yes	Yes			Yes
Siwinda	Centre		Yes					
Phaso	North	Yes		Yes	Yes		Yes	
Yokoniya	North	Yes	Yes	Yes		Yes		Yes
		9	8	8	5	3	5	7

* *Productive assets include tobacco baling jacks, ploughs, tangerine trees, bicycle taxis, motorised boats and fishing nets, each of which is site specific*

Source: Author's summary of MOPS Field Reports

Access to fertilizer

This is another dimension that is not only unique to the richest category but is also not popular across the country. For example, out of the 15 sites 11 sites spread across the regions used access to fertilizer to characterise the richest. However, fertilizer is most popular in the Centre evidenced by its use in all the five sites each with unprompted estimates of number of bags the richest purchase in a season.

So far, the analysis has established features within characteristics that have the potential of being used across categories and regions. The next step is to determine whether such features would, in some form, apply in other categories. As stated earlier unless a feature is capable of 'changing colours' over the wellbeing continuum it cannot be taken as a good identifier.

7.3.4 Popular wellbeing features

Moving forward from the previous subsection, the features that can easily characterise households in the top most wellbeing category across the country include (i) the ownership of at least cattle and goats and chickens; (ii) the availability of maize stocks

that go as far as the next harvest; (iii) consumption of protein-rich relish every lunch and supper; (iv) taking tea breakfast; (v) hire of labour; (vi) ability to support child education; and (vii) purchase of fertilizer. Other important but less popular features include (viii) ownership of a house with corrugated iron sheet roof; (ix) ownership of good quality clothes; and (x) ownership of bicycles.

Under the category for the moderately rich the most popular features are (a) ownership of both goats and chickens, (b) the inadequacy of maize stocks combined with ability to cover the food gap, and (c) consumption of two meals a day. There are two features that are popular for the moderately poor. These are (i) working for other households and (ii) having maize stocks that run out before the next harvest. These are related in that households are forced to work for relatively well off households in order to bridge the food gap. For the poorest category, the features that are popular include (i) having maize stocks that last three months at the most, (ii) having one meal in a day, (iii) absence of meat-based meal for a long time, (iv) owning no livestock, (v) having primary school going age children out of school, and (vi) having no mat and blankets. Some of these have caveats but when used in combination with others, they are good features.

The question is, are these features consistent across categories? This then requires some sort of consistency check. To do so each important feature, regardless of the category it is popular under, is checked for some consistent variation across the four wellbeing categories⁵³. Table 7.26 lists the features in a form that is easy to compare across the categories. For most of these features, it is difficult to see their different shades. To make it clear, a discussion of the ambiguous features is required. This is done in the next paragraphs.

⁵³ What is applied here is a mild form of consistency check recognising that the data was not collected for a rigorous consistency check.

Table 7.26: Variations of popular features across wellbeing categories

Feature	Richest	Moderate rich	Moderate poor	Poorest
Ownership of chickens	Majority	Majority	Some	None
Ownership of goats	Majority	Majority	Some	None
Ownership of cattle	Majority	Some	None	None
Taking breakfast tea	Majority	Few	None	None
Months of maize stocks	>=12	<=12	<=6	0
Number of meals per day	3	2	<=2	<=1
Protein every meal and day	All	Some	Few	None
Corrugated iron roof	Majority	Some	Few	None
Hire of labour	All	Few	None	None
Working for others	None	Few	Majority	Some
Type of clothes*	New	HQ used	PQ used	None
Type of 'sleeper'	Bed/mattress	Mattress	Mat	Sack
Type of beddings	HQ blankets	Blankets	Blankets	Fabric
Level of child education	Secondary	Primary	< full PS	None
Purchase of fertilizer	Majority	Some	Few	None
Ownership of bicycles	Majority	Some	Few	None

* HQ used=high quality used clothes; PQ used=poor quality used clothes

Source: Summary of the sub-section (shades of wellbeing dimensions)

Livestock ownership

Three types of livestock (cattle, goats and chickens) are found to be popular features across the country. As to how categories differ is best dealt with numbers owned. Table 7.27 presents the numbers. Judging from the table, the numbers of goats and chickens decline as wellbeing status declines, at least within a site. Across sites, Zidyana appear to be an exception because the numbers of livestock owned by the moderately rich and poor are what in other sites are used for the 'richer categories'. For example, owning 3 to 10 goats is used for the moderately poor in Zidyana but the moderate rich in Nkanile, Kawiliza and Kasimu.

Considering that this picture is based on unprompted responses, it is likely that more consistent collection of number of cattle, goats and chickens would yield better indicators of wellbeing status of households.

Table 7.27: Varying numbers of livestock by category and site

Site	Cattle		Goats			Chickens			
	R-est	MR	R-est	MR	MP	R-est	MR	MP	P-est
Fombe									
Kasimu	>6		>20	4-5		Many	Depleted		
Kawiliza	>=3		>=10	3-8		Many			
Kuchilimba									
Kumwanje	>=1								
Malonda	4-15		4-15		2-3	6-15	4-5		
Mchoka M	>=10		>=15	<=15	2-3	Many		>=1	1 / 2
Mchoka F			>=5	2		>=10	4		
Mwachilolo			2			10			
Nkanile	>=5		>=10	3 / 4	1-2	>=20	>=7	some	
Phaso								lots	
Siwinda	5-10	2-3	12						
Sosola	many		many						
Tsoyo									
Yokoniya	7-15	<9	7-15	>=2		7-15			
Zidyana M	10-30	7-8	10-30	4	4	30		5	
Zidyana F	50	9-15	60	12-15	3-10				1

R-est=Richest, MR=Moderately rich, MP=Moderately poor, P-est=Poorest

Source: Author's analysis of MOPS Field Reports

Another critical issue is ownership of sets of livestock. The richest own cattle, goats and chickens, the moderate rich own goats and chickens, and the poor own few chickens or none at all. A firm conclusion can only be made after a focused study that establishes the range and combinations of numbers for cattle, goats and chickens.

Tea for breakfast

Breakfast tea is a consistent feature across categories and sites. The majority of the richest households have tea for breakfast while few of the moderately rich have it. The moderately poor and the poorest do not take tea. However, for breakfast tea to be a true identifier of the richest, the tea taken by the richest should be different from that taken by the moderately rich. According to the field reports, the richest normally have tea with milk plus something with it like bread, buns, scones, or doughnuts while the moderately rich have tea without milk. With a little bit more information on the type of tea, this feature can easily be used to differentiate the different categories. Thus including this feature in a questionnaire would assist in the identification of the poor.

Months of maize stocks

According to the majority of the reports, the richest households have at least 12 months of stocks. They are also more likely to sell than buy maize. The stocks for the moderately rich barely make it from harvest to harvest and more often than not the households are forced to purchase maize to bridge the gap. Sale of livestock is the common way of generating income to buy the maize. The moderately poor are generally short of maize stocks to the extent that most of their time is spent working on *ganyu* to bridge the gap. The poorest have maize stocks that last at most three months after harvest. The consistency of this feature, in terms of decreasing number of months of stocks over a year as the wellbeing status worsens, makes it a good candidate for inclusion. This feature is made even better when combined with strategies employed to deal with the surplus or deficit. Consistently, the richest sell or use surplus maize to pay for labour. The moderately rich sell livestock to bridge the gap and the moderately poor sell their labour to bridge the gap but for a few months while the poorest almost spend the entire year selling labour to access food. However, the coping strategies need to be collected to argument the maize stocks feature.

Number and types of meals per day

This is yet another feature that is easy to use, especially if it is combined with other features like the type of relish and maize stocks available. The richest take three meals a day. Their breakfast is heavy and the main meals (lunch and supper) are described as good because they comprise at least two types of 'side plates' (meat and vegetables). The moderately rich take two meals with occasional meat or fish. The amount of relish for the moderately rich is less than that of the richest. As one group put it, the richest can afford to throw away leftovers. Again, according to the reports, some households in the moderately poor category take two meals a day with vegetables as the predominant 'one-out' relish. Very few of the moderately poor afford to have meat/fish. Compared to the moderately poor, who can afford some 'modern' vegetables (mustard, Chinese cabbage, and rape), the poorest are forced to have one meal of *nsima* (the staple) accompanied by own-grown or wild 'leaves'. Thus number of meals combined with type of meals can be used to characterise households at different wellbeing levels.

Ownership of a house with corrugated iron sheets

The majority of the richest in almost all sites have houses with iron sheets compared to only some and few for the moderately rich and moderately poor, respectively. Given

that some households in the three categories have houses with iron sheets and some with grass thatch, it would be difficult to use iron sheets or grass thatch as indicators of wellbeing status. Unless used in combination with other house-specific features like the condition of the entire house, type of windows, walls and floor, these iron sheets are not useful. An index that respects weights obtained from people themselves is a possible way forward. The housing index that is currently used needs to be modified to account for district or regional differences in subjective valuation of various housing characteristics.

Demand for and supply of labour

There is a clear message that the rich demand and the poor supply labour services. According to field reports analysed, households in the richest category only hire labour while moderately rich households hire and offer labour services irregularly. The moderately rich hire if they have surplus maize or agriculture income but offer labour services when cash-strapped. The differences between the moderately poor and the poorest, in terms of supply of labour services, are not clear from the reports. However, in many cases the poorest are said to fail to work their farm because they are busy selling their labour to get their needs (cash, maize, meat, old clothes, and blankets). This is true for the poorest with labour. For the labour-constrained poorest, there is no option of selling labour services.

Clothing

Table 7.28 is an attempt to piece together a story from various voices (key informants and focus groups) from each site that used clothing to characterise categories. The clothing description covered source of clothes (shop or flea market), quality (decent/nice and their negatives), condition of the clothes (clean and tidy/dirty and torn), and number of changes.

Table 7.28: Varying shades of clothing across categories and sites

Site	Richest	Moderate rich	Moderate poor	Poorest
Fombe	nice	few changes		no change
	expensive suits		one cloth	
	new and expensive	new and used		
Kasimu	expensive	used but clean	PQ used	PQ used and torn
Kawiliza	expensive	cheap		given
	daily change			no change
	pressed	clean		dirty
	very nice/decent			not nice/decent
Kuchilimba	expensive	cheap	torn and dirty	given and dirty
	daily change			no change or none
Kumwanje	expensive			not nice
Malonda	daily change	some change	no change	
	pressed		dirty	
	new and expensive	HQ used		given
	nice and clean		clean rarely	stained
Mchoka	shop new	decent	PQ used	given
	good quality			torn
	clean			one/two changes
	nice shoes	plastic shoes	no shoes	
Mwachilolo	dress very well	some change	one change	
	pressed	clean		
Nkanile	expensive/suits		used	PQ used
	daily change			one change
	pressed			not pressed
Phaso	nice/suits	No suits	some clothes	not decent
	nice shoes	HQ used shoes	slip-ons	
Siwinda	expensive/HP used	used		PQ used
	nice/suits			torn
Sosola	decent/fashionable			dirty
	daily change	some change	just enough	none/one change
	nice shoes		plastic shoes	
Tsoyo-Undi	daily change			no change
	shoes		no shoes	torn
	pressed		clean/nice	faded/dirty
Yokoniya	very well	very well	one change	no change
	daily change	few changes		torn
Zidyana	expensive	nice	used	torn or none
	daily change		few changes	no change

PQ=poor quality; HQ=High quality

Source: Author's summary of MOPS Field Reports

The gaps in the table signify the absence of the dimension or feature in the discussions. Decent clothes cover clothes that are described as pressed and of good quality. Pressed clothes, in turn, cover clean or washed clothes since pressing comes after washing. In general, 'no clothes' stand for no 'effective' clothes (top less and dirty and torn skirts/shorts for children and dirty and torn clothes for adults).

The table shows that some features are not always consistent across sites as they apply to more than one category. For example, in Siwinda some of the richest households are said to purchase high quality used (HQ used) clothing. This is a characteristic of the moderately rich in Malonda. Again, in Mchoka some of the poorest households have one or two changes of clothes yet in Fombe and Yokoniya this is a feature of the moderately rich. In general, though, there are clear patterns.

One of the patterns is that the richest are well dressed and the poorest are the worst dressed and there is some retrogression in the quality of clothes worn as wellbeing status declines. For example, the richest buy expensive clothes (including suits) from shops and the moderately rich and poor buy varying qualities of used clothing while the poorest rely on being given or working for clothes. Another pattern is that the richest can afford to change every day (especially women) and the moderately rich can change twice or thrice in a week. On the other hand the moderately poor have one or two changes of clothes and the poorest have none. A third pattern is that the richest have clothes that are washed and pressed while the poorest have dirty and torn clothes with the categories between having variations of these extremes.

Footwear was rarely mentioned but there is some retrogression from the richest (new nice shoes from shops), moderately rich (used shoes), moderately poor (plastic shoes) and the poorest (no shoes). However, there is need for a purposive study that looks at the various features surrounding clothes to get a clear picture.

Where and how people in various categories sleep

This dimension is mostly used for the poorest category. Further, three sites did not use it at all making it difficult to get a national story. However, based on those that used it, the use of blankets is rare among households in the poorest category while the use of beds, mattresses, linen and blankets defines the richest households. Table 7.29 presents features that were gleaned from the 12 sites that used this dimension.

Table 7.29: Varying shades of where and how people sleep by category and site

Site	Richest	Moderate rich	Moderate poor	Poorest
Kasimu	bed	animal skin beds		sack for blanket
	mattress	no mattress		cloth for linen
	expensive beddings	cheap blankets		donated blanket
Kawiliza	beds	beds		No good blankets
Kuchilimba	beds		no nice beddings	floor (no sack)
	expensive blankets		inadequate beddings	in-house fire
				buried in beach sand under fish drying stands
Mchoka	blankets			No blankets/bags
	good beddings		mats	sack for mat
				sawn-together bags in-house fire
Mwachilolo	beds			no mat/sack
				blanket (donated/ worked for)
Nkanile	good blankets	good blankets	mats	No blankets
	beds	mats/no bed	no blankets	bag/cloth for blanket
	mattresses	no mattress	piece of cloth	cloth for blanket
			shared blanket	plastic/sack for mat
Phaso	beds	beds	some beds	worn out mats
	mattresses		no mattress	bag for blanket
	nice beddings		mats/cattle skins	
Siwinda		bed		no mats/sacks
				no blankets/wrapper
Sosola	beds/mats		no beds	sack for mat
	good beddings		good beddings	bag for blanket
Tsoyo-Undi			worn out mat	tattered mats
			wrapper	no proper beddings
				in-house fire
Yokoniya	beds	no bed		sack for a mat
	bed linen	mattresses		torn cloth for blanket
	blankets			
Zidyana	blankets			no linen or blankets
				shared wrapper (MC)

Source: Author's summary of MOPS Field Reports

In the table, 'beddings' collectively cover linen and blankets and 'proper' bedding covers linen and blankets as opposed to empty bags and used plastic bags (50kg and 70 kg)

and pieces of cotton cloths. The bags are either opened up to make them bigger or left intact. In some cases, they are sewn together to make larger mats for adults' use or a group of children. 'Blankets' are ideally made from fabric-based bags. In some cases, even large shopping plastic carrier bags are used as mats. Two types of pieces of cloths are used as linen and blankets; patterned cloth worn around by women (termed wrappers in the reports and locally referred to as *chitenje*) and one-coloured cotton cloths (commonly used as a wrapper by older women and locally called *chilundu*). These cloths are better than the fabric bag 'blanket' but of the two the latter is warmer. It is also noted that in some homes fire is used to warm the room instead.

The table shows that some of the rich in some sites use mats (Sosola) and some of the moderately poor use beds (Phaso). In general, the poorest go without basic beddings like mats and blankets while the richest have beds, mattress and expensive blankets. However, the available evidence does not show any clear pattern. This then calls for a study that would provide some weights for the various aspects of the dimension. This can be done in the spirit of Breadline Britain methodology (Gordon, et al., 2000), which requests community groups and household respondents to identify important features, and indicate absence or presence of the feature and for those absent indicate whether the absence is by choice or due to lack of resources.

Level of child education

In general, there is some progression from the poorest to the richest in terms of the average level of child education. This moves from rare school enrolment (poorest) to completion of primary school to enrolment but rare completion of primary school (moderately poor) to completion of primary school but rare completion of secondary school (moderately rich) to completion of secondary school and beyond (richest). Since some children from the moderately rich complete secondary school, the question is: how then can secondary school completion distinguish the two categories? According to the groups, moderately rich households support their children through asset or maize stocks depletion. They are forced to sell livestock to the last animal or sell non-surplus maize just to ensure that their children complete secondary school. This implies that completion of secondary school can be used only with the support of financing mechanism of the education.

Purchase of fertilizer

The majority of the richest purchase fertilizer without depleting their assets and some of the moderately rich purchase some fertilizer using proceeds from the sale of livestock and modest maize surplus. While very few of the moderate poor purchase one or two bags of fertilizer by working for other households, the poorest do not buy fertilizer. This feature can best be used in combination with other features like source of money for the purchase and number of bags of fertilizer purchased although the latter is crop and area specific.

Ownership of bicycles

Ownership of bicycle alone is not a good indicator of wellbeing status because some moderately poor households own bicycles while some moderately rich and richest households do not. This is true even within a site. It is apparent that ownership of a bicycle is dependent on a number of factors including preference, terrain of an area and distance to socio-economic infrastructure like maize mills, markets, and health facilities.

What then?

This chapter has identified characteristics that are important in characterising various wellbeing categories, especially the richest and poorest. It has also shown that there are differences by site, region and category. These differences are important in understanding that a national picture runs into the risk of being a mirage. That said the sub-section has taken the risk of establishing national features that can be used to interrogate the national official wellbeing assessment system. Before concluding the chapter attempts to show once again the national picture can be useful in some cases and not in others by comparing the national picture with the three village pictures 'painted' during the group discussions.

7.4 Characterising wellbeing in the three villages

The objective of the section is to determine whether village pictures painted are the two rankings is the same or different from the national picture. The analysis starts with looking at the headline characteristics from a general discussion of wellbeing. It then moves on to bringing out key characteristics from reasons given for household step placement and ranking. By definition, households placed on the same level can have similar features. By using pairwise ranking, the group is 'forced' to look for features that make the households on the same step different. Thus pairwise ranking bring out more or finer features.

7.4.1 Ngochera wellbeing characteristics

Table 7.30 presents the categories that were identified and their characteristics.

Table 7.30: Characteristics of wellbeing categories in Ngochera

Rich	Poor	Poorest
Food secure	More income than the poorest	Go to bed hungry frequently
Eat daily	No maize granary	Skip meals
Good 'sleeping place'	House not well 'taken care of'	Mangoes only
Have a blanket	Do not support to survive	Physically challenged
Have clothes	No house	Aged - can't work
Have livestock	House with no amenities	No external support
Have good clothes	Have some maize	Too many children
Have a bicycle	Eat less frequently	Orphans without support
Have a radio	Mostly out working	Orphans with old grandparents
Have cash for needs	No start-up capital	Have nothing/no blanket
Diligent in work	Run low-profit enterprises	Clothes are given
Diligent in IGAs	Women take on hard IGAs	Built-for house
Children in school		Poor house

Source: Author's primary data collection – Ngochera FGD Transcript

A total of 283 features were given by the Ngochera group. Table 7.31 presents the number of times a feature was mentioned as well as its share in the total number of features. There is prominence of features that describe the struggles households go through to make a living. The main ones are natural resource exploitation like charcoal making and selling, firewood collection and selling, and bamboo collection and selling (43%); casual jobs (19%); skill-based activities like basket making and making grass or bamboo fences and poultry houses (16%); and operating microenterprises (16%). Only two households were rated on the basis of receiving regular income while one was rated on the basis of 'income' from alms.

Table 7.31: Wellbeing dimensions from household ranking in Ngochera

Dimension	Count	Percent
Income generating activities (all types)	76	26.9
Labour capacity (old age, disability, ill-health)	38	13.4
Demographic factors (children, family size, marital status)	37	13.1
Food availability and quality	25	8.8
Access to external support (within and outside area)	21	7.4
Ownership of all physical assets	20	7.1
Ownership of livestock	20	7.1
Work ethics (laziness, drunkenness, diligence)	20	7.1
Housing structure	11	3.9
Quality of life	10	3.5
Clothing	3	1.1
Child education	2	0.7
Total	283	100

Source: Author's summary of Ngochera FGD Chichewa Transcript

Various capacities available to households to engage in income generating activities (i.e. being young, strong and in good health) were frequently used. Other capacity-related features included the absence of a man in a household, ill health and old age.

Households with strong members but poor were said to be lazy while those that applied themselves in whatever they were doing were described as hard working. Thus work ethics is important in this village. In particular, hard working earns one a high position on the ladder of life. For example, 15 of the 20 cases that used the work ethic dimension mentioned working diligently as a feature that made some households achieve.

Food availability and consumption, the most popular dimension at the national level, was only fourth and represented less than 10% of the features given. Indeed, features like number of meals per day, the use of cooking oil and consumption of meat and tea were not mentioned at all. This is also true of livestock and asset ownership. Based on the national picture, Ngochera village is poor. Maybe this validates the group's decision to have no category for the rich in the village. This is further confirmed by the livelihoods strategies adopted in the village.

Superimposing the Ngochera features over the national picture shows that the intensive use of *ganyu* and natural resource exploitation fits the moderately poor category. Further, in the national picture, the moderately poor were the main operators of low-capital low profit enterprises. In Ngochera, operating such enterprises put a household just above the poorest category, i.e. steps 5 to 6. Again, in Ngochera Village, there are very few households that are taken as the 'source of livelihood for the poor'. In fact,

only one household was said to be such. To further show the difference between Ngochera and the national picture, the dimensions are broken down by steps. Steps 1 to 4 are, as described by the village group, the poorest. The poor which run from step 5 to 10 are subdivided into two equal sections; steps 5 to 7 labelled 'poor' and steps 8 to 10 'rich'⁵⁴. Table 7.32, which breaks down the income generating activities and presents the number of features by each group of steps labelled poorest, poor and rich.

Table 7.32: Number of times dimension is used to describe category in Ngochera

Dimension	Poorest	Poor	Rich	Total
Labour capacity	30	8	0	38
Demographics	17	20	0	37
IGA - NR exploitation	11	20	2	33
External support	12	8	1	21
Ownership of assets	1	6	13	20
Livestock	1	8	11	20
Work ethics	6	10	4	20
Food availability	4	7	6	17
IGA – <i>ganyu</i>	7	8	0	15
IGA - Skills jobs	0	10	3	13
Cash for food/needs	3	9	0	12
IGA – enterprises	2	6	4	12
Housing	5	1	5	11
Quality of life	4	0	2	6
Clothing	2	1	0	3
Child education	1	1	0	2
Employed/honoraria	0	1	1	2
IGA – beg	1	0	0	1
Total	107	124	52	283

IGA=Income Generating Activities

NR=natural resources

Source: Author's summary of Ngochera FGD Chichewa Transcript

Households in the poorest category were mostly described using their physical and numerical capacity to fend for their households, the number of children they take care, their involvement in the common livelihood strategy in the area (firewood collection/charcoal making and selling), and by the extent of external support they get. Households just above the poverty line (step 5 to 7) share two dimensions with the poorest, i.e. demographics (number of children) and natural resource exploitation. Other than these, they were also described using their diligence and use of their skills to

⁵⁴ It is noted that 'rich' in this case is just a label because the village group emphasised that none of the households qualifies to be rich.

generate income. Only two dimensions stand out for the rich; asset and livestock ownership mainly goats and chickens.

Given that the top four dimensions for the national picture are food stocks, quality of housing, livestock ownership and clothing, the poorest in Ngochera are described very differently. The only one that is common in the top four is livestock ownership but even then the sets of livestock are different. Although Ngochera is not an average village it still has most of the critical national features. Ngochera Village has unique feature, though.

The national picture rarely portrays the importance of a man in a household in Malawi. In Ngochera, the 'cry for a man' is common perhaps because of types of livelihood sources like charcoal making, fence making and even farm-based casual work. The group agreed that charcoal making is a 'man's job' and that women involvement in charcoal making was a sign of desperation and lack of viable alternatives. The group also stated that women engagement in farm-based casual work was stressful. This could be a reason why a hardworking husband is 'prized' highly.

The importance of a husband comes up in other versions too. In describing a divorced or separated or widowed female head, the group used the term 'has no husband'. This was to underline the perceived importance of the man's labour input. Likewise, households with polygamous husbands were perceived in negative light. In many cases it is the absence of the labour input that is of more of concern than the absence of the man's 'kisses or hugs'. The importance of a male is also clear in the external support dimension. Out of the 21 cases under external support, husband was explicitly mentioned six times, son twice and father once. On the other hand, no mother or wife was explicitly mentioned and daughter to mother was mentioned once.

The short of it is that Ngochera village is poor by the national standard established earlier. However, it is not seriously out of place because it has some features that are reflected at the national level.

7.4.2 Chikhwaza wellbeing characteristics

The group identified and characterised four wellbeing categories. Table 7.33 presents the categories and characteristics.

Table 7.33: Characteristics of wellbeing categories in Chikhwaza

The richest	The moderately rich
Have houses with electricity	Do not lack soap
Own vehicles	Do not lack food
Lack nothing	Lack nothing
Eat anything they want	Do not ask for help
Run 'large scale' businesses	Have a cash generator
Use hired labour	Have adequate clothes
Go to private hospitals	Have dairy cattle
Send child to good schools	Have large farmland
The poorest	The moderately poor
Have inadequate farmland	Take meals irregularly
Can't afford fertilizer	Eat meat/fish irregularly
Have many children	Have inadequate food stocks
Have no beds or mats	Have no tea breakfast
Have no linen and blankets	Can't afford fertilizer
Have no decent clothes	Generate very little income
Have no or poor houses	Have poor quality houses
Have no external support	Have no livestock
Care for orphans	Are socially excluded
Have no capacity to work*	Are estate wage employees
	Have poorly educated children

** These include the aged, chronically ill, and disabled*

Source: Author's summary of Chikhwaza FGD Transcript

Some of characteristics are similar to the national pictures. Some are unique and these are the ones that are of interest. Starting with the richest category, the group did not use food stocks as a characteristic. One of the possible reasons is that the village has limited land and growing enough maize to last the entire year is too rare to be used as an indicator. In fact farmland size is not used to describe the richest but the moderately rich, which is different from the national picture. As such using food self-sufficiency to characterise the rich would not make sense. In Chikhwaza, the richest are more associated with large scale businesses and vehicles than farming.

Another feature that is missing is livestock ownership among the richest. Instead, it is the moderately rich that are associated with cattle. Even then, it is dairy cows bought for income generation and not store of wealth as is often the case. Ownership of pigs is also associated with the moderately rich. Just like cattle ownership, the pigs are for income generation. To prove the point, the numbers of livestock are so small. The absence of goats also confirms that the livestock ownership pattern in the village is mainly for income generation.

In this village, child education is used to describe the richest and moderately poor. The richest are said to send their children to good and expensive schools. On the other hand, some children of the moderately poor are said to be out of school while others enrol and drop out before completing primary school and a few go to secondary school but fail to complete. This is not very different from the national picture.

Contrary to expectation, only the moderately poor in the village are described as socially excluded; due to their clothing they are discouraged to attend community meetings. Likewise, due to their 'low voice', they are excluded from pro-poor programmes including free or subsidised inputs. It is not clear why social exclusion is not used to describe the poorest, which are likely to be worst affected.

One other feature worthy discussing is participation in low wage employment. The moderately rich and richest are not described in terms of their offer of labour services. Wage employment is associated with the moderately poor. Likewise, engagement in casual work (*ganyu*) is not mentioned, even for the poorest. One of the reasons is that labour intensive farming is not prevalent in the village. Persistence of poverty among the employed moderately poor is blamed on very low wages. The poverty associated with wage matches the national picture.

A total of 322 features were used to describe the households that were placed and ranked. To aid analysis, the features are placed into manageable wellbeing dimensions. As an explanation, labour employment covers *ganyu* workers (4 cases), brick layers (3) and tinsmith (1). Further, under food availability and quality, there are only four cases of food quality (3 cases of consumption of small dried fish and 1 case of tea for breakfast). Table 7.34 presents the breakdown of the features by wellbeing categories.

Table 7.34: Wellbeing dimensions by category in Chikhwaza*(% share in all features)*

Dimension	Poor	Moderate poor	Moderate rich	Total
Type and condition of house	16.2	17.3	11.4	15.8
Ownership of assets	6.8	21.2	37.1	12.4
Food availability and quality	11.1	13.5	11.4	11.5
IGA – enterprises	8.1	7.7	17.1	9.0
Capacity to work 1/	11.1	3.8	0.0	8.7
IGA – farming	8.5	9.6	5.7	8.4
IGA - labour employment	9.4	5.8	2.9	8.1
Access to cash for needs 2/	7.2	9.6	0.0	6.8
Demographics 3/	7.2	7.7	2.9	6.8
External support	6.0	0.0	0.0	4.3
Livestock ownership	4.3	3.8	5.7	4.3
Quality of life	4.3	0.0	5.7	3.7
Total number of features (n)	235	52	35	322

1/ includes features on age, health status, and work ethics of household members

2/ Includes features focusing on purchase of food, necessities and support of or failure to support child education

3/ covers features like 'many children', caring for orphans, divorced, no husband, polygamous husband

Source: Author's summary of Chikhwaza site FGD Transcript

The top three most popular dimensions used to describe the poorest are (i) type and condition of the house, (ii) amount of food stocks available and quality of meals and (iii) capacity to work. Two of these (housing and food) were also popular for the moderately poor (households on step 5) but ownership of assets (i.e. lack of assets) is the most popular for the moderately poor. For the moderately rich category, the top three popular dimensions include (i) ownership of assets, (ii) operation of microenterprises and (iii) housing and food jointly.

What is of note in Chikhwaza is that almost all wellbeing categories have households that progress or cope or survive by getting involved in some non-farm income generating activities. Apparently, the poorest undertake low-capital activities like selling firewood while the relative well off set up merchandise shops in the village with vegetable and produce trading in between. The scale of the agricultural produce trading is judged by how far the trading market is. Those who manage to go to the city (Blantyre over 30 kilometres away) and beyond are considered to be more prosperous than those who concentrate on local markets. Another feature of note is that no household among the moderately rich is said to be labour-constrained. In fact, the poorest are dodged by capacity problems than any other category. This is possibly by definition since the community designated the lowest step for labour-constrained households.

Wage employment is almost exclusively used to characterise the moderately poor. This is in line with the national picture which paints wage employment as a sign of poverty because the more a household is well off the less likely it is to be described by wage employment. Indeed wage employment does not lift the worker out of poverty. According to the group, wages are so low that they 'vanish' into debt repayment once received giving the impression that wage employment is more for securing 'lines of credit' than moving out of poverty.

Another unique feature is that capacity to work amongst the poorest go hand in hand with access to external support. Labour constrained households were differentiated based on actual or potential access to external support. In fact access to external support was an exclusive dimension used to describe the poorest.

Just like in the case of Ngochera, the role of a husband seems to come up as well although not as strongly. In describing very poor households, the group used features like divorced, widowed, no husband and polygamous husband. The polygamous husband is rated negatively because of his minimal contribution to the household. The number of children was also used as an indicator of wellbeing status. Apparently having five or more children is blamed for poverty because the little a household produces feeds too many mouths.

On the basis of the household clustering in this village and absence of a dimension specific to the richest, poverty is more equally distributed. Further, when the Chikhwaza picture is compared with the national one, there are three important dimensions that are missing: (i) type and quantity of clothing; (ii) child education and (iii) food consumption in terms number of meals taken in a day. The absence could be a sign that these are not meaningful indicators.

7.4.3 Dzilekwa wellbeing characteristics

The village group identified three wellbeing groups namely poorest, poor and rich (termed literally the worst sufferers, sufferers and the doing well, respectively). The characterisation of the categories is not very different from those obtained from the national studies. For example, food stocks, livestock ownership, housing and quality of the home, involvement or capacity to get involved in income generating activities, and the role of external support in the household livelihoods were used to describe the categories. See Table 7.35.

Table 7.35: Characteristics of wellbeing categories in Dzilekwa

The poorest	The Rich
Have no mats and beddings	Have adequate food stocks
Have uncared for home	Eat adequate food and fruits
Have few months maize stocks	Have a good house
Some are lazy ('they abhor the hoe')	Have leak-proof roof (grass or iron sheet)
Have no kitchen	Have a house with windows
Have a leaking house	Have a well cared for home
Have inadequate external support	Have a smoothed floor house
Do not apply fertilizer	Have access to potable water
Buy or beg for food	Dress well (good clothes)
Poor or no breakfast	Use good mats and beddings
Use empty bags as mats	Have adequate utensils 1/
Have difficulties generating cash	Have livestock (goats and chickens)
Fail to cover secondary school costs	Eat quality food 2/
The poor	Parents and children well mannered
Have maize lasting over six months	Are hardworking farmers
Some receive some support	Meet all necessary needs (lack nothing)
Some sell subsidised fertilizer	Can afford to receive overnight visitors
meet some of the needs	Children go up to secondary school
Have some access to cash	
Fail to cover secondary school costs	

1/ Includes pots, plates, tins, bath basins, bamboo basket, bamboo winnower, mortar, pestle

2/The group specifically mentioned vegetables eaten together with mice, or beans, or eggs

Source: Author's summary of Dzilekwa FGD Transcript

The descriptions of the features, on the other hand, are not as elaborate as those from the national studies. For example, on food stocks very little emphasis is placed on number of months the stocks last. Further, details about number of meals taken per day and type of relish consumed by categories were hardly mentioned. Dzilekwa also has some features which are different from the national ones. For example, some of the poorest households are said to have breakfast of porridge but without sugar. This is different and confirms earlier findings that the site is above average. Dzilekwa is also different in that, unlike the national picture, children in the poorest category complete primary school. A good house in Dzilekwa does not necessarily have burnt brick walls or corrugated iron sheets roofs or cement floors. For some, having a grass thatch is a choice. This is similar to some sites reviewed.

The wellbeing and pairwise ranking came up with 268 features. Table 7.36⁵⁵ summarises these in dimensions similar to those used previously.

Table 7.36: Wellbeing dimensions by category in Dzilekwa

(% share in all features)

Dimension	Wellbeing category			
	Poorest	Poor	Rich	Total
IGA – trading	2.5	16.4	24.5	17.2
IGA – Farming	0	14.2	19.1	13.8
Social behaviour ^{1/}	2.5	20.9	3.2	11.9
Food availability	12.5	12.7	6.4	10.4
Capacity to work	37.5	3.7	2.1	8.2
Demographics ^{2/}	5.0	11.2	5.3	8.2
Housing	5.0	4.5	6.4	5.2
Food production	0	2.2	10.6	4.9
Livestock ownership	0	3.7	8.5	4.9
IGA – <i>ganyu</i>	0	6.0	4.3	4.5
External support	12.5	3.0	2.1	4.1
Access to cash for needs	22.5	0	1.1	3.7
Assets ownership	0	1.5	5.3	2.6
Hire of labour	0	0	1.1	0.4
Total number of features	40	134	94	268
Number of households	8	28	22	58

1/ includes laziness, misuse of resources for beer, concentration on ganyu as the expense of farm and home work, excessive drinking, 'womanising', and children who do not help parents or steal from parents; 2/ Demographics include 'no husband (9); polygamous husband (3), family size (4), new family or recently returned (5), widower (1)

Source: Author's summary of Dzilekwa FGD Transcript

In Dzilekwa, the two main dimensions used to characterise the poorest category include capacity to work (determined by age and health status) and inability to access cash for households needs. These two are related since failure to work leaves a household with no cash for needs. The limited access to cash then leads to the reliance on external support such that if support is not available the households fall further into poverty. That is why external support is one of the popular dimensions used to describe poorest households. One other dimension that is used to describe the poorest households is amount of maize stocks.

The characterisation of the poor category was dominated by social behaviour, a short hand for personal habits and attitude towards work of household head (and/or spouse if married). The type of husband in terms of involvement in farming, trading and casual

⁵⁵ The shaded cells in the table represent dimensions that have a proportion of at least 10% of the features in the category.

work and management of generated income are major features in this dimension. Another popular dimension is involvement in trading activities, especially of women (or wives). Trading was followed by Irish potato production. Although this dimension was dominated by reference to farming men, the group also stressed woman's participation in farming activities. The expectation is that a good husband leads and a good wife follows the lead. In cases where this happens the group was quick to acknowledge and accord 'high' marks accordingly. Perhaps underlining all the dimensions discussed, the marital status of the household head was also popularly used to describe households in this category. This dimension termed 'demographics' is dominated by absence of a husband or presence of an absent husband⁵⁶.

For the rich category, the most common dimension used was high-capital trading like the buying and selling of Irish potatoes in bulk and running of well-stocked shops at the market. This was followed by multi-season Irish potato and vegetable production. This type of farming almost always was reserved for rich households. One other important dimension for the rich category includes maize production. Livestock ownership, which is popular at the national level, was not used frequently to describe the rich.

One other unique feature of Dzilekwa is that households are, by far, described by their livelihood strategies and not what they do or do not own, wear or eat. Apparently, the group mentally used the following sequence of questions when placing and ranking households: Does the household produce own food and how much? Does it cultivate Irish potatoes for sell? Does it trade on regular basis at the market? What is the scale of the farming or trading? For men, do they spend most of their time at the local market instead of their farm? Mental responses to these determined the category a household was placed.

The presence of the market also brings in unique labour market dynamics. Unlike the rich in other rural areas, the richest in Dzilekwa are 'forced' to work their farms themselves. This is why hardworking as a trait of the farmers is emphasised. One of the reasons is that the village seems to have no desperately poor people that offer their labour services as farm hands. Instead, the poor offer their labour services at the local market where cash generation is relatively easy. Ironically, farmers frown at and label those who offer their labour services at the market as either lazy or unproductive or drunks. The absence of surplus labour in the village also affects single women who trade at the market. These women who could otherwise use hired labour to work their maize farms are also left with no choice but to concentrate on their trading activities. Such

⁵⁶ This refers to polygamous or non-remitting away husbands.

choices, according to the discussants, showed that such women were 'lazy' since they prioritised trading over their farms. This labelling of frequent local market 'workers' is probably because the local market is seen to upset local labour market conditions against farmers.

7.4.4 A comparison of the national and village level pictures

Just like in the case of the quantitative pictures, each village is unique. Of the three villages, Dzilekwa is closest to the national picture. This is different from the conclusion made based on average household characteristics presented in Chapter 4. In that analysis, it was Chikhwaza that was closest to the national picture. However, it has been confirmed that Ngochera is the poorest among the three villages and Dzilekwa is the richest even using the characterisation in this chapter. In general, all the villages have features that reflect the national picture. This then leads to two conclusions. The first is that modifying the quantitative picture based on national quantitative picture can improve the relationship between the quantitative measure and the local qualitative measure of wellbeing. The second is that the difference between the national and local qualitative picture means that even the modified quantitative methodology would not be perfect. As such its application at the local level would still be need to be done cautiously.

7.5 Summarised national qualitative picture of wellbeing

The main output of this chapter is a set of wellbeing features considered important for the determining wellbeing status of a household. Table 7.37 presents the popular characteristics and features as well as their potential usability. Coming up with these involved identifying popular dimensions used to characterise wellbeing categories then breaking them down into 'measurable' features and finally checking their consistency across the country and categories. While some features were found to be consistent enough to be used across all the wellbeing categories some were found to be either too broad or narrow for use without either a study to verify their consistency or other features to complement them.

Table 7.37: Wellbeing characteristics and features: usability and way forward

Characteristic/feature	Usability	Way forward
Livestock ownership		
Ownership of cattle	Richest - with goats and chickens	Study to establish numbers
Ownership of goats	Moderately rich - with chickens	Study to establish numbers
Ownership of chickens	Moderately poor	Study to establish numbers
Food security & consumption		
Months of maize stocks	Use with coping with food insecurity module	Modify sources of food module
Number of meals per day	Use with type of meal	Collect at least yesterday meals
Taking breakfast tea	Use with modified consumption module	Modify consumption module
Protein relish every meal	Use with number of meals	Collect at least yesterday meals
Housing		
Corrugated iron sheet roof	Use as part of a housing index	Study to establish weights
Labour services		
Demand for labour services	Use as a dummy	
Supply of labour services	Combine with other features	Modify labour supply module
Clothing and beddings		
Type of clothes	Not useable without modifications	Study to establish weights
Type of 'sleeper'	Not useable without modifications	Study to establish weights
Type of beddings	Not useable without modifications	Study to establish weights
Child education support		
Level of child education	Useable but needs some caution	Use sources of education money
Access to inputs		
Purchase of fertilizer	Useable but needs some support	Use sources of inputs money
Asset ownership		
Ownership of bicycle	Not useable on its own	Study to establish weights

Source: Sub-section 7.3.4

The sub-section that discussed these provided pointers on how these can be dealt with if they are to be used to modify the official wellbeing assessment system. These pointers are picked up in Chapter 9 when the official wellbeing assessment system is systematically analysed for possible gaps that can be filled using qualitative information.

As indicated in the same, some of the feature would need further study for them to be incorporated. Apart from these features, the modification would also benefit from the perspective of the households themselves. Chapter 8 is meant to come up with features gleaned from self assessment.

Chapter 8: Characteristics of wellbeing from households

8.1 Introduction

The year 2005 witnesses three studies that introduced self assessment as one way of understanding wellbeing and poverty in households in Malawi. The CPS5 and MOPS, which have already been introduced, also had extensive modules on subjective assessment of wellbeing. Due to some differences in the design of these two, the results from the two studies are not presented in this chapter. However, Appendix 7 presents the findings from those two studies. This chapter is based on two surveys; IHS2 and the survey conducted in the three villages as part of the primary data collection for this study. The chapter analyses the responses in the subjective assessment of wellbeing modules of the questionnaires used in those surveys. The focus is on responses that qualitatively described the household's wellbeing status. The first part of the chapter presents the poverty correlates and wellbeing determinants for the self-assessed poverty from the IHS2 (Devereux, et al., 2006 and GoM & World Bank, 2007). The second part presents the results of subjective poverty correlates and wellbeing determinants for the three villages.

8.2 Subjective wellbeing under IHS2

The subjective wellbeing module of the IHS2 included the three questions namely (i) the consumption adequacy questions (CAQ) covering food consumption, housing, clothing and health care; (ii) subjective economic wellbeing (SEW) rating questions that compare current with previous and future; and (iii) the minimum income question (MIQ). The adequacy question have three ordinal responses 1 to 3 for 'less than adequate for household needs', 'just adequate for household needs' and 'more than adequate for household needs'. The life satisfaction question uses a 5-point scale for 'very unsatisfied', 'unsatisfied', 'neither unsatisfied nor satisfied', 'satisfied' and 'very satisfied'. The household economic wellbeing rating runs from 1 'much better' to 5 'much worse' with 3 in the middle for 'no change' and 'better' (2) and 'worse off' (4) on the other end.

As explained already the IHS2 module was analysed by Devereux and colleagues and Malawi Government and World Bank officials. Both conducted some statistical analysis to establish some relationship between self-assessed poverty (as defined by the analysts) and some selected household characteristics available in the dataset. Table 8.1 presents the self-assessed poverty correlates as found by Devereux and others.

Table 8.1: Self-assessed poverty correlates from IHS2 data

Factor	Factor
Household size	In a matrilineal system
Female-headed household	In a minority language group
Household head is divorced	Has permanent housing
Household head is unmarried	Has semi-permanent housing
Household head is widowed	Number of <i>ganyu</i> days last year
Head is in a polygamous union	Household's assets index
Household head has JC	Household's landholding size
Household head has MSC	Tropical livestock units
Head a university education	Experienced death in the family
At least one disabled member	

JC=Junior Certificate; MSC=Malawi School Certificate

Source: Devereux, et al. 2006

Eight of these nineteen correlates concern the households head (sex, marital status and education) and other than few social factors, most are economic. The poverty determinants analyses used a number of formulations taking advantage of responses from the CAQ, SEW and MIQ^{57 58}. Table 8.2 presents factors found to influence the evaluation of consumption adequacy (CAQ), wellbeing (SEW) and minimum income for making ends meet (MIQ).

Table 8.2: Self-assessed wellbeing determinants from IHS Data

Independent variables ↓	Dependent variables →	CAQ	SEW	MIQ
Log real per capita consumption		√	√	√
Household size		√	√	√
Household size squared		√	√	√
Share of children in total population		X	X	√
Share of elderly		X	X	√
Female household head		X	√	√
Age of household head		X	X	√
Completed pre-school		√	√	√
Completed junior primary		√	√	√
Completed senior primary		√	√	√
Completed senior secondary		√	√	√
Completed junior secondary		X	√	√
Household owns an enterprise		√	√	X

* significant at 5% (MIQ) the rest at 1%

⁵⁷ Ordered probit regression analysis was used to come up with predictors of feelings of consumption adequacy and economic wellbeing (GoM and World Bank, 2007b). OLS was used to analyse the poverty status dummy created from the MIQ

⁵⁸ Malawi Poverty and Vulnerability Analysis (GoM & World Bank, 2007b) used regression analysis to determine the poverty line from the MIQ following the Leyden methodology (Van Praag, et al., 1982)

Source: Tables A3.6 of Annex 2D (GoM & World Bank, 2007b)

The results show that the level of consumption is related to feelings about wellbeing as evidenced by its significance under the three types of subjective wellbeing assessment. Other than that the table shows that self wellbeing assessment is negatively influenced by a large household size composed mainly of dependents. The table also shows the role education status of the household plays in self wellbeing assessment. The difference between Devereux and colleagues and the officials is that the officials' list does not bring out economic factors.

8.3 Characteristics of self-assessed wellbeing status in the three villages

After assigning their household a group, the respondents gave at most three reasons why they assessed their households thus. These reasons are discussed at three levels; in their original form, simple categorisation. The sub-section also presents findings from subjective poverty correlates and determinants analysis.

8.3.1 Reasons for household wellbeing grouping

There were 394 reasons given and 63% can be classified as negative and the rest positive. The first discussion does not necessarily attach the reasons to their respective wellbeing group or any steps on the ladder of life. As is seen later few reasons have monopoly of a group or step because the open-ended nature of the question implies that one reason can be given by households on different steps or in different categories.

Positive reasons

Just like in CPS5 and MOPS, availability of food is the most important factor when assessing household wellbeing status. Another factor is diversification of income sources (including operating some enterprises or engaging in some IGAs). These are supported by hard working spirit and child-parents remittances. Some respondents mentioned outcome indicators like 'household meets all or most needs' and 'household has adequate money to cover household needs'. As Table 8.3 shows, factors on ownership of assets like land (4%), livestock (3%), durables (1%) and ownership of a good house (3%) are not used frequently as reasons for wellbeing status.

Table 8.3: Positive reasons for wellbeing group assignment

Positive factors (<i>n=147</i>)	Per cent
Household has adequate food	22.4
Household operates an enterprise	13.6
Household meets all or most needs	12.2
Member(s) work hard in farm or business	8.8
The household gets support from children	8.2
Household has adequate money for needs	6.1
member(s) engage in non-farm IGAs	5.4

Source: Author's summary from village FGD transcripts

Negative reasons

Mirroring the positive side, the top most reason is food insecurity or inadequate harvests. Other reasons are more like causes of the poor harvests and these include high prices or inaccessibility of inputs. Struggling to generate income is given as an indicator of their wellbeing group while poorly performing enterprises is given as the cause of their being where they are. Some gave the poor state of their house as a sign of their chosen wellbeing group. See Table 8.4.

Table 8.4: Negative reasons for wellbeing group assignment

Negative factors (<i>n=247</i>)	Percent
Food insecure, inadequate harvest	11.3
No/inadequate farm inputs, high prices	8.9
Struggles to generate income	6.5
Poor housing quality	5.3
Too small/non-performing business	4.9
Too old to work as expected	4.5

Source: Author's summary from village FGD transcripts

There are other less frequently mentioned reasons, some of which could be related to the prominent factors discussed above. For example, owning inadequate farmland (4%) and no irrigatable land (3%) could be related to harvests and struggles households go through to generate income. This is true of reasons related to labour supply (too ill to farm - 1%, having no husband to work with (1%), and, for the married, having a spouse who is in poor health (3%) or in polygamy (1%) or who drinks alcohol excessively (1%)). It is also true of reasons related to labour demand (being unemployed (4%), rare or no labour demand (2%) and relying on casual work (1%)). There are less frequently mentioned reasons that may be related to performance of enterprises. These

include inadequate money to prosper (3%), lack of business start up capital (2%), and generation of income that is adequate to support consumption only (2%).

The advantage of using open-ended questions is that they yield diverse responses. The risk is that some factors can be discarded on the basis of low frequency. To avoid that it may be better to group reasons that are related. While this runs the risk of losing the original flavour and injecting too much expert opinion, it may be useful to be open on how the responses are grouped. For the purposes of this study the reasons are grouped along the lines presented in Table 8.5. With this rationalisation, the most prominent factors include having inadequate income, being food secure, meeting basic needs, being food insecure, having an enterprise or some income generating activity, having limited labour, having no or limited access to inputs, and lack of gainful employment. These eight factors take up 58% of all the responses as opposed to 38% before rationalisation. Table 8.6 presents all the frequencies of all the factors.

Table 8.5: Mapping of factors from original reasons

Factor	Original reason given
Under/not employed	Not employed; only relies on <i>ganyu</i> , rare or no labour demand
Inaccessible inputs	No/inadequate farm inputs; high prices
Hardworking	Prosperous farmer; works hard on own farm or business
Food insecurity	Food insecure; inadequate harvest
Limited labour supply	Can't afford to hire labour; too ill to farm; too many dependent children; too old to work as required; widowed
Basic needs met	Adequate money for needs; can afford private hospital; has essential household affects or has chairs, meets all or most needs
Poor housing	Poor housing quality
No dimba land	No irrigatable land
Food security	Adequate food
Head is female	Female head - limited support
Problem husband	Husband drinks excessively; husband is polygamist
Has an enterprise/IGA	Has a non-farm IGA; operates an enterprise
Enterprise not performing	Enterprise too small; enterprise not performing well
No enterprise support	Lack of business start up capital
Not established	New household; new in village; just started winter farming
Inadequate income	Gets irregular income for regular living; inadequate money to meet needs; inadequate money to prosper; only generates enough income for consumption; struggles to generate income; wages too low wages to support progress
No non-farm IGA	No non-farm IGA
Regular income	Gets regular income from either pension, honoraria, or wage, gets church support as pastor; regular <i>ganyu</i> worker; manages to generate some income
Employed	Head/spouse employed
Can't support self	Relies on begging; relies on handouts from relatives
Inadequate farmland	Inadequate farmland
Good housing	Good housing quality
Poor health	Poor health - head or spouse
No external support	Community not supportive; no family support from children or parents; not included in inputs subsidy programme
No livestock	No livestock
Adequate farmland	Have adequate farmland
Low produce prices	Low produce prices
Uneducated children	Did not educate children
Support from children	Support from children; children help out in farming;
Has livestock	Have cattle/livestock
Basic needs unmet	Poor diet (no protein rich foods); poor clothing; has no household effects; has no own house;

Source: Author's summary from Village FGD transcripts

Table 8.6: Share of wellbeing factors in total number of reasons (%)

Factor	Percent (n=391)	Factor	Percent (n=391)
Inadequate income	11.2	Inadequate farmland	2.5
Food secure	8.4	Head is female	2.3
Basic needs met	7.6	No irrigatable land	2.0
Food insecure	7.1	Poor health	1.8
Has an enterprise/IGA	7.1	No livestock	1.8
Limited labour supply	6.1	No support for business	1.5
Inaccessible inputs	5.6	Adequate farmland	1.5
Under/not employed	4.6	Problem husband	1.3
Hardworking	3.8	Good house	1.3
Poor housing	3.3	Has livestock	1.3
Support from children	3.3	New	1.0
Unmet basic needs	3.3	Relies on alms/handouts	0.5
Non-performing enterprise	3.0	Low produce prices	0.5
Regular income	3.0	Failed to educate children	0.3
No external support	3.0	Total	100

Source: Author's calculations based on primary data

Reasons by wellbeing group

To understand the reasons further, the wellbeing group they are meant to justify is superimposed. The results are presented in Table 8.7. The results show that there is no major factor that is common in all the wellbeing groups considering that the groups are mutually exclusive⁵⁹.

Table 8.7: Most prevalent reasons for wellbeing group assignment

<i>Poor Group (n=176)</i>	<i>%</i>	<i>Middle group (n=206)</i>	<i>%</i>	<i>Rich group (n=9)</i>	<i>%</i>
Inadequate income	15.3	Has enterprise/IGA	13.1	Basic needs met	44.4
Food insecure	14.8	Food secure	12.6	Food secure	22.2
Limited labour supply	10.8	Basic needs met	11.2	Hardworking	11.1
Under/not employed	8.0	Inadequate income	8.3	Regular income	11.1
Inaccessible inputs	6.8	Hardworking	6.8	Support from children	11.1
No external support	5.7	Regular income	5.3		
Unmet basic needs	4.5	Support from children	5.3		
		Inaccessible inputs	4.9		

Source: Author's calculations based on primary data

⁵⁹ This is true for the most prevalent factors (i.e. whose share is at least 5%) only. There are some factors that are found in all only that their frequencies are low. For example, food security and basic needs security are found in all the groups only that very few in the poor group are food and basic needs secure; 3% and 1% respectively.

However, there are factors that are common between pairs like poor and in-between and in-between and the rich. Of the two pairs, there are more common factors between the rich and in-between groups than between the poor and in-between groups. Inadequate income and inaccessible inputs are common factors between the poor and in-between groups⁶⁰ while food security, basic needs security, hardworking, regular income, and support from children are common factors between the rich and in-between groups. The bottom line though is that the in-between group has the potential of accommodating both poor and rich households. As such some positive factors can cater for the in-between and rich groups. Likewise, some negative factors can apply to households that are in-between and poor wellbeing groups.

Despite these commonalities, there are factors that are mostly prevalent in one group⁶¹. For example, factors that are prevalent mainly among the poor are limited labour supply, underemployment or unemployment, lack of external support and unmet basic needs. On the other hand, there is only one factor for the 'middle class'; ownership of a non-farm enterprise or income generating activity⁶². There is no factor that is particular to the rich. It is however curious that ownership of an enterprise is not necessarily mentioned as a factor by the rich. This does not necessarily mean that they do not have enterprises. It may simply mean that the rich do not single them out as a defining factor.

8.4 Correlates and determinants of subjective poverty

8.4.1 Self-assessed poverty correlates

The correlation analysis in this chapter uses the household characteristics (variables) from the objective poverty analysis used in Chapter 6. This list is supplemented by three self-rated wellbeing variables (self-rated welfare group, level of life satisfaction, and self-rated economic wellbeing change). Table 8.8 presents the correlates of self-rated poverty using the median poverty line.

⁶⁰ There are many other factors that are common between the two but are not popularly used.

⁶¹ Again, this analysis focuses only on the most frequently used factors. Exclusivity especially between the poor and middle groups is not guaranteed.

⁶² Again, this analysis focuses only on the most frequently used factors. Exclusivity especially between the poor and middle groups is not guaranteed. Even the factor 'household has a non-farm enterprise is not exclusive to the middle group. This reason was also mentioned by one poor household.

Table 8.8: Self-assessed poverty correlates in the three villages

Factor	All sites	Ngochera	Chikhwaza	Dzilekwa
Maize output per cultivated land	**	**	**	
Level of consumption expenditure (log)	**		*	
Livestock diversity	**		**	
Household owns dimba land	*			
Head aged 65 years and above	*			
Children from 5 to 10 years old		**		
Amount spent on agricultural inputs (log)			**	**
Highest class by any adult				**
Household head is widowed				*
Dzilekwa village	**			
Level of life satisfaction	**			
Self-assessed wellbeing group	**	**	**	**

*** = significant at 1% level; * = significant at 5% level*

Source: Author's analysis of primary data

One clear message from the table is that what is important at combined level is not always important at village level and what is important at one village may not be important at another. For example, three factors only appear at the combined level and two 'global' factors appear in one village only. Out of the eight factors that are important at the combined level, only one is common to all the three villages, one to two villages and two to one village only. On the other hand, there are four factors that are only important at village level; Dzilekwa has two factors unique to itself and Ngochera has one unique factor. Chikhwaza shares one unique factor with Dzilekwa.

This shows that there are differences even among the villages. For example, out of the twelve factors found to be important correlates of self-rated poverty only one factor is common to all the three villages; the household wellbeing group. This further confirms that the value judgements made by the respondents are generally consistent. There are two factors that are common to either two of the villages; amount of maize produced per given cultivated land (Ngochera and Chikhwaza) and amount of money spent on inputs (Chikhwaza and Dzilekwa). Number of under-five children is a unique factor for Ngochera village while education level of adults and household head widowhood are unique factors for Dzilekwa Village. Looking at the factors associated with each village's self-rated wellbeing status, Chikhwaza village has factors that are more related to objective poverty. It is the only village whose self-rated poverty status is strongly associated with most factors directly related to the objective poverty measure. These include maize output, consumption expenditure, livestock ownership, and amount of

money spent on inputs. The absence of asset ownership factors is worth noting because it is sometimes thought that subjective wellbeing assessment is biased towards asset ownership.

8.4.2 Determinants of perceptions on wellbeing status

In line with the lessons from previous studies, logit models are used to determine factors that influence the perceptions on wellbeing status as measured by the step a household is said to be⁶³. Since Logit models are more amenable to nominal and ordinal variables, most of the variables used in objective poverty determinants analysis are converted to either dummy or ordinal variables. Some are combined to make one variable. Table 8.9 presents the descriptive statistics for the variables used in the model while Table 8.10 presents the estimation results.

Table 8.9: Descriptive statistics of variables for the determinants model

Variable (<i>n</i> =164)	Mean	SD
Step (<i>1=poor, ..., 10=rich</i>)	4.1	2.05
Group (<i>1=Poor, 2=in-between; 3=Rich</i>)	1.6	0.55
Life (<i>1=very unsatisfied, 2=unsatisfied, 3=neither, 4=satisfied, 5=very satisfied</i>)	3.3	1.08
HHSIZE (<i>1=1-2 ; 2=3-4 ; 3=5-7; 4=8 or more members</i>)	2.3	0.80
Under5	0.7	0.80
Headsex (<i>0=Head is male; 1=Head is female</i>)	0.3	0.47
Younghead (<i>0=Head is at least 45 years old; 1=Head is at most 44 years</i>)	0.6	0.48
Widowed (<i>0=Head is not widowed; 1=Head is widowed</i>)	0.2	0.37
HHHWage (<i>0=Head is unemployed; 1=Head is employed</i>)	0.1	0.32
Educllevel (<i>1=head no educ.; 2=Some prim; 3=Full prim; 4=Post prim</i>)	2.6	0.99
Morbidity (<i>0=no member ever ill; 2=A member ever ill</i>)	0.6	0.50
Employer (<i>0=None; 1=Formal; 2=Non-formal</i>)	0.2	0.58
Credit (<i>0=No credit; 1=Had credit</i>)	0.2	0.40
Fertilizer (<i>0=Did not apply; 1=Applied</i>)	0.8	0.39
Coupon (<i>0=Did not use coupon; 1=used a coupon</i>)	0.7	0.49
Inputs (<i>0=Did not spend on inputs; 1=Spent on inputs</i>)	0.9	0.30
Enterprise (<i>0=Has not enterprise; 1=Has an enterprise</i>)	0.6	0.49
Landcat (<i>1=landholding size < 0.5 ha; 2= 0.5 - 1 ha; 3= > 1 ha</i>)	2.0	0.85
Dimbaland (<i>0=No irrigatable land; 1= has irrigatable land</i>)	0.3	0.46
PovCE (<i>0=non-poor by CE; 1=Poor by CE</i>)	0.3	0.46
Livestock (<i>0=No livestock; 1=Has livestock</i>)	0.7	0.47
Village (<i>1=Ngochera; 2=Chikhwaza; 3=Dzilekwa</i>)	2.0	0.80

Source: Author's computation from primary data

⁶³ The ordered probit model is not used because it is not possible to guarantee that the dependent variable (step on the ten-step ladder) is normally distributed. If anything, the negative log-log model could be the closest because if the finding that households generally understate their wellbeing status is taken as commonplace.

Table 8.10: Self-assessed wellbeing determinants in the three villages

Factor	Coefficients			
	All sites	Ngochera	Chikhwaza	Dzilekwa
Household in poor group	-5.5**		4.855	-9.7**
Household middle group	-2.33*		9.4**	-6.8**
<i>Rich group (Reference)</i>				
Very unsatisfied with life	-2.04*	-6.9**	-13.0**	-2.808
Unsatisfied with life	-1.005	-1.039	-20.8**	-1.349
Neither with life	-1.204	-2.665	-18.0**	-3.55*
Satisfied with life	-1.043	-4.9**	-18.0**	-2.35
<i>Very satisfied with life (reference)</i>				
No under-five child	-3.05*	-6.14*	-2.28	-7.08*
One under5 child	-2.583	0.059	-2.94*	-6.69*
Two under5 children	-2.07			-7.29*
<i>Three under5 children (reference)</i>				
Head of household is male	-0.84*	-3.4**		
Household did not apply fertilizer	-1.19*			
Land holding is less than 0.5 ha	-0.801	-0.73		
Landholding is 0.5 to 0.99 ha	-1.4**	-3.82*		
<i>Landholding is 1 ha or more (reference)</i>				
Household has no irrigatable land		-7.9**		
Head of household is not widowed		-4.06*		
Head is not in employed		-11.2**		
One member household			6.08*	
Two-member household			8.0**	
Three-member household			9.1**	
<i>Four-member household (reference)</i>				
Head has no education			-5.95*	
Head has some primary			-1.365	
Head some full primary			1.016	
<i>Head has post primary</i>				
None employed			4.0**	
Non-formal employment			7.6**	
<i>Formal employment (reference)</i>				
Household is not objectively poor			2.4**	

*=Significant at 5% level; **=Significant at 1% level

Source: Author's analysis of primary data

Results of the estimation of the model show that while most of the determinants of wellbeing status at the combined level (all sites) are applicable at local level, some villages have unique determinants. In Ngochera Village, for example, the assigned household welfare group does not determine the assignment of the household step (welfare status). Instead, it is whether or not the household has irrigatable land and whether the head is widowed or employed. In Chikhwaza the story is different. Sex of

the household, whether fertilizer was applied and landholding size do not have a bearing on the household welfare. Instead it is household size, education and employment status that do. A complete different picture emerges from Dzilekwa because it has no unique determinants. The results also show that the villages themselves have less common than unique factors. For example, there are only two factors that are common in all the three villages; number of under-five children and perceptions on life satisfaction. Application of fertilizer, which influenced the welfare rating at the combined level, does not at village level.

The role of a 'man in the house' is picked up in Ngochera village where sex, widowhood, and employment of the household head⁶⁴ influence the assessment of wellbeing. The prominence of household size in Chikhwaza is most probably related to the size of their small landholdings while the importance of education and employment is to do with the village's proximity to employment centres (nearby estates and Blantyre City which is 30 kilometres away). The bottom line is that most of these findings make some sense and are in line with most of those already presented. In other words, these subjective poverty determinants are not very different from the objective poverty determinants. It can therefore be concluded that some factors that predict consumption poverty can also predict subjective poverty and that some factors are better predictors in some circumstances than others.

8.5 Key findings, conclusions and implications

Most of the factors found to be associated with self-assessed wellbeing status and poverty are similar to those found for objective poverty. That said, some of the factors that have some implication on the official wellbeing assessment system are discussed below.

Agricultural production

In all the studies, production of food crops is mentioned as one of the most important wellbeing defining factor. For those that had a ten-year perspective their responses focus on whether food security improved or not. For those providing a snapshot, the focus is on the perception on food security for the material year. Apart from the level, other

⁶⁴ This is based on the gender bias in single household heads and employment. In general, 92% of the single heads were female and 68% of those employed heads were men. In Ngochera Village, 89% of single household heads are women and 61% of employed heads are men. As can be deduced and recalled, Ngochera is not the worst affected in terms of female headship or unemployment of female heads. This is most probably related to the type of livelihoods options available to Ngochera women. In Ngochera, natural resources exploitation (e.g. felling trees for firewood extraction and charcoal making) is predominant and such favours men.

aspects of agricultural production mentioned include diversity of agricultural production (number of crops grown and types of livestock owned) as well as intensification (new and improved varieties and methods of cultivation/management).

Most of the elements of agricultural production dimension are taken care of in the current official wellbeing assessment system. What are not specifically asked are the new methods of cultivation and the period the methods have been used, and any external support the household gets or got. Such questions would assist in assessing the link between agricultural development and external support. For policy purposes, it is needful to go beyond acknowledging that diversity is important by matching different types of diversifications to different levels of outcomes. This is therefore an area that needs to be looked into in the design of the data collection tools.

Quality and quantity of labour

Availability of labour and its capacity to generate income dominates reasons given for the household's economic wellbeing status. In particular, the commonly mentioned factors include number of dependents and availability of productive labour (hardworking/employed spouses, working children, *ganyu* workers, and healthy household members). Thus availability of household capabilities and assets in food production and income generation either through wage employment or running household enterprises or engagement in specific IGAs play a critical role in shaping perceptions on economic wellbeing.

Most of these aspects are collected in the current questionnaire. What is missed is the exact labour contribution by members in the household production process. Reasons like 'the wife/husband is hard working or lazy or is alcoholic' show that households place some value on labour quality. Likewise, reasons like 'the father of the children abandoned the family' or 'do not have a husband' seem to imply the importance of quantity of labour. That said it is also curious that while some women heading households blame their low wellbeing on the absence of a man in the house while other women of marital status have high economic wellbeing status which is mainly attributed to working hard and other reasons instead of previous presence of a man. It is clear that households consider labour composition of the household crucial in assessing wellbeing or poverty status of their households. What is, therefore, needed is a data collection tool that takes care of different aspects of household labour.

Household operating environment

Household respondents, in giving reasons for their wellbeing status rarely mention the role of external environment. Ironically, there are many aspects of household living conditions are dependent on the institutional climate. For example, price levels facing a household determine the purchasing power of generated income regardless of its source. Generally, a flourishing national economy boosts demand just as availability of technical advice and business credit affect household supply of goods and services. In the same vein, availability of institutions like family, CBOs, NGOs and government impacts household's ability to live productively. Could it be that households do not mention institutions because the role of institutions is remote and therefore not felt? Or is that the role of institutions can only be inferred from other reasons given by households? The current poverty analysis only makes inferences. What is required is a direct approach to the analysis of the role of institutions. A specially designed study is required to give households a platform to tell their institutional story; the type of institutional support they got/lost or indeed the type they need and when.

The role of the macro economy in facilitating or hindering the progress of individual households is rarely discussed in poverty analysis. What are discussed are aspects of the macro economy at area or national level evidenced by the use a community questionnaire to supplement the household questionnaire. What is needed is a discussion of macroeconomic conditions facing households. For example, there is need to have questions linking households to critical macro economic trends like major changes in commodity or produce prices; introduction or cessation of smallholder farmer credit; or changes in labour or produce demand. Until the local translation of the macro economy is specifically related to the household economy the impact of the macro economy will continue to be confined to statistical inference.

Perceptions in poverty analysis

Although the main data collection tool used for poverty analysis includes subjective wellbeing module with almost all known aspects, the data from this module is not included in the main poverty profile. The absence of the voices in the profile further alienates the profile from the people it is supposed to profile. It is important to know whether what people spend their income on are needs just as it is important to check whether the consumption poor rate themselves as poor or unhappy or unsatisfied with life. Further, the current poverty analysis sidelines perceptions on wellbeing. None of

the surveys in Malawi has used the Breadline Britain methodology where respondents are involved in deciding basic goods.

Poverty correlates and determinants from self-rated wellbeing status

Most of the self-rated poverty correlates and determinants found are the same as those found for objective poverty. This does not prove that the two are the same. If anything, this is expected since both use the same or similar independent variables. However, the variables are biased towards objective poverty since the questionnaire from which the variables are derived is specifically designed for consumption poverty. What self-assessed poverty determinants analysis requires is a data collection tool that incorporates hypothesised factors associated with it. If one data set is to be used for poverty determinants analysis of both objective and self-assessed poverty then such a dataset should be derived from a data collection system that incorporates hypothesised factors associated with both. This is where factors identified in this chapter come in. The identified factors are therefore used to develop a data collection system that is sensitive to the needs of self-rated poverty analysis

Characteristics of self-assessed wellbeing and poverty for comparisons

This chapter was meant to bring out characteristics that are associated with wellbeing and poverty based on self-assessment for possible comparison with those obtain from objective poverty and peer assessed wellbeing and poverty. Unlike peer assessment, there has been no nationally representative qualitative study from where 'pure' characteristics of self-assessed wellbeing or poverty could be gleaned. The quantitative treatment of subjective assessment module of IHS2 does not give the same level of analysis required of qualitative data. After all, the questionnaire use pre-coded responses.

This is why the primary data collection incorporated an open ended question on the wellbeing status in order to capture as much variety and 'colour' as possible. However, despite the interesting results from that data, the results cannot be used as representative of the country. They are however useful for local level comparison of characteristics from the three types of wellbeing assessments.

Chapter 9: Conclusions, recommendations and implications

9.1 Introduction: putting the three eyes together

This chapter provide answers to the three research questions. The first question is whether or not the three types of household wellbeing assessments identify the same households as poor. The second is whether or not features used to characterise wellbeing or poverty differ if the assessment is done by a representative of the household being assessed or peers or experts using consumption expenditure. The third is whether the method used by the experts can be modified to reflect the features used by locals in order to reduce the divergence in understanding between the experts and the locals? This last question is relevant only when results of self and peers assessments are different from those of experts.

In Chapter 3 (methodology), five tasks are proposed to deal with these three questions. Task 1 was to determine prominent wellbeing features using statistical analysis and wellbeing analysis and pairwise ranking. Task 2 was to separately rank households in the three sampled villages from the richest to the poorest based on consumption expenditure and focus group developed local criteria. Task 3 was to identify the households that are poor in each of the three villages based on poverty lines imposed by experts, households' representatives and community members. Task 4 was to make three comparisons namely the national level wellbeing features (output of Task 1); the households rankings from consumption expenditure and pairwise ranking (output of Task 2), and households assessed as poor from the consumption expenditure, self and peers assessments (output of Task 3). This fourth task gives an idea on whether or not the three assessments are similar in terms of poverty analysis. Task 5 is to discuss what can be done to the official version of poverty in case the comparisons reveal differences between expert and local level understanding of poverty.

Chapter 5 has dealt with the first research question and Task 2. To recap, it has been established that the three types of wellbeing assessments are neither the same nor completely different; they are not substitutes but complements. The evidence of this is that they rank wellbeing status of some households differently. The convergences and divergences in the households identified as poor gave justification for further analysis of characteristics each assessment uses to assess household wellbeing in Chapters 6 through 8 which individually covers official, peers and self assessments, respectively. The characteristics from the official assessment have taken the form of wellbeing correlates

and determinants at national and community level. The characteristics from peers assessment has taken the form of reasons given for household wellbeing category placement and ranking. Characteristics from self assessment have taken the form of reasons for ranking a household in a particular wellbeing group.

The findings in these three chapters provide the inputs to deal with the remaining two research questions. They also offer some chance to compare national and local level perspectives on wellbeing correlates, determinants and characteristics. In particular, the chapter makes three comparisons. The first is on poverty correlates between the official and self assessments at national (using IHS2 data) and local level (using data from the three villages). The second comparison is on wellbeing determinants at national and local level as a group of villages as well as individually. The third comparison is on wellbeing characteristics between peers and self assessments using data from the three villages combined. The task of interrogating the official wellbeing assessment system uses the findings from the analysis of the qualitative studies.

9.2 Comparing poverty correlates at national and local levels

The independent analysis by Devereux and colleagues (2006) and joint analysis by officials from Government and World Bank (GoM & World Bank, 2007b) provide two sets of results from the same IHS2 dataset. Devereux and colleagues found 21 poverty correlates when they used consumption expenditure as a measure of wellbeing and 19 when they used self assessed wellbeing status. Of these, 13 matched, implying that the 'objective' poverty had 8 correlates that were unique while the other had 6. See Table 9.1.

Their conclusion was that monetary poverty analysis is an inadequate representative of household poverty and that determinants of monetary and subjective poverty are likely to be different due to the fact that subjective poverty includes feelings of relative deprivation, vulnerability, social exclusion and lack of access to basic needs.

Table 9.1: Comparison of poverty correlates at national level

Factor	Objective	Subjective
At least one disabled member	√	√
Household size	√	√
Household head is divorced	√	√
Household head is unmarried	√	√
Household head is widowed	√	√
Household head has Junior Certificate	√	√
Household head has Malawi School Certificate	√	√
Has permanent housing	√	√
Has semi-permanent housing	√	√
Number of <i>ganyu</i> days last year	√	√
Household's assets index	√	√
Household's landholding size	√	√
Tropical livestock units	√	√
Household member is a labourer	√	X
Experienced a shock (price, theft)	√	X
Household has an enterprise	√	X
Head has primary education	√	X
Household head is literate	√	X
In mixed language group	√	X
Household member is a farmer	√	X
Child is a double orphan	√	X
Experienced death in the family	X	√
Head is in a polygamous union	X	√
Female-headed household	X	√
Head a university education	X	√
In a matrilineal system	X	√
In a minority language group	X	√

Source: Devereux, et al. 2006

Likewise, the official analysis found that many correlates (in some forms) matched except very few cases as depicted in Table 9.2. Their conclusion was that objective and subjective poverty are related but objective poverty does not cover subjective wellbeing well enough because subjective wellbeing covers health, respect of others, employment, and having children (GoM & World Bank, 2007b).

Table 9.2: Comparison of wellbeing determinants at national level

Household characteristics	Objective	Subjective
Household size	√	√
Household size squared	√	√
Share*/number of 0-4 & 5-10 yr children	√	√
Female household head	√	√
Age of h-head/age groups (26-35/36-45/65+)	√	√
Household owns an enterprise	√	√
Completed junior primary	√	√
Completed senior primary	√	√
Completed senior secondary/post-prim	√	√
Completed junior secondary/Post-prim	√	√
Household head is widowed	√	X
Household has wage income	√	X
Household owns dimba plot	√	X
Household grew tobacco last season	√	X
Total rain fed land area (log)	√	X
Completed pre-school	X	√
Share of elderly	X	√

* significant at 5% (MIQ) the rest at 1%

Source: Tables A3.6 of Annex 2D and Annex 2E (GoM & World Bank, 2007b)

The mismatches between objective poverty correlates and wellbeing determinants become very obvious when the comparison is done at the local level. Table 9.3 presents poverty correlates and determinants for the three villages combined. There is only one correlate that is common between the official and self assessments. In fact self assessment has only four correlates while the official boasts of sixteen correlates.

As for the wellbeing determinants, there were two that were common to both assessments. Both found that the number of children in the household affect the wellbeing status. Application of fertilizer also influenced the level of consumption as well as self assessed wellbeing status. These two determinants are not surprising. Possibly what is surprising is that access to credit, which is a determinant of consumption expenditure, is not for self-assessed wellbeing and that landholding size is not a determinant of consumption expenditure when it is for self assessed wellbeing status.

Table 9.3 Comparison of correlates and determinants at community level

Feature	Poverty correlates		Wellbeing determinants	
	Official	Self	Official	Self
Location: Ngochera	√			
Location: Dzilekwa		√		
Household size	√		√	
Dependency ratio	√			
Number of dependent children	√		√	√
Years in school for adults (mean)	√			
Highest class by adult member	√			
Whether applied fertilizer	√		√	√
Amount spent on inputs	√		√	
Share of food in total consumption	√			
Number of durable assets	√			
Whether a member has cell phone	√			
Whether household has a bicycle	√			
Hours adults spend on enterprise	√			
Access to credit (incl. amt)	√		√	
Income from agriculture	√			
Maize output per cultivated land		√		
Livestock ownership (types/values))	√	√	√	
Number involved in <i>ganyu</i>			√	
Household has a irrigatable land		√	√	
Landholding size is 0.5 and 0.9 ha				√

Source: Tables 6.11, 6.12, 8.8 and 8.10

Things get worse when the determinants models are applied at each village individually. As Table 9.4 shows, there is not even one case of matching. Determinants of consumption expenditure are completely different from the one for self assessed wellbeing status. In fact, in Dzilekwa there are no determinants of consumption expenditure.

Table 9.4: Comparison of wellbeing determinants by village

Characteristic	Village -->		Ngochera		Chikhwaza		Dzilekwa	
	Official	Self	Official	Self	Official	Self	Official	Self
Household size	√							√
Household size squared			√					
Children from 5 to 10 years old			√					
Children from 11 to 14 old			√					
Members in wage employment			√					
No under-five child		√						√
Head is not in employed		√						
Head of household is male		√						
Head of household is not widowed		√						
Household has no irrigatable land		√						
Landholding is 0.5 to 0.99 ha		√						
None employed						√		
Non-formal employment						√		
One member household						√		
Three-member household						√		
Two-member household						√		
Head has no education						√		
One under5 child						√		√
Household accessed credit								√
Harvest in tonnes per hectare								√
Members engaged in <i>Ganyu</i>								√
Two under5 children								√

Source: Tables 6.12 and 8.10

It is clear that monetary and subjective assessments of wellbeing are different. The difference gets clear the lower the level. Although, some of the difference could be due to number of cases for applying the models, the difference reflects differences in coverage as suggested by the officials that analysed the IHS2 (GoM & World Bank, 2007b). The differences also reveal the limitation of using variables derived from a survey specifically designed to provide data for objective poverty for self assessed wellbeing. To come up with meaningful profiles for self assessed wellbeing, there is need to collect data that is in line with self assessed wellbeing. Open-ended discussions on wellbeing status and its causes would assist in refining the subjective assessment of wellbeing module currently in use. A first step towards this was done by opening the discussion, results of which have been presented in chapter 8 and compared with those from community groups next.

9.3 Comparing the three assessments at village level

The comparison between peers and self assessments is made easy because the coding system used to analyse the responses was the same. There are sixty-five different reasons that were given by both assessments (53 for peers and 52 for self assessments). To highlight the similarities and differences between the two assessments this long list of reasons is broken down in several ways. In terms of convergence and divergence, forty reasons appear in both assessments. That is 75% for peers assessment and 76% for self-assessment. Without considering the relative weights for each reason, the conclusion is that the two assessments are generally in agreement. The reasons with at least 5% on either assessment are listed Table 9.5.

Table 9.5: Top wellbeing factors for peers and self assessment in the 3 villages
(% of total responses)

	Factor	Peers <i>n=537</i>	Self <i>n=394</i>
1	Has a non-farm enterprise	12.1	7.1
2	Has adequate food	6.9	8.4
3	Is a hard worker	7.1	3.3
4	Has inadequate food	3.2	7.1
5	Meets all/most needs	1.5	7.1
6	Too old to work as required	4.5	2.8
7	Owens some livestock	5.8	1.3
8	Is a <i>ganyu</i> worker	5.0	2.0
9	Has diligent farmer(s)	5.8	0.5
10	Has a good house	4.7	1.3
11	Uses no or inadequate fertilizer	0.2	5.6

Source: Author's computation of primary data

When factors with at least 3% difference in weight (shaded) are considered a certain pattern emerges. While households themselves thought they were doing well in terms of meeting basic needs, other community members did not use that 'fact'. Similarly, while households used their failure to apply fertilizer to justify their wellbeing position, the community group did not use that factor as much. To some extent, this goes for food stocks as well. On the other hand, while the community groups valued the hardworking spirit (hard, diligent and *ganyu* worker) the households themselves did not see it as much. This is also true for ownership of enterprises, livestock and good house. A similar picture emerges when factors that appear only under one assessment are considered. For example, community groups used ownership of durable and productive assets in assessing household wellbeing status but no household used such. This is true for orphan care and laziness (opposite of working hard or diligence). On the other

hand, ownership of irrigatable land and lack of money and employment opportunities were used by households when assessing their wellbeing status but these were not used by the community groups. Table 9.6 presents reasons that were mentioned in only one assessment.

Table 9.6: Wellbeing factors featuring in only assessment type in the 3 villages
(% of total responses)

Peers assessment	n=537	Self assessment	n=394
Owens some durable asset	3.5	Has no irrigatable land	2.0
Takes care of orphans	1.5	Has no money to prosper	2.0
Has lazy member(s)	1.3	No/rare job openings	1.5
Has some productive assets	0.9	Generates money for basics only	1.5
Has a small household	0.7	Excluded in subsidy programme	0.8
Has no supportive husband	0.7	Has poor quality clothes	0.8
Acts as a source of help	0.6	Low produce prices	0.5
Has beddings - beds/blankets	0.4	Has no educated children	0.3
Has a husband in town	0.4	Community is not supportive	0.3
Is physically challenged	0.4	Can't hire labour	0.3
Eats no protein foods	0.2	Has household utensils	0.3
Is promiscuous	0.2	Gets too low wages	0.3
Is old but still strong	0.2		

Source: Author's computation of primary data

These differences in valuation show differences in weighting between community members and households themselves. These differences in weighting could be a reflection of inadequate knowledge or difference in perceptions of what matters for wellbeing at community and household levels. Assuming the latter is true it does not mean that the community or household perception is superior. None is superior or inferior but each matters because community perceptions matters just as households do

Comparison of all the three requires some rationalisation of some of the factors. Those that have been modified are discussed before the comparison is done. The location factor is dropped since most of the factors are household based. Likewise household size and number of dependent children are considered to be related to 'too many children' or 'taking care of orphans' prevalent in subjective assessments. Dependency ratio, part of which covers members over sixty-four years old, is taken to be related to 'too old to make a living' mentioned in both self-rating and peer assessment. Similarly, share of food to total consumption is taken to be related to 'adequate food stocks' or 'inadequate food stocks' both of which are popular in wellbeing assessments.

There are other factors that are in different forms but can be rationalised. For example, amount of hours spent by adults in a household enterprise is related to 'whether a household operates an enterprise', number of household members engaged in casual work is related to 'household head or spouse get engaged in casual work', and the factors: number of durable assets, whether a household member has a mobile phone and whether the household owns a bicycle are jointly linked to 'ownership of durable assets' under peer assessment. Finally, durable assets as presented in survey questionnaire include some utensils such combining utensils and durable assets would benefit the analysis.

Others under self rating and peer assessment also need some rationalisation. For example, whether a household lives in a poor quality house (as given by self and peer assessment) or a good quality house (peer assessment only) it is that these are not unique features but the opposite of each other. As already stated, the factor 'good quality house' is more prominently used by peers than household representatives. Factors 'presence of external support' (mentioned in self rating) and 'absence of external support' (mentioned under peer assessment) are not two unique factors but just 'sides of the same coin'. It is only that household representatives emphasise one side while peers notice the other more.

Table 9.7 presents prominent factors associated with each of the three assessments following the rationalisations. The table shows that there are four factors that are common in all the three assessments. There are two factors that are common between the official and peers assessments and two between the official and self assessments. Once again proving that peers and self assessments are more related to each other than each to official assessments, there are four factors that are common between them. It is noted that consumption and self-rating shared the more measurable features or those that are best known by the households (inputs use and income levels and sources) while peer assessment shares with consumption expenditures features that are conspicuous (livestock and durable assets).

Table 9.7: Comparison of wellbeing features under the three assessments

	Household wellbeing feature	Official	Self	Peers
1	Has adequate/inadequate food stocks	√	√	√
2	Operates an enterprise (including size/time spent)	√	√	√
3	Head too old (implied in dependency ratio)	√	√	√
4	Members are involved in <i>ganyu</i> (also number)	√	√	√
5	Applied no/inadequate farm inputs (incl. amount)	√	√	§
6	Income source and type (meets needs)	√	√	§
7	Owens (no) livestock (types and values)	√	§	√
8	Owens some durable assets/utensils	√	§	√
9	Lives in a poor/good quality house	§	√	√
10	Gets (no) external support (children and others)	§	√	√
11	Head or spouse is a regular <i>ganyu</i> worker	§	√	√
12	Member(s) work hard in farm or business	x	√	√
13	Large household size/too many children	√	§	§
14	Number of dependent children/too many children	√	§	§
15	Household has (no) irrigatable farmland	√	§	x
16	Access to credit (amount or start up capital)	√	§	§
17	Education level of adult members (highest class)	√	x	x
18	Has money that meet/meets all or most needs	§	√	§
19	Struggles to generate income	x	√	§
20	Head has no husband	§	§	√
21	Head or spouse is in poor health	§	§	√
22	Husband is polygamist	§	§	√
23	Head and/or spouse is/are diligent farmer(s)	x	§	√

√ means it is a significant feature; § means that it is present but not as prominent feature; and x means it is absent as a feature

Source: Author's analysis of Tables 9.3 to 9.6 and primary data

Further, considering only factors that are important or significant (marked with '√') there are eight important features under the official assessment that are shared with at least one other assessment. Self and peers assessments have both ten factors that are shared with at least one other assessment. This implies that both peer and self assessments are generally broader because they include dimensions not taken care of by the official assessment.

This is confirmed when the features that are present in local level assessments but absent in official assessment are analysed. For example, the official assessment misses 'hard working members', 'households that struggle to generate cash income' and 'households with diligent farmers'. One of the possible reasons for this, as Chambers (1997) put it, is that survey questionnaires shy away from difficult-to-measure wellbeing indicators. As long as it is difficult to operationalise subjective assessment of wellbeing in a

questionnaire, any measure based on such data is likely to miss out some aspects of wellbeing that are considered important at community level.

Another look at the features shows that areas covered by the survey questionnaire were also covered in some form by the subjective wellbeing module and wealth and pairwise ranking. For example, there is only one important feature under the official measure (education level of adults) that did not come up during self or peer assessments in all the three villages. This is understood because in rural economies where formal employment is almost non-existent, education level is of no consequence (GoM & World Bank, 2007a). On the other hand, only ownership of irrigatable land did not come up under peer assessment possibly because the group reasoned that those without such farmland can rent it if they have money. The implication is that despite using different 'views', a carefully designed survey questionnaire can cover some aspects of important features that are found to be important by self and peer assessments. It is noted that this is only indicative since the villages visited are not representative of the country. What is needed are national level factors – factors gleaned from qualitative studies that were nationally representative, which is the subject of the next section.

9.4 Interrogation of the official definition of poverty

So far it has been established that the three methods of assessing household wellbeing and poverty are neither the same nor completely different. It has also been established that although they share some dimensions, each emphasises different characteristics and in some cases each uses completely different characteristics. In line with the research problem, the findings imply that the official wellbeing measure barely include qualitative aspects of wellbeing commonly associated with self and peers assessments. Using the three villages as case studies, it has been shown that the use of either peers or self assessment to identify the poor would lead to targeting errors if the evaluation is done using the official measure. It has also shown that some of the targeting errors would possibly emanate from conceptual and weighting differences.

This leaves one research question unanswered. The question is whether the official version of wellbeing and poverty can be modified based on the findings from qualitative studies nationally and the three villages. To answer this question, there is a need to review the official wellbeing analysis system first to identify entry points in the system for modifications.

9.4.1 The official wellbeing analysis system

In Malawi, the official wellbeing analysis system comprise the administration of two survey questionnaires (household and community) countrywide over twelve months, the analysis of the survey data to construct the consumption expenditure aggregate and the poverty line, the analysis of the data to construct poverty measures like poverty incidence, severity and depth, and the determination of household and community characteristics that are associated with wellbeing and poverty. The characteristics are in the form of poverty correlates (used as poverty proxy indicators) and wellbeing determinants (meant to infer causes of poverty). An internal evaluation of some parts of the system is done before the system is exposed to the external 'elements' gathered from peers and self assessments.

The consumption expenditure aggregate

As seen in Chapter 5, the consumption expenditure aggregate has three parts; food consumption, household expenditure on non-food goods and services, non-consumer durables and use value of durable goods. Food consumption component covers food consumed from own production, purchases and gifts. Almost all kinds of food consumed are included. Further, the list is prompted implying that the respondent is reminded in case the item could slip through. In responding, the interviewee gives the unit used and quantity consumed. Valuation of food consumed from own production and gifts is done using prices used in the purchase of the same. To complete food consumption amount of money spent on water is added.

The non-food, non-durable component covers expenditure or purchases of goods and services; spending on heat and lighting, private and public transport, personal and household hygiene and care, payment for services; clothing and footwear, household utensils, and entertainment materials and equipment; ad hoc payments and costs; and education expenses. Use value of durable goods covers 17 out of the 36 durable goods collected. Traditionally housing mortgage payments, repairs, maintenance and decorations are excluded from the non-food expenditure because the consumption expenditure aggregate uses housing use value instead.

There are a few cases the consumption expenditure has the potential to come up a wellbeing status that may not match that of self or peers assessment. As reported in Chapter 3, in collecting food consumption the interviewee gives the actual unit the food was eaten or made from. The advantage of this approach is that both the respondent and interviewer are not asked to estimate. This improves the accuracy of the amounts of

data collected. To standardise the units, experts come up with conversion factors. This is where there is some potential of introducing measurement errors. A casual look at the conversion factors (from various units to grams) shows that some of them are inconsistent or questionable. This is clear in the case of maize flour, the main ingredient used to cook '*nsima*', the main food item in Malawi.

The first example of a unit used for maize flour is 'heap'. A heap of maize flour converts to 4581 grams yet a large pail (between 8 to 10 litres) of maize flour converts to 2036 grams and a basketful converts to 4841 grams. The question is: what type of flour heap is this? Other 'strange' conversion units for maize flour include 'piece', 'basket shelled' and 'basket unshelled'. A 'piece' of maize flour converts to 580 grams, which is close to the value assigned for a no. 12 plate (595 g). This begs the question: what is this 'piece' in terms of maize flour? Again, what is 'shelled' or 'unshelled' basket? Are these mistakes considering that they have the same conversion factors? Another curious unit is 'oxcart' of maize flour. Given that the consumption in question is for a week the use of an oxcart for a unit seems out of place. Even if it were used (may be for a very large household) its conversion factor of 32270 grams is even lower than that of a 50-kg bag of maize flour (46658 g). Normally an oxcart is capable of packing at least five such bags. Is it that the unit is wrong for a week or that the factor is wrong or both?

Similar mismatches between a unit and its conversion factor are observed on basin and tin. A basin has a factor of 4308 grams, which is almost twice that of a large pail (2036 grams) yet a standard basin is rarely larger than a large pail. At the same time a tin has 33 grams as its conversion factor yet the smallest tin imaginable cannot be a quarter of a cup (whose conversion factor is 160 g). A more practical question is: why sell maize flour in such a small unit, even if it existed? It would have been better if these dubious units were just on paper. However, all these units are present in the IHS2 dataset and for a good measure that even have cases of 'litres' of maize flour. The point being made here is that analysts use these to construct the food consumption aggregate and if they are wrong the aggregate is bound to be wrong.

Whether these significantly affect the level of maize flour consumption is not clear. What is clear, though, is that they do not inspire confidence in the aggregate. It is not advisable to continue using dubious units and conversion factors. Since consumption-expenditure is the standard wellbeing measure used to evaluate other wellbeing assessment methods, its construction should meet high standards. It is therefore recommended that experts review all units and factors for all food items to satisfy themselves of their appropriateness and accuracy. In the interim, units and conversion

factors for maize and maize flour, the major food consumption item, should be rationalised. For those units found to be inappropriate, they should be blocked out during data collection and entry. For factors that are out of line, they should be revised based on other credible conversion factors in the same food category.

Another area that can bring differences in assessment is on use value of durable goods. As indicated, not all durable goods in a household are included in this aggregate. Some are, understandably, left out because they are productive assets (e.g. boats, nets, ox-carts, and ploughs) whose use may translate into food or income. However, the list of durable goods considered (17) are generally not 'traditional' except one (mortar/pestle for food processing). While noting that there are some 'modern' durable goods that are excluded also, exclusion of some durable goods associated with rural households like (hoe, panga, hoe, axe, sickle, wheel barrow, and drum) is difficult to justify unless it has been proven that these are valueless to their wellbeing. To settle the matter, there is need for a study to first establish which durable goods are considered valuable for wellbeing status in rural areas and separately in urban areas and for those found useful, establish the relevant information for the computation of the use value (expected life time and range of retail prices). Until then, the use value of durable goods may be divorced from the thinking local people and therefore can be a source of differences between the assessments.

Another area is the removal of the user-value of housing in the aggregate. The justification for the removal was that there is no effective housing market in Malawi to get market prices for the valuation. Considering that the non-food non-durable component excludes housing costs (building materials, repairs, maintaining, and decoration) on the understanding that the user-value covers these, the removal effectively blocks housing out of the consumption expenditure aggregate. The solution is to re-introduce housing costs in the non-food non-durable component. Excluding housing from the wellbeing measure is a potential source of assessment mismatch because quality of the dwelling unit features as a prominent wellbeing characteristic at local level.

Addressing these would affect wellbeing levels as measured by consumption expenditure. Given a poverty line such changes would affect the poverty status of some households. In other words, changes in the measure affect the poverty status of some households. This is also true of changes in the poverty line itself. This means that the appropriateness of the poverty line needs to be addressed as well before comparing wellbeing features from the official and local level assessments.

The official poverty line

The construction of the official poverty line is based on the basic needs concept (GoM & World Bank, 2007b). Just like the wellbeing measure, the basic needs poverty line has food and non-food components. The food component is based on what is actually consumed while the non-food component is based on expenditure. Food being one of the components of basic needs (Doyal & Gough, 1991), the food component of the poverty line defines ultra poverty (GoM, 2000).

As discussed in Chapter 5, the food poverty line uses a WHO-based median minimum daily calorie requirement for a medium activity population valued at median cost of food consumed by the 5th and 6th decile households (GoM & World Bank, 2007). Two discussion points come out of this: (i) the assumption that Malawi is a medium activity country and (ii) value used to cost the calorific value. The question is whether Malawi is a medium activity country given that the hoe is still the main agricultural implement for tilling the land. Perhaps more pertinent is the point that the 2007 wellbeing analysis used 1985 recommendations (GoM & World Bank, 2007b) instead of 2004 recommendations (FAO/WHO/UNU, 2004). According to the 2004 recommendations, it is possible to assign values for each individual instead of assigning activity status for an entire population. Clearly the new system resonates with the finding that households differ in activity level and therefore energy requirements. Until when the new recommendations are used, it is not clear whether the food poverty line is the right one.

As for the use of median cost of food consumption for the 5th and 6th decile, it is not clear whether it is appropriate to use it to value the 2400 calories per day per person ultra poverty line. So far it has been established that at a village level, what and how much a household eats determines its wellbeing status. This implies that consumption patterns reflect wellbeing statuses. If 2400 calories per day separates the ultra poor from the rest, it should therefore be the median cost of food consumed by the poor that should be used. That may not be true for the 5th and 6th deciles. A more realistic proposition would be to use the median for the bottom 50%.

In effect using the median value from the bottom 50% may result in poverty line that is lower than the current one on the assumption that the poor purchase cheap calories (GoM & World Bank, 2007b). However, given that the resultant minimum calorific value from using the 2004 WHO recommendation may result in a minimum more than 2400 calories (what with child labour, agricultural activities, and constant casual work among the poor) the overall impact could go either way. The advantage would be that

such a poverty line would be reflecting the thinking of differentiated needs by activity and growth needs.

It is also noted that the Malawi poverty line is NOT based on basic needs. It is based on food consumption at the median. No expert is involved in defining the foods that make up the minimum calories. The calories can come from different sources as long as it is what the average household consumes. This is also true of the non-food component. No expert draws a list of non-food basic needs. Instead revealed preference of the average households (i.e. households along the food poverty line, plus minus 5%) is taken as the standard. . This procedure is meant to avoid the subjectivity associated with expert choice of basic needs. The assumption on both cases (food and non-food components) is that food consumed and goods purchased by the ultra poor are basic. Of course, this is not always true. It is needful that some analysis be done to check whether indeed most of the goods and services around the poverty line are basic needs. But what are considered basic items in a Malawian household?

So far there has been no study to establish what basic needs in Malawi are. One solution is to conduct a comprehensive Breadline Britain type of study (Gordon, et al., 2000) where community group discussants, at the first instance, come up with a list goods and services that are considered essential for normal style of living in their community and households are requested to indicate, from the list compiled from the FGDs, those they consider necessary for their household. Apart from being relevant, the resultant list would help in establishing whether what is consumed at the median matches the 'ideal' minimum basket. The list would also be used to check local level definitions of poverty. The implication is that a self-rating poverty line would then be used to check against the consumption expenditure poverty line and peer assessed poverty line. So far, self-rating does not have a standard.

Other possible sources of differences

The consumption expenditure measure combines actual (food consumption) and potential consumption (expenditure). This approach excludes current use of goods and services acquired previously (clothes, shoes, blankets and linen) and, by extension, future use of goods and services, acquired in the current period. Residual use of goods and services purchased previous and current years is assumed to be zero. While this is alright given the limitations of quantitative analysis of wellbeing where flow and stock cannot be mixed, peers and self assessments have no such boundaries because the assessors consider all these. This is also true for the separation of income and consumption

analysis. The use of consumption as a measure automatically excludes the use of income. Yet local people consider income, consumption and many other wellbeing aspects in their analysis.

For example, apart from the 'calories' consumed, local people also consider the source of the calorie. Some sources of food, no matter how rich they are in calories, may be considered unattractive for some wellbeing categories. Likewise, spending a lot on some items may be seen as a sign of poverty. This is also true for some sources of income as some sources are considered more respectable than others regardless of the level of income. The implication is that the level of wellbeing implied in the consumption expenditure (or income level) may not always agree with the assessment of local people. In particular, the use of one dimension of wellbeing (consumption or income or expenditure) does not match the process used by local wellbeing assessors.

Finally, consumption expenditure is a flow and not stock concept. In the flow concept, it is not the amount of maize a household has in store that matters but how much is consumed regardless of source. At local level, both are considered as part of wellbeing. Thus, unless the assessments use the same principles, there are bound to be differences among the three measures. Apparently, self and peer assessments are more holistic in their approach than the official measure. They consider various sides of wellbeing: income as well as consumption; flow as well as stock; actual as well as potential; and quantitative as well as qualitative.

But is the current official wellbeing analysis system completely out of touch with self and peers assessments? Do wellbeing category characteristics obtained from wellbeing analysis completely alien to consumption expenditure measure? Do factors considered important by households not assessed by the questionnaire used to assess the household wellbeing status? These are the remaining questions worthy checking against the official wellbeing analysis system.

9.4.2 Wellbeing characteristics: official versus local concepts

To get the features or characteristics that are covered in the official system, there is need to revisit the questionnaires in order to check what they cover. It is what they cover that dictates what household characteristics are likely to come out of the official system since both poverty correlates and wellbeing determinants analyses are based on variables from the questionnaires.

The household questionnaire covers household demographics, education and health status, time use and employment, and security and safety of all household members. It

also covers child anthropometry. At household level it covers housing structure, housing amenities, and housing costs; consumption of food (from different sources) over three days and a week; non-food consumption over a week, month, three months and a year depending on assumed frequency of expenditure; and durable assets. The consumption expenditure aggregate is constructed from various parts of these modules.

For instrumental variables (aspects hypothesised to have some effect or be related to household wellbeing as measured by consumption expenditure), the questionnaire collects data on agriculture production inputs (land, technical advice, purchased seed and fertilizer), harvests, sales, consumption and stocks by crops cultivated. It also covers production and sale of tobacco, dimba crops, livestock and trees. It also covers operation of household enterprises and access to savings interest, pension, property rental, remittances as sources of income outside agriculture; and access to commercial credit and social programmes (for free or worked for food, social employment, subsidised credit, and free or worked for or subsidised inputs). Other instrumental variables are constructed from modules on recent shocks (natural, economic and social) and deaths in the household.

Other than these modules which are used to indirectly assess wellbeing, the subjective assessment of wellbeing module directly assesses the household wellbeing status in a number of areas. These include an assessment of the adequacy of consumption (food, housing, clothing and health care), sufficiency of current income and economic wellbeing, minimum income and life satisfaction. Targeting only the household head, the questionnaire has questions on number of changes of clothes, and what the head sleeps on and under.

The household questionnaire is supplemented by a community questionnaire. The community questionnaire includes a direct observation section on children and adults clothing and footwear, whether windows have glass and surroundings are swept, and type of building material used for the walls and roofs. Other sections covered include community-level basic physical and demographic characteristics (language, ethnic make-up and inheritance system); access to basic services (all-weather roads, clinics, schools, commodity and produce markets, financial services, and representation); economic activities include public works programmes; agriculture activities (adoption of new crop varieties, access to technical advice and credit facilities, and prevalence of farmer clubs and cooperatives); and prices and changes over a five year period on a myriad of areas including major wellbeing-affecting events.

These two questionnaires provide a long list of areas covered and provide an opportunity to construct just as long a list of variables used in the correlates and determinants analyses. To deal with the question whether the wellbeing features given by community groups have some 'relations' in the official wellbeing analysis, there is need to first check the local features against factors that have ever been found to have significant association with wellbeing. For management purposes, the local features are divided into three categories; those that are present in all measures (official, self and peers assessments), those under either self rating or peer assessment and official system, and those only under peer assessment⁶⁵.

Common wellbeing features

It is noted that even the case where a feature is common under all the three assessments, it does not mean that they are used the same way. It could be that what is common is the dimension but not necessarily their measurement or use in analysis. Thus if the objective is to modify the official system to reflect the local concepts, then it is important to analyse the official system in order to check how the feature fits in that system in terms of how it is collected or incorporated in the measure or used in the analyses. Table 9.8 presents 16 factors that are common. Six of these (shaded in the table) are either measured differently or excluded from analyses. These are the ones that are discussed individually.

⁶⁵ There is no feature that is unique to self-rating.

Table 9.8: Wellbeing factors common in all the three types of assessments

	Factor	Official	Self	Peers
1	Access and level of cash income	√	√	√
2	Access/ownership to and size of land	√	√	√
3	Age of head/aged without support	√	√	√
4	Education of adult member/head	√	√	√
5	Engagement in <i>ganyu</i>	√	√	√
6	Health status of members	√	√	√
7	Household has an enterprise	√	√	√
8	Household shock (price, theft, death)	√	√	√
9	Marital status of household	√	√	√
10	Number of members/Household size	√	√	√
11	Number/share of dependent children	√	√	√
12	Ownership and type of durable assets	√	√	√
13	Ownership of non-farm IGAs	√	√	√
14	Ownership or value of livestock	√	√	√
15	Quality of housing structure	√	√	√
16	Wage employment and income	√	√	√

Source: Chapters 6, 7 and 8

The official system for wellbeing analysis includes *health status of household members* in terms of morbidity and expenditure on health care. In the analysis, the factor ‘whether a household has a member that was ill or injured’ is used as a dummy variable in the correlation analysis. What is missing is the impact of illness/injury on wellbeing status, especially the number of lost days by adults (the ill/injured or carer) in the poverty determinants analysis. Considering that local people consider illness/injury holistically, this extra analysis may bring the official treatment of this factor closer to that of local people.

The data collected covers *ownership of an enterprise* and a dummy variable is used in correlation analysis. However, no analysis is done to relate various aspects of the enterprise (type, size and profitability) to household type. Community reports give the impression that enterprise size, type and profitability are related to wellbeing status. It is the extra analysis that can ground truth the impression. *Ownership and type of durable assets* are collected but partially used. As discussed above a study on usefulness of various durable goods is required. A Mack and Lansley (1985) type of study would establish such a list.

The questionnaire and analysis cover *ownership and value of livestock*. While the questionnaire is used to collect ownership and numbers of all types of livestock and income from livestock, the analysis uses various variable constructs from this to relate

livestock ownership to wellbeing status. One area that can be added in the analysis is a categorisation of types of livestock owned. Since local people use ownership of sets of livestock in assessing household wellbeing status, there is need to include a variable that incorporates this. For example, the analysis can have a categorical variable with values 3 for a set of cattle, goats, and chicken (and others); 2 for goats and chickens (and others); 1 for chickens only; and 0 for no livestock. This would resonate with the local reasoning.

Quality of housing structure is collected and used in analysis. However, it is completely missing in the wellbeing measure. As already proposed above, the housing costs should be introduced to compensate for the removal of the housing use value. Apart from that, there is need to engage local people to give shape to the 'quality of housing' factor. From community reports, a 'quality house' may mean different things in different areas. Therefore, there is need for a study to establish relevant importance of various building materials by area and type of household. The study proposed under the durable goods can incorporate this aspect. Related to housing is *tidiness or cleanliness of the home and its surrounding*. This qualitative aspect is only collected at community level. Since community groups attach important to this, the direct observation as done under community questionnaire should be done at household level. In other words, the observation should be transferred from the community to the household questionnaire

Ownership of non-farm IGAs is related to activities that mostly rely on individual skills or capability like handcrafts making, shoe repairing, brick-laying, and also grass/bamboo fence building, traditional kraal/house building, maintaining or thatching. Currently, what each member does over a particular period is covered by the questionnaire. Various variables are also constructed from the module on time use and labour. What is not specifically dealt with is the possession of the skills or capabilities by household members. The questionnaires should specifically collect each member's skills and how they have been used over a specific period in the material year. The reason is that both the possession and use of skills and capabilities are used by peers to assess wellbeing status.

Wellbeing features under official and either measures

Table 9.9 lists factors that are at least present under official assessment.

Table 9.9: Wellbeing factors common in the official and one other assessments

	Factor	Official	Self	Peers
1	Households has a disabled head/member	√	√	X
2	Location/language group/inheritance system	√	√	X
3	Sex of household head	√	√	X
4	Access to external support	√	X	√
5	Access to inputs	√	X	√
6	Access to social economic services	√	X	√
7	Availability of amenities	√	X	√
8	Education status of children	√	X	√
9	Household owns a dimba plot	√	X	√
10	Production of cash crops	√	X	√
11	Type and amount of food consumed	√	X	√

Source: Chapters 6, 7 and 8

The list shows that the official wellbeing analysis system provides some space for the subjectively determined features. The issue is whether the space is sufficient for the local features to manifest freely. This then requires an analysis of each of the listed factor. The first is the *presence of an adult member with physical disability*. This factor is not comprehensively dealt with because the questionnaire does not deal with the extent of the physical disability vis-à-vis ability to make a living. Thus each household member should be assessed in terms of disability and level of independence. This, if done in conjunction with the skills assessment and employment of skills and capabilities, would make a clear link between disability and wellbeing status. What a questionnaire cannot do is deal with the local people's thinking that disability, regardless of ability, negatively affects wellbeing.

The factor that a *household grows cash crops* is collected but not analysed comprehensively to include the number of cash crops. Production of tobacco is found to be associated with high wellbeing status by both assessments. However, in non-tobacco growing areas it is the number of crops that acts as an indicator of wellbeing. One way of dealing with this is to supplement the value with a categorical variable on number of cash crops grown weighted by either size of cultivated land or value of the sales.

The *type and amount of food consumed* is a factor that can be inferred from the data collected on food consumption. While the food consumption aggregate takes care of the amount, the analysis does not deal with the type of food consumed. This is an area of possible difference because local people use both amount and type to assess wellbeing status of a household. Thus the type of food consumed has to be related to local

concepts regarding the type of foods eaten at various points of food/income security continuum (i.e. when desperate or just coping or in abundance). Since the data on type of food consumed is not collected together with the circumstances, a dedicated module on food security would include questions that would provide the context. The same module would collect information on the type of food that is considered ‘normal’ in the community for the three meals and other times.

Wellbeing features not prominent under the official system

There are twenty-six factors under self rating or peer assessments. Only eight of them are common to both self-rating and peer assessment while the rest are only mentioned in peer assessments. These are presented in Table 9.10.

Table 9.10: Wellbeing factors in self and peers assessment only

	Factor	Official	Self	Peers
1	Adoption of new varieties/production methods	X	√	√
2	Amount of food (maize) stocks	X	√	√
3	Attitude to work/hardworking	X	√	√
4	Household access to hired labour	X	√	√
5	Household has working children (in/out)	X	√	√
6	Institutional analysis - opportunity space	X	√	√
7	Number/share of dependent adults	X	√	√
8	Types of crops produced	X	√	√
9	Access to credit facilities	X	X	√
10	Access to household basics	X	X	√
11	Access to productive assets	X	X	√
12	Accessibility of community	X	X	√
13	Behaviour/attitude to life	X	X	√
14	Body and skin appearance	X	X	√
15	Cleanliness of home and surrounding	X	X	√
16	Frequency of food consumption	X	X	√
17	Household has peace of mind	X	X	√
18	Household members beg	X	X	√
19	Luck/charms	X	X	√
20	Natural factors (weather/soil quality)	X	X	√
21	Ownership and type of household utensils	X	X	√
22	Personal/property security	X	X	√
23	Quality of clothing and footwear	X	X	√
24	Quality of life	X	X	√
25	Quality of sleeping place/beddings	X	X	√
26	Widowhood/orphanhood	X	X	√

Source: Chapters 6, 7 and 8

It is noted that the absence of these under 'official' does not mean that they are not collected or analysed. Some are collected but not analysed while others are collected, analysed and found statistically insignificant. Factors that are well covered include accessibility of the community, access to credit facilities, access to basics like salt, soap, and soda; involvement in casual work; access to hired labour; and personal and property security.

The official system also covers *expenditure on clothing, footwear and linen*. However, the questionnaire does not collect their stocks and quality. While the questionnaire collects number of changes of clothes and the type of beddings (sleep on and under) for the head, even this data is not analysed. Since local assessments also use quality and adequacy (stocks) for children and all adults (and not only the head) in assessing wellbeing, the questionnaire should also cover number of changes of clothes/beddings for each member and their quality (age/conditions) to match the local concepts.

Just like in the case of cash crops discussed above, the *number and types of crops grown* are not used in the official analyses yet local people use crop diversification as an indicator of wellbeing status. Since the data is collected, the analysis can use these as unweighted or weighted by production quantities/value of output or cultivated area. Related to crops grown are *natural factors*. While weather is dealt with, soil fertility is not. However, local people consider soil fertility as an important determinant of wellbeing especially when viewed against inputs accessibility. A dummy indicating whether crops like maize are grown without fertilizer on given plots could deal with the missing factor.

Crop harvests in the questionnaire covers *amount of food stocks*. However, the relationship between stocks and wellbeing is not dealt with. On the other hand, local people also consider food stocks when assessing household wellbeing. To incorporate stocks, the analysis can convert stocks into per capita months of food supply or per capita food supply per annum. Alternatively, the proposed food security module can directly request the respondent to estimate food supply months from own stocks.

Quality of life and attitude towards life (agency) are covered in various degrees under subjective wellbeing module. However, the data in this module are not mainstreamed in the poverty profiling that follows. This makes subjective wellbeing assessment secondary to the official assessment which uses consumption expenditure as the measure. For the purposes of policy making, subjective assessment of wellbeing is

equally important because people's assessments are likely to influence their responses to the opportunity structure in general or policy initiatives in particular.

Data on *orphanhood and widowhood* are collected. The analysis extensively deals with orphanhood but scantily with widowhood. A household headed by a widow is covered by female headed household. However, what a widow goes through in wellbeing terms may be different from what a divorcee goes through. Further, the immediate and sometimes permanent impacts on wellbeing of orphanhood and widowhood are stressed in peer assessment. To deal with this, the module on recent shocks or death in the household should specifically trace changes in wellbeing due to loss of spouse or parents over a five year period.

Body and skin appearance is often used in peer assessment. This is possibly in place of 'use or non-use of bathing soap and lotion' because people just see the manifests of use or non-use. Direct observation by the interviewer can deal with this feature directly. It can, however, be dealt with indirectly by including questions on use or non-use of bathing soap and lotion. The downside of the observation method is that data quality would depend on the representativeness of the observed household members. Use and type of soap and lotions used would give an idea of the quality of skin and body care. For a good measure, the two methods can be used simultaneously.

The community questionnaire collects data on *cleanliness/tidiness of the home and its surrounding* through direct observation. However, this does not satisfy people's thinking. Local people seem to relate low priority given to quality of living environment to poverty. To get household level data on this, the direct observation should be transferred from the community to household questionnaire. This can be done under the housing module.

There are factors that are rather difficult to collect. These include the *behaviour of household members* or *attitude to life including belief in luck or bad luck*. These factors are best dealt with third persons because it is difficult to get honest responses from household respondents. Few would be honest enough to say that they are not hard working or fatalistic. The *use of charms* for household prosperity is another difficult-to-collect factor due to negative publicity on charms. While many are free to discuss the issue generally, few would do so specifically. Therefore, these factors are best collected under the confines of peer assessment or other participatory methods.

The *adoption of new varieties of crops and production methods* are factors that are considered important for wellbeing improvement. Yet these are not directly dealt with

in the household questionnaire. The questionnaire covers crops grown but not newly adopted crops. As for production methods, the questionnaire is silent. However, these two can easily be incorporated by finding out whether the household adopted or abandoned new crops or methods of production with reasons, say in the past three or five years. It is likely this question would bring out institutional issues at household level as well. In particular, the role of technical advisors, credit or markets for the household's wellbeing can come out here. Most of these institutional issues are covered under the community questionnaire. However, what is required is an institutional analysis of households' opportunities and constraints.

A household *institutional analysis* is an area that has been neglected in wellbeing analysis in Malawi. Local people, in assessing wellbeing of households rarely mention the role of institutions in improving their opportunity structure. This could be a reflection of the long absence or non-existence of institutions at local level. It could also imply that they don't need governmental and non-governmental organisation, in the form of technical advice and microcredit. It is therefore important to ascertain this by getting an actual account of how the presence/absence of institutional support makes a difference to the household.

9.4.3 Prominent features: official versus peer assessment

The comparisons and discussions done in the previous sub-section provide a comprehensive list of areas that need to be dealt with if the current official wellbeing analysis system is to respond to local voices. However, not every local feature is important. In particular, not every local feature is prominent across the country all the time. To be fair, the comparison should be between official wellbeing correlates and determinants and prominent local features that are determined in studies conducted around the same time. These are presented in Table 9.11 for the comparison.

Clearly there are more mismatches than matches in this list. For example, out of the 30 features only 4 are common to both while 17 factors that are significant under official assessment are absent in peer assessments and 9 prominent features under peer assessment are either insignificant or absent in official assessments. As has been argued before, even when the official and peer assessments have a similar factor it does not mean it is the same in measurement. The implication is that each prominent feature under peer assessment needs to be analysed. Those that were already dealt with in the previous subsection are not discussed here.

Table 9.11: Prominent wellbeing features under official and peer assessment

	Factor	Official	Peers
1	Education status of children	√	√
2	Household head/member get wage income	√	√
3	Type/number/value of livestock	√	√
4	Ownership of durable goods (phone/bike)	√	√
5	Access to amenities (sanitation)	√	X
6	Access to SE services (clinic, markets, etc)	√	X
7	Accessibility of community (location)	√	X
8	Age of household head	√	X
9	Education level of head or adults	√	X
10	Health status of household member	√	X
11	Household landholding size	√	X
12	Household size	√	X
13	Marital status of household head	√	X
14	Maternity services open to mothers	√	X
15	Number of children/Dependency ratio	√	X
16	Ownership of non-farm enterprises	√	X
17	Production of cash crops (tobacco)	√	X
18	Sex of household head (female)	√	X
19	Whether a household owns a dimba plot	√	X
20	Whether member is a child (dummy)	√	X
21	Whether member is a woman (dummy)	√	X
22	Access to inputs/purchase of fertilizer	X	√
23	Access to paid labour	X	√
24	Amount and frequency of food consumed	X	√
25	Amount and quality of beddings/linen	X	√
26	Amount and quality of child clothing	X	√
27	Amount and quality of clothing	X	√
28	Amount of food stocks	X	√
29	Quality of food consumed	X	√
30	Quality of house structure	X	√

Source: Chapters 6 and 7

Education status of children: peer assessment covers three angles; (i) the level/class children achieve (ii) parental support in terms of type/quality of school, food (before and after school) and school supplies (uniform and fees) and (iii) source of finance for school expenses. The official system covers the first angle fully, education expenses only out of the second and does not cover the third angle at all. For education status to reflect wellbeing status of the household while factoring in child's agency and capability, all the angles should be fully incorporated in the official wellbeing analysis system. This can be done in the education module by including questions on availability of food

before and after school, type of school and source of money for the last major education expense (school fees, uniform or supplies).

Employment status of household head/adult members: This is taken care of in the official system. In peer assessment, wage employment is viewed positively but is consigned to poor households. In official assessment, wage employment is also positive but not necessarily consigned to the poor. This is possibly because the wage employment covers both rural and urban households while the peer assessment is based on rural households by design.

Livestock ownership – type, number and value: This is as discussed above.

Ownership of durable assets: Two assets are found to be important in official wellbeing analyses (mobile phone and bicycle). Peer assessments mostly mention bicycles. However, to ensure that the official system recognise assets normally used and owned, the bias against traditional assets implicit in the calculation of user-value of durables should be revisited as proposed above.

Access to inputs (fertilizer): This feature is collected and analysed although it is not statistically significant whether used as a dummy (whether a household applied fertilizer) or scalar variable (inputs costs). Thus this factor is well taken care.

Access to paid labour: This is another factor that is well covered by the official system though it is statistically not significant.

Food stocks and consumption: This is already discussed above.

Quality of clothing, shoes, beddings and linen: This is discussed above.

Quality of housing structure: This has already been discussed above.

This analysis shows that the current system does not need to be overhauled to deal with key local people's concepts of wellbeing. If these aspects are incorporated in data collection and analysis, the resultant wellbeing measure and poverty proxies would be closer to local wellbeing conceptualisation. That implies that if the official wellbeing measure or poverty proxies are used to evaluate the efficiency of community-based targeting, it would lead to reduced levels of 'superficial' targeting errors. This has been the overall objective of the study.

9.5 Summary of the findings, recommendations and implications

The study concerned itself with showing a mismatch between the official version of wellbeing and those of people whose wellbeing is being measured. The literature review showed that the way wellbeing is conceptualised and measured, there is a possibility that even in Malawi what the officials consider as poverty may not necessarily be what people on the ground conceive as poverty. By extension, the reviewed literature showed that households that are locally assessed as poor are evaluated as non-poor by the official measure and those locally assessed as non-poor are poor. The review also checked and confirmed that some differences in assessments emanate from differences in the features implicit in the methods used to measure household wellbeing.

The study then moved to check whether the mismatches can be proven to exist in Malawi. To do that the study adopted a methodology that required replicating the processes officials and local people use to assess household wellbeing and identify poor people. This led to the (i) construction of consumption expenditure aggregates in the three randomly selected villages, representing the official version of wellbeing, and (ii) determination wellbeing status of each household using self and peer assessments, representing local versions of wellbeing. Application of official, self-declared and peer-chosen poverty lines assisted to categorise the households into poor and non-poor households.

The resultant lists of poor people for each measure (official, self and peer assessments) in each village provided inputs for the comparisons. An analysis of wellbeing characteristics under each measure in the three villages provided a glimpse of possible differences at national level. However, analysis of data from nationally representative studies provided comprehensive lists of wellbeing features from the official and local perspectives that were compared. The aim of the latter comparison was to determine areas in the official wellbeing analysis system that can be modified for the sake of making the official version of wellbeing sensitive to local concepts. So far the three research questions have been answered. A summary of the answers are presented hereafter.

9.5.1 Households identified as poor

Regarding the question whether the consumption-expenditure, self-rating and peer assessment identify the same households as poor, the answer is: 'not necessarily'. Using the rankings of households based on the consumption measure and a combination of wealth and pairwise ranking for the peer assessment, the two measures do not match.

Using poverty rates, each of the measures identified different numbers of households as poor. Comparing the lists of the poor households shows that very few households were common in the three measures. In fact, there were more households that were uniquely identified by a measure. Further, those households jointly identified as poor by all measures are not very different those from either identified by two assessments or only one, in terms of per capita consumption levels and other socio-economic characteristics. To cap it, identification errors in all the three villages are very high confirming that each of the measure is unique. The conclusion is that taking one type of assessment as a measure of the other is not practical.

9.5.2 Wellbeing characteristics

Based on the wellbeing characteristics from the three villages, there are more common than unique features for the three measures. The features also show that peers and self assessments have more convergence between them than each with the official measure. This points to the possibility that conceptualisation of wellbeing at household and community level is closer than that of officials with each. Overall, the analysis of features in the three villages does not show major differences among the three measures. Of course, three villages out of thousands can hardly be representative but the few differences may point to possible differences at national level.

A cursory analysis of national level factors shows that a good number of factors are common to all the three methods. In terms of policy implications, this means the common factors can act as the core proxy indicators for wellbeing or poverty. The advantage is that most of these are in the current official wellbeing analysis system. Adding a few modifications would make them even better. A much more strict analysis shows that only four features (out of 30) are common to official and peer assessments. This change shows the problem of scalability of local level features. This fundamentally reveals that, at national level, there are relatively few universality acceptable features from qualitative studies. The differences confirm the thinking that consumption-expenditure barely measures the wellbeing the way local people do. Indeed analysis of each local feature shows that the official wellbeing analysis system does not include some aspects of wellbeing that are considered in local wellbeing assessment.

9.5.3 Appropriateness of the official wellbeing analysis system

Overall, the official wellbeing analysis system takes care of local concepts of wellbeing to an extent. It has been found that the questionnaires used to collect data for wellbeing analysis best covers consumption expenditure aspects, by design. It has also been found

that some features from self-rating and peer assessment are covered in the questionnaires. It has also been found that in some cases data is collected but not analysed appropriately or at all.

There are some features that are not covered in the household questionnaire like stock of durable goods, utensils, clothing, blankets and linen. Institutional analysis is also absent. The questionnaire does not include some qualitative aspects like household member behaviour and attitudes towards life because these are difficult to collect. The analysis misses availability of food, types of livestock owned by household types, impact of widowhood, and assessment of quality of life and subjective wellbeing.

The local aspects that are not very well covered by the official wellbeing system are the likely contributors of the divergences between the official and local measures of wellbeing and poverty. The study has therefore proposed areas that need to be looked into in order to bring the official version of poverty closer to people without necessarily changing its fundamental tenets.

9.5.4 Proposed changes to the official wellbeing analysis system

The study has made sets of proposals for change on a number of aspects of the official wellbeing analysis system in order to make the wellbeing measure and operational definition of poverty sensitive to people's characterisation of wellbeing and poverty. These proposals are premised on the belief that a country's definition and measurement of wellbeing and poverty should be based on what people in that country take them to be. This is even imperative when the people, as is the case in Malawi, are asked to identify the poor among themselves; a situation that requires the officials and people to have same understanding of who is poor or otherwise.

The proposed changes are on the data collection system, construction of wellbeing measure, determination of the poverty line, analysis of the data for wellbeing proxy indicators, and profiling of wellbeing and poverty. These are recapped below.

Construction of the consumption expenditure aggregate

1. Review units used for food consumed, received and purchased to remove possible data 'noise' that may come with the use of inappropriate units
2. Review conversion factors to remove inconsistencies and thereby improve the accuracy of the amounts of food consumed, received and purchased

3. Review the list of durable assets used in the calculation of their use value under the non-food consumption aggregate to ensure that all relevant durable assets from both rural and urban households are included
4. Include housing costs in the non-food consumption aggregate in lieu of housing use-value that is rightly abandoned in Malawi

Determination of the poverty line

1. Revise the method used to determine the minimum calorific value by using the 2004 instead of the 1985 expert recommendations which favours the use of individual instead of country level activity levels to determine food requirements.
2. Revise the method used to determine the cost for valuing the minimum calories by using the median cost for the bottom five deciles instead of the 5th and 6th deciles
3. Introduce a 'true' basic needs poverty line by conducting a study that determines a consensual set of goods and services considered basic for living in Malawi using the Breadline Britain Methodology.

Potential poverty proxy indicators that have to be included and tested

1. Per capita stock of clothes, footwear, blankets and linen
2. Quality of clothes, footwear, blankets and linen
3. Quality of housing and surroundings
4. Number of lost days by adults due to illness/injury
5. Size of an enterprise (based on either capital requirements or turnover or profits)
6. Per capita months of maize supply or per capita maize stocks per annum
7. Types of livestock owned in recognition of the differences in ownership of sets of livestock by wellbeing groups
8. Household member skills and capabilities
9. Number of crops (cash crops separately) weighted by either area under cultivation or value of their harvests or sales (cash crops)
10. Types of food consumed by meal and number of meals taken per day
11. Self-assessed soil fertility
12. Various kinds of institutional support

Profiling of wellbeing and poverty

1. Include subjective assessment of wellbeing as part of the Malawi poverty profile since the household questionnaire has a fully fledged module on this.
2. Where possible, the profile should include community groups' assessment of wellbeing of communities and, if possible, households.

Use of proxy indicators for identifying the poor

1. If there is need to narrow down the list of wellbeing/poverty indicators, priority should be given to the four that were found to be common to all the three assessments. If more are required the 16 factors found under the non-binding analysis should be considered second.
2. The difference between prominent factors at national level and community level (three villages) imply that the use of national level wellbeing/poverty proxy indicators needs to be done with caution. The best is to first ground truth each because different communities may value them differently despite being common. This is an issue of weighting.

Data collection

1. Introduce a direct observation module in the household questionnaire to include subjective assessment of the condition of the main dwelling unit, and cleanliness of household members' bodies and clothes as well as the surroundings
2. Introduce a module on clothing, footwear and beddings to get more details on stocks and conditions for each household member in the household; and also frequency of wash/baths, type of detergents preferred and used, and type of soap and lotion preferred and used
3. Introduce a food consumption and security module to collect data on typical foods eaten by meal, actual food eaten by meal, amount of food stocks and sources of food when stocks run out
4. Modify the time use and labour module to include skills and capabilities of each household member and their recent use
5. Modify the education module to include type of school, type of food given before, in-school and after school, and the source of finance for various education expenses
6. Modify the agriculture production modules to include assessment of soil fertility
7. Introduce an institutional analysis module in the household questionnaire to get views on the potential and actual impact of institutions on the wellbeing of the household

Special study

1. A Breadline Britain type of study (Gordon, et al., 2000) to establish goods and services considered basic for living a decent life, normal meals in a day, type of foods for each meal, typical durable goods in a household, and typical type of houses including type of materials for the roof, walls, windows, and floor.

9.5.5 Implications of the study

One of the study's viewpoints is that all the three types of wellbeing assessment are equal. The study started off with the view that what a household respondent (mostly head or spouse) says to an enumerator administering a questionnaire is as good as what the respondent says when subjectively (directly) evaluating the household's wellbeing status. This thinking is also extended to a group of individuals representing the community. This study has shown that each of the types has inherent challenges regardless of the quality of enumerators and facilitators. In particular, it has been shown that the construction of the wellbeing measure in Malawi leaves some room for improvement. It has also shown that peers assessment can easily go wrong if the group or some of the members choose to distort facts. Thus there is no method that is better than the other as that is dependent on many factors some of which are outside the control of the researcher.

The study avoided focussing on the differences amongst the three sampled villages to ensure that the objectives of the study are achieved. However, it has come clear that wellbeing and poverty trajectories of households, regardless of differences in local definitions and characterisation of wellbeing or poverty, are dictated by location. The study has shown village differences are too important to ignore in poverty analysis. By implication, any design of local level poverty reduction or alleviation initiative should bear this in mind.

The study is based on the hypothesis that some targeting errors associated with projects that use community based targeting and self-selection are superficial. Indeed, the analysis of the primary data supports this hypothesis. Although not pursued in detail, the data has also shown that some of the errors could indeed be due to deliberate misclassification of households even when the criteria are clear or developed by the identifiers themselves. Since no analysis was done on these deliberate errors, all that can be said at this juncture is that dealing with the superficial errors is but one side of the story. The assumed information advantage at community level can be misused if there

are no mechanisms to verify whether or not the superior knowledge is indeed used during the identification. Thus community based targeting requires some monitoring.

The goal of the study was to improve the measurement of wellbeing for the benefit of community based targeting. Judging from the areas that have been found to be missing in the current system of wellbeing analysis, it is not easy to have them all incorporated. While others can easily be incorporated, there are many more that require further work. This study has highlighted all such areas. However, the study does not provide concrete statistics on how much improvement each change or all changes can bring to the measurement of wellbeing and poverty. It also does not discuss the practicality of bringing the required changes, including the financial implications.

Such gray areas are the study's areas for further study. Chief among them is a study on consensual poverty and role of institutions in determining wellbeing status of households. The consensual poverty analysis would not only supplement the subjective wellbeing assessment well but also improve the definition of the needs basket in Malawi. The institutional analysis study would provide material for civic education on demand for and supply of appropriate and relevant support.

9.6 Contribution to knowledge

This study has made a modest contribution to the understanding of wellbeing measurement in a rural setting. It has managed to modify techniques used elsewhere and apply them to Malawi and three rural villages. In particular the study has the following contributions.

Application of overlapping dimensions adapted from Bradshaw and Finch (2003)

Factors associated with consumption-expenditure measure are compared with those from self-rating and peer assessment to determine those that overlap as best candidates for developing proxy indicators.

Comparative analysis of the three methods

There has been no study that has compared the three methods on the same households at the same time. Reviewed studies have compared consumption/income measure with either self-rating or peer assessment. The comparison of consumption/income measure with self-rating traditionally uses one questionnaire to collect the consumption/income and subjective assessment of wellbeing (called self assessment or rating in this study). The comparison between consumption/income and community assessment (called peer-assessment) requires an administration of a questionnaire on households that were

assessed by the community. In this study, the two approaches were pooled together with an added question in the module on subjective wellbeing assessment to get reasons for the assessment. This approach provides 'objective' correlates and determinants for the consumption-expenditure measure and self-rating and 'subjective' wellbeing features for self-rating and peer assessment.

Bringing local-specific features to the national level

Statistical analysis makes it easy to identify factors that are associated with wellbeing or poverty from a purpose-built survey questionnaire. The same is not true for factors from group discussions using wellbeing analysis and pairwise ranking. This study, using content analysis of country representative group discussions, gleaned factors that are not only consistent for a wellbeing category but also consistent across space. That process brought the FGD-specific features to national level where they were compared with the national level poverty correlates and determinants. Although no 'science' was used to come up with the national level features from focus group discussions, the process was sound enough for comfortable comparison.

Use of three independent populations

The comparisons so far reviewed use one sample (either nationally representative sample or one community). This study was done on three randomly selected communities to ensure that findings are not subject to a community's peculiarity. The three sites offer a chance to check whether the research questions can have the same answer in all the three sites. It has been a bonus that the three communities are different on a number of important aspects, especially livelihoods strategies.

Use of census instead of sampling

This study, unlike previous studies, opted to conduct a village census instead of a sample to ensure that all the three methods of identifying the poor were applied to the same households. With this method, there is no question of representativeness of the households visited since the unit for community-based targeting is a village.

Complete ranking of households

Consumption expenditure measure enables the complete ranking of households from poorest to richest. Traditional wealth analysis goes as far as determining proportions of different wellbeing categories in a community. That cannot be used to rank households from poorest to richest. Pairwise ranking is traditionally used to rank problems or

projects. This study, borrowed the use of a ten-step ladder, to further breakdown households into ten categories and borrowed pairwise ranking to sort households on each ladder step. Thus by combining wellbeing analysis (placing households in categories and later ten steps) and pairwise ranking (sorting by step), households were ranked from poorest (the lowest household on step 1) to the richest (the highest placed household on the highest community-designated step). This ranking was then compared with the consumption-expenditure ranking using statistical methods to check their correlation. This has never been done before.

Thus apart from answering the research questions, this thesis has made some contributions to knowledge, especially for Malawi wellbeing assessment.

Appendices

Appendix 1: Data collection tools

A1.1 Modifications made to IHS2 for the survey of the three villages

A PDF format of the IHS2 household questionnaire is available on demand from the National Statistical Office. It is also available online at www.nso.malawi.net at least by 30th September, 2011. The modifications made on IHS2 were meant to concentrate on parts that are relevant for the construction of the consumption-expenditure aggregate and variables for the poverty correlates and wellbeing determinants models. These are outlined in the table below.

Module	Label	Changes made
A-1	Household identification	No change
A-2	Survey staff details	Maintained only A12, A13 and A14
B	Household roster	Deleted B08-B11 because household head provided info
C	Education	Deleted C04-07. Did not differentiate languages Deleted C21-C29. Did not want schooling details
D	Health	Deleted D02-D03 because household head provided info Deleted D06 – did not need to know who diagnosed illness Deleted D21-38 – did not need details beyond morbidity
E	Time use and Labour	No change
F	Security and Safety	Deleted – not directly important
G	Housing	No change
H	Food consumption past 3 days	No change
I	Food consumption past 1 week	No change
J	Non-food expenditures past 1 week & 1 month	No change
K	Non-food expenditures past 3 months	No change
L	Non-food expenditures past 12 months	No change
M	Durable goods	No change
N	Agriculture - General	Deleted N02 – not applicable Deleted N08-N30 – did not need the details
O	Agriculture – Rain fed cultivation	Deleted O04 – did not need decision maker Deleted O10 – did not need details on land market
P	Agriculture – Rain fed crop sales	No change
Q	Agriculture – Tobacco	Deleted P02-P08 – details on tobacco growing

		unnecessary
R	Agriculture – Dry season (Dimba) cultivation	Deleted R01 – not applicable Deleted R03-R4 – because ownership not prevalent Deleted R09-R12 - did not need details on land market
S	Agriculture – Dry season (Dimba) crop sales	No change
T	Agriculture – Tree crop production & sales	No change
U	Agriculture – Livestock & livestock sales	No change
V	Household enterprises	No change
W	Other income	No change
X	Gifts given and received	No change
Y	Social safety nets	No change
Z	Credit	No change
AA	Subjective Assessment of well-being	Modified AA01 – from food consumption adequacy to wellbeing category (poor or rich or in between) Replaced AA02 with a question that request respondent to justify the selected category in AA01 Deleted adequacy questions (AA03-AA04) because there would not be used Modified AA05 – replaced 6-step ladder with a 10-step ladder; requested for a poverty step; retained AA05 Deleted AA06-AA07 – no need to compare with neighbours and friends
AB	Recent Shocks to household welfare	Deleted – not needed
AC	Deaths in household	Deleted – not needed
AD	Child Anthropometry	Deleted – not needed

A1.2 FGD Interview Guide for wellbeing and pairwise ranking

Introduction

Our meeting will take most of the day today. We appreciate very much your being with us. We had indicated to the chief that the meeting would take some time and that only those who feel can stand that should be requested to come. However, this is not a prison. In case, you feel that you are unable to be with us the whole day, don't feel pressed to just stay on, you are free to go.

In our discussions, we will be discussing wellbeing, poverty, and how these affect households. We will be mentioning names of households and placing them on position. Others may find discussing their households while they are here uncomfortable. If you feel that you don't have to be here while we are discussing your household, you will be excused for that time.

We know we will take some time discussing this. We plan to have a break, then lunch together and then another break in the afternoon. We have asked some people to help us with the cooking instead of asking the discussants here to do it. When food is ready we will be informed.

The discussion forms part of a study on how to match community understanding of wellbeing and poverty with those of officials in Government, NGOs and donors who sometimes help the poor in communities. It has not been commissioned by Government. However, it is being conducted by a member of the University of Malawi who works with Government, NGOs and donors on promoting pro-poor initiatives. It is hoped that the results of this study will influence how these stakeholders take the views of people on the ground regarding their experience in poverty.

Our discussion is divided into several parts. We will start with categorising the households in this village into welfare groups from the poorest to the richest and giving characteristics of each group. Following the characterisation, we will introduce a ten-step ladder on which we will superimpose the welfare groups. Once we agree, we will place households in this village on the ten steps of ladder. We will be asked to give reasons why we think a household should be placed on a particular step. After households are placed on the steps, we will sort the households on each step from poorest to the richest on that ladder. By doing that we would have sorting the households from the poorest to the richest.

Part I: Welfare groups in the community and their categorisation

- We know in every society that there are differences in well being among people. We are visiting three communities in this study to learn about these differences. We especially hope to learn from you how these differences are used when identifying the poor in the village for transfers like cash transfers, free inputs, subsidies.
- Tell me about people at the bottom and the top of your community. How would you describe the people living at the bottom – the poorest and worst-off? How can you tell that a person is in this category? How do they live? How would you describe people living at the top – the richest and best off? How do they live?
- Let's move on. What about people who are just above the category of people who are at the bottom? How would you describe people in this category?
- Now, let's move up from that category. [Keep inquiring about additional categories until the best off is reached. For each of the categories identified:] How would people living in this category be described?
- Let us now recap. We have identified [X] categories of people who live in this village. Is this so? We will need the characteristics of these [X] categories as we discuss individual households. Can we move to the second part?

Part II: Introducing a ten-step ladder of life and superimposing welfare categories

- Imagine again a ten step wellbeing ladder on which the first step stands the poorest households you know. Those could be in the village or elsewhere. Consider the [X] categories we have just defined. Which steps does the poorest category occupy?
- Which steps does the richest category occupy?
- What about the group(s) in the middle?

Part III: Placing a community poverty line

Now we have [X] categories placed on a ten-step ladder of life. Sometimes, it may be required just to have two groups; one poor and the other non-poor. On which step would you say is the step where the first group of the non-poor are found?

Part IV: Placing households on the wellbeing ladder steps

Call out the name of each household on the list. Ask the focus group what step the household is at today and why.

[To reduce the potential for recording errors or miscommunication, please record each response in a matrix that the entire focus group can see and verify. The facilitator should remind the discussants the characteristics of the welfare categories superimposed on the ladder of life, especially at the beginning and occasionally during the sorting exercise. This is a very important step. Facilitator should ensure that detailed notes are taken and that the recorder is picking the voices]

Part V: Ranking households by step on the ladder

We have now managed to place the households on the ten steps of the ladder. What we need to do next is to sort households on each step. We can start from any step. To make it easier let us start from the top most step in the community.

Call names of households on step according to the record and then perform pair wise wealth ranking to rank households from poorest to richest on each step until all steps with households are dealt with.

[Although emphasis is not on distinguishing features between households in this pair wise ranking, take down all distinguishing factors given by the group]

Concluding Note

[Summarise the work of the day: Groups, key characteristics and poverty rate]

[Open for comments and questions]

[Thank the members of the FGD for their participation]

Appendix 2: Data analysis notes from the 2007 analysis

This appendix reproduces Annex 1B found in the Appendices of the Malawi Poverty and Vulnerability Assessment (GoM & World Bank, 2007b). It also reproduces the notes from the team (Ms Beegle) on construction of the housing use value. These are modified to reflect only the relevant parts that have been used in the current analysis.

A2.1 Note on Construction of consumption expenditure Aggregate

Introduction

The Malawi 2004-2005 Integrated Household Survey (IHS2) was a comprehensive socio-economic survey of the living standards of households in Malawi. The National Statistics Office administered the IHS2 household questionnaire to 11,280 households from March 2004-April 2005. The survey was designed so that information gathered could be used for, among other things, an assessment of the incidence of poverty in the population at the district level and above.

Poverty is that condition in which basic needs of a household (or individual) are not met. Clearly it is a multidimensional concept. Nevertheless, for purposes of identifying the poor using international standards, a monetary measure is developed as a welfare indicator for each household. Using this monetary measure, households can be ranked from richest to poorest. By developing a poverty line (a monetary threshold, below which a household is labelled as poor), households can be further described as poor or non-poor. For more nuanced classification, multiple poverty lines can be developed, for example, to identify the ultra poor.

This note describes the construction of this welfare indicator, referred to as the consumption expenditure aggregate, and the development of poverty lines which can be applied to the welfare indicator to label households as poor. The following sections describe how the aggregate was constructed.

Consumption expenditure aggregate

Broadly speaking, the consumption expenditures fall into four categories: (1) food; (2) non-food, non-consumer durables; (3) consumer durable goods; and (4) actual or self-estimated rental cost of housing. In the following sections there is more information on the calculation of these components of the consumption expenditures. Some general issues to note are.

Outlier values: Outliers are identified based on a combination of graphical review and standard deviations from means for each subcomponent. Generally, outlier values are replaced by median values based on households in the enumeration area (or by median values at the district/national level if less than 7 observations at the lower level). Lists of cut off points used to establish outliers are in Appendix 2d.

Annualization: Recall periods for expenditure subcomponents vary, ranging from past 7 days to 12 months. For uniformity all values are annualized.

Real values: Since the data were collected in the three villages were collected within a month and within a radius of 200 km, there is no need to adjust prices to take into account spatial and temporal price differences. In some cases where IHS2 cost or value data is used, they are brought to 2010 using the growth in the rural CPI between March 2004 and July 2010.

Food consumption aggregate

Food consumption is reported at the household level in Sections H and I of the IHS2 questionnaire. Section H has food consumption over the last 3 days for a limited number of products which were self-produced (not purchased). Section I has food consumed over the last 7 days for a much larger range of products. Section H, by definition, is a subset of Section I.

For computing food consumption only Section I is included. Section I collects information on 80 different food categories. In addition interviewers could include “other” products consumed that were not specified in the list. Products reported under “other” were also included and given a value in the expenditure aggregate.

Section I has information on food consumption from three different sources: (1) purchased food; (2) consumption from own-production; and (3) food received as gifts or free from some other sources. In addition, drinking water expenditures from Section G are later added to the beverage sub-aggregate.

Unit prices and conversion of units to grams: For purchased food, both quantity and expenditure in Malawi Kwacha (MK) were collected. For consumption of food from own-production and food from gifts, only quantities are recorded. In order to compute the MK value for own-production and food from gifts, a unit price for each purchased product was calculated. These unit prices were then multiplied by the quantities reported from own-production and food from gifts. In general, the unit prices are computed as the median product price over all households in that geographical area at

that time of the year. If less than seven households in that area and time purchased a particular product, a larger geographical area was used. The use of a minimum seven households to calculate the unit-price guards against high volatility in unit prices over different households.

In the questionnaire, quantities can be reported in 20 different units of measurement. In order to calculate the unit prices and to multiply the quantities with the unit prices, the different units of measurements were all converted into grams. Appendix 2c gives a full list of the conversion factors.

Non-food consumer durable goods and services

Expenditure on non-food, non-consumer durable goods and services are collected in several sections of the IHS2 household questionnaire. Relevant sections of the questionnaire include sections J, K, L, and G (utilities). The recall period varies across items, depending on the general frequency of purchase. More frequently purchased items have shorter recall periods, while less frequent purchases have long recall periods. The recall periods are last 7 days, last month, last 3 months, and last 12 months. All values are annualized. Education expenditures were reported either by type of expenditure, for example, tuition, books, uniforms, etc., or as an overall total. The total expenditure for education was calculated as the sum of all the sub-categories if they were reported, or as the overall total, whichever is greatest.

Consumer durable goods

Section M of the IHS2 questionnaire collects information on household ownership of 36 durable consumer goods. Seventeen of the items were deemed consumer durables and are included in the consumption expenditure aggregate. The other durable consumer goods are predominately related to income generation or enable higher consumption and, as such, are considered production durables. Therefore, these were excluded. Of course, there are some goods for which it is not clear how to classify them. The assignments used were based on best practices as well as the assignments used in the IHS1 analysis.

As durable consumer goods last for several years, and because it is clearly not the purchase itself of durables that is the relevant component of welfare, they require special treatment when calculating total expenditure. It is the use of a durable good that contributes to welfare, but since the use is rarely observed directly the yearly use value is estimated in the following way:

- 1) Assuming that each product is uniformly distributed, expected lifetime for each product is calculated as twice the mean age of each product.
- 2) Remaining lifetime is calculated as current age minus expected lifetime. If current age of product exceeds expected lifetime, remaining lifetime is replaced by two years. The two years were arbitrarily chosen, however other expenditure aggregates have used this value in the past. The yearly use value of each product is then calculated as current value divided by remaining lifetime.

Table A2.1 shows the estimated lifetime used for IHS2 computation of user-values. It also shows the values used in IHS1 (1997/98) analysis for the subset of durables included in IHS1 with number of observations in parenthesis.

Table A2.1: Estimated Lifetime for Consumer Durables in IHS1 and IHS2

Section M IHS2 Item Code	Item	Expected Lifetime (years)	
		IHS2 (2004)	IHS1 (1998)
501	Mortar/pestle/pounding mill	14.5 (5641)	16.3 (1457)
502	Bed	15.0 (3625)	17.0 (2498)
503	Table	13.8 (4030)	16.0 (2488)
504	Chair	12.3 (5060)	13.8 (3202)
505	Fan	7.8 (262)	
506	Air conditioner	8.8 (28)	8.1 (153)*
507	Radio (wireless)	6.8 (6184)	4.1 (1199)
508	Tape or CD player, HiFi	8.4 (1851)	
509	Television & VCR	6.9 (439)	7.5 (131)
510	Sewing machine	22.6 (326)	
511	Kerosene/paraffin stove	10.4 (241)	
512	Electric or gas stove, hot plate	7.6 (287)	4.8 (858)
513	Refrigerator	10.1 (227)	9.6 (238)
514	Washing machine	10.7 (19)	19.7 (14)
515	Bicycle	12.2 (4082)	9.7 (2156)
516	Motorcycle/scooter	14.0 (41)	13.3 (41)
517	Car/motor vehicle	12.9 (136)	8.1 (124)

Note: Numbers of observations are in parentheses. Some of the item labels were slightly different across the two surveys. For example, fan and air conditioner were combined into one category in IHS1

Poverty line

The total poverty line has two principal components; a food component and a non-food component. The food poverty line is the amount of expenditures below which a person is unable to purchase enough food to meet caloric requirements, based on a set basket of food. It is also known as the ultra poor poverty line.

Food Poverty Line: The food poverty line is derived by estimating the cost of buying a sufficient amount of calories to meet a recommended daily calorie requirement. It is constructed in the following steps:

- 1) Set the daily calorie requirement. This is done using the WHO recommended calorie requirements for moderate activity levels as described in Table A2.2. These calorie requirements were applied to the IHS2 sample to yield a median calorie requirement, which was 2,400 calories per day per person.

Table A2.2: Calorie Requirements

Age	Calorie requirements
<1	820
1-2	1150
2-3	1350
3-5	1550
5-7	1800
7-10	1950
10-12	2075
12-14	2250
14-16	2400
16-18	2500
18+	2464

Source: Adapted from the World Health Organization (1985) "Energy and Protein Requirements." WHO Technical Report Series 724. Geneva: World Health Organization.

- 2) Identify cost per calorie for a reference population. A set level of calories can be consumed through many different combinations of food. In order to price calories, a reference population needs to be identified. Ideally, the reference population would be households who are not extremely poor (thus resorting to eating extremely cheap foods) nor wealthy (consuming very expensive calories). Table A2.3 presents the mean and median cost per calorie by decile.

Table A2.3: MK Cost per 1000 Calories by Decile

Decile	Mean	Median
1	9.02	8.67
2	10.18	9.61
3	10.97	10.36
4	11.65	10.83
5	12.21	11.57
6	13.17	12.16
7	14.35	13.22
8	15.49	14.44
9	17.20	15.64
10	23.86	21.13

The reference population was chosen to be the population in the 5th and 6th deciles of the consumption aggregate distribution. In fact, these are households that are close to/near the poverty line itself (as seen by the poverty rate which is described below. The cost per calorie applied is 11.48 MK per 1000 calories.

3) Calculate the food poverty line. The food poverty line is calculated as the price per calorie multiplied (0.01148 MK) by the recommended per capita daily calorie requirement (2,400). The food poverty line is 10,029 MK per person per year, or 27.5 MK per person per day

The food poverty line is also the Ultra Poverty Line. The ultra poor are those households whose total per capita expenditure levels are below the food poverty line.

Non-Food Poverty Line: Identifying basic needs non-food expenditures is more difficult as there is no concept like calories which can be applied. The non-food component of the total poverty line is based on the non-food consumption of those households whose food consumption is close to the food poverty line. The non-food component is calculated as the weighted average of non-food expenditure for those close to the food poverty line. The average expenditure is kernel weighted so that those that are very close to the food poverty line are given most weight and those further away are given less weight. Households with food expenditure per capita that was five percent below or above the food poverty line was included in the kernel weighted average. The non-food component of that total poverty line is 6,136 MK per person per year, or 16.8 MK per person per day.

Poverty Line: The total poverty line is simply the sum of the food and non-food poverty lines described above. The poverty line is 16,165MK per person per year, or 44.3 MK per person per day. Once the poverty line is established, all households can be categorized as poor or non-poor depending on whether their per capita expenditure (their welfare indicator adjusted for household size) is below or above the poverty line. The poverty headcount, then, can be computed, indicating the proportion of individuals living in poverty. The poverty rate for the population of Malawi is 52.4%. This is the proportion of the population whose household per capita consumption is below 16,165MK per year.

A2.2 A note on housing and imputed rent

Summary

In most developing countries including Malawi, a small proportion of households explicitly pay for their dwelling with rent. The thin rental markets make it difficult to assess a value of owner-occupied dwellings. There are three ways to consider housing valuation for home-owners in the consumption aggregate: use self-reported estimated rents, use imputed rents based on sample of renters, or exclude from the consumption aggregate.

It should be noted that there is no consistency on whether and how housing valuation should be included in a consumption aggregate measure among countries in the region. The approaches that have been used by countries close to Malawi have been diverse. For example, Ethiopia, Kenya and Tanzania have excluded housing valuation; Mozambique have included actual rents and self-reported estimates; while Uganda and Zambia have included actual rental values estimated from regression models of actual renters.

The key findings from the analyses undertaken in this note are:

- The lack of reliability of the estimated rental values suggests that the values should not be used for housing valuation or to extrapolate rental values for households with missing rental values.
- The small number of households renting in rural areas, combined with the notable differences in the dwelling characteristics of rented and owned houses in rural areas, suggests that the sample of renting households is too small to impute rental values for owned dwellings from actual rental values.
- Given the above conclusions, excluding housing valuation from the consumption aggregate should be given serious consideration.

Introduction

Consumption aggregates are designed to estimate the total value of goods and services consumed by members of the household. For many items, this is fairly straightforward,

for example, valuing the amount of food consumed in the past one week. For other areas, where the item “consumed” is a durable good or owner-occupied housing, this valuation is much more complicated. This note pertains to the issue of valuing the “consumption” of housing in Malawi. In the case of Malawi, where the vast majority of housing is owner-occupied, this issue becomes much more complicated. In areas where rental markets are thin (or non-existent, as in some rural areas), there is doubt as to whether the concept of renting (and hence estimated rental values) is understood by households. Most households in Malawi are either owners of their dwelling or otherwise do not pay rent. Overall, 91 percent of households in Malawi pay nothing for their dwelling. In rural areas, this figure is 97 percent.

This note evaluates the options with respect to valuing housing consumption for Malawi. The options available are:

1. Include the valuation of housing in the consumption aggregate, by one of the following methods:
 - a. Use actual rent and self-reported estimated rent for dwelling owners. For missing values of estimated rent (108 households), use regression estimates to predict estimated rent.
 - b. Use actual rent and imputed rental values for owner-occupied dwellings. The imputed values would be predicted based on regressions of actual rent values reported by renters.
2. Exclude the valuation of housing consumption from the consumption aggregate

In order to assess these options, this note evaluates several features of the data. It reviews the data available, including the housing characteristics of the renters and homeowners in rural and urban areas. It then reviews the correlates of rental values (actual and estimated). As an extension, the exercise tests whether the estimated rental values provided by non-renters were close to the predicted values based on actual rents paid by households living in houses of similar characteristics and in the same location. Based on the results from this analysis, a set of key findings are highlighted in the conclusions.

Data Available

In IHS2, information on housing was collected Module G: Housing. The main parts that were used for this exercise were questions on estimated rental value (G03) and actual rent paid (G04). Other variables that were also used included housing characteristics. In

addition, using the information on district and tradition authority, two dummy variables, regional and rural or urban, were also created. The next section gives a brief description of the main variables used in the regression models.

G03 Estimated rent values: For households who reside in owner-occupied dwellings (or those residing in free housing that is not technically owned by the household)⁶⁶, the household head was asked to estimate the value of rent for that dwelling.

G04 Actual rent paid: For households that paid rent, the household head provided information on the actual rent values they were paying.

Overall, 9 percent of households were paying rent for their housing (this corresponds to 1,068 households, unweighted).⁶⁷ There is a large difference between the prevalence of renting across urban and rural areas. Fifty percent of urban households were renting (720 out of 1,403 households, unweighted) compared to 3.3 percent of rural households (348 out of 9,667 households, unweighted).

Descriptive Statistics

Before moving to multivariate analysis, we first present descriptive statistics on housing characteristics for renters and non-renters. The variables included the following: roofing material (G07), type of roofing material (G09), floor material (G10), number of rooms occupied (G11), access to electricity (G20), main source of drinking water (G35) and type of toilet facility (G36). Since urban and rural differences are expected to be very salient, households are divided into four categories: urban and rural by renter and non-renter status.

The descriptive statistics show that there were significant differences between dwellings in urban and rural areas, and between rented and owned dwellings. Most of the houses in urban areas, both rented and owned, were constructed with better quality materials such as permanent materials, iron sheets, and smooth cement floors as compared to dwellings in rural areas. However, even so, there was also marked differences *within* the urban setting between those that were rented and those that were owned. Most of the rented dwellings in urban areas were of relatively better quality than the owned dwellings. The descriptive statistics also highlighted that in rural areas, the characteristics of rented houses were significantly different from owned houses. Renters in rural areas

⁶⁶ We use the term “owner-occupied” to refer to households that are not renting their dwelling. The majority of these households are, in fact, owner-occupied but not all are. In the IHS2 sample of *non-renting* households, 89 % were owners (or in the process of purchasing), 3.8 % live in employer provided housing, 7 % live in free, authorized housing, and 0.2 % are in free, unauthorized housing.

⁶⁷ All statistics are weighted using the preliminary household weights.

reside in dwellings of higher quality relative to home owners, as do their urban counterparts.

The differences in the characteristics of rented and owned dwellings may complicate the ability to impute rental values for owners from the sample of renters. This is because there may not be a sufficient number of comparable rented houses from which to estimate a model of rental values. This will be particularly problematic for rural areas. For example, in rural areas, there is a sample of 348 households who rent. Only about one-third of these dwellings are constructed of smoothed mud. However, the majority of owned dwellings in rural areas are constructed of smoothed mud. Thus, there are only approximately 100 rural renting households nationwide with which to estimate rental values for the sample of approximately 9300 rural home-owning households.

To understand the magnitude of the differences between characteristics of houses in different locations, houses were ranked according to the quality and facilities. A summary of the ranking of the 4 regions for each of the dwelling characteristics is presented in Table A2.4 below. Each housing characteristic is ranked from 1 to 4 with 1 indicated the area with the highest level in terms of quality of that characteristics, and 4 the lowest/poorest.

Table A2.4: Ranking of the Quality of Building Materials and Facilities

Variable	Urban		Rural	
	<i>Rented</i>	<i>Owned</i>	<i>Rented</i>	<i>Owned</i>
Type of construction material	2	3	1	4
Roofing material	1	3	2	4
Floor material	1	3	2	4
Access to electricity	1	2	3	4
Source of drinking water	1	2	3	4
Type of toilet facility	2	1	3	4

Note: 1 indicates the best/highest score/quality and 4 is the lowest/poorest score/quality for each indicator among the four types of the households (urban renter, urban owner, rural renter, and rural owner). See Appendix 1 for the underlying statistics for each of these indicators of housing quality

The results of the ranking supports earlier findings that rented urban houses were better than urban owned, rural rented and rural owned houses. The rented urban houses scored higher than the rest in roofing material, floor and access to facilities such as electricity and water. The underlying statistics in Table A2.4 suggest minimum differences between urban owned and rural rented houses. The rural rented houses were better than the rest of the houses in the type of construction material while urban

owned had superior toilet facilities. On the other hand, rural owned houses ranked the worst in all the categories.

Using housing valuation based on actual rent for renters and self-reported estimated rent for dwelling owners, we can evaluate the share in total consumption and correlation of housing to total consumption. Housing valuation as a share of total household consumption ranges from 11% to 6% (Table A2.5). Interestingly, the relationship is somewhat U-shaped, implying larger shares of housing in total consumption for the richest and poorest households, relative to households in the middle of the distribution.

Housing valuation is highly correlated with total consumption. The correlation coefficient between total consumption and housing valuation is 0.73. For most of the 4 groups (urban/rural, renters/non-renters), the correlations are similar: renting rural households 0.68, non-renting rural households 0.68, and renting urban households 0.64. For urban non-renters, the correlation is much higher, 0.88

Table A2.5: Housing as a Share of Total Consumption

Consumption Decile	Housing as a share of total consumption
1	11.1%
2	9.1%
3	8.1%
4	8.2%
5	7.2%
6	6.2%
7	6.0%
8	6.6%
9	5.9%
10	7.8%

Note: Housing valuation is based on actual rent for renters and self-reported estimated rent for dwelling owners. Total Consumption aggregate is based on preliminary version

Results of the regression models

In order to evaluate the self-reported estimated rental value of owner-occupied dwellings, this section imputes rental value using regression analysis. In the following section, the imputed rent values from the regressions will then be compared with the estimated rent values reported by households that do not pay rent.

Six regression models were estimated. Three were estimated on logged estimated rent paid by households in owner-occupied dwellings (all and by urban/rural). Three were estimated on logged actual rent values reported by renting households (all and by urban/rural). Table A2.6 presents the descriptive statistics of the variables for the six models.

Table A2.6: Housing Characteristics

Housing Characteristics	Urban			Rural		
	All	Rented	Owned	All	Rented	Owned
G07. (Type of Construction Material (%)						
1. Permanent	42.6	47.1	37.9	12.1	53.3	10.6
2. Semi-Permanent	37.9	44.0	31.5	16.0	21.6	15.8
3. Traditional	19.5	8.9	30.6	71.9	25.2	73.6
G09. Roofing Material (%)						
1. Grass/Plastic Sheeting	23.6	12.0	35.8	81.5	32.9	83.2
2. Iron sheets/clay tiles/concrete	76.4	88.0	65.2	18.5	67.1	16.8
G10. Floor Material (%)						
1. Smoothed Mud /Sand	35.2	23.2	47.7	86.7	39.0	88.4
2. Wood/tile	2.4	1.8	3.1	0.0	0.0	0.0
3. Smooth Cement	62.8	75.0	49.2	13.3	61.0	11.6
G11. Number of Separate Rooms Occupied (Mean)	2.5	2.1	2.8	2.5	2.3	2.5
G20. Has Access to Electricity (%)	33.0	36.8	29.0	2.0	15.4	1.5
G30. Main Source of Drinking Water (%)						
1. Piped in house	12.6	11.9	13.4	0.8	2.7	0.7
2. Piped outside/communal pipe	64.4	79.5	48.6	11.9	31.8	11.2
3. Pump/protected spring	10.9	4.7	17.3	51.5	52.5	51.5
4. Unprotected water source	12.1	3.9	20.7	35.8	13.0	36.6
G36. Type of Toilet Facility (%)						
1. Flush toilet	14.0	12.4	15.7	1.2	6.0	1.1
2. Pit Latrine	83.0	87.2	78.7	79.8	91.4	79.4
3. None	3.0	0.5	5.6	19.0	2.6	19.5
Number of Observations	1,403	709	694	9,667	348	9,319

Note: Statistics are weighted using preliminary household weights. Total sample in IHS2 consists of 11,280 households. This table contains 11,070 households: 108 households missing actual or estimated rent and 101 households missing one or more of the dwelling characteristics in this table

The logged dependent variables were regressed on the various house and geographic characteristics noted above (type of structure, type of roofing material, type of floor material, number of rooms occupied, access to electricity, main source of drinking water, type of toilet facility). Region dummy variables were also included. The results of the models are Table A2.7.

Table A2.7: Results of the Regression Models

Model --> Characteristic	Estimated Rent			Actual Rent		
	1	2	3	4	5	6
	All	Urban	Rural	All	Urban	Rural
Semi-permanent	-0.18	-0.372	-0.121	-0.12	-0.095	-0.194
	(4.56)**	(4.45)**	(2.71)**	(2.62)**	(1.97)*	-1.7
Traditional	-0.385	-0.339	-0.341	-0.208	-0.165	-0.336
	(8.44)**	(2.46)*	(6.76)**	(2.28)*	-1.35	(2.04)*
Iron sheets/tiles	0.382	0.351	0.404	0.169	0.27	0.05
	(11.33)**	(3.04)**	(11.33)**	(2.40)*	(2.83)**	-0.44
Wood/tiles	1.287	0.947	0.19	0.046	-0.003	
	(7.35)**	(4.71)**	-0.42	-0.27	-0.02	
Smooth Cement	0.225	0.061	0.261	0.285	0.277	0.237
	(6.08)**	-0.72	(6.37)**	(5.64)**	(5.02)**	(2.17)*
# of separate rooms	0.198	0.323	0.191	0.203	0.216	0.187
	(31.39)**	(13.65)**	(29.16)**	(11.82)**	(10.23)**	(6.02)**
Electricity	0.876	0.777	0.87	0.723	0.685	0.841
	(14.97)**	(8.71)**	(11.18)**	(15.43)**	(13.95)**	(7.46)**
Piped water - outside	-0.54	-0.585	-0.293	-0.18	0.113	-0.596
	(5.69)**	(3.53)**	(2.47)*	-1.56	-0.89	(2.09)*
Pump/protected spring	-0.552	-0.832	-0.297	-0.208	0.094	-0.659
	(5.73)**	(4.45)**	(2.51)*	-1.62	-0.61	(2.26)*
Unprotected source	-0.593	-0.754	-0.344	-0.199	0.062	-0.643
	(6.13)**	(4.07)**	(2.89)**	-1.44	-0.39	(2.10)*
Latrine	0.121	-0.116	0.244	-0.361	-0.715	0.185
	-1.51	-0.74	(2.60)**	(3.34)**	(5.71)**	-0.92
No toilet	-0.031	-0.303	0.091	-0.455	-0.64	-0.048
	-0.38	-1.53	-0.95	(2.37)*	(2.12)*	-0.16
Northern region	-0.269	-0.003	-0.289	-0.019	0.178	-0.306
	(10.15)**	-0.03	(10.54)**	-0.27	(2.20)*	(2.49)*
Central region	0.141	-0.149	0.155	-0.012	-0.021	-0.054
	(8.45)**	(2.12)*	(8.98)**	-0.32	-0.46	-0.73
Rural Residence	-0.258			-0.372		
	(7.17)**			(7.89)**		
N	10,013	694	9,319	1,057	709	348
R-squared	0.41	0.72	0.32	0.65	0.68	0.5

Notes: Absolute value of t-statistics in parentheses. Regressions are weighted using preliminary household weights. * indicates significance at 5% level; ** significance at 1% level. Omitted categories are: permanent construction material, grass/plastic sheeting roofing material, smoothed mud/sand floor material, piped water in house, and flush toilet

The first three models estimated regression equations using estimated rent for all households that reported estimated rent, as well as estimated rent for urban and rural rent only respectively. Comparing the models for the urban and rural samples (Table 2.7), the results from urban-only model were able to explain about 72 percent of the variation in rental prices based on the household characteristics. On the other hand, the

rural-only model explained only 32 percent of the variations. These results suggest that households in urban areas have a better understanding of the concept of rental value than rural areas. This is presumably due to the fact that rental markets are more developed in these areas, which could lead to observable characteristics being more closely linked to self-reported rents.

Further, there was remarkable contradiction on the movement of the signs of the coefficients between the models of urban estimated rent and rural estimated rent. For example, main source of water (G30) and type of toilet facility (G36) had negative and significant coefficients for urban households, where lower quality was associated with lower rent. However, we do not see this pattern for rural households, implying that a lack of correlation between water quality and estimated rental values in rural areas. This further vindicated our earlier concerns that estimated rent was poorly correlated with characteristics of the house especially in rural areas.

Using the three actual rent paid models, the explanatory power of our models improved significantly as compared to the ones using estimated rent. The reported R^2 for the three actual rent models (columns 4-6) were 0.65, 0.68 and 0.50 for all, urban and rural households respectively. However, it was noted that the R^2 for the rural actual rent model was still low when compared with the other two models (column 6). There was a weak correlation between the characteristics of the house and the actual rent paid in rural areas. Although there were also some inconsistencies in the movement of the signs of the coefficients between actual rent model for all households paying rent and urban actual rent models with rural actual rent model, these were moderate. As such, the actual rent models might be preferred to impute rental values than using the self-estimated rental values reported by households.

Predictions

In order to compare the reliability of the estimated rent reported by home owners, the three specifications of actual rent (columns 4-6) were used to predict (impute) rental values⁶⁸. The predicted rental values from the regressions were then compared with the estimated rental values self-reported by home owners. Table A2.8 below shows the results of this comparison.

⁶⁸ Since the regression models above used a log-transformed dependent variable (estimated rent/actual rent), making predictions using a simple exponential approach will produce incorrect estimators. To prevent such misrepresentation of the results, we used the *predlog* command in Stata (See Stata manual for details).

Table A2.8: Correlation Coefficients of the predicted and the estimated values

<i>Self-reported Rental Values</i>	<i>Predicted (imputed) rental values</i>		
	<i>Specification 4 (All households)</i>	<i>Specification 5 (Urban)</i>	<i>Specification 6 (Rural)</i>
All households (10,013)	0.58	0.57	0.55
Urban (694)	0.72	0.69	0.71
Rural (9,319)	0.46	0.46	0.41

Note: (i) Figures in parenthesis are the number of observations; (ii) All correlation coefficients are significantly different from zero

The correlation coefficient between self-reported estimated rent and imputed rent is 0.58 when using specification 4 in Appendix 2. This was significantly different from zero. The predicted rental values for all households were also used to test its correlation with the estimated rent values from the urban and rural households. The results yielded correlation coefficients of 0.72 and 0.46 for urban and rural respectively; these were also significantly different from zero.

The predicted figures from the sample of urban estimated rental values yielded correlation coefficients of 0.69 and 0.46 for urban and rural households respectively. The sample from rural households yielded 0.71 and 0.41 for urban and rural, respectively. These correlation coefficients are significantly different from zero.

As it can be seen from the results, there was a higher correlation between the predicted values for urban than rural areas, for all three model specifications. On the contrary, there was a weak correlation between the predicted values from the three models with the estimated rent for rural households. This further supported the hypothesis that the concept of renting is better developed in the urban areas than in the rural areas.

Conclusion

The note evaluated the options for valuating housing consumption for Malawi using several features of the IHS2 data. The key findings of this evaluation are:

- The basic statistics on housing characteristics revealed that there were significant differences in the dwelling characteristics of rented and owned dwellings. Further, there were also significant differences between the dwellings in urban and rural areas.
- The results of the estimated rent models in Appendix 2 showed that there were inconsistencies in the results of the correlates of estimated rent especially for rural households. This suggests that households had difficulties in estimating rental values that were consistent with the quality of their dwellings. This was especially

apparent for rural households. Therefore, it can be concluded that the estimated rental values reported by households especially in the rural areas are unreliable.

- The lack of reliability of the estimated rental values suggests that the values should not be used for housing valuation or to extrapolate rental values for households with missing rental values.
- A second option for including housing consumption in the consumption aggregate is to use the actual rental values reported to predict the rental values for owner-occupied dwellings. Out of the total 11,280 households interviewed, only 1,068 households are renting but most of these are urban households. The number of households paying rent is much lower for rural areas (348 renting households).
 - The small number of households renting in rural areas, combined with the notable differences in the dwelling characteristics of rented and owned houses in rural areas, suggests that the sample of renting households is too small to impute rental values for owned dwellings from actual rental values.

A2.3 Factors used to convert amount from various units to grams

Table A2.9 presents conversion factors used to convert amounts in various units into grams.

Table A2.9: Conversion factors from other units to grams by food item

Unit	Description	Grams	Unit	Description	Grams
101 Maize - whole grain flour			104 Maize grain		
1	kg	1000	1	kg	1000
2	50kg bag	46658	3	90kg bag	90000
4	pail small	1014.3	4	pail small	1312.5
5	pail large	2036.25	6	no. 10 plate	194
6	no. 10 plate	150	7	no. 12 plate	770
7	no. 12 plate	595	9	piece	271
9	piece	580	12	basket shelled	6263.1
12	basket shelled	4840.5	16	cup	207
13	basket unshelled	4840.5	18	gram	1
14	ox-cart	32270	22	basin/pot	3580
16	cup	160	105 Maize – green		
17	tin	33	1	kg	1000
18	gram	1	2	50kg bag	47595
22	basin/pot	4308	4	pail small	1312.5
23	sachet/tube/packet	595	5	pail large	1515.6
102 Maize - refined grain flour			7	no. 12 plate	770
1	kg	1000	8	bunch	269
2	50kg bag	46658	9	piece	185
4	pail small	1014.3	10	heap	269
5	pail large	2036.25	12	basket shelled	6263.1
6	no. 10 plate	150	13	basket unshelled	3616.05
7	no. 12 plate	595	106 Rice		
9	piece	580	1	kg	1000
10	heap	4580	2	50kg bag	50000
12	basket shelled	4840.5	4	pail small	1014.3
16	cup	150	5	pail large	2036.25
17	tin	23.1	6	no. 10 plate	120
18	gram	1	7	no. 12 plate	495
22	basin/pot	4308	9	piece	271
103 Maize bran flour			16	cup	200
1	kg	1000	18	gram	1
4	pail small	1014.3	22	basin/pot	356
5	pail large	2036.25	23	sachet/tube/packet	500
6	no. 10 plate	150	107 Finger millet		
7	no. 12 plate	595	1	kg	1000
12	basket shelled	4840.5	5	pail large	2634
17	tin	39	6	no. 10 plate	80
18	gram	1	7	no. 12 plate	320
22	basin/pot	4308	12	basket shelled	6281.85
			16	cup	200
			18	gram	1
			22	basin/pot	442

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
108 Sorghum			113 Biscuits		
1	kg	1000	1	kg	1000
2	50kg bag	50000	2	50kg bag	500
4	pail small	1317	9	piece	200
5	pail large	2588.4	13	basket unshelled	75
6	no. 10 plate	120	16	cup	150
7	no. 12 plate	475	18	gram	1
9	piece	271	22	basin/pot	500
10	heap	442	23	sachet/tube/packet	150
12	basket shelled	6176.85	114 Spaghetti, macaroni, pasta		
16	cup	170	1	kg	1000
18	gram	1	9	piece	550
22	basin/pot	680	18	gram	1
109 Pearl millet			23	sachet/tube/packet	575
1	kg	1000	115 Breakfast cereal		
4	pail small	1317	1	kg	1000
5	pail large	2634	6	no. 10 plate	75
6	no. 10 plate	80	7	no. 12 plate	135
7	no. 12 plate	320	9	piece	38
9	piece	52	12	basket shelled	120
18	gram	1	16	cup	38
110 Wheat flour			18	gram	1
1	kg	1000	22	basin/pot	733
9	piece	271	23	sachet/tube/packet	135
18	gram	1	116 Infant feeding cereals		
111 Bread			1	kg	1000
1	kg	1000	6	no. 10 plate	135
7	no. 12 plate	500	16	cup	108
9	piece	500	18	gram	1
10	heap	500	201 Cassava tubers		
18	gram	1	1	kg	1000
22	basin/pot	502	2	50kg bag	41676
23	sachet/tube/packet	1125	4	pail small	1087.2
112 Buns scones			5	pail large	2174.4
1	kg	1000	6	no. 10 plate	339
5	pail large	75.3	8	bunch	1350
6	no. 10 plate	500	9	piece	339
7	no. 12 plate	275	10	heap	1695
8	bunch	500	12	basket shelled	5187.9
9	piece	38	13	basket unshelled	5188.05
18	gram	1	22	basin/pot	1374

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
202 Cassava flour			205 Irish potato		
1	kg	1000	1	kg	1000
2	50kg bag	50000	4	pail small	945
4	pail small	1014.3	5	pail large	1590.75
5	pail large	2036.25	6	no. 10 plate	400
6	no. 10 plate	150	7	no. 12 plate	587
7	no. 12 plate	595	8	bunch	1350
9	piece	4580	9	piece	174
10	heap	4580	10	heap	1045
12	basket shelled	4840.5	12	basket shelled	4509.45
16	cup	220	13	basket unshelled	4509.45
17	tin	33	17	tin	621.6
18	gram	1	18	gram	1
22	basin/pot	4580	22	basin/pot	326
203 White sweet potato			23	sachet/tube/packet	518
1	kg	1000	206 Potato crisps		
2	50kg bag	36225	1	kg	1000
4	pail small	945	4	pail small	67.5
5	pail large	1890	6	no. 10 plate	25
6	no. 10 plate	339	9	piece	25
7	no. 12 plate	442	10	heap	25
8	bunch	1350	12	basket shelled	67.5
9	piece	174	16	cup	25
10	heap	1045	18	gram	1
12	basket shelled	4509.45	23	sachet/tube/packet	18
13	basket unshelled	4509.45	207 Plantain, cooking banana		
14	ox-cart	45100	1	kg	1000
17	tin	2652	4	pail small	930
22	basin/pot	850	8	bunch	6700
23	sachet/tube/packet	455	9	piece	135
204 Orange sweet potato			10	heap	6700
1	kg	1000	23	sachet/tube/packet	455
2	50kg bag	36225	208 Cocoyam		
4	pail small	945	1	kg	1000
5	pail large	1890	2	50kg bag	36225
9	piece	174	4	pail small	930
10	heap	1045	5	pail large	5250
12	basket shelled	4509.45	8	bunch	400
13	basket unshelled	4509.45	9	piece	100
			10	heap	400
			12	basket shelled	6750
			18	gram	1

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
301 Bean - white			304 Groundnut		
1	kg	1000	1	kg	1000
2	50kg bag	45000	2	50kg bag	50000
4	pail small	1122	4	pail small	1200.6
5	pail large	2036.25	5	pail large	2401.2
6	no. 10 plate	90	6	no. 10 plate	70
7	no. 12 plate	740	7	no. 12 plate	280
9	piece	1	8	bunch	140
10	heap	177	9	piece	140
12	basket shelled	2036.25	10	heap	140
13	basket unshelled	5250	12	basket shelled	3352.5
16	cup	177	13	basket unshelled	2231.25
18	gram	1	16	cup	157
22	basin/pot	7480	18	gram	1
302 Bean - brown			22	basin/pot	465
1	kg	1000	23	sachet/tube/packet	470
2	50kg bag	50000	305 Groundnut flour		
4	pail small	1122	1	kg	1000
5	pail large	2036.25	2	50kg bag	50000
6	no. 10 plate	90	4	pail small	3750
7	no. 12 plate	740	5	pail large	4500
9	piece	1	6	no. 10 plate	125
10	heap	177	7	no. 12 plate	375
12	basket shelled	5354.7	9	piece	378
13	basket unshelled	2213.25	10	heap	550
16	cup	177	12	basket shelled	176.25
18	gram	1	16	cup	125
22	basin/pot	7480	18	gram	1
303 Pigeon pea			21	spoon	75
1	kg	1000	22	basin/pot	1175
2	50kg bag	50000	23	sachet/tube/packet	475
4	pail small	1490.4	306 Soybean		
5	pail large	2036.25	1	kg	1000
6	no. 10 plate	72	4	pail small	3750
7	no. 12 plate	592	5	pail large	4500
9	piece	300	6	no. 10 plate	46
10	heap	205	7	no. 12 plate	184
12	basket shelled	6201.75	16	cup	125
16	cup	205	18	gram	1
18	gram	1	22	basin/pot	3120
22	basin/pot	1196			

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
307 Ground bean			403 Tanaposi		
1	kg	1000	1	kg	1000
6	no. 10 plate	90	4	pail small	9
7	no. 12 plate	740	5	pail large	15
9	piece	300	6	no. 10 plate	80
10	heap	177	7	no. 12 plate	85
12	basket shelled	5354.7	8	bunch	60
16	cup	177	9	piece	15
18	gram	1	10	heap	60
22	basin/pot	7480	12	basket shelled	183
308 Cowpea			13	basket unshelled	97.5
1	kg	1000	18	gram	1
6	no. 10 plate	74	22	basin/pot	612
7	no. 12 plate	296	404 Pumpkin leaves		
8	bunch	140	1	kg	1000
10	heap	166	2	50kg bag	3500
16	cup	166	4	pail small	96
18	gram	1	5	pail large	212.25
20	other		6	no. 10 plate	67
22	basin/pot	1138	7	no. 12 plate	83
401 Onion			8	bunch	155
1	kg	1000	9	piece	8
2	50kg bag	50000	10	heap	155
4	no. 12 plate	150	12	basket shelled	94.95
6	no. 10 plate	50	13	basket unshelled	96.75
8	bunch	50	18	gram	1
9	piece	13	22	basin/pot	178
10	heap	50	405 Chinese cabbage		
18	gram	1	1	kg	1000
402 Cabbage			4	pail small	51
1	kg	1000	5	pail large	15
6	no. 10 plate	1030	6	no. 10 plate	80
8	bunch	1030	7	no. 12 plate	85
9	piece	1030	8	bunch	140
10	heap	1030	9	piece	23
18	gram	1	10	heap	140
			18	gram	1
			23	sachet/tube/packet	235

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
406 Other cultivated vegetables			408 Tomato		
1	kg	1000	1	kg	1000
4	pail small	141.15	3	90kg bag	12000
5	pail large	15	4	pail small	35.25
6	no. 10 plate	206	5	pail large	45
7	no. 12 plate	578	6	no. 10 plate	235
8	bunch	155	7	no. 12 plate	300
9	piece	8	8	bunch	235
10	heap	155	9	piece	45
12	basket shelled	120	10	heap	235
13	basket unshelled	97.5	12	basket shelled	120
18	gram	1	13	basket unshelled	1800
22	basin/pot	258	15	litre	947
407 Gathered wild leaves			16	cup	235
1	kg	1000	17	tin	35.25
2	50kg bag	5038	18	gram	1
4	pail small	64.35	19	millilitre	0.947
6	no. 10 plate	96	22	basin/pot	1248
7	no. 12 plate	192	23	sachet/tube/packet	235
8	bunch	155	411 Okra		
9	piece	8	1	kg	1000
10	heap	155	2	50kg bag	5038
12	basket shelled	120	4	pail small	9
13	basket unshelled	97.5	5	pail large	15
18	gram	1	6	no. 10 plate	180
22	basin/pot	354	7	no. 12 plate	720
23	sachet/tube/packet	192	8	bunch	240
409 Cucumber			9	piece	30
1	kg	1000	10	heap	240
4	pail small	90	12	basket shelled	222
5	pail large	97.5	18	gram	1
8	bunch	600	22	basin/pot	838
9	piece	200	23	sachet/tube/packet	74
10	heap	600			

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
410 Pumpkin			503 Fresh fish		
1	kg	1000	1	kg	1000
4	pail small	90	2	50kg bag	603
6	no. 10 plate	400	4	pail small	94.5
8	bunch	600	5	pail large	108
9	piece	900	6	no. 10 plate	140
10	heap	600	7	no. 12 plate	560
12	basket shelled	151.2	9	piece	380
18	gram	1	10	heap	380
412 Tinned vegetables			12	basket shelled	148.5
1	kg	1000	16	cup	380
8	bunch	550	17	tin	57
9	piece	550	18	gram	1
10	heap	550	504 Beef		
18	gram	1	1	kg	1000
501 Eggs			2	50kg bag	5000
1	kg	1000	9	piece	22
6	no. 10 plate	360	18	gram	1
8	bunch	360	505 Goat		
9	piece	50	1	kg	1000
10	heap	360	9	piece	22
13	basket unshelled	54	18	gram	1
502 Dried fish			506 Pork		
1	kg	1000	1	kg	1000
3	90kg bag	500	2	50kg bag	50000
4	pail small	7.5	9	piece	22
5	pail large	82.5	18	gram	1
6	no. 10 plate	18	507 Chicken		
7	no. 12 plate	72	1	kg	1000
8	bunch	50	8	bunch	900
9	piece	50	9	piece	800
10	heap	50	18	gram	1
13	basket unshelled	82.5	23	sachet/tube/packet	900
16	cup	50	508 Other poultry		
17	tin	82.5	1	kg	1000
18	gram	1	9	piece	800
23	sachet/tube/packet	50			

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
509 Small animal			602 Banana		
1	kg	1000	1	kg	1000
7	no. 12 plate	45	6	no. 10 plate	500
9	piece	35	7	no. 12 plate	600
510 Termites/other insects			8	bunch	600
1	kg	1000	9	piece	50
4	pail small	15	10	heap	600
6	no. 10 plate	18	14	Ox-cart	12000
7	no. 12 plate	72	15	litre	50
9	piece	22	21	spoon	50
10	heap	50	22	basin/pot	655
16	cup	50	23	sachet/tube/packet	1038
17	tin	5.25	603 Citrus		
18	gram	1	1	kg	1000
22	basin/pot	100	4	pail small	3750
511 Tinned meat or fish			5	pail large	4500
1	kg	1000	6	no. 10 plate	500
9	piece	350	9	piece	159
17	tin	52.5	13	basket unshelled	4500
18	gram	1	17	tin	82.5
601 Mango			18	gram	1
1	kg	1000			
2	50kg bag	50000			
4	pail small	3750	606 Guava		
5	pail large	2851.2	1	kg	1000
6	no. 10 plate	500	4	pail small	3750
8	bunch	500	5	pail large	4500
9	piece	50	7	no. 12 plate	600
10	heap	500	9	piece	68
12	basket shelled	3300.45	10	heap	640
13	basket unshelled	4500	12	basket shelled	4500
17	tin	82.5	13	basket unshelled	4500
21	spoon	50	17	tin	82.5
604 Pineapple			18	gram	1
1	kg	1000	22	basin/pot	864
9	piece	472	607 Avocado		
605 Pawpaw			1	kg	1000
1	kg	1000	6	no. 10 plate	500
9	piece	1170	9	piece	525
18	gram	1	10	heap	1050

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
608 Wild fruit			702 Powdered milk		
1	kg	1000	1	kg	1000
2	50kg bag	50000	6	no. 10 plate	120
4	pail small	1478.4	7	no. 12 plate	128
5	pail large	1848	9	piece	128
6	no. 10 plate	202	10	heap	128
7	no. 12 plate	609	15	litre	1036
9	piece	98	16	cup	128
10	heap	202	17	tin	75
12	basket shelled	4500	18	gram	1
16	cup	365	19	millilitre	1.036
18	gram	1	21	spoon	28
22	basin/pot	480	23	sachet/tube/packet	62.5
609 Apple			704 Butter		
1	kg	1000	1	kg	1000
6	no. 10 plate	512	9	piece	550
9	piece	128	18	gram	1
10	heap	512	21	spoon	81
13	basket unshelled	414	705 Sour milk		
701 Fresh milk			1	kg	1000
1	kg	1000	9	piece	240
5	pail large	155.4	15	litre	1036
6	no. 10 plate	245	16	cup	245
9	piece	500	18	gram	1
15	litre	1036	19	millilitre	1.036
16	cup	245	23	sachet/tube/packet	240
17	tin	75	706 Yoghurt		
18	gram	1	1	kg	1000
19	millilitre	1.036	9	piece	227
21	spoon	15	15	litre	1036
22	basin/pot	1252	16	cup	227
23	sachet/tube/packet	500	17	tin	34.05
703 Margarine			18	gram	1
1	kg	1000	19	millilitre	1.036
9	piece	550	23	sachet/tube/packet	100
18	gram	1	707 Cheese		
19	millilitre	0.55	1	kg	1000
21	spoon	81	18	gram	1
23	sachet/tube/packet	500			

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
708 Infant feeding formula			803 Cooking oil		
1	kg	1000	1	kg	1000
9	piece	400	2	50kg bag	50000
15	litre	541	6	no. 10 plate	224
17	tin	60	8	bunch	224
18	gram	1	9	piece	40
19	millilitre	0.541	10	heap	456
			15	litre	947
801 Sugar			16	cup	224
1	kg	1000	17	tin	75
2	50kg bag	50000	18	gram	1
3	90kg bag	82000	19	millilitre	0.947
4	pail small	160.8	21	spoon	198
5	pail large	282.3	22	basin/pot	6629
6	no. 10 plate	81	23	sachet/tube/packet	456
7	no. 12 plate	324	810 Salt		
9	piece	970	1	kg	1000
10	heap	970	2	50kg bag	50000
16	cup	220	4	pail small	177.3
18	gram	1	5	pail large	192.3
19	millilitre	0.947	6	no. 10 plate	120
21	spoon	208	7	no. 12 plate	175
23	sachet/tube/packet	970	8	bunch	166
802 Sugar cane			9	piece	85
1	kg	1000	10	heap	45
2	50kg bag	50000	12	basket shelled	4840.5
3	90kg bag	82000	13	basket unshelled	4840.5
4	pail small	4500	15	litre	947
5	pail large	5250	16	cup	166
9	piece	375	17	tin	75
12	basket shelled	5250	18	gram	1
18	gram	1	19	millilitre	0.974
19	millilitre	0.947	21	spoon	204
813 Tomato sauce			22	basin/pot	204
1	kg	1000	23	sachet/tube/packet	500
9	piece	947	820 Maize boiled/fried		
15	litre	947	1	kg	1000
18	gram	1	9	piece	217
19	millilitre	0.947	10	heap	654
21	spoon	35			

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
811 Spices			814 Hot sauce		
1	kg	1000	1	kg	1000
6	no. 10 plate	75	9	piece	108
9	piece	10	18	gram	1
10	heap	75	19	millilitre	0.947
18	gram	1	21	spoon	15
19	millilitre	0.425	821 Chips vendor		
20	Tea spoon	46	1	kg	1000
21	Table spoon	92	5	pail large	54.9
22	basin/pot	237	6	no. 10 plate	89
23	sachet/tube/packet	125	7	no. 12 plate	366
812 Yeast/baking powder/soda			8	bunch	246
1	kg	1000	9	piece	7
2	50kg bag	5000	10	heap	246
6	no. 10 plate	6	12	basket shelled	83.25
9	piece	6	16	cup	166
10	heap	250	18	gram	1
15	litre	250	21	spoon	166
16	cup	250	22	basin/pot	338
18	gram	1	23	sachet/tube/packet	166
19	millilitre	0.25			
21	spoon	192	822 Cassava - boiled (vendor)		
22	basin/pot	250	1	kg	1000
23	sachet/tube/packet	250	6	no. 10 plate	267
			9	piece	267
815 Jam, jelly, honey			10	heap	267
1	kg	1000	823 Eggs boiled vendor		
9	piece	224	1	kg	1000
15	litre	947	2	50kg bag	5000
16	cup	224	9	piece	50
18	gram	1	824 Chicken vendor		
19	millilitre	0.524	1	kg	1000
816 Sweets, candy, chocolates			9	piece	39
1	kg	1000	10	heap	39
5	pail large	150	18	gram	1
6	no. 10 plate	580	825 Meat vendor		
9	piece	12	1	kg	1000
10	heap	580	6	no. 10 plate	39
18	gram	1	9	piece	39
23	sachet/tube/packet	25	18	gram	1

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
826 Fish vendor			901 Tea		
1	kg	1000	1	kg	1000
5	pail large	93.45	5	pail large	840
6	no. 10 plate	335	6	no. 10 plate	240
8	bunch	337	7	no. 12 plate	458
9	piece	39	8	bunch	375
10	heap	337	9	piece	10
827 Doughnuts/fritters			10	heap	375
1	kg	1000	15	litre	1120
5	pail large	82.5	16	cup	375
9	piece	42	17	tin	22.5
10	heap	550	18	gram	1
828 Samosa (vendor)			19	millilitre	0.947
1	kg	1000	21	spoon	42
9	piece	45	22	basin/pot	7840
18	gram	1	23	sachet/tube/packet	250
829 Meat at restaurant			902 Coffee		
1	kg	1000	1	kg	1000
6	no. 10 plate	950	6	no. 10 plate	240
7	no. 12 plate	1325	15	litre	125
8	bunch	375	16	cup	375
9	piece	950	18	gram	1
10	heap	950	21	spoon	12
12	basket shelled	5.85	22	basin/pot	875
15	litre	39	903 Squash		
16	cup	375	1	kg	1000
17	tin	56.25	9	piece	1048
18	gram	1	15	litre	1048
19	millilitre	0.947	18	gram	1
21	spoon	1	19	millilitre	1.048
22	basin/pot	1325	904 Fruit juice		
905 Freezes			1	kg	1000
1	kg	1000	9	piece	210
9	piece	42	15	litre	1048
10	heap	42	18	gram	1
15	litre	947	19	millilitre	1.048
18	gram	1	22	basin/pot	7336
19	millilitre	0.947	911 Wine or commercial liquor		
21	spoon	21	1	kg	1000
22	basin/pot	947	15	litre	1000
23	sachet/tube/packet	42	19	millilitre	1

Table A2.9: Conversion factors from other units to grams by food item (contd.)

Unit	Description	Grams	Unit	Description	Grams
906 Soft drinks			909 Local sweet beer (<i>thobwa</i>)		
1	kg	1000	1	kg	1000
4	pail small	47.1	4	pail small	1211.25
9	piece	314	5	pail large	1436.25
15	litre	1048	7	no. 12 plate	947
16	cup	314	9	piece	237
17	tin	49.5	14	ox-cart	860
18	gram	1	15	litre	947
19	millilitre	1.048	16	cup	237
22	basin/pot	7336	17	tin	129
23	sachet/tube/packet	278	18	gram	1
907 Commercial traditional beer			19	millilitre	1
1	kg	1000	22	basin/pot	3605
9	piece	1015	910 Traditional beer (<i>masese</i>)		
15	litre	1000	1	kg	1000
16	cup	1015	4	pail small	1500
19	millilitre	1	5	pail large	35.55
908 Bottled/canned beer			7	no. 12 plate	
1	kg	1000	9	piece	237
5	pail large	45	15	litre	1000
9	piece	300	16	cup	237
15	litre	1000	17	tin	78
16	cup	300	18	gram	1
17	tin	49.5	19	millilitre	1
19	millilitre	1	22	basin/pot	2345
			912 Local spirit (<i>kachasu</i>)		
			1	kg	1000
			9	piece	237
911 Wine or commercial liquor			15	litre	1000
1	kg	1000	16	cup	237
15	litre	1000	18	gram	1
19	millilitre	1	19	millilitre	1

Appendix 2d: Cut off points for amounts, costs, values and numbers

The tables in this appendix present the cut off points used in the analysis as used in the 2007 analysis

Table A2.10: Maximum food consumption by item

Food tem code and name	Grams	Food tem code and name	Grams
101 Maize flour - whole grain	35,000	401 Onion	1,000
102 Maize flour - refined	35,000	402 Cabbage	10,000
103 Maize bran flour	20,000	403 Tanaposi	5,000
104 Maize grain	20,000	404 Pumpkin leaves	15,000
105 Maize – green	35,000	405 Chinese cabbage	5,000
106 Rice	20,000	406 Other cultiv veggies	10,000
107 Finger millet	20,000	407 Gathered wild leaves	5,000
108 Sorghum	20,000	408 Tomato	5,000
111 Bread	20,000	409 Cucumber	5,000
112 Buns scones	5,000	410 Pumpkin	10,000
113 Biscuits	5,000	411 Okra	5,000
114 Spaghetti, macaroni, pasta	10,000	412 Tinned vegetables	5,000
115 Breakfast cereal	10,000	501 Eggs	5,000
116 Infant feeding cereals	10,000	502 Dried fish	5,000
201 Cassava tubers	20,000	503 Fresh fish	20,000
202 Cassava flour	20,000	504 Beef	10,000
203 White sweet potato	20,000	505 Goat	10,000
204 Orange sweet potato	20,000	506 Pork	5,000
205 Irish potato	20,000	507 Chicken	10,000
206 Potato crisps	1,000	508 Other poultry	20,000
207 Plantain, cooking banana	20,000	509 Small animal	5,000
208 Cocoyam	20,000	510 Termites/other insects	1,000
301 Bean - white	20,000	511 Tinned meat or fish	5,000
302 Bean - brown	20,000	601 Mango	10,000
303 Pigeon pea	20,000	602 Banana	5,000
304 Groundnut	20,000	603 Citrus	10,000
305 Groundnut flour	5,000	604 Pineapple	5,000
306 Soya bean	20,000	605 Pawpaw	10,000
307 Ground bean	20,000	606 Guava	10,000
		607 Avocado	10,000
		608 Wild fruit	5,000
		609 Apple	5,000

Table A2.10: Maximum food consumption by item (continued)

Item code and name	Grams	Item code and name	Grams
701 Fresh milk	10000	823 Eggs boiled vendor	1,000
702 Powdered milk	5000	824 Chicken vendor	5,000
703 Margarine	5000	825 Meat vendor	5,000
704 Butter	5000	826 Fish vendor	5,000
705 Sour milk	5000	827 Doughnuts/fritters	5,000
706 Yoghurt	5000	828 Samosa (vendor)	5,000
707 Cheese	5000	829 Meat at restaurant	10,000
708 Infant feeding formula	5000	901 Tea	1,000
801 Sugar	10000	902 Coffee	1,000
802 Sugar cane	30000	903 Squash	5,000
803 Cooking oil	10000	904 Fruit juice	5,000
810 Salt	5000	905 Freezes	5,000
811 Spices	1000	906 Soft drinks	5,000
812 Yeast/baking powder/soda	5000	907 Commercial traditional beer	20,000
813 Tomato sauce	1000	908 Bottled/canned beer	20,000
814 Hot sauce	1000	909 Local sweet beer (<i>thobwa</i>)	20,000
815 Jam, jelly, honey	1000	910 Traditional beer (<i>masese</i>)	10,000
816 Sweets, candy, chocolates	1000	911 Wine or commercial liquor	5,000
820 Maize boiled/fried	5000	912 Local spirit (<i>kachasu</i>)	5,000
821 Chips vendor	5000		
822 Cassava - boiled (vendor)	10000		

Table A2.11: Cut off values and number of durable goods

Item	Estimated value		Number of items	
	Item ID	Value (MK)	ID	#
Mortar/pestle	M05-501	1,000	M05-501	7
Bed	M05-502	20,000	M03-502	10
Table	M05-503	10,000	M03-503	10
Chair	M05-504	10,000	M03-504	10
Fan	M05-505	8,000		
Air conditioner	M05-506	10,000		
Radio (wireless)	M05-507	8,000	M03-507	5
Tape or CD player; HiFi	M05-508	35,000	M03-508	5
Television & VCR	M05-509	40,000		
Sewing machine	M05-510	20,000		
Kerosene/paraffin stove	M05-511	3,000		
Electric or gas stove; hot plate	M05-512	50,000	M03-512	5
Refrigerator	M05-513	50,000		
Washing machine	M05-514	50,000		
Bicycle	M05-515	20,000	M03-515	10
Motorcycle/scooter	M05-516	150,000		
Car	M05-517	500,000	M03-517	4

Table A2.12: Cut off cost and values for household expenditure items

Item	Cost MK	Item	Cost MK
<i>Weekly expenditure</i>		<i>3-month expenditure</i>	
Firewood	1,000	Infant clothing	25,000
Charcoal	600	Baby nappies	1,500
Paraffin/kerosene	400	Boy's trousers	2,000
Tobacco	200	Boy's shirts	2,500
Matches	100	Boy's jackets	1,000
Public transport	4,000	Boy's undergarments	2,200
4-week/monthly		Boy's other clothing	5,000
Curative health services	2,000	Men's trousers	3,000
Preventive health care	1,500	Men's shirts	5,000
Common drug expenses	1,500	Men's jackets	5,000
Milling fees	1,000	Men's undergarments	1,000
Bar soap	1,000	Men's other clothing	3,000
Powdered soap	1,000	Girl's blouse/shirt	3,000
Toothbrush/toothpaste	500	Girl's dress/skirt	2,500
Toilet paper	1,000	Girl's undergarments	1,000
Skin care items	750	Girl's other clothing	4,000
Other body care items	1,000	Lady's blouse/shirt	3,000
Household cleaning agents	1,000	Chitenje cloth	2,000
Light bulbs	300	Lady's dress/skirt	4,100
Postage	200	Lady's undergarments	1,020
Petrol/diesel	25,000	Lady's other clothing	6,000
Vehicle service	30,000	Boy's shoes	3,000
Bicycle service	2,500	Men's shoes	4,500
Servant wages	10,000	Girl's shoes	2,000
Item repairs	2,000	Lady's shoes	2,000

Table A2.12: Cut off cost and values for household expenditure items (contd.)

Item	Cost MK	Item	Cost MK
<i>3-month expenditure</i>		<i>12-month expenses</i>	
Cloth, sewing items	3,200	Tuition fees	30,000
Cloth services	4,000	School books/stationery	10,000
Bowls, glassware, plates,...	2,000	School fund	2,000
Cooking utensils	2,500	School PTA fund	2,500
Cleaning utensils	450	Carpets, rugs, drapes, curtains	12,000
Torch/flashlight	250	Linen - towels, sheets, ...	8,000
Umbrella	600	Mat - sleeping/drying	1,500
Paraffin lamp	800	Mosquito net	1,000
Stationery items	1,000	Mattress	10,000
Ordinary books	3,500	Sports/music/hobby equipment	8,000
Music/video cassette/CD	5,000	Film/film processing, ...	4,000
Tickets for sports	2,000	Council rates	9,000
Household decorations	7,000	Insurance	80,000
Rest house or hotel expenses	3,000	Electricity costs	100,000
		Informal health care expenses	5,000

Appendix 3: Malawi country background and commentaries on poverty

Appendix 3a: Country background⁶⁹

Political and economic history

Malawi was Nyasaland before it became independent in 1964. Nyasaland as country was a creation of the Great Britain. Before then the area was ever under the Maravi Kingdom in the 15th Century, Ngonde Kingdom in the 17th Century and Chikulamayembe Kingdom in the 18th Century. Over time, various Bantu tribes settled in various parts of the area. The rampart slave trade witnessed by explorer David Livingstone and entrepreneur Cecil Rhodes forced Britain to declare Nyasaland a protectorate in 1892 after annexing it in 1891. Colonial government managed Nyasaland until the country joined the Federation of Rhodesia and Nyasaland in 1951. World changes, and a little bit of internal pressure, brought down the federation, replaced by self government in 1961, independence in 1964 and republic status under the British Commonwealth in 1966. During its time, colonialism introduced and formalised the market economy. It brought cash crop agriculture, some manufacturing and organised commerce. It also brought organised public administration that required the population to enter the market economy to pay for it. In summary, colonialism brought economic and social development through public administration and the market.

The Malawi Government that took over from the colonial government did not change things as much. It continued most of the social and economic policies inherited from the colonial government. Within years of independence, Malawi became one-party state government by a parliamentary majority and a constitutional one-party dictatorship from 1971 to 1993. During this period, the President had absolute powers; no dissenting views were allowed and terror ruled. On the economic front, the government employed managed liberalism. The government worked to make the central government and few individuals rich. It did not have instruments that directly encouraged individual local businesses. According to Chingaipe Ng'oma (2010), politics ensured that even the African businesses the government openly supported failed to benefit. In the end it was only the president and his close associates who prospered. In fact, government practices of detaining successful businessmen who supported the opposition, forfeiture of property of those suspected to be 'unsympathetic' to the

⁶⁹ There are three main sources for the country background and these are GoM, 1987; GoM & UN, 1993; Tsoka, 2008.

regime, and forced party donations extracted from businesses bottled up entrepreneurship. Worse still, the government did not have any social policy. To support the poor, the government opted for an economic policy in the form of price control and inputs subsidies. However, even these vanished as the country was forced to adopt liberal economic management in the 1980s following serious economic crises.

Politically, Malawi was a favoured country because it was an island among socialist neighbours. The collapse of communism changed the geo-politics that propped the dictatorial regime and with aid freeze in early 1990s and a little of internal pressure, multipartyism was introduced in 1993 followed by multiparty elections and government in 1994. At the same time, Malawi adopted a new constitution that provided for respect of human rights, separation of powers among the executive, legislature and judiciary and accountability like Human Rights Commission, Anti-Corruption Bureau and the Ombudsman

This brought some changes, both good and bad for poverty reduction. On one hand, the freedoms unleashed entrepreneurial spirits bottled up under the dictatorial regime. On the other hand, crime and insecurity followed the collapse of the village vigilant groups associated with the old regime and the introduction of the respect of rights of a suspect. Ownership of livestock, property and businesses especially in rural areas received a very big knock and immediately negated the benefits of the freedom. In the early years, dissatisfaction with the liberal approach to crime sometimes led to instant mob justice, where suspects were burnt alive.

The change in political system did not change the economic policy which firmly remained in the hands of donors. There were some social policy changes, though. For the first time since independence, poverty was officially recognised as a problem and in 1995 the new government launched the Poverty Alleviation Programme. The hallmark of the programme was free primary education, credit to small businesses and free inputs, community projects, and public works. Although the credit schemes were plagued by politics, it was clear that poverty was on the lips of the politicians and getting a service.

Geography

Malawi is located in the southern part of the East African Rift Valley. It is locked away from the Indian Ocean in the East by Mozambique and Tanzania. Zambia covers most of its Western side. The country is small (119,140 m²) with a border totalling 2,881 kilometres. Lake Malawi contains, by far, the largest body of that water and with a length of 580 km, is Malawi's prominent feature. The country has sub-tropical climate

with a rainy season from November to May and dry season from June to October. It has an immensely varied topography and therefore agro-economic zones as it rises from 37 to 3,002 metres above sea level. There are very few mineral deposits in the country. Most of them are not in large enough quantities for mining.

The location of the country makes it an unattractive investment destination because it is cut off from the sea. Its lack of minerals provides limited options for development and sustainable growth. The varied topography (and presence of a variety of agro-economic zones) is a clear signal for agriculture development. There is also potential for irrigation given that 20% of the country's surface is water.

Social system, culture and religion

Malawi's society is characterised by both patrilineal and matrilineal systems; the latter being the commonest. There is no dominant tribal grouping and ethnicity is not a major problem although regionalism crops up as a talking point. Extended families are prominent although the nuclear family is slowly creeping in as the chief production unit and main source of social support. Modernisation and economic pressure is diminishing the prominence of the extended family although the impact of HIV/AIDS is demanding its intensive and extensive use. Traditional beliefs, customs, ceremonies, and other social and cultural factors, under the guidance of traditional leaders, have a powerful influence on community life especially in matters of social relationships, decision-making patterns, inheritance rights, acceptability of new ideas and practices (education, health, family planning, sanitation, agriculture, borrowing and debt repayment). Culture in Malawi has changed over time as the country came in touch with external actors. Currently, the Malawi culture is a product of traditional beliefs and customs, development (brought by colonialism and independence), and foreign religions.

Malawi has two major religions namely Christianity and Islam but it is labelled a Christian country because the majority profess to be Christians. In fact, until the election of the Moslem Bakili Muluzi as state president in 1994, Islam was obscure. The ten years of Muluzi enabled Islam to flourish in the public arena with mushrooming of mosques in non-traditional areas and Moslems being appointed to some important public positions. In general, there have been no religious tensions whether at area or national levels. Cases of infightings are very rare. The culture of tolerance which has seen co-existence of different tribes and races has enabled the co-existence of religions to the extent that zealots and militants are almost non-existent. It should be pointed out that religions,

just like traditional beliefs and customs, are good at designating gender roles. The position of women in the Malawi society is a legacy of these two.

Nature gives women a head start in Malawi; they outnumber men in the population. However, they have multiple roles. From young age females are home makers, home nurses, food processors, child carers, and farmers. With about two in five births attended by non-professionals women of experience are birth attendants. In the social arena, they are behind-the-scenes king makers and main actors in major ceremonies like initiation, weddings, and funerals. Female traditional leaders are also common in matrilineal societies. Overall, women in Malawi weave the fabric of the society. However, women are generally disadvantaged in almost all spheres. Even in matrilineal societies, they still play second fiddle to uncles and brothers. In general, most of the roles women play are not rewarding financially, if at all.

The interplay of culture, religion and social development are continuously and dynamically shaping the Malawi culture. However, the slow development in general and urbanisation in particular leaves tradition and religion as still the major culture shaping instruments in Malawi. Malawians are considered hardworking, especially when rewards are right. They are also considered as peaceful, docile and welcoming. They are eager to lend a hand to a stranger at no cost, although this is changing as some token payment may be expected. Working on voluntary basis in the name of development was 'normal' under the dictatorship. This still persists although some token 'incentive' is now expected. Economic pressure and NGOs' practice of 'paying for people's time' and participation' are eroding some of this culture. All in all, Malawi is not yet a capitalist society but marks of capitalism are evident.

Public and land administration

Malawi has three strands of public administration namely central government, local government and traditional authority. Local government is organised along a single-tier system of councillors in either urban or district councils. The traditional system is a crucial communication link between the population and the other strands of public administration. The system has a hierarchy of leaders from village head to group village head, then area chief and paramount chief. Central government supervises the traditional system and pays graded honoraria to the traditional leaders in the hierarchy. Appointment is hereditary but starting from area chief level, the appointment is subject to presidential approval.

The judicial matters in the country are handled by formal and informal structures. The High Court and Supreme Court of Appeal with their derivatives like the Industrial Relations Court and Commercial Courts comprise the formal structures. Traditional courts from village to area chief level form the informal structures. The informal structures are given limited jurisdiction over civil cases, including family and customary land matters. Of the three organs of the state, the executive is the most dominant. Apart from controlling the purse, the president as the head of the executive appoints judges as well as heads and commissioners of the accountability bodies.

Multiparty local government councils only existed between 2000 and 2004. Before 1994 one-party councils existed but had no decision making powers since the Life President then had absolute powers. The one-party councils were dissolved in 1994 but no elections were held until 2000, a year after the second multiparty elections in 1999. In 2005, local government councils were dissolved and no elections have been held since. Instead, district councils are run as central government entities.

There are four land ownership avenues; leasehold, freehold, public, and customary. Land is administered by central government at the formal level and informally by traditional leaders in traditional areas. The state president is the trustee of all land. Historically most of the land was customary and the traditional leaders were the trustee and administrator. They defended it in wars and allocated it to their subjects. With the advent of the state (colonial and independent governments), the head of state (King/queen and President) assumed the trusteeship and left the traditional leaders as nominal administrators. Under this arrangement, the state has the power to convert customary land to any type of ownership with little resistance and compensation, as long as the state has a reason. In areas where land is still available, traditional leaders still allocate land to families. On the other hand, customary land owners do not hold any title. However, customary law protects the land from being re-allocated to non-family members. This means that customary land once allocated to a family remains in that family. It can be sub-divided and passed on to family members.

Overall, the performance of public administration institutions is influenced by the political system in place. During the one-party dictatorship, the party and government were one. The government could not rescue a citizen from the jaws of the party. This meant that the public administration produced a society that respected the rule of law and zipped its mouth. Undoing this has proved difficult even under the liberal politics because the central government is still dominant and the local governments are not functional. The domineering central government has apparently reduced a population

that looks up to government for almost anything. At the same time, people hardly take public officials to account even if what is expected is not provided. In fact, provision of public services is taken as a privilege and not a right and civil servants are still taken as knights and citizens as pawns. Demonstrations, petitions, and any form of local organisation for a public administration cause are rare even in urban areas. As for politicians and political parties, people leave them alone until the day of elections. There is no recall provided in the laws.

Development financing and planning and the role of donors

Financing of development in Malawi has evolved over time. After independence, in the first years up to 1970, the British Government fully paid the Malawi Government recurrent budget. However, the British Government nominally participated in the financing of the development budget in the 1970s because Malawi Government opted for a development agenda that was evaluated as unviable by British experts. The World Bank funded some projects in agriculture, education, health, roads and power but not the high-profile 'unviable' projects. To fund them, Malawi Government turned to non-concessional financing, mainly from South African Government. After the economy was knocked off-balance by a series of shocks starting in Mid-1970s, Malawi Government contracted commercial debt in the hope that the crisis would soon pass (Gulhati, 1989). More exogenous shocks made Malawi unable to repay its debt as the economy went further deep into recession. To survive the crisis Malawi sought balance of payment assistance from the IMF in 1979 and by 1981 went full swing into structural adjustment. Up until this time, Malawi Government was in full control of policy direction. The role of donors in policy development and direction was very limited.

From then on, management of development financing was in the hands of the World Bank (WB) and International Monetary Fund (IMF), which co-financed the programmes in the form of soft loans and credits. The first phase of structural adjustment programmes (SAPs), which run up to 1986, focussed on stabilising the economy. The second phase focused on dealing with sectoral constraints. Starting with the second phase, other multilateral as well as bilateral donors joined the two in co-financing programmes. This external financing was came with conditionalities, some bad for the poor. Further, IMF became a donor team leader such that if there is no IMF programme, other like-minded donors withheld their aid. The results of the two have been that Malawi Government has been forced to reform in line with policy dictates of donors and if it fails donor financing dries up leaving projects and activities in limbo.

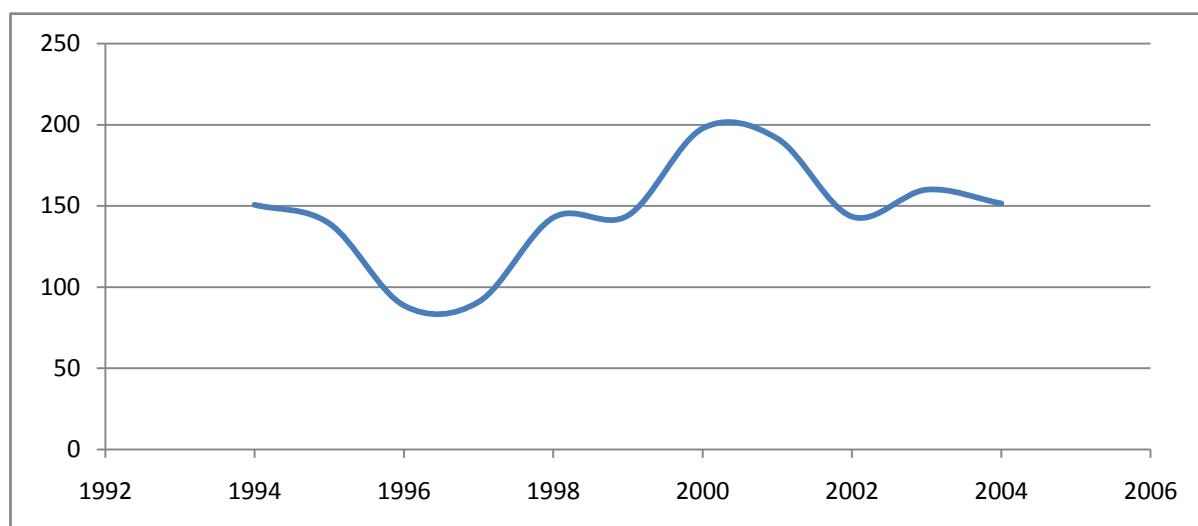
Suspending of aid in the ‘carrot and stick’ approach implies uncertainty in development financing. This means that Malawi, as a donor dependent country, cannot have concrete and long-term development programmes. This is why most programmes adopt a three-year rolling system. In some instances, aid suspension has forced Government to borrow money from the Central Bank or the domestic money market in order to finance ongoing activities. A recent example is the suspension of an IMF programme in 2001 that stayed in force up until 2004. During that period, Malawi’s domestic debt more than doubled between 2002 and 2005 as donor aid remained frozen (Botolo, 2008).

This situation has not changed much over time because Malawi is still dependent on donor funding. As Khaila and colleagues put it,

“While agriculture is indeed the backbone of Malawi’s economy, it has to be mentioned that the Malawi’s economy is really dependent on the largesse of the donor agencies and nations.” (Khaila, et al., 1999, p. 18)

SAPs and their financing did not necessarily reduce the debt burden but composition. The introduction of SAPs meant that Malawi Government was more dependent on what was termed concessional than commercial financing. As Figure A3.1 shows, Malawi has always been debt-laden, at least since 1994.

Figure A3.1: External debt/GDP in percent



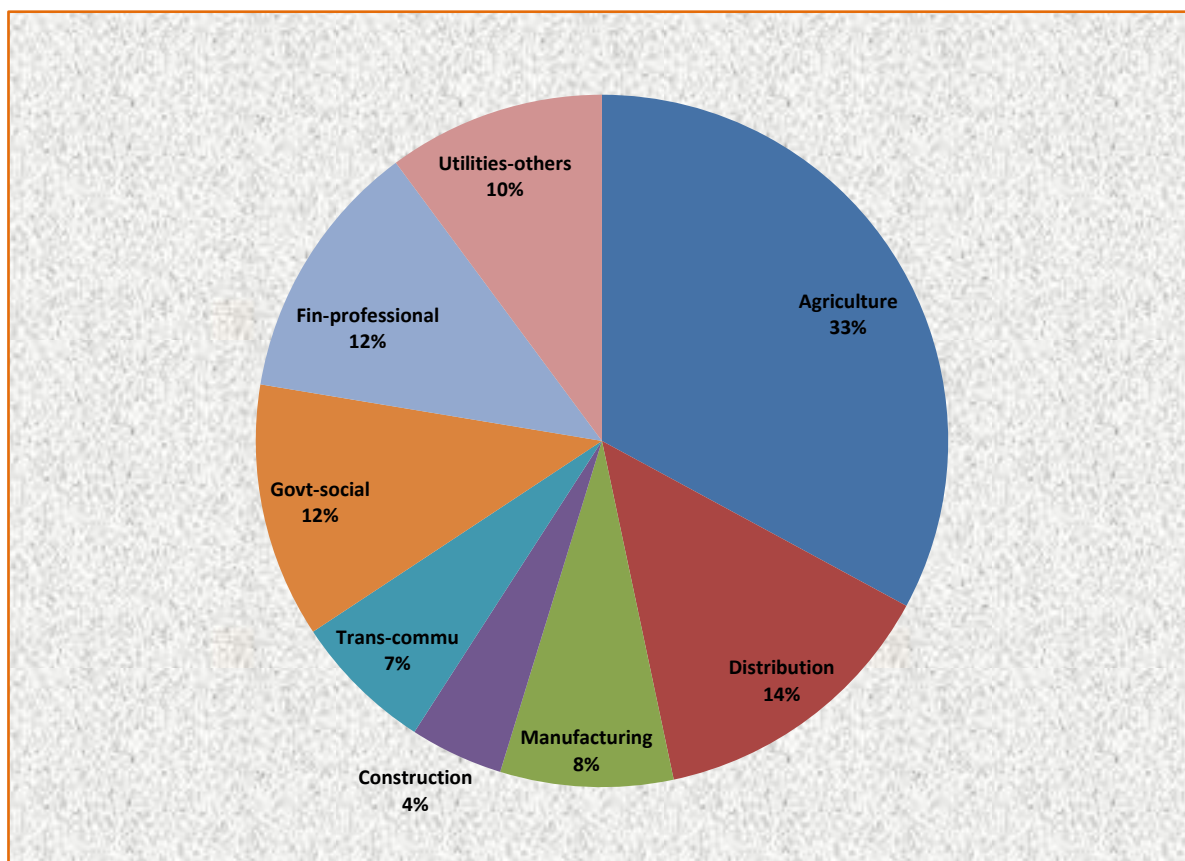
Source: World Bank (2000); MEPD (2005)

National economy

The Malawi economy is dominated by the dualist agriculture sector. Smallholder farming is undertaken on customary land. Estate agriculture is undertaken on leasehold land. Most of the agricultural land is devoted to smallholder maize production for own consumption. Other common food crops grown include cassava, bananas, rice and groundnuts. Tobacco is by far the largest cash crop in the country. It is the single-largest export and foreign exchange earner. Tea is another important cash crop and comes second in export earnings. Other cash crops include cotton (exclusively grown by smallholders), coffee and sugar. Limited employment opportunities in the formal sector force the active labour force to take on farming as their occupation. The smallholder farming is done by hand-held hoes. Ownership of drought animals is very low. There have been no improvements in the technology used possibly because farming is a default occupation.

The manufacturing sector is small and mainly for import substitution and basic agro-processing. Export earnings rarely cover imports. The absence of production of manufactured exports limits the scope for increasing the role of the manufacturing sector in the economy. The role of the distribution sector in the economy has increased over time as imports filled the gap created by liberalisation-induced de-industrialisation. Government services have always played a dominant role in the economy. See Figure A3.2.

Figure A3.2: Sectoral distribution of GDP, 2002-2009



Source: Annual Economic Reports, MEPD (various)

Population and the household economy

The household population in 2008 was estimated to be 3.0 million containing 13.1 million individuals and therefore averaging 4.4 members per household. The population grew by 3.0 per annum between 1998 and 2008. The population density at 139 persons per km² is high, even by African standards. The population is concentrated in the Southern (45%) and Central (42%) regions with 185 and 154 per km², respectively. The population density in the Northern Region was 63 persons per km². However, in terms household size, the Southern Region had the least (4.2 persons) compared to 4.5 and 4.9 for the Central and Northern Regions, respectively. The population is rural-based (88%) and young (52%).

Labour force participation is estimated at 93% when own farm employment is considered. Otherwise only 12% of the labour force is estimated to be formally employed and 6% are self employed in the non-agriculture informal sector. Most of those employed in the formal sector are male given that women represent over two-thirds of full-time farmers. In fact, in terms of agriculture work women undertake 70% of it. Even when employed, women are generally paid less than men (63% of men in

terms of median wage). This is true even when it's the same type of work and same number of hours (38% in production activities and 69% as labourers).

Apart from being overworked and under rewarded, women are under-resourced. According to MPVA (GoM & World Bank, 2007a), even in small-scale agriculture and enterprises in which they are over-represented, women are less likely to get loans and advisory services. Further, about 70% of female-headed households have average landholding size of less than a hectare compared to 50% for men. In fact, nearly twice as many female heads of households, as male counterparts, have landholdings below half of a hectare. Women are twice likely to be illiterate than men. Consequently, women and their household members are overrepresented in poverty. For example, whereas 23% of households are headed by women 58% of the members in female-headed households are poor.

Appendix 3b: Poverty status and persistence in Malawi

A3b.1 Is Malawi and an island in poverty?

Table A3.1 presents key socio-economic characteristics for Malawi and its immediate neighbours.

Table A3.1: Key socio-economic indicators for Malawi and its neighbours

Indicator	Malawi	Zambia	Mozambique	Tanzania
Human poverty rank (out of 134)	90	110	127	93
HDI Rank (out of 182 countries)	160	164	172	151
GDP per capita rank (out of 182)	174	152	169	157
GDP per capita (PPP \$)	761	1358	802	1208
GDP per capita (\$)	256	953	364	400
Population (million)	13	12	22	41
Population density (persons km ²)	139	16	25	41
Population rate (%)	52	68	54	36
Population living on < \$1.25 a day (%)	74	64	75	88
Gini index	39	51	47	35
Life expectancy at birth (years)	52	44	48	55
Survival to age 40 (% of cohort)	32.6	42.9	40.6	28.2
Adult literacy rate (% > 14 years)	72	71	44	72
Combined gross enrolment ratio (%)	62	63	55	57

Source: UNDP (various), GoM & World Bank (2007a), NSO (2008)

Based on these indicators, Malawi is poor even by regional standards. In terms of human development, Malawi is the least developed among its neighbours. In terms of income, the country is the poorest by far. Malawi is not the least only on very few indicators like life expectancy, combined gross enrolment, population living below US\$1.25 a day. Malawi is the most densely populated country by far. While it ranks the least among the four countries on the human development index, it ranks highest on the human poverty index.

Overall, Malawi is the poorest in the region, even when other countries like Zimbabwe, Lesotho, Swaziland, Namibia, Botswana, and South Africa are added. This is why some Malawians migrated to neighbouring countries, especially Zambia, Zimbabwe and South Africa. Although the flow to Zambia and Zimbabwe has reversed due to economic problems in those countries as well, Malawians still attempt to migrate to South Africa and Botswana.

A3b.2 Has Malawi changed its social economic status over time?

The characterisation of Malawi as a country has not changed much over time. In 1989, Gulhati described Malawi as a low-income small country with a rapidly growing, underdeveloped, and short-life population engaged in traditional technology agriculture (Gulhati, 1989). In 1990 the Malawian economy was said to be fragile and narrow and its population characterised by rapid growth, widespread poverty, high mortality rates, and low human capital status (Frischtak, 1990). This seemed to be echoed in 1995 when the economy was described as overwhelmingly agricultural, and the population as having low health and education indicators in terms of life expectancy and child mortality, and literacy and enrolment, respectively (World Bank, 1996). Chilowa (1998) as if copying from a script from the 1980s, described Malawi as a very poor country dominated by the agriculture sector with a narrow economic base and rapid population growth. Thus, for four decades (1960s to 1990s) Malawi remained a poor agricultural country. Did the characterisation change in the new millennium?

Smith (2001) characterised Malawi as a rural-based country in the early stages of the transition out of subsistence agriculture, evidenced by low monetarisation of the economy, with a very poor population and unequally distributed income. Mukherjee and Benson (2003) described Malawi as an agriculture-dependent food insecure poor country whose population is faced with unmet consumption needs, declining life expectancy and dwindling employment opportunities. In 2007, Malawi was described as a poor and vulnerable country with little arable land, high population density, and a young and rapidly growing population and its economy as very fragile and unstable due to its dependence on agriculture which is itself dependent on weather (GoM & World Bank, 2007a). The characterisation of Malawi has not changed over time. Is this a reflection of limited vocabulary or there is evidence in support of the unchanging characterisation? Table A3.2 presents some indicators from the 1970s to as late as 2008.

Table A3.2: Trends in key socio-economic indicators in Malawi

Indicator	1970-79	1987	1998	2007
Population (millions) ¹	5.5	8.0	9.9	13.1
Population density (persons per sq km) ¹	59	85	105	139
Urbanisation rate (% population in urban areas) ¹	7.7	8.1	11.0	11.8
Life expectancy	42	48	39.5	52.4
Total fertility rate (births per woman) ²	7.6	7.4	6.5	6.0
Maternal mortality rate (per 100,000 live births) ²		620	620	984
Under-5 mortality rate (per 1,000 live births) ²	330	262	213	133
Infant mortality rate (per 1,000 live births) ²	189	167	125	76
People living with HIV/AIDS (% of 15-49 year olds)			14.9	11.8
Children under weight for age (% aged under 5) ³	25.9	24	30	19
Adult literacy rate (% aged 15 and above)	30	42	58.2	71.8
Adult literacy rate (male)	42	52	73.2	79.2
Adult literacy rate (female)	18	31	44.1	64.6
GNP Per capita (1995 US\$ for 1975, 1987, 1998)	157	160	166	256
GDP per capita PPP (US\$)		476	523	761
Poverty incidence (%) ⁴		76.6	54.1	52.4
Gini Index (income/consumption expenditure) ⁵	44.8	59.9	39	39

¹ The 2007 figures are for 2008; ² The 2007 are for 2004; ³ The 1970-79 figure is for 1981 (after harvest); ⁴ The 1987 figure is a population weighted average of urban and rural poverty; ⁵ The 1970-79 figure is for 1968/69

Source: UNDP (various), GoM & World Bank (2007), NSO (2008), NSO (1998), Macro and NSO (2004), World Bank (1996a), and Pryor (1989), UNICEF, 2010

The indicators echo the general characterisation given over time. They support the conclusion that Malawi was poor and is still poor on almost all fronts although there have been improvements in some indicators. They show that Malawi has a rapidly increasing population. The population pressure on land resources is also made worse by lack of diversification from low productivity agriculture. This has resulted in very low GNP per capita and skewed income distribution.

There are some improvements though. Total fertility and illiteracy rates declined and the increase in female literacy has been remarkable. Child malnutrition and mortality have declined over time although they are still relatively high. Likewise, there have been some improvements in education albeit not sufficient because of very low status at base. Still over a quarter are illiterate and at least a quarter of the country's children are not in school. Malawi is struggling to reduce the runaway maternal mortality rate, which ever reached 1120 per 100,000 live births in early 2000s.

Apparently, life expectancy has tended to fluctuate with trends in major diseases and advances in medical science vis-à-vis those diseases. For example, the advent of HIV/AIDS in late 1980s reversed the positive trend established between 1977 and 1987 following the success in child immunisation. The downward trend has been contained (if only for a time) by the provision of free life prolonging drugs to HIV-infected people. The possibility of a reversal is still there because the HIV infection rate, though declining, is still high and the ART programme's effectiveness is dependent on patients' attitudes and its sustainability. The programme is donor-funded as such sustainability is questionable.

It is clear that poverty in its various forms has persisted. Poverty survived the colonial and federal governments. Poverty flourished under the one-party with no official recognition. Poverty in Malawi has worsened under the hard core structural adjustment. Poverty has just been restrained under the so-called structural adjustment with a human face. The liberal politics has failed to reduce poverty, either. If anything it has, at times, simply alleviated its effects. The question is why has poverty persisted despite sometimes open declaration of war against it by all stakeholders?

A3b.3 Why poverty persisted in Malawi

This issue of persistence of poverty is best seen using experts' lenses over time. In most cases, these agree and in others they disagree but a picture emerges. The categorisation of the answers has benefited from hindsight. In some cases, space economics has taken pre-eminence over comprehensiveness. What has been found is that the poverty can be blamed on nature, colonialism, poor policy and programme design, the MCP dictatorship, and structural adjustment. In presenting the reasons under these broad topics, the emphasis is on negatives. There is limited effort put on balancing the negatives and positives because if poverty persisted it implies that the negatives outweighed the positives. It is recognised, though, that without the positives the poverty situation could have been worse. For example, without colonialism, structural adjustment and possibly independence, the country may have been worse off. Of course, the opposite could also be true. This is why it has been elected not to go for the counterfactual in this presentation.

A3b.3.1 Poor start: blame poverty on colonialism

Colonialism has variously been blamed for the poor start Malawi had at independence. It is argued that had it been that the colonial government prioritised the development of the economy and population Malawi would have had a good footing. Probably

expecting the colonial government to develop the country is expecting too much but some commentators has picked on this. Can colonialism be blamed for the creation and propagation of poverty in Malawi?

Negative side of colonialism

One of the factors cited is that the country did not receive high volume of European investments compared to neighbouring countries like Northern and Southern Rhodesia (Pryor 1989). The speculation is that that the country was of no economic value because of its lack of exploitable mineral resources. The result is that very few settlers chose Malawi as a colonial destination. The small size of the settler population and modern sector meant limited development of socio-economic infrastructure since those were meant to follow the settlers. This colonial neglect meant underdevelopment and poverty (Pryor, 1989).

Another factor is that implemented policies were dictated by the few settlers and detrimental to the welfare of the majority natives (Pryor, 1989; Kydd & Christiansen 1982). In agriculture, for example, the colonial government facilitated the transfer of land from subsistence to estate agriculture (Kydd & Christiansen, 1982) such that by independence, 13% of the land was held by the few settlers that were in Malawi (Pryor, 1989). Another example is that to provide cheap labour to the estates, the colonial government forced people to seek wage employment in estates by imposing hut tax (Kydd & Christiansen, 1982). In the Southern Region where the settlers had grabbed most of the prime land, the colonial government facilitated a quasi-feudal arrangement whereby the use of a plot of estate land was exchanged for supply of labour in the estate (Kydd & Christiansen, 1982; Pryor, 1989). Further, the colonial government facilitated a visiting tenant system under which a household grew cash crops on an estate land on condition that it would sell the crop to the estate at a price determined by the estate (Kydd & Christiansen, 1982). These policies ensured that the tenants remained poor and dependent upon the estates for their livelihoods.

Although the colonial government is credited with the introduction of cash cropping, settler politics ensured that the local farmer remained poor. Firstly, smallholders were not allowed to grow lucrative cash crops like burley and flue-cured tobacco and tea and the few crops they could grow they were restricted to sell them to marketing boards whose prices ensured that estates workers benefited (Pryor, 1989). Worse still, the colonial government adopted a minimum wages policy which ensured that estates and capitalists got cheap labour (Pryor, 1989). Another negative is that the colonial

government emphasised primary education at the expense of secondary and tertiary education thereby ensuring a docile and unorganised labour force (Pryor, 1989). In the end neither own farm production nor employment guaranteed movement out of poverty.

Policies in the financial sector did not even give the natives a chance to get business finance. According to Pryor (1989), the colonial government facilitated a liberal economic environment for settler capitalists but implemented stunting market regulation to the extent that factor markets (labour, capital and land) for the locals were virtually non-existent. In the end, ownership of production activities in the modern sector (i.e. production for exports, transport, and communication) were firmly in foreign hands (Pryor, 1989). For example, 56% of total manufacturing gross output in 1960 was from foreign owned enterprises and the recorded 38% contribution from locals comprised production of handcrafts (Pryor, 1989). Again, at independence, all banks were foreign-owned (Pryor, 1989).

The lack of interest in the economic development by the British Government after independence in Malawi is also cited as a factor explaining the difficult the country had in dealing with poverty (Pryor, 1989). Given the colonial neglect which resulted in a largely a rural economy (96% of population in 1966) and differences in living standards and income between foreigners and locals, it was expected that the British Government would 'save' its face by investing in the country so as to increase the size of the market, even for its products (Pryor, 1989).

Overall, this engineered low economic status is believed to be the root cause of the persistent poverty; too much was left undone and the likelihood of sustainable poverty reduction has been diminishing with the advent of new and tougher challenges. Pryor (1989) talks of colonial neglect earning the country the titles of imperial slum and Ireland of Central Africa and reports of derogatory characterisation like a country with an empty economy and a handful of educated people. While it may be true that the independent government inherited an empty government, it may not be true that colonial government left nothing.

Positive side of the colonial era

The introduction of the market economy to a people that had little contact with the outside world is considered as positive although others can argue against it. The introduction of the cash economy started with the introduction of payment of a hut tax in cash which forced men to seek wage employment out of which the hut tax was paid

(Kydd & Christiansen, 1982). In the agriculture sector, the cash economy came in earnest with smallholder farmers selling their surplus food to the growing estate agriculture (Kydd & Christiansen, 1982). With time, the colonial government introduced cash cropping in the smallholder sector and in time, smallholder production of cash crops outstripped that of estates (Kydd & Christiansen, 1982; Pryor, 1989). From an economy that was effectively subsistence, the proportion of the monetary GDP to total GDP stood at 47% by independence (Pryor 1989). By rooting the economy in the market economy, the colonial government arguably provided a platform for development and possibly poverty reduction.

The colonial government gets credit for emphasising agriculture when it was clear that the majority of the people would benefit from agricultural development more than any other sector. The emphasis came especially after the Second World War (Pryor, 1989). The colonial government put in place two medium-term development plans which were implemented and increased smallholder production. The investments in the sector started after the Second World War and peaked in the period 1953-1959 when the Federation of Rhodesia and Nyasaland was in operation (Pryor, 1989). The downside is that at independence the agriculture sector, including the subsistence sector, contributed 90% of GDP (Pryor 1989). With the rural sector involved in one or another in the production of food and cash crops, the colonial government had raised the awareness of the potential benefits of agriculture, which the independent government could have exploited positively.

Just like the emphasis of agriculture is considered positive, the colonial government's migration policy is considered in the same light. The colonial government responded to economic opportunities offered by external migration, namely remittances and employment of the underemployed. The colonial government followed this policy despite pressure from estate owners (for cheap labour) and missionaries (for family stability) (Pryor, 1989). While emigration was a sign of poverty in Malawi vis-à-vis its neighbours (Pryor, 1989), it is difficult to argue that it robbed the economy of the requisite labour for its development since external migrant made up of only 14% of the labour force in 1960 and when the modern sector employed only 3% in 1965 (Gulhati, 1989). It is fair to conclude that, on the balance, the emigration policy was a positive rather than negative poverty reducing factor (Pryor, 1989; Kydd & Christiansen, 1982).

One other positive factor is that the country was not plundered, discounting the forcible free transfer of land from locals to foreigners and considering that the colonial

government turned some freehold land over to locals for settlement and at independence there were very few landless households (Pryor 1989).

Considering both the negative and positive factors and the absence of the counterfactual, it is not justifiable to continue to blame colonialism for the persistent poverty. While it is true that the colonial government had policies that propagated poverty in the agriculture sector, it is also true that it laid a foundation for an agriculture-led development. The independent government had the chance to right the wrong without jeopardising the overall poverty reduction goal. Apparently, the independent government carried forward the wrong colonial policies with devastating effects.

A3b.3.2 Poverty amidst hope: years after independence

The independence campaign in the early 1960s had one strong message: Malawi was an imperial slum which had to be turned into a Denmark of Africa (Pryor, 1989). The targets were poverty in the form of hunger, poor clothing, and poor housing as well as disease and ignorance (GoM, 1971)⁷⁰. The message gave hope to many Malawians and earned the independence movement a landslide victory. Some decades after independence, it was observed that poverty persisted despite some rapid growth of the economy (Kydd & Christiansen, 1982). In fact as early as 1975, experts spotted tell-tell signs that the welfare of the poor was likely getting worse evidenced by increasing inequity in the distribution of gains from growth and lack of growth in the smallholder sector on the back of lack of government's and donor's attention to distribution effects of the adopted policies and strategies (Kydd & Christiansen, 1982).

The economic success story of an economy growing at an average of 6% per annum against a population growth of 3% per annum between 1964 and 1979 (Sen & Chikunda, 2002, Gulhati 1989) is marred by stories of declining smallholder farmer productivity and declining living standards of the majority (Pryor, 1989) due to government policies and practices that worked against smallholder agriculture but supported estate agriculture (Kydd & Christiansen, 1982). In some cases, the independent government carried on regressive colonial policies and practices and in others complemented them with meaner ones. For example, it carried forward the colonial policies that restricted smallholder farmers from selling their produce at price they wanted and to whosoever was willing to buy it. Malawi government also continued the tenancy system and the supplementary minimum wage policy. It also

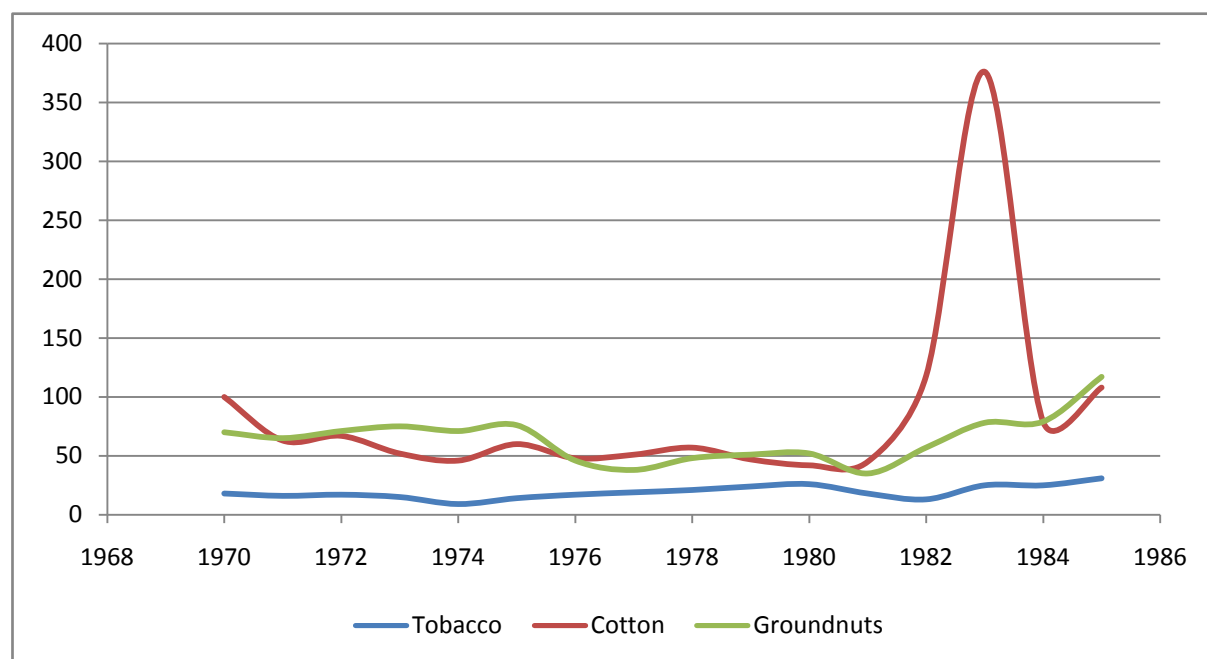
⁷⁰ GoM (1971), Statement of Development Policies, 1971-1980, Zomba: Economic Planning Division

carried forward the policy of restricting smallholders from growing burley tobacco and this also went hand in hand with the continuation of the transfer of land from smallholder agriculture to estate agriculture, this time at a faster rate than did the colonial government. This implies that the Malawi Government maintained the law that restricted the production of crops like burley tobacco, tea, flue-cured tobacco and coffee on customary land. This was a good recipe for continued poverty.

Implicit taxing of smallholder farmers

According to Kydd and Christiansen (1982), Malawi government consolidated smallholder crop marketing boards into one (called Farmers Marketing Board) and required smallholders to sell their produce to that marketing board only. By 1971, the name of the board changed to Agricultural Development and Marketing Board (ADMARC) and its mandate expanded to cover both crop marketing and agricultural development. Contrary to the official policy that cautioned ADMARC against taxing smallholders (Gulhati, 1989), over time ADMARC paid lower than export parity prices to farmers and used the surplus generated to finance estate agriculture (Kydd & Christiansen, 1982; Pryor, 1989). Figure A3.3 presents the trends in the ratio between producer prices of the three cash crops and their border prices.

Figure A3.3: Producer price – Border Price Ratio, 1970-1985



Source: Gulhati (1989)

It is clear that smallholder cash crop producers were paid far below the border prices. Cotton and groundnuts producers were much better than tobacco producers in terms of the implicit tax paid. Tobacco producers were persistently paid far below the border price (averaging 19% for the period 1970 and 1985) than cotton (85%) and groundnuts (64%). It is noted that ADMARC used the objective of cross-subsidy to justify this implicit tax (Pryor, 1989). Unfortunately, the subsidy did not benefit the rural poor because their participation in the cash economy was very minimal. According to Kydd and Christiansen (1982), the surplus food crops purchased by ADMARC and later sold at subsidised prices served the estate agriculture workers and urban dwellers more than food deficit smallholders.

Low return for smallholder crops and good land for estates

Gulhati (1989) argues that there is no technical reason why smallholders were not permitted to grow lucrative burley tobacco. According to him, all they needed was what estates farmers got: credit and technical advice (Gulhati, 1989). Just as settlers wanted this lucrative crop to be exclusive to them, politicians wanted this crop to remain a crop only they and few capitalists could grow (Kydd & Christiansen, 1989). This is why Government supported the transfer of land from smallholder to estate agriculture by enacting a law in 1965 that required traditional leaders to transfer 'idle' land for estate agriculture (Gulhati, 1989).

The president encouraged politicians as well as senior civil servants to take up burley tobacco production (Gulhati, 1989; Pryor, 1989). This political influence backed by the 1965 Land Act eased the transfer of good customary land (Kydd & Christiansen, 1982). Land availability in the smallholder declined by 26% as opposed to a more than ten-fold increase in land leased by estate agriculture between 1964 and 1985 (Gulhati, 1989). Likewise, number of estates increased from 229 in 1970 to 14,355, albeit with declining estate sizes (See Table A3.3).

Table A3.3: Estates number, area and average size

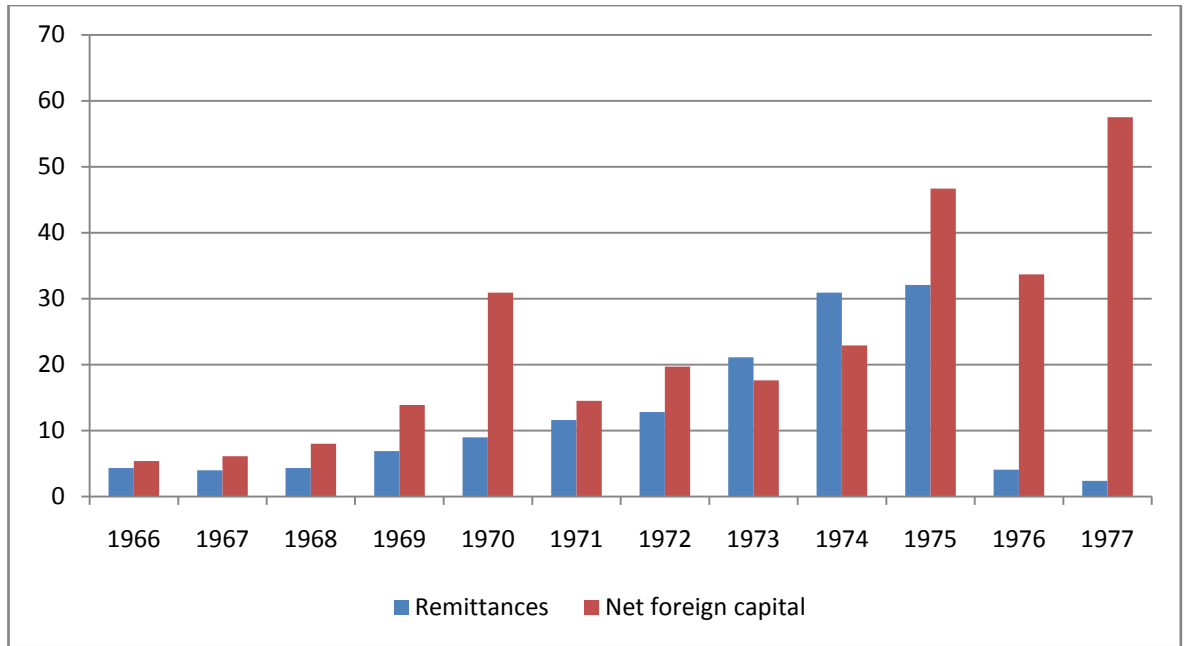
	70	79	80	81	82	83	84	85	86	87	88	89
Estates ('000)	0.2	1.1	1.3	2.1	3.8	4.8	5.3	5.7	6.2	8.1	12	14.4
Area ('000 ha)	79	25 6	27 3	32 0	38 6	43 5	46 0	49 2	51 8	58 8	69 6	759
Average size (ha)	34 5	23 2	20 7	153	101	91	87	87	83	73	58	53

Source: Mkandawire, 1999 Table 1

Nowhere to go: migration, minimum wages, and tenancy system

After a flourishing start for migration and peaking at 25% of the labour force in 1972 (Kydd & Christiansen, 1982), formal migration was stopped in 1974, restarted in 1977 but at a limited rate (Gulhati, 1989). Formal migration was finally stopped in 1989 (Chijere-Chirwa, 1996). This was in disregard to the positive impact remittances had on the economy. For example, at the peak of formal migration, remittances surpassed net foreign capital (Figure A3.4). In other words remittances, apart from the household effects, assisted in balancing the foreign payments the country was facing in its infancy.

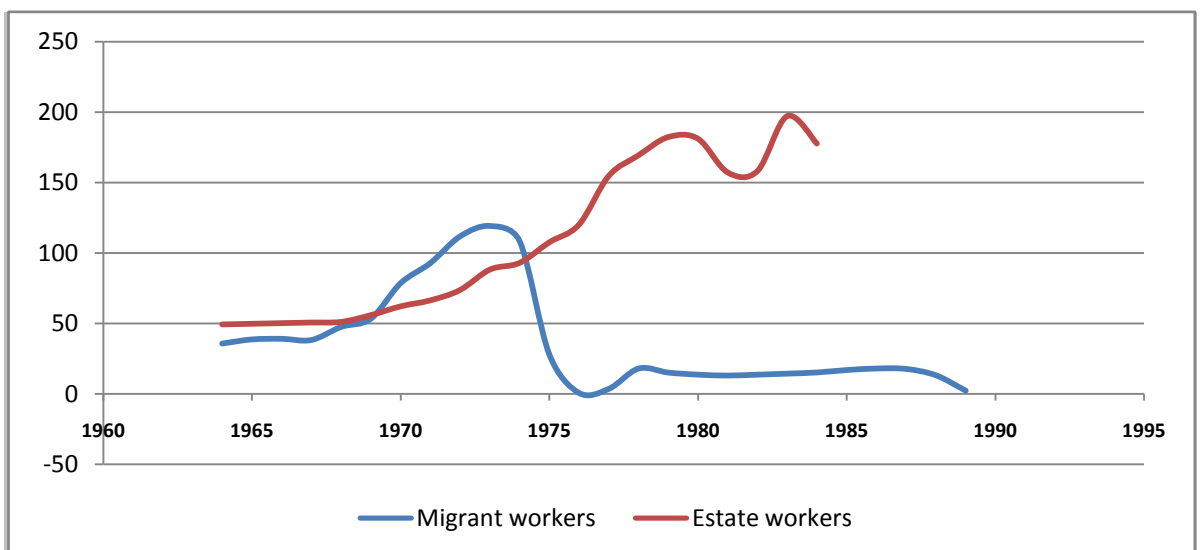
Figure A3.4: Remittances compared to net foreign capital in million US\$



Source: Data for graph from Gulhati (1989)

The unemployed were forced to seek wage employment in estates. Others took their families and joined a growing population of tenant farmers in estates, courtesy of a colonial system that survived a ban just before independence. According to Gulhati (1989), settler estate owners prevented the enactment of a bill that would have abolished the tenancy system on estates but the independent government carried it forward. According to Mkandawire (1999), tenants are the main labour force in burley tobacco estates. However, estates also benefited through estate wage employment judging from Figure A3.5 below.

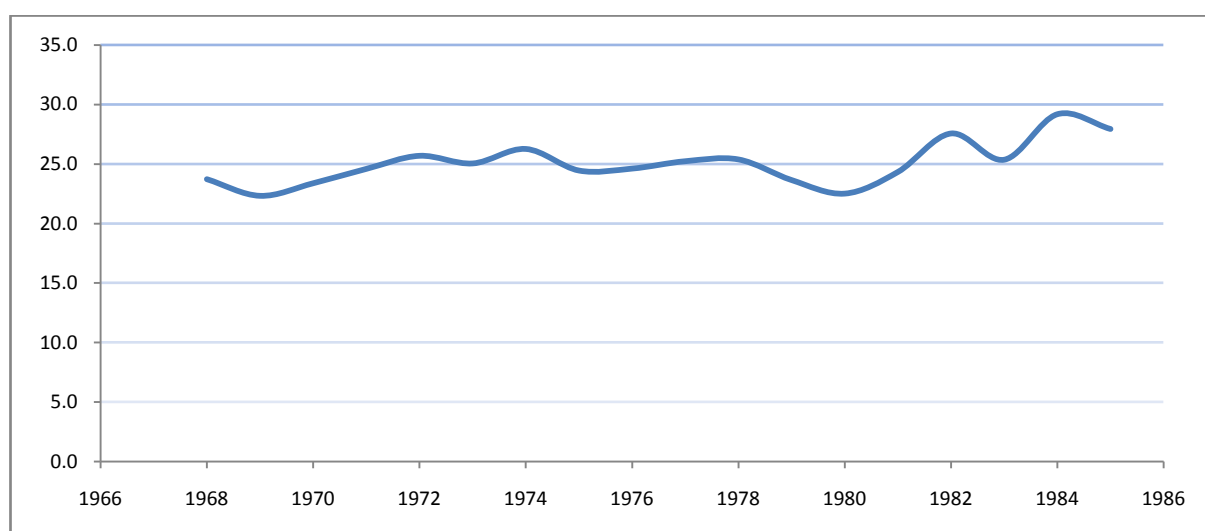
Figure A3.5: Number of migrant and estate workers ('000), 1964-1989



Source: Data for graph from Chijere-Chirwa (1996)

Mkandawire (1999) reports that malnutrition was rampant among tenants as they generally lived in abject poverty. GoM & UN (1993) reports that tenant farmers hardly get enough returns to redeem themselves out of the system and return home. Unfortunately, wage earners in estates could not escape poverty either. According to Gulhati (1989) Malawi Government maintained the minimum wage policy to ensure capitalists had cheap labour. Although the average wage in the agriculture sector was above the minimum wage, they have always been way below all other sectors (Pryor, 1989). See Figure A3.6.

Figure A3.6: Ratio of agriculture wages to non-agriculture wages in percent



Source: Data for graph from Gulhati (1989)

It is no wonder that the situation analysis of poverty in early 1990s identified estate workers and tenants as poverty groups (GoM & UN, 1993). Yet the bulk of those employed were in this sector. This followed new policies and orientation adopted by Malawi Government. It adopted a labour-intensive development strategy. This was complemented by an incomes policy and the already discussed minimum wages policy. In agriculture, Malawi Government fervently employed development strategy that created dualism between estate and smallholder agriculture in the sector supported by production, marketing and pricing policies. The dualism was enhanced by introduction of a powerful corporation and the investment strategies of ADMARC. These and their effects are discussed in turn.

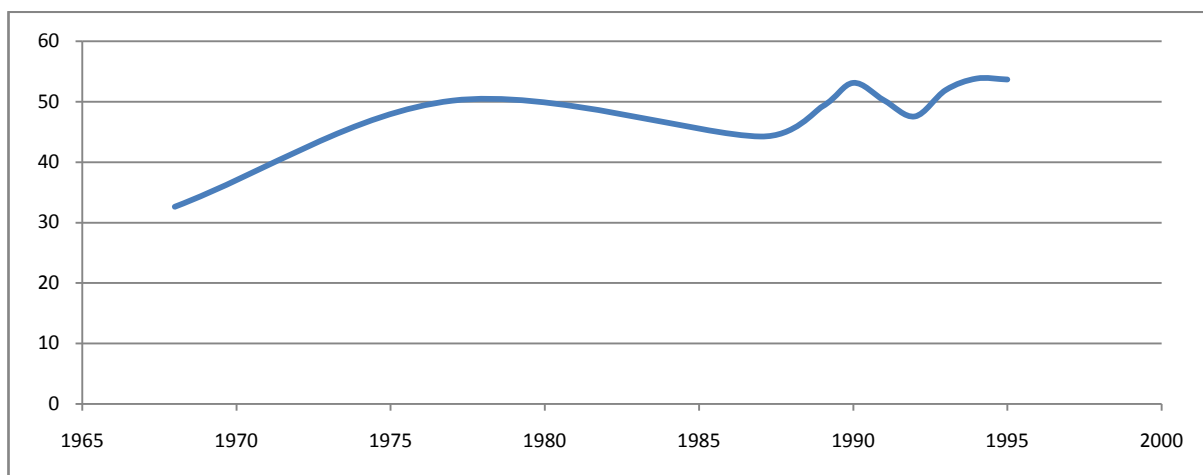
The labour-intensive development strategy

Government strategy was to prioritise sectors that were labour intensive and keep them competitive (Gulhati, 1989). This meant prioritising agriculture and keeping the price of

labour low. In essence this meant rural as opposed to urban development and limited employment opportunities in urban areas (Pryor, 1989). Some of the strategies used included the minimum wages policy, suppression of trade unionism and an incomes policy that required any employer to get an approval from government if it meant to increase salaries of its workers by more than 5% (Pryor, 1989; Gulhati, 1989). The minimum and incomes policies were meant to stem rural-urban migration. This was to be achieved by keeping urban and rural income gaps constant and, by keeping public sector wages lower than private sector wages government to avoid creaming scarce skilled labour away from the private sector (Gulhati, 1989). The strategy was also meant to constrain cost-push inflation (Gulhati, 1989).

This seemed to work in terms of creating employment opportunities and limiting rural-urban migration. Further, it managed to woo marginal smallholders away from smallholder farming into wage employment in estate agriculture, estate associated enterprises and import substitution industries (Kydd & Christiansen, 1982). This resulted in an increase of the modern sector share of the labour force from 8% in 1968 to 14% in the 1980, with the estate agriculture share rising from 35% to 50% (Gulhati, 1989). Kydd and Christiansen (1982) states that the share of agriculture sector employment to total employment rose from 44% to at least 51% in the same period. On the other hand, urbanisation rate between 1965 and 1980 rose from 5% to 10% (Gulhati, 1989). However, the share of the manufacturing sector between 1967 and 1984 did not change much; from 11% to 12% and its output grew by 5% (Pryor, 1989). According to Mkandawire (1999), the share of the agriculture sector wage employment to total wage employment rose from 33% in 1968 to 54% in 1995 although the stabilisation period may have put a halt to the rapid growth as depicted in Figure A3.7.

Figure A3.7: Share of agriculture employment in total formal employment in percent



Source: Data for graph from Mkandawire (1999, Table 5)

The strategy was not negative per se. It was its implementation that made the living conditions of workers poor. The main problem was that there were infrequent and relatively low adjustments. Minimum wages and salaries remained unchanged between 1974 and 1979 (Gulhati, 1989). The results were that in real terms minimum wages for low income Blantyre dwellers declined by 31% between 1974 and 1980 and modern sector wages fell by 28% between 1968 and 1978 with estate workers bearing the blunt of the decline (Gulhati, 1989). Chilowa (1998) reports that estate wage earners were considered the least food secure because they were effectively paid less than minimum wages. On the other hand, overall real wages and salaries in the public sector did not fall because, apart from the 1974 6% adjustment and the 1978 32% adjustment, the annual merit increases of 4% were maintained throughout the 1970s (Gulhati, 1989).

Smallholder agriculture development strategy

Government concentrated most of its energy on developing estate agriculture (Sahn & Frausum, 1994; Kydd & Christiansen, 1982). Smallholders were left to the 'experiments' of the World Bank, initially four integrated projects and later on national rural development programme (Kinsey, 1984; Kydd & Christiansen, 1982). Kinsey (1984) doubt if Malawi Government and World Bank genuinely cared about equity in these projects. Lele (1990) states that even the designers of the successor NRDP did not factor in strategies that would meet the needs of the risk-averse farmers. For example, the financial and technical packages in the projects and programme were mostly directed to non-poor smallholder farmers (Sofranko & Fliegel, 1989). Thus smallholder development strategies failed because they could not provide inputs and appropriate agricultural equipment to the majority of the farmers (Gulhati, 1989; Pryor, 1989;

Kinsey, 1984). Even the few targeted non-poor smallholders only accessed short-term credit tied to inappropriate technical packages, making medium term credit effectively non-existent (Gulhati, 1989). Adoption of new technology, though increasing, was low (Sofranko & Fliegel, 1989).

Although the share of smallholder agricultural output in GDP increased overtime (Sofranko & Fliegel, 1989), productivity hardly rose (Kinsey 1984; Gulhati 1989)). Further, the increase in production was from a small section of the smallholder farmers (Sofranko & Fliegel, 1990; Gulhati, 1989; Kinsey, 1984; Kydd & Christiansen, 1982)). In terms of equity, only the top 2.5% of the population experienced an increase in their aggregate share of the income in the period 1968-77 (Kinsey 1984). Pryor (1989) argues that Malawi Government performed no better than the colonial government judging from pre and post independence growth in smallholder crop production.

Whence the implicit tax revenue? The irony of ADMARC as a friend of farmers

The ADMARC advertises itself as a 'friend of farmers'. Indeed the design of ADMARC was to promote smallholder crop production (Gulhati, 1989). Unfortunately, ADMARC vied away from this objective by imposing an implicit tax on smallholders (Pryor, 1989) and not investing the 'tax revenue' in smallholder friendly financial and technical services (Pryor, 1989). Instead, it invested in its 'enemy', the estate agriculture known for 'stealing' smallholder agriculture land and labour (Kinsey, 1984). Gulhati (1989) reports that between 1972 and 1981, the development of estates took up 76% of ADMARC's investments and loans. In fact by 1981, ADMARC owned tobacco estates covering 12,350 hectares and had lent out a lot of its money (MK50million) to Press Holding, the largest single investor in estate agriculture (Gulhati, 1989).

The emergence of Press Holdings as a private sector player

Press Holding was wholly owned and established by the dictator president in 1969 as an investment holding company (Gulhati, 1989). By the end of the 1970s, it covered tobacco production, trade, transport and manufacturing and its turnover was a third of GDP and its work force 10% of modern sector employment (Gulhati, 1989). The fact that this was the president's meant that any policies related to land, estate agriculture, wages and incomes had a special place in his personal development. As such, policy makers understood the advantages of rapidly transferring land to his company, and keeping wages low. On the financial market, this meant that commercial banks had to provide special treatment to estates financing. This further crowded out the smallholder

sub-sector in terms of land, labour and capital availability. It is ironic that ADMARC used profits from smallholder crop marketing to prop this conglomerate.

Anything left for the poor? Price controls of essential products

Poverty persisted in the 1960s and 1970s because Government policies and strategies worked against the smallholder. If there was any consolation then it was the price controls on essential commodities. According to Kaferankhande and Ndhlovu (2006), there were ten goods whose prices were controlled and fertilizer was among them. This was meant to keep inflation in check. According to Chingaipe-Ng'oma (2010) price controls were enforced by party zealots at community level. By the end of the 1970s, the price controls weakened the financial positions of those manufacturers mostly producing pro-poor products. This constrained supply and resulted in either queues or non-existence of the products as producers switched to non-essential commodities (Gulhati, 1989). It has to be said that had it not been for this policy, the declining real wage incomes in the 1970s would have resulted in worse living conditions.

On the other hand, this policy can be viewed as an inefficient cover up for the regressive policies adopted in agriculture and a clear deterrent to the development of the manufacturing sector which was facing a squeezed local market, limited human capital and expensive transport cost for its raw materials. It could have been better if farmers and workers got what they deserved so as to expand the local market for manufactures rather than constraining prices of labour, farm produce, and manufactures. As will be seen later, liberalisation under the structural adjustment programme further disseminated the manufacturing sector.

The impact of Malawi Government policies and strategies on the poor

There were no poverty studies in the 1970s and 1980s. As such it is not easy to determine whether poverty increased or not. However, using income as a measure of poverty, some gauging of direction of the effect can be done. On smallholder farming returns, Kinsey (1984) reports that both rich and poor smallholder farmers faced declining returns; the cash cropping farmers faced increasing input prices with static producer prices while subsistence farmers faced declining and uncertain returns vis-à-vis modern sector wages. Pryor (1989) calculates that returns in the smallholder subsector grew by less than 1% and its aggregate employment increased by 2% compared to 3% growth in labour force between 1978 and 1987. The returns were particularly affected by the implicit taxes ADMARC exacted from farmers, the lack of opportunities to grow lucrative crops, non-availability of inputs and extension services, diminishing

landholding sizes, and slightly higher wages in the modern sector (Kydd & Christiansen, 1982; Pryor 1989). The declining returns led to further weakening the smallholder sector because strong labour moved away from smallholder subsector leaving women, children and the weak. Further, those that remained in smallholder farming moved away from cash cropping and concentrated on low-yielding but low-risk local maize production for food security (Kydd & Christiansen, 1982; Pryor 1989).

On wage income, the results are likely to be ambiguous. The increase in modern sector employment may have more than compensated for the declining returns. According to Gulhati (1989), growth in modern employment was faster than the labour force between 1971 and 1980. This coupled with the fact that modern sector wages were higher than minimum wages, the development may not have directly led to the creation of poverty (Pryor 1989). However, this ignores that inflation for the low-income population outpaced growth in nominal wages by 6% (Kydd & Christiansen, 1982).

On diminishing landholdings, Pryor (1989) observed that despite the massive state transfer of land from customary to leasehold status, landlessness and land renting in rural Malawi was uncommon. However, that does not negate the fact that families, especially in the Southern Region where land is scarce, are forced to subdivide the landholding and, when sub-division is no longer possible, abandon agriculture altogether.

Overall, personal benefit to the political elite took priority in policy making and strategy development. The welfare costs were systematically devalued as Government chose to support estate agriculture at the expense of smallholder farmers. According to Sahn and Frausum (1994), this created three poverty groups out of smallholder farmers; subsistence farmers who stayed on the land, estate wage earners and estate tenant farmers.

A3b.3.3 Fated to be poor: the role of nature and bad luck

Commentators also blame nature and bad weather for the persistent poverty in Malawi. The weather pattern, absence of seashore and minerals, land size, and endemic diseases are often used as default scapegoats. Others blame bad luck in terms of droughts and floods, insecurity in neighboring countries, and volatile terms of trade. In some cases culture is blamed for the high population growth and HIV prevalence rate as well as low women status which are considered causes of poverty. Culture is also blamed for the risk-averseness prevalent among potential investors. Most of these have a bearing on the

size and structure of the economy and are sometimes associated with Malawi poverty. These factors are briefly discussed below.

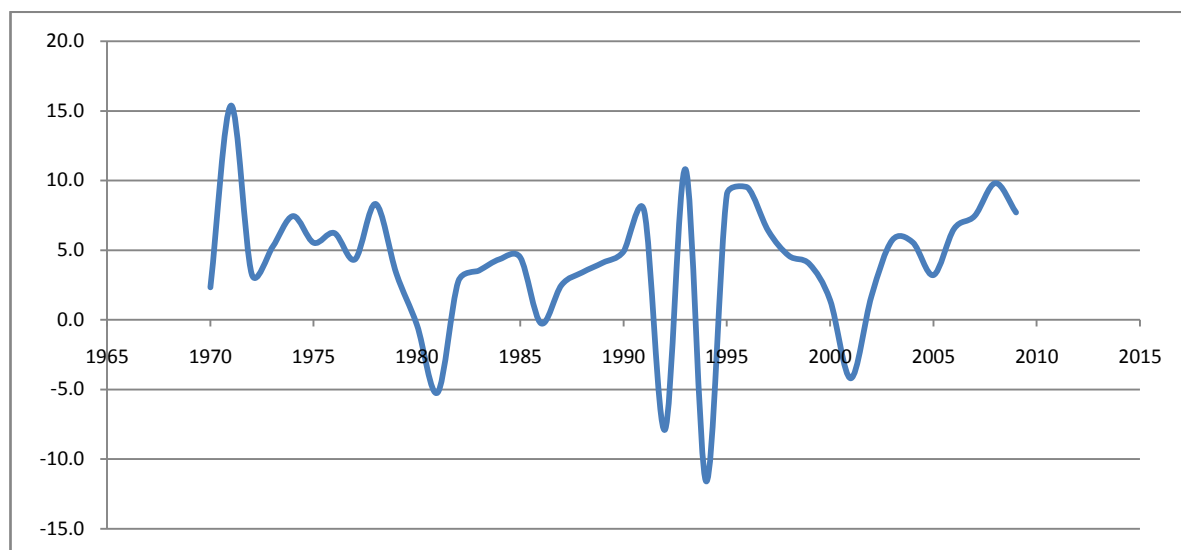
Land holding size

The discussion on the transfer of land from customary to leasehold title was predicated on the premise that such a policy reduces landholding sizes to levels that are not viable even for subsistence farming without massive investments in technology. The land factor has consistently been mentioned as a cause of poverty (Gulhati, 1989; Sofranko and Fliegel, 1989; GoM & UN, 1993 and Chirwa, 2004). By looking at the diminishing landholding sizes and relating poverty levels with landholdings sizes, many conclude that people are poor because of the meagre landholding sizes. For example, Sofranko and Fliegel (1989) argue that the average landholding size even in 1980/81 were too small for meeting basic subsistence needs. Chirwa (2004) argues that households in areas with no spare land should be facilitated to relocate to areas with spare land. However, poverty determinants studies rarely find landholding size as a factor (Mukherje & Benson, 2003, Chirwa, 2004, GoM & World Bank, 2007).

Erratic weather pattern

Another nature-related factor is the rainfall pattern which allows only one growing season and is very erratic. The point the commentators (Ellis, et al., 2002; Pryor, 1989; Devereux, et al., 2006) make is that one season on the very small landholding sizes is not adequate for annual household food security and cash generation. Further, the erratic rainfall makes things worse in years when the rainfall pattern is less than normal. In such years, the population is plunged from general poverty to food poverty. The impact of this factor even at national level is enormous. Malawi's economic performance is closely linked to the weather pattern. The poor weather of 1991, 1994 and 2001 is clear in Figure A3.8.

Figure A3.8: GDP Growth 1970-2009



Source: Author's calculations from various editions of MEPD's Economic Report

However, this weather can be mitigated somehow. Strategies like weather-based insurance (GoM & World Bank, 2007) and irrigation (GoM 2006)⁷¹ can be adopted. Again, there are certain aspects of nature that are positives and can be exploited to the benefit of the poor. Pryor (1989) lists mild temperature, fairly rich soils, relative abundance of rain, and varied topography with varied rainfall pattern which permit the cultivation of a variety of crops.

Absence of high value minerals and sea shore

Perhaps one key natural factor highlighted by many, including Pryor (1989) and Gulhati (1989), is that Malawi, unlike all its neighbours, has no viable mineral resources as evidenced by almost non-existent mining industry and mineral exports. It is expected that resources from the minerals could have lifted some out of poverty. Another physical disability mentioned as holding the country back is lack of a sea shore for external trade (Pryor, 1989; Gulhati, 1989). With a minimum 1,500km distances to a seaport (Ellis, et al., 2002), overland transport costs are said to consume unsustainable levels of the country's foreign exchange and therefore limit the capacity of the country to deal with poverty. Further, the bottleneck makes Malawi an unattractive investment destination.

⁷¹ GoM (2006) Malawi Growth and Development Strategy: From Poverty to prosperity 2006-2011. Lilongwe: Ministry of Economic Planning and Development.

The curse of living in a valley

Malawi is said to have high morbidity rates due to endemic diseases like malaria, diarrhoea, acute respiratory infections and cholera (Pryor, 1989; Devereux, et al., 2006). Malaria, diarrhoea and cholera are endemic especially during the rainy season, the very time where labour demand is at its highest for the majority of the population. Attending to the suffering or sufferers reduces agricultural labour productivity and therefore leads to poverty (GoM & UN, 1993).

People's attitudes towards family size and HIV infection

The population growth since 1966 averages 3 percent per annum (NSO, 2008). Use of contraceptives for limiting number of children is very low (17% - Macro and NSO, 2004) and yet the rapid population growth has been identified as one of the causes of poverty (GoM & UN, 1993) or 'driver of Malawi's persistent poverty' (GoM & World Bank, 2007a, p. 21). Rapid population growth has also led to diminishing family landholding sizes (Pryor, 1989; Gulhati, 1989). This rapid population growth seems to come from people's preferences of large family sizes. For example, 29% of women with five or more living children wanted to have another child while 49% of men had the same desire and even the ideal numbers of children, 4.1 for women and 4.0 for men, are high (Macro and NSO, 2004).

The attitude against the use of contraceptives is also apparent in HIV prevention. HIV transmission in Malawi is mostly through heterosexual sex. However, despite almost universal knowledge of HIV and AIDS and how it transmitted (Macro and NSO, 2004), condom use prevalence is only 15% (GoM & World Bank, 2007a). The dare-devil attitudes are apparent in the finding that only 42.5% of men who paid for sex in the past year used a condom in the last paid episode (GoM & World Bank, 2007a).

Prevalence of poorly resourced female-headed households

Devereux and colleagues (2006) argue that female-headed households are prone to poverty because of the reduced labour availability (Devereux, et al. 2006) as well as the limited cultural and economic power available to them. Female households are said to have significantly less landholding sizes (GoM & World Bank, 2007a; Sofranko and Fliegel, 1989), less contact time with agricultural extension services (Kinsey, 1984; Kydd & Christiansen, 1982), and less loan episodes and amounts (Devereux, et al. 2006, GoM & UN 1993). Devereux and colleagues (2006) found that women are paid only two thirds of men's rate when they work on *ganyu*. The disadvantage starts while young;

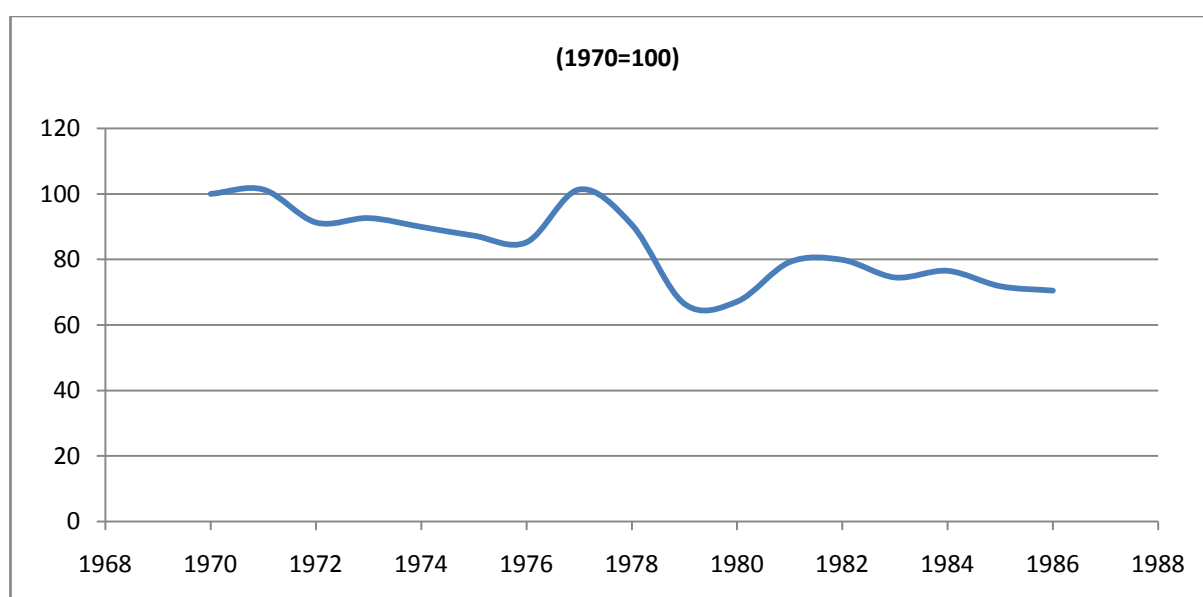
girls are more likely to be absent and drop out from school (Devereux, et al., 2006). When they grow up and become heads of households, they are more likely to have a fraction of the value of assets in male-headed households and their households are more likely to depend on transfers for survival than male-headed households (Devereux, et al., 2006).

With more women than men in smallholder farming and 44% of women being illiterate (Devereux, et al., 2006), it is no wonder that Malawi is confronted with low agricultural labour productivity as a cause of poverty (GoM & UN, 1993; Chirwa, 2003). In fact, poverty analysis in Malawi shows that poverty incidence in female-headed households is higher than in households headed by their counterparts (GoM & World Bank, 2007a; GoM, 2000). In general, female-headedness is associated with the 'production' and sustenance of poverty for its household members.

Bad luck

Others have observed that the country would have developed faster or reduced poverty more if the country was not plagued by ill-timed 'bad' luck like the two oil shocks in the 1970s when the economy was booming, the declining primary commodity terms of trade, the disruption of the rail routes to the sea and influx of refugees in the 1970s and 1980s from wars in Mozambique (Gulhati, 1989). The terms of trade deteriorated such that by 1986, they were 70% of what they were in 1970. See Figure A3.9.

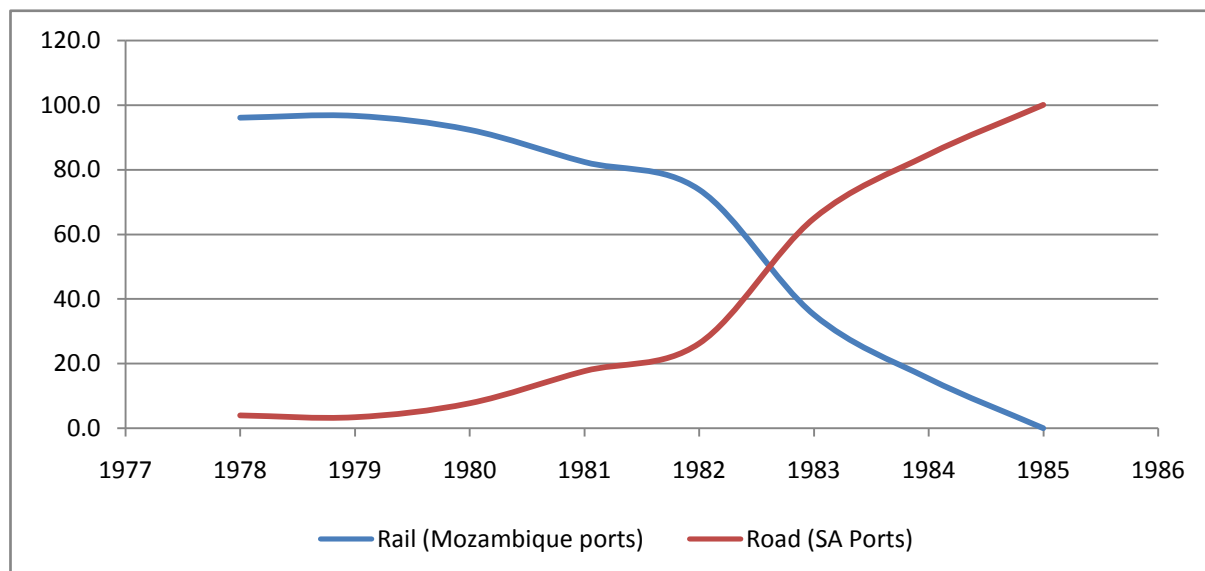
Figure A3.9: Terms of trade, 1970-1986



Source: Data for Graph from Gulhati (1989)

The disruption in the rail routes to the sea resulted in a complete switch from using short and cheap routes to overland, long and expensive routes. Whereby almost all external trade was routed through Mozambique in 1978, in 1985 this had reversed as depicted in Figure A3.10.

Figure A3.10: Trends in rail and road transport of external trade, 1978-1985



Source: Data for graph from Gulhati (1989)

Of course, there were incidences of good luck as well. The boom in burley tobacco production owes its existence to trade embargo imposed on Southern Rhodesia to force it to allow democracy in the country. Likewise, Malawi benefited from the collapse of the communism through the introduction of liberal politics as opposed to the one-party one man dictatorial regime. These had very profound impact on the economy. The estate agriculture absorbed a good proportion of the otherwise underemployed labour force. Likewise, human rights and multiparty politics in Malawi brought in a lot of NGO activities that brought with them poverty reduction safety nets as well some employment for the educated.

A3b.3.4 Suffering at the hands of the doctor: SAPs and the poor

A synopsis of SAPs in Malawi

Structural adjustment in Malawi started in earnest in October 1979 with an IMF standby agreement and were initially supported primarily by IMF credits and World Bank loans (Gulhati, 1989). However, other donors were still funding projects and some of them, with some nagging from the World Bank started co-financing SAPs. According to Chirwa (2008), the adjustment period run from 1981 to 1995 because since then the policy

reforms being implemented simply revisit the reforms implemented earlier. Early SAP effort (1981-1986) was meant to bring about stability in the economy by correcting prices and tightening fiscal and monetary policies. IMF supported the programme with two extra standby agreements in 1982 and 1983 while the World Bank extended three adjustment loans in 1981, 1983 and 1985. Apart from the World Bank and IMF, Malawi was supported by bilateral donors judging from the net transfers. See Table A3.4

Table A3.4: Malawi net resource transfers (US\$ million)

Source	1980	1981	1882	1983	1984	1985	1986
World Bank	19	44	42	19	67	24	72
IMF	34	24	-6	18	8	-6	-24
Bilateral ODA	99	113	91	77	77	76	90
Bilateral Other	23	0	-5	1	-7	-5	-10
Commercial Banks	0	2	1	1	2	2	-42
Supplier's credit	10	-1	-5	-5	-3	-4	-3
Total all sources	212	193	124	123	58	97	83

Source: Gulhati (1989) Table 7

The stabilisation of the economy included the gradual removal of inputs subsidies, restructuring of ADMARC to reduce fiscal support, and the removal of price controls to stimulate domestic production (Kaferankhande and Ndhlovu, 2006; Chirwa, 2008). The removal of fertilizer subsidy was planned to start in 1984 and was meant to complete in 1990 but due to exogenous factors like rapid rise in world prices of fertilizer and transport costs for external trade the programme, it was completed in 1994 (Sahn & Arulpragasam, 1991a; Orr & Mwale, 2001; Sen & Chikunda, 2002). The restructuring of ADMARC commenced and completed in this period such that by 1987 its quasi-monopsony power was legally removed (Sen & Chinkunda, 2002). The restructuring of ADMARC included the opening of the market to the private sector and withdrawal from unprofitable markets in a bid to reduce its losses and therefore reliance on government subsidy (Sahn & Arulpragasam, 1991a; Chilowa, 1998; Sen & Chinkunda, 2002).

SAP efforts since the 1987 focussed on removing sectoral bottlenecks starting with industry (1989), then agriculture (1990), labour and capital markets (1992) and public sector management, including parastatal reform (1994) with economic stabilisation as an ever-present undercurrent (Sen & Chikunda, 2002; Chirwa, 2008). Probably in response to the 1980s 'adjustment without human face' (Jolly, 1991), World Bank and other donors started to think about the poor. In Malawi, World Bank and DFID piloted a project in early 1990s that targeted financial assistance to the poor called 'Social

Dimensions of Adjustment' (Chirwa, 2008) from which the 1995 Malawi Social Action Fund was born (Chirwa, 2008). Indeed, since 1995 safety nets have supplemented policy reforms (Ellis, et al. 2006; Chirwa, 2008). Most donors, including the World Bank, funded these safety nets through NGOs, quasi-government agencies and, for the large ones, government itself (Chirwa, 2008; Sen & Chinkunda, 2002; World Bank 2007; GoM & World Bank 2007a). The free and subsidised inputs programmes are some of the safety nets initiatives prevalent in Malawi.

Public sector reform went beyond the parastatal reform by including restructuring of utilities (power, water, and housing) and public enterprise monopolies like rail and water transport, and communications. Performance pay and management by contract were also introduced in the civil service and the public sector in general. Since the turn of the century and following the Jubilee 2000 debt cancellation campaign, structural adjustment programmes took the form of a conditionality of the second Highly Indebted Poor Countries Initiative under the term 'Poverty Reduction Strategies Paper' (Booth, 2001). Malawi was one of the first countries to take advantage of the initiative by producing a PRS (Chirwa 2008; Ellis, et al. 2006). Table A3.5 chronicles the major SAP initiatives since 1988. Needless to mention that World Bank was also financing other non-SAP projects and the SAP project funding was only 28% of total World Bank project cost in the period 1981-2009. Further, these exclude IMF credits in the same period. For example, there were sixteen loan disbursements between 1988 and 2008 amounting to a total of 214 million SDR. Thus structural adjustment programmes brought in substantial inflows and in some cases had conditionalities that were meant to benefit the poor.

Table A3.5: Major World Bank SAP initiatives since 1988

Project	Year	Target sector or area
Industrial and Trade Policy Adjustment Programme	1988	Industry and trade
Agriculture Sectoral Adjustment Programme	1990	Agriculture
Financial Sector and Enterprise Development Programme	1991	Capital market
Entrepreneurship Development and Drought Recovery Programme	1992	Labour and informal sector
Institutional Development Programme	1994	Civil service reform
Railways Restructuring Project	1995	Parastatal sector reform
Fiscal Restructuring and Deregulation Programme	1996	Public sector reform
Privatization and Utility Reform Programme	2000	Parastatal sector reform
Financial Management, Transparency and Accountability Programme	2003	Public sector reform
Fiscal Management and Accelerating Growth Programme	2004	Stabilisation - budget support
Malawi Poverty Reduction Support Programme	2007	Stabilisation - budget support
Malawi Social Action Fund Programme	1996	Safety nets

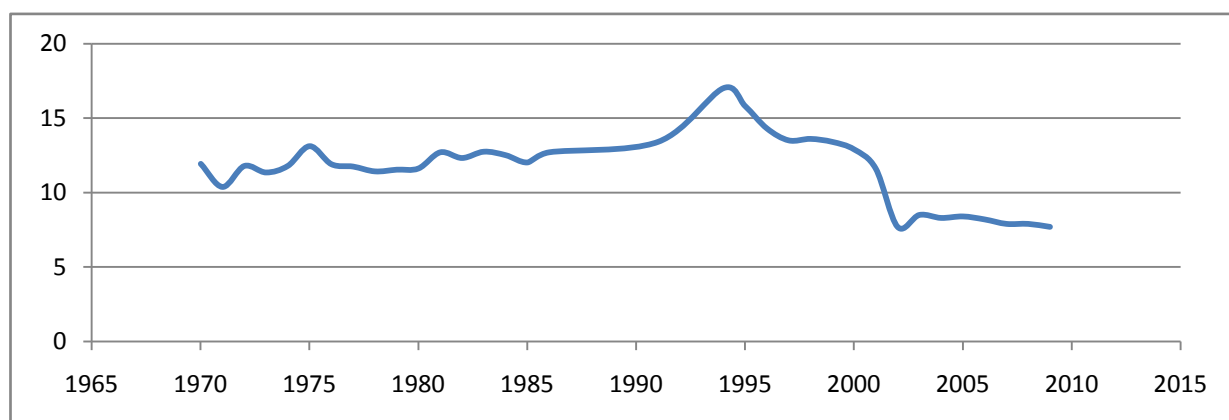
Source: World Bank, 2010

The jury is out on the impact of SAPs on the poor because SAPs had both positive and negative effects. On the positive side, SAPs were responsible for the reversal of most of the policies that worked against the smallholder and worker. SAPs first focussed on reviving growth using the private sector. To do this, product and producer prices were used as signals for stimulating growth in the manufacturing and agriculture sectors, respectively.

To encourage domestic production of goods demanded in the local economy, SAP chose to target price controls. Price controls were gradually lifted over the adjustment and by end of the 1980s, pricing of almost all locally-produced goods were de-controlled. At the same time, local industry protection was gradually lifted to make the local industry competitive, much to the advantage of consumers. The manufacturing sector revived but its growth was constrained by cheap imports. The share of manufacturing to total GDP in the 1980s (12.7%) was not very different from that achieved in the 1970s (12.4%). A special programme for the manufacturing sector was implemented starting in 1988. The programme revived the sector such that its share in the national economy averaged to 13.2% in the 1990s. However, complete liberalisation of imports and foreign exchange market in 1994 flooded the country with cheap imports such that in the new millennium the manufacturing is just a skeleton of its

former self. Its sectoral share declined and averaged at 8% in the 2000s. Since mid 1990s, Malawi was a vendors' paradise. Figure A3.11 shows the trend much better.

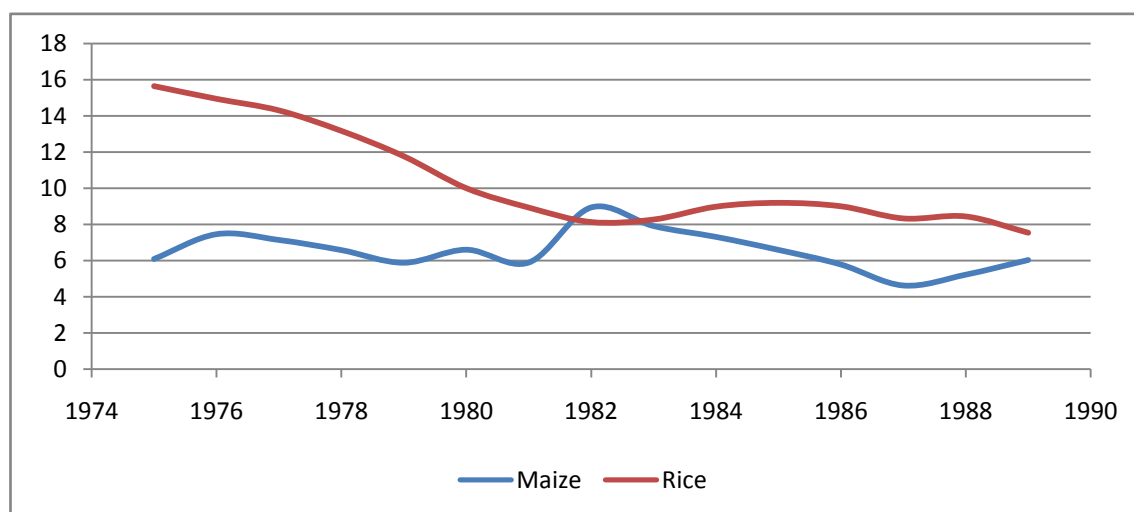
Figure A3.11: Manufacturing sector share in GDP (%)



Source: Data for from various editions of MEPD's Economic Report

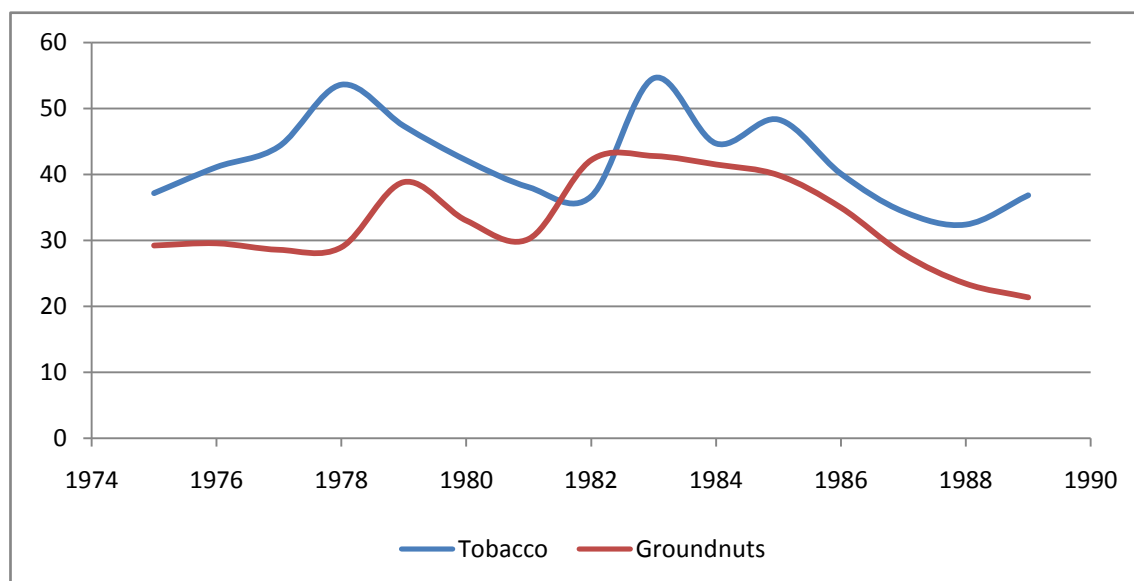
In the 1980s, frequent adjustments of producer prices and the exchange rate of the local currency were implemented to stimulate smallholder and estate agriculture, respectively. By mid 1990s, both producer price adjustments and the exchange rate were liberalised, again in the hope of stimulating production. According to Ndaferankhande and Ndhlovu (2006), there were six devaluations between 1983 and 1994, when the Malawi Kwacha was finally floated. Between 1981 and 1989, producer prices were adjusted in 1982 (except rice) and 1984 and 1988 and 1989. In the 1980s, the producer prices were too slow compared to the rise in inputs and product prices as depicted in Figure A3.12 for maize and rice and Figure A3.13 for tobacco and groundnuts (Sahn & Arulpragasam, 1991a, Sen & Chinkunda, 2002).

Figure A3.12: Trends in maize and rice producer prices in MK constant prices



Source: Sahn and Arulpragasam (1991)

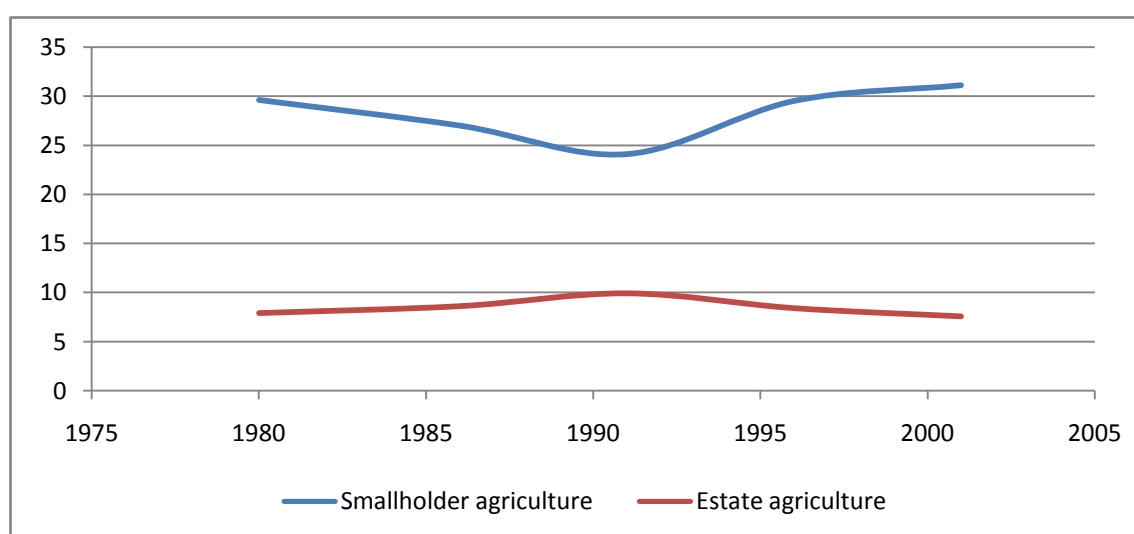
Figure A3.13: Trends in tobacco and groundnuts producer prices in MK constant prices



Source: Sahn and Arulpragasam (1991)

Since 1990s, it has been smallholder agriculture that has driven the growth in the economy. The result of the shifts is that the share of smallholder agriculture steadily declined in the 1980s but rebounded in the 1990s. On the other hand, the estate sub-sector progressively lost its steam in the 1980s as depicted in Figure A3.14.

Figure A3.14: Trends in sectoral shares of smallholder and estate agriculture

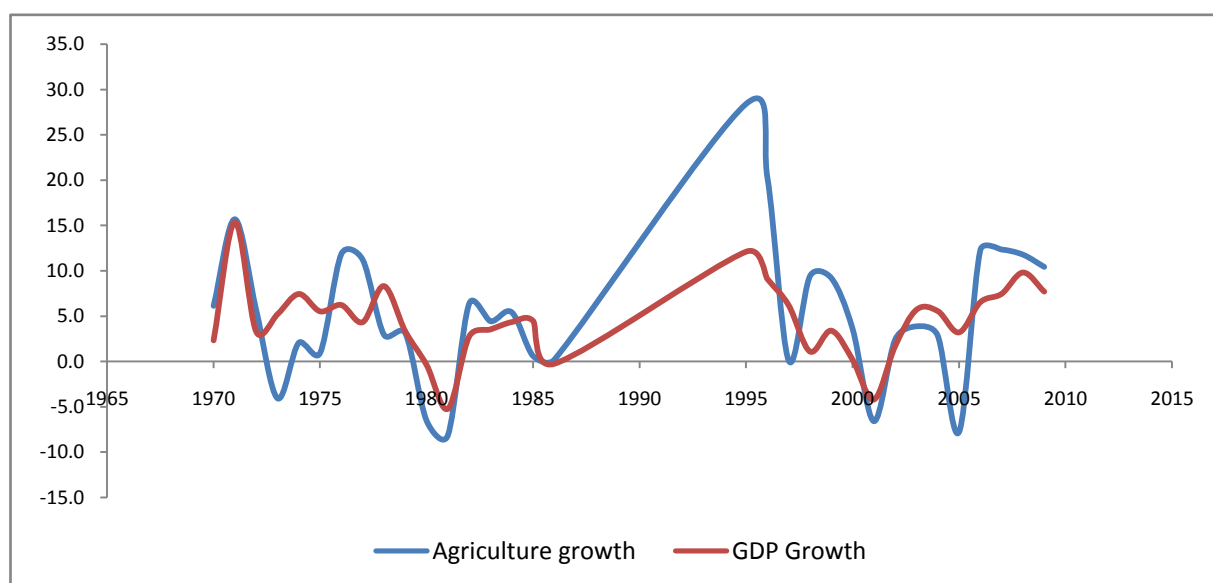


Source: Sen and Chinkunda (2002)

It is noted that the slow adjustment of prices in the 1980s has very little to do with SAP just as the rapid growth in smallholder agriculture since the second half of the 1990s cannot wholly be attributed to liberalisation of burley tobacco production. In fact, maize production supported by non-SAP initiatives like free and subsidised inputs programmes explain the bulk of the growth (Sen & Chinkunda, 2002). This is confirmed by the rapid fall of the market-oriented estate agriculture despite the continuation of SAPs.

In Malawi, economic growth is driven by agricultural growth. While credit goes to SAP for economic recovery especially in the 1980s and early 1990s, economic growth in the 1990s and 2000s was more determined by weather and subsidised inputs than the SAP reforms. Specifically, the yo-yo pattern in the period 1991-1996 and deepes in 2001 and 2005 reflect poor weather conditions (Figure A3.15). It can, however, be argued that SAP provided the platform for enterprising farmers and entrepreneurs to prosper by liberalising the produce pricing and marketing, burley tobacco production and marketing and trade in general.

Figure A3.15: GDP and agriculture sector growth 1970-1986 & 1995-2009

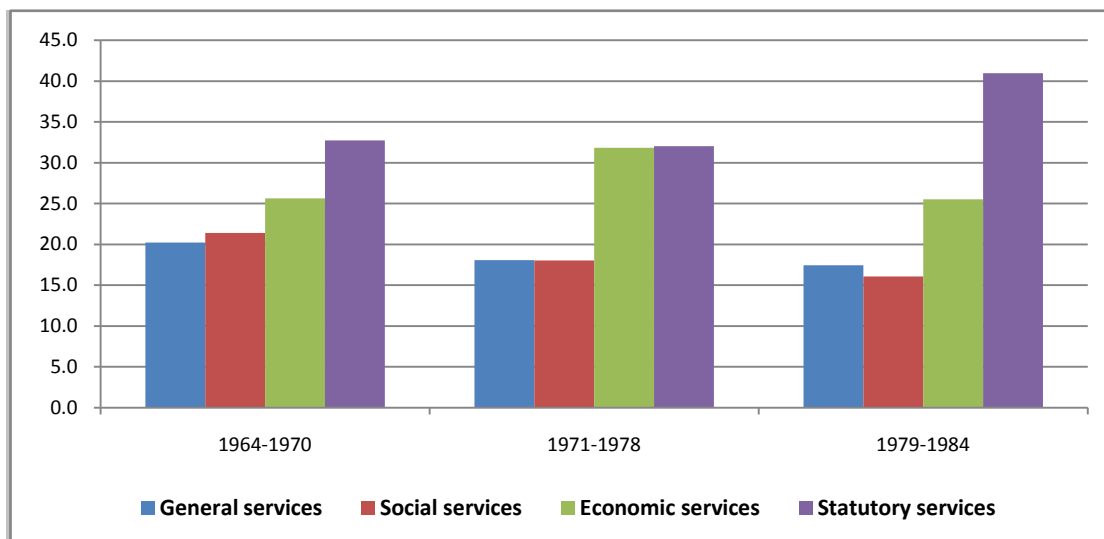


Source: Author's computations from various editions of MEPD's Economic Report

SAPs are not necessarily poverty and distribution neutral. They have some negatives as well. One of the features of the stabilisation programme (1981-1986) was public expenditure contraction (including removal of input subsidies). As already seen, SAPs also came with liberalisation of markets particularly product and produce markets, labour, capital and foreign exchange markets. Malawi was forced to liberalise all these markets. Some of these had negative consequences. According to Jolly (1991), SAPs

worldwide achievements in the 1980s had no human face. This is particularly true for Malawi. For example, public expenditure contraction was mainly borne by the social sectors. The squeeze of the social sectors in the 1980s followed yet a decade of neglect. The picture is clear in Figure A3.16.

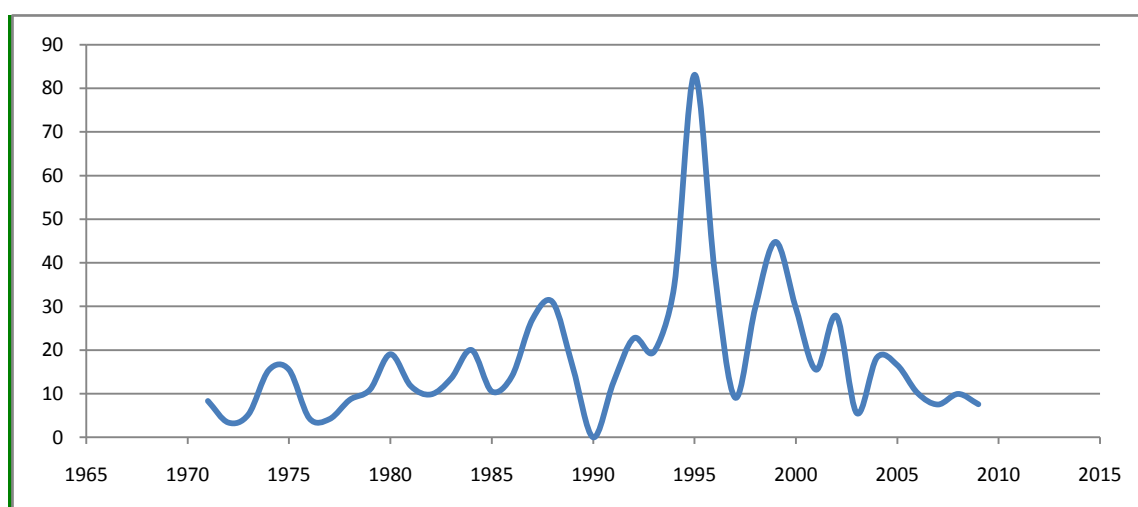
Figure A3.16: Functional classification of public expenditure 1964-1984



Source: Author's computation from various editions of MEPD's Economic Report

While social sectors suffered under SAPs, some public expenditure items were ring-fenced under statutory expenditures. As will be seen later, the low priority given to social services was only reversed in the 1990s. Donors used SAP conditionality to force Government to increase spending on education and health. The net effect of the liberalisation of all the markets, including labour in the 1990s, has not been done systematically in Malawi. However, some preliminary analysis can be done based on the behaviour of prices. Inflation covering the period 1971 to 2009 is presented in Figure A3.17.

Figure A3.17: Inflation 1971-2009



Source: Author's computation from NSO's Monthly Statistical Bulletin (NSO various)

The normal impact of inflation is erosion on income or consumption if there is no matched increased in those aggregates. Most of the inflation in the 1980s can be explained via the liberalisation policies implemented. Unfortunately as already seen, smallholders did not contribute to the growth of output in the 1980s. This implies that they bore the blunt of the 17% average inflation in the period. SAPs explain some of the inflation in the 1990s but not all of it. For example, the 1995 spike followed a 1994 massive depreciation after the local currency was floated. The value of the Malawi Kwacha fell from 4.4 to over 17 per dollar within 12 months and this is also true for the 1998 spike which also followed fiscal-deficit induced fall in the value from MK16 to MK31 (Ndaferankhande & Ndlovu, 2006).

Other than the SAP reforms, weather induced supply shocks and fiscal indiscipline were major accelerators of inflation in the 1990s (Ndaferankhande & Ndlovu, 2006; Sen & Chinkunda, 2004). Determining the net impact of the increased burley tobacco production, flourishing informal and cross-border trade and transport businesses on one hand and the erosion of incomes and consumption expenditure due to the floatation of the Kwacha and liberalisation of all prices is yet to be done. All that can be said is that on the balance, the negatives balanced the positives such that consumption poverty and inequality remained the same between 1998 and 2005 (GoM & World Bank, 2007a).

Another issue raised has been the impact of the removal of inputs subsidy on smallholder production. Chilowa (1998) blames the slow growth in smallholder production in the 1980s and early 1990s on the rising prices of fertilizer following the

removal of the subsidy and devaluations. However, the rapid rise in the fertilizer prices was more due to exogenous factors like rising world fertilizer prices and the switch of transport routes from rail routes to overland routes as already discussed above (Sahn & Arulpragasam, 1991a). Paradoxically, purchases of fertilizer in the 1980s increased. That would imply that the rising prices did not unduly affect smallholder farmers' use of fertilizer. However, according to Sahn and Arulpragasam (1991), this rise is mainly explained by increased purchases by the non-poor (smallholder farmers with large landholding sizes and, illegally, estate owners) as supply constraints were removed by a fertilizer supply project funded by the WB-funded project outside the SAP. It may, in fact, mean that smallholders reduced their intake of fertilizer until free and subsidised inputs were re-introduced by Government as safety net programmes in the 1990s.

As already mentioned, SAPs led to de-industrialisation. Apart from market flooding, parastatal sector reform under SAP also contributed to the de-industrialisation.

Nyirenda (2005) reports that over 42 state owned companies were privatised resulting in at least 10000 job losses. Had it not been for the growth of the informal sector, the welfare effects of SAPs on employment would have been worse (Nyirenda, 2005).

Currently, there is no tangible estimate of the proportion of the labour force engaged in the informal sector but it is substantial judged by small scale shopping outlets in urban as well as rural areas.

The impact of SAPs on income distribution is difficult to call. The period 1971-1980 is marked by increased income inequality (Kydd & Christiansen, 1982). Whether or not SAPs worsened the situation with its increase in producer prices and decontrol of consumer prices is not known. However, Gulhati (1989) thinks the design of NRDP may have propagated income inequality since it still targeted the no-poor. Again, it is noted that SAPs forced ADMARC to adjust producer prices more than it did in the 1970s but the adjustments lagged behind inflation. This means that even in the 1980s, smallholder farmers that dared sell their crops to ADMARC lost out. The gainers were most likely purchasers of subsidised ADMARC food crops. According to Table A3.6, income distribution, measured by the Gini index, worsened in the stabilisation period and continued to decline since 1991 judging by the consumption expenditure distribution, especially for second and third quintiles.

Table A3.6: Income and consumption distribution 1968-2005

Population Share	Cumulative income share			Cumulative consumption share		
	1968/9	1984/85	1991/92	1990/91	1997/98	2004/05
20	8.2	3.3	3	4	5	5
40	18.8	9.5	9	10	16	18
60	30.9	19.1	22	20	31	32
80	44.6	34.3	46	38	53	53
90	53.8	47.6	65	48	69	69
95	61.1	58	80	62	75	77
100	100	100	100	100	100	100
Gini index	45	60	62	57	39	39

Notes: Figures from 1990/91 on were read from Lorenz curves and could differ slightly from those used in construction

Source: Pryor (1989) Table I-5 and I-6 for 1968/69 and 1984/85; World Bank (1995) for 1990/91 and 1991/92; GoM (2000) for 1997/98; and GoM & World Bank (2007) for 2004/05

There have been some shifts among the quintiles over time also. In the period 1968 and 1985 the bottom four quintiles lost out to the richest but in the period 1985-1992 the 3rd and 4th quintiles gained at the expense of the richest. These are possibly the small estate owners and large smallholders who took advantage of the price incentives in that period. In the 1998-2005 period, there were no major shifts, only that the richest 5% lost out a little bit of consumption expenditure and no particular group benefited from this 'unduly'. It is not surprising that both the Gini Index and poverty rate remained the same between 1998 and 2005.

Restructuring of ADMARC and market access

ADMARC restructuring had had both negative and positive effects (Sen & Chinkunda, 2002). The introduction of private traders benefited farmers located in more developed areas. Orr and Mwale (2001), who conducted a qualitative study in relatively developed areas, found that the majority of households indicated that their economic wellbeing improved over a ten-year period due high income from crop sales (Orr & Mwale, 2001). On the negative side, those in remote areas suffered because without ADMARC's pan-territorial prices, farmers paid for transport and storage costs incurred by private traders through reduced producer prices and increased consumer prices (Chilowa, 1998). In some cases, private traders did not even move in (Chirwa, 2008).

Further, input marketing has not taken off as expected (Sen & Chinkunda, 2002). Lack of effective demand and high transport costs have constrained the development of the

private sector involvement in inputs marketing. Once again, farmers in remote areas that depended on ADMARC inputs marketing have lost out and their welfare negatively affected. In effect the market reforms introduced market segregation. Sen and Chinkunda (2002), however concludes that on the whole, market reforms have been beneficial to smallholder farmers.

Burley tobacco production and food security

Chilowa (1998) also blames SAP for increased food insecurity among households in areas where burley tobacco production is common. He argues that just like the decontrol of producer pricing, decontrol of tobacco production by smallholders has benefitted those with resources to grow it. Chirwa (2004) report that smallholder burley tobacco production overtime outstripped that of estates and peaked at 70% percent of total production. The effect has been that incomes of burley tobacco smallholder farmers increased (Sen & Chikunda, 2002). Chilowa (1998) however argues that the high incomes fooled some farmers with smallholdings to switch away from maize to burley tobacco production in the hope that they would use the income from burley tobacco production to purchase maize on the market. He argues that due to resource constraints and sometimes poor weather, such farmers ended up with no income from tobacco and therefore no food. While there is no evidence for this, it is noted that most of the reforms in the agriculture benefited farmers that were into cash cropping; leaving female-headed and near landless households 'stuck in poverty' (Sen & Chinkunda, 2002).

A3b.3.5 Who is to blame? Concluding remarks

Blaming the doctor is rather too harsh just as blaming colonialism is but dogmatic. Colonialism get credit for bringing the country into a family of countries and putting it in a position where it could take off. Malawi Government had a chance to reduce the impact of colonialism. Likewise, SAPs get credit for bringing the economy back from oblivion. SAPs also get credit for forcing Malawi Government to dismantle poverty-producing policies and practices although in some cases it was too late to benefit the poor. There is no hard evidence that SAPs were responsible for generating poverty just as there is no hard evidence that SAPs reduced poverty. Malawi Government had some chance to improve the living conditions of the population. Self-enrichment has always blinded leaders to the plight of the poor.

In a situation where, on one hand, policy makers blame donors for ADMARC market closures, company closures, job losses, inflation, stagnant producer prices, and

unreachable input prices and, on the other, get credit when things improve SAPs are bound to bear a bad name while policy makers and politicians end up being knighted. The truth is that the doctor administered bitter 'medicine' and the patient is recovering but with considerable pain. On the whole, it may be bad luck, bad policies, and bad politics that brought the patient to the doctor. It may take good luck, good policies and good politics to bring the patient out of the doctors' clinic for good. Some countries have managed to do that.

Appendix 4: Hypothetical targeting performance in the three villages

An evaluation of targeting performance requires comparing the households identified as poor by a certain assessment against households determined as poor based on the official standard. In this case, the standard is the consumption expenditure. Thus the quality of identification performances of self and peers assessments in the three villages can be evaluated. In evaluating targeting performance two errors are calculated; exclusion and inclusion. The error of exclusion also referred to as under coverage is refers to consumption poor households that are not identified as poor by either the peer assessment or self-rating. The error of inclusions, also termed leakage, refers to households that consumption nonpoor but are identified as poor by either of the local criteria. According to Coady, et al. (2004), the two errors can be presented as in Table A4.1.

Table A4.1: Calculating inclusion and exclusion error rates

	Wellbeing status of households*		
	Poor	Nonpoor	Total
Excluded**	A	B	AB
Included***	C	D	CD
Total	AC	BD	ABCD

* Using consumption expenditure as the standard measure of wellbeing

** Those identified as nonpoor by local criteria (peer assessment or self-rating)

*** Those identified as poor by local criteria (peer assessment or self-rating)

Source: Coady, et al. (2004) Table 2.1

The exclusion error rate is therefore calculated as the proportion of the number of households determined as consumption poor but excluded as potential beneficiaries to the total number of consumption poor households (i.e. A/AC). On the other hand, inclusion rate is calculated as the proportion of households that are determined as not consumption poor but identified as poor to the total number of households included as potential beneficiaries (i.e. D/CD). Based on the above formulae and with the rates expressed as a percent, Table 5.23 presents the exclusion and inclusion errors for all the three villages on the assumption that peer assessment and self assessment were used to identify the poor and consumption expenditure was used to evaluate the identification.

Table A4.2: Targeting errors by identification method and village

	Ngochera	Chikhwaza	Dzilekwa
<i>Peer assessment</i>			
Exclusion error	56.5	15.8	44.4
Inclusion error	50.0	65.4	85.3
<i>Self rating</i>			
Exclusion error	47.8	42.1	66.7
Inclusion error	53.8	63.3	82.4

Source: Author's analysis of survey data and FGD transcripts

Of the three villages, Dzilekwa displays the worst scenario possibly because it has the lowest consumption poverty and high poverty rates in the other two measures. Just like in the case of poverty rates, Ngochera has smallest differences between inclusion and exclusion errors for both peer assessment and self assessment. It also has the highest under coverage (reflected by the exclusion error for peer assessment) possibly because its peer assessed poverty rate was lower than that of consumption expenditure. On the other hand, Chikhwaza has a low under coverage of 16%, reflecting its unusually high peer assessed poverty. It is noteworthy that even with almost every household assessed as poor, out of the seven households that were considered nonpoor by the Chikhwaza group some were in fact consumption poor.

Despite the village differences, what is clear is that the errors very high targeting errors in all the three villages⁷². This underlines the discord between the official and local wellbeing measures and confirms that they are not the same and do not identify the same households as poor. As such using one measure to check the quality of the other is futile⁷³. In fact, when a target number of households is imposed, say poorest 20% in each village⁷⁴, the results confirm that is unfair to use one measure to check the other. To show this, the rankings created by the group discussion following the wellbeing and pairwise rankings are compared with the consumption expenditure rankings for each village. In Ngochera, a 20% cut off implies selecting the poorest 10 households. Out of the ten households none is in the poorest 20% judged by the consumption expenditure

⁷² For example, the targets for the Malawi Cash Transfer Pilot Project were a maximum of 10% and 20% for inclusion and exclusion errors, respectively but its evaluation of community based targeting found inclusion errors ranging from 16% to 43% and exclusion errors ranging from 37% to 68% (Miller, et al., 2008). Coady, et al., (2004) in their review of various social protection projects across the world found similar ranges of targeting errors for community assessment.

⁷³ It is understood that the study did not stimulate a project beneficiary identification scenario. In fact, the introduction of the study questionnaire and focus group discussions stressed that the exercise had no benefits attached to it in the form of a project. It was nonetheless ensured that the exercise followed the protocol generally used to identify project beneficiaries.

⁷⁴ The Malawi Cash Transfer Programme uses 10% as a cut off point (Miller, et al, 2009). With household populations of less than 100, 10% would be too small for robust analysis.

measure. In Chikhwaza, out of the 12 that would be in the poorest 20% only four are consumption poor. In Dzilekwa, only three of the 11 are consumption poor. This implies that a project evaluator using consumption expenditure as a standard would summarily condemn the Ngochera Village group as incompetent and Chikhwaza and Dzilekwa groups as mainly biased. But is the consumption expenditure a gold standard?

Appendix 5: Wellbeing determinants in the 1996 analysis

Coming up with determinants of poverty goes beyond correlation analysis. It requires some theory or conceptual framework to build a poverty explaining model since the point is to establish some causal link. Regression analysis is used to establish factors that have an impact on the poverty measure as a group. Again, the type of the poverty measure also matters because the modelling requires an understanding of the link between the measure and the instrumental variables. The implication is that poverty determinants of income poverty could differ from those of consumption poverty. In other words, same household factors can have different causal effect on poverty depending on the measure of poverty chosen unless the different poverty measures are perfectly or highly correlated.

The 1990 analysis did not go as far as producing the poverty determinants. However, the situation analysis of poverty (GoM & UN, 1993) hypothesised that poverty was caused by four interlinked factors with two cross-cutting factors 'urging' them on. The four included low agricultural production, low non-farm income, low education levels, and poor health. The cross-cutting issues were rapid population growth and weak institutional structures. The conceptual framework presented in the situation analysis has been used in subsequent poverty determinants analyses. Poverty determinants analyses presented here point out that the models do not determine causality but test the relationships posited by economic theory. Once the relationship is confirmed then the factors are considered as causal (Mukherje & Benson, 2003, GoM & World Bank, 2007).

The 1996 analysis highlights five factors as determinants of rural income poverty namely 'size of cultivated land'; 'sex of household head'; 'age of household head'; 'household size and dependency ratio'; and 'education level of household head'. There were spatial factors as well. The analysis found out that a minimum of 0.54 hectare was needed for an average household to generate enough income to move it out of poverty and that the average income of female-headed households were 79% of identical male-headed households. The hypothesis being that female-headed households have limited income generating opportunities. On age of household head and household size, the finding was that household income poverty increases with age of the household head and household size. On education of the household head, the finding was that low levels of education have neutral impact on poverty while higher levels have positive impact to

the extent that a household whose head had secondary or tertiary education had incomes 10% higher than those without education.

Female headedness is also a producer of poverty. Likewise, more poverty is produced with increasing age. This gives an indication that age is a non-linear determinant of poverty, especially when seen together with household composition. Further, large household size causes poverty. There are access factors too which affect the level of consumption expenditure and by extension poverty. For example, being in Karonga, Kasungu and Salima Agricultural Development Divisions significantly boosted household income.

Appendix 6: A poverty profile of the three villages

Appendix 6a: Characterising households based on their poverty status

The characterisation of 51 poor households and 113 non-poor households takes the form of comparing the means (where the factor is represented by a scale variable) or proportions (where the factor is represented by a nominal or ordinal variable). At this level, there is no disaggregation by village suffice to mention that 45% of the poor are in Ngochera, 37% in Chikhwaza and 18% in Dzilekwa. Further, at this level of analysis there is no attempt to check whether the differences are statistically significant. That level of analysis is undertaken later. The presentation is done by groups of factors.

A6a.1 Demographic factors

Previous profiles found that poor households have, on average, larger household sizes than nonpoor households (GoM, 2000; GoM & World Bank, 2007). This characteristic is also true in the three villages visited. Just like in the previous profiles (GoM, 2000; GoM & World Bank, 2007a), poor households have more dependent children than the nonpoor. This is also confirmed by the dependency ratio. According to the 2000 and 2007 analyses, poor households have, on average, more dependents per ‘worker’ than nonpoor households (GoM, 2000; GoM & World Bank, 2007a). As Table 6.5 shows, this is also true in the three villages visited.

Table A6.1: Comparison of demographic factors between the poor and non-poor

Factor	Poor		Non-poor	
	N	Mean	N	Mean
Household size	51	5.0	113	4.0
Members less than 15 years old	51	3.0	113	2.0
Members 65 years or older	51	0.2	113	0.2
Members between 15 to 64 years old	51	1.8	113	1.8
Dependency ratio	47	1.8	104	1.2
Age of household head	51	43.8	113	44.3
Proportion headed by females (%)	51	33.3	113	31.9

Source: Author’s computation from primary dataset

There is no major difference between the poor and nonpoor in terms of average age of the household head. Previous studies found that the poor were generally headed by older people (GoM, 2000; GoM & World Bank, 2007a). In the three sites, the average

age of the head in both groups is 44 years. Again, unlike previous studies (GoM, 2000; GoM & World Bank, 2007a), female headed households are not disproportionately represented among poor households because make up 32% of the household population and 33% of the households in poverty.

A6a.2 Education status

The association between education and welfare status in rural Malawi can be described as difficult or remote mainly because of the general low education status. For example, 28% of heads never attended school and only 17% have post-primary education (GoM, 2005). Yet a household headed by a primary school 'graduate' is likely to 'cross' the poverty line (GoM, 2000) and indeed a third of the richest 40% are illiterate (GoM, 2005). However, what is clear from both 2000 and 2007 analyses is that post-secondary education is almost always associated with high welfare status (GoM, 2000; GoM & World Bank, 2007a). In general, education of the household head is a major welfare determinant (GoM, 2000) and illiteracy is associated with poor households (GoM & World Bank, 2007a). In the three villages, 33% of the heads of poor households are illiterate compared to 27% of the nonpoor.

Using the highest class attended as a measure, poor households are generally at a disadvantage. For example, 18% of household heads in poor households have no education compared to 13% of nonpoor households and, respectively, 47% had completed some primary compared to 55%. However, completing at least primary school is 'no cure' for poverty because 33% of poor households are headed by those who completed at least primary school compared to 31% among the nonpoor. Unlike the 1998 profile, it is when education status of all adults in the household is considered that the education disadvantage in poor households is seen clearly (Table A6.2).

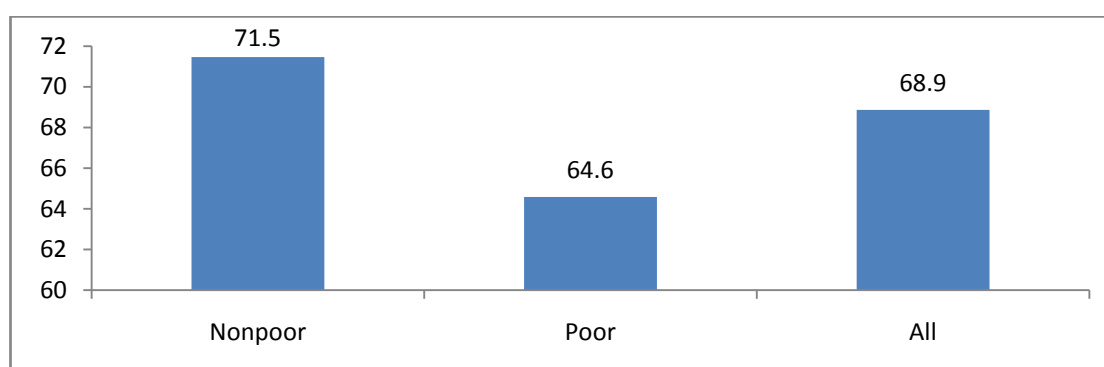
Table A6.2: Highest class attended by poverty status

Level	Nonpoor	Poor
<i>Household head</i>		
None	13.3	17.6
Some primary	54.8	47.0
At least full primary	31.0	35.2
<i>Any adult</i>		
None	6.2	15.7
Some primary	46.9	51.0
At least full primary	46.9	33.3
<i>All adults (mean)</i>		
None	6.2	15.7
Some primary	62.1	66.8
At least full primary	32.0	17.7

Source: Author's computation from primary dataset

Unfortunately, the education disadvantage in poor households is 'passed on' to children. At national level, more children in poor households are out of school than those in non-poor households (GoM & World Bank, 2007) as depicted in Figure 5.3 below. Further, on the basis of the highest classes attended the average years spent in school by adults in poor households (4 years) is two classes lower than that for nonpoor households. This is a new characteristic and therefore does not have a comparator.

Figure A6.1: Proportion of children in school in percent



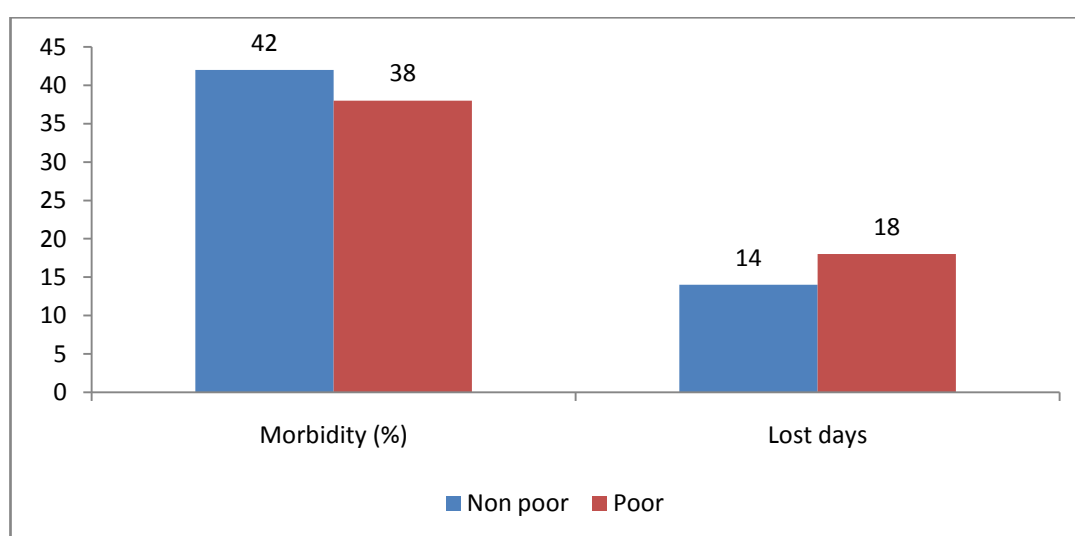
Source: Author's computation from primary dataset

A6a.3 Morbidity status

The paradox found on morbidity in previous studies in Malawi is also found in the three sites. Nonpoor households report are more likely to report being ill than the poor. In this particular case, 42% of nonpoor household members were ever ill or injured as opposed to 38% in poor households. The 2000 analysis called this finding 'counter-

intuitive’ (GoM, 2000) while the 2007 analysis qualified it as ‘interesting’ (GoM & World Bank 2007). The explanation given is that the poor report feeling ‘ill’ only when serious as compared to the nonpoor who feel ‘out of sorts’ easily (GoM, 2000). This explanation is apparently supported when the number of lost days by adults due to the reported illness or injury is analysed. Using lost days to gauge the intensity of the illness or injury, it is found that poor households lose four more hours than nonpoor households in times of illness or injury. This may mean that the poor report more serious illnesses that require withdraw from normal activities than the nonpoor. See Figure A6.2.

Figure A6.2: Health status of poor and nonpoor households



Source: Author’s computation from primary dataset

A6a.4 Housing quality and ownership of assets

The 2007 analysis, using a housing quality index⁷⁵, found that poor households had a larger share of poor quality dwelling units and smaller share of good quality dwelling units. Since this study was conducted mainly in rural areas, an ordinal variable considering only the quality of building materials was constructed. Just like in the 2007 analysis there are three types – traditional (mud walls, mud floor and grass thatched roof), modern (burnt bricks for wall, cement for the floor, and iron for the roof) and mixed (various combinations of traditional and modern materials)⁷⁶. Although the bulk of the dwelling units are built using traditional material, 6% of the nonpoor households

⁷⁵ The index takes into consideration housing tenure, construction material, outer walls, roofing materials, flooring materials, number of rooms, presence of electricity, presence of drinking water, type of toilet facilities and method of garbage disposal.

⁷⁶ Availability (and not quality) of toilet is considered separately. The quality is discounted because almost all with toilets have the traditional pit latrine.

have dwelling units built using modern material compared to 2% of the poor households. Among the nonpoor households, 83% have a toilet as compared to 71% among the poor households.

Ownership of land, livestock and durable assets do always mirror the income picture. The 2000 analysis reports that poor households have significantly low per capita landholding ownership (GoM, 2000) and the 2007 analysis reports that per capita landholding in poor households was half of the nonpoor households (GoM & World Bank, 2007a). However, the difference between the poor and nonpoor is marginal in the three villages (0.2 ha vs. 0.3, respectively).

On livestock ownership, the 2000 analysis found that there are no differences between the poor and nonpoor, except in cattle ownership while the 2007 analysis found that the non-poor have more livestock than the poor (GoM & World Bank, 2007a). Using the same measurement as the 2007 analysis⁷⁷, there is no difference found between the nonpoor and the poor (0.1 for both groups). This reflects the general low ownership of livestock in these parts of the country⁷⁸. Even using the livestock diversity variable (number of different types of livestock), the difference between the poor and nonpoor (0.7 as opposed to 1.1 animals) is not pronounced.

In terms of durable assets diversity, poor households are also slightly disadvantaged; they own five as compared to seven types for the non poor. Differences become apparent on the ownership of some durable goods. For example, almost half of all nonpoor households have a member who owns a mobile phone as opposed to only a fifth in poor households. It is nonetheless noted that even the 20% ownership is a feat because just five years prior (2005), virtually all poor households had no member with a mobile phone (GoM & World Bank, 2007a). As for bicycle ownership, the 2007 analysis reports that nonpoor households own more bicycles than poor households (GoM & World Bank, 2007a). Findings from the three villages support this because one in three nonpoor households has a bicycle as compared to one in eight in poor households. Table A6.3 summarises the statistics.

⁷⁷ The 2005 profile used the concept of Tropical Livestock Units (TLU). TLU enables the standardisation of measurement of different livestock by using conversion factors that reflect the relative value of different species. The conversion factors are oxen=1.0; cattle=0.7; goats and sheep=0.10; pigs=0.2; poultry=0.01; rabbits=0.01; turkey=0.10' (GoM & World Bank, 2007a, pp. 38-39)

⁷⁸ The TLU index for the South, where this study was conducted, was less than 0.4 and that is for both poor and non-poor households (GoM & World Bank, 2007a, p. 39).

Table A6.3: Housing quality and ownership of land, livestock and durable assets

Factor	Poor		Non-poor	
	N	Mean	N	Mean
Proportion of households with modern house (%)	51	2	113	6.2
Proportion with no toilet (%)	51	29.4	113	16.8
Total land owned by household	51	0.9	113	0.9
Total dimba land owned by household	51	0.0	113	0.1
Number of different types of livestock	51	0.7	113	1.1
Tropical livestock units	51	0.1	113	0.1
Number of durable assets in the household	51	2.5	113	5.3
Proportion of households with a bicycle (%)	51	11.8	113	33.6
Proportion whose member has a cell phone (%)	51	19.6	113	49.6

Source: Author's computation from primary dataset

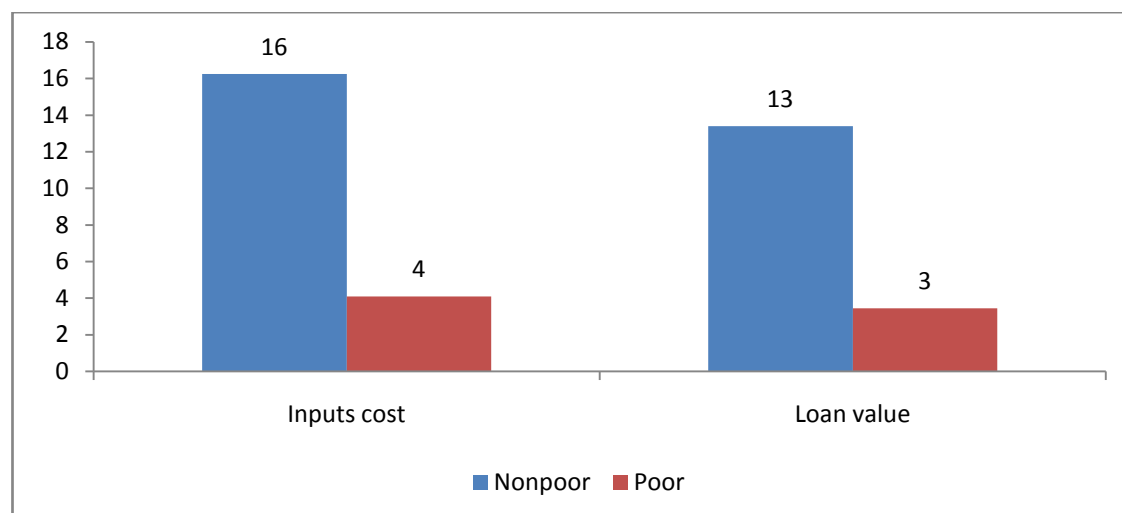
The use of inputs like fertilizer and improved seeds is considered vital for household food security and income generation. Level of income from agriculture can therefore be linked to level of inputs use, especially fertilizer. For example, while 69% of poor households applied fertilizer, 87% of the non-poor households did. This is in line with findings presented in the 2007 analysis (GOM, 2000).

A6a.5 Agricultural inputs and credit

Although there is no difference between the two groups in terms receipt of coupon for subsidised inputs (71% in both groups)⁷⁹, it is likely the non-poor purchased some commercial inputs to supplement the subsidised ones. For instance, nonpoor households spent four times as much as did poor households on inputs. Again, only 6% of poor households obtained loans compared to 27% for the nonpoor. Worse still, the mean value of loans accessed by poor households was a third of those obtained by nonpoor households. See Figure A6.3.

⁷⁹ Note that among the poor, 71% reported receiving and purchasing inputs while 69% actually applied fertilizer. The difference could be that some were only able to purchase seeds with their coupons and not fertilizer or they have sold the fertilizer instead of applying it on their plots.

Figure A6.3: Inputs cost and loan value (MK'000) by poverty status



Source: Author's computation from primary dataset

This is slightly worse than reported in the 1998 profile where the nonpoor accessed twice as much as the poor (GoM, 2000).

Regarding crop production diversity, there is little difference between the poor and non-poor. On average poor households plant 4 different crops as compared to 5 for non-poor households. However, the difference between the two groups is in the output per cultivated area. While poor households produce a tonne per hectare, non-poor households produce almost two and half times that. See Table A6.4.

Table A6.4: Inputs and crops grown

Factor	Poor		Non-poor	
	N	Mean	N	Mean
Inputs cost (MK'000)	51	3.3	113	15.4
Proportion that did not apply fertilizer (%)	51	31.4	113	13.3
Proportion of households without coupon (%)	51	29.4	113	28.3
Number of different crops	49	4.0	112	4.8
Crops output per cultivated area	51	1.0	113	2.43

Source: Author's computation from primary dataset

A6a.6 Ownership of non-farm enterprises

Non-farm enterprises of different types and sizes provide an opportunity for households to generate some cash income to finance household activities. Type as well as scale of operation reflects the welfare status of the household running the business. For example, some households use them as poverty alleviation (survival) strategies (GOM & World Bank, 2007a). Just like in the two profiles, ownership of household enterprises is

higher in non poor households than poor households (67% compared to 53%). In the 2000 analysis, ownership rates were 25% and 20%, respectively and, according to the 2007 analysis, 63% of all household business enterprises were owned by nonpoor households. Clearly enterprise ownership in the three villages is much higher than was the case in 1998 and 2005.

The 2000 analysis states that entrepreneurial abilities more associated with welfare status than education in rural areas, (GoM, 2000). However, it does provide any evidence. The 2007 analysis, despite collecting time allocation towards various income generating activities, did not use that information to check whether nonpoor households devote more time to business enterprises than poor households. Instead it uses the information to show the differences in time allocation between women and men (GoM & World Bank, 2007a). This study uses number of hours adult household members spend on family business as a proxy for scale or importance of the enterprise to the household⁸⁰. Using the average number of hours devoted to an enterprise, the study found that nonpoor households devote 13 hours a week running non-farm enterprises, four hours more than poor households.

A6a.7 Resources devoted to food consumption and sources of income

It is argued that the poor dedicate most of their resources to food consumption (Benson, et al. 2004) implying that the share of food consumption is higher in poor than nonpoor households. However, this argument is not supported in the three villages because the share of food consumption is lower in poor households than in nonpoor households (51% compared to 60%). This may imply that although the households are categorised as different on the basis of consumption poverty, most of them are struggling to reach a decent level of food consumption in quantity as well as quality. This is further supported by the proportion of households that rely on *ganyu*; type of work generally associated with the poor (World Bank, 1996; GoM & UN, 1993). In the three villages, the share of *ganyu* income in total labour income among the nonpoor was 88% compared to 84% for the poor households.

As expected, the consumption poor are also income poor. In the 2000 analysis, the share of cash income in total income⁸¹ was 37% and 59% for poor and nonpoor households, respectively (GoM, 2000). Considering all sources of cash in the form of

⁸⁰ It is duly acknowledged that time allocation depends on a number of factors inter alia type of business, distance to the operational base and household composition. Collecting firewood and selling, making charcoal and selling are time consuming activities with low return to time allocated. Likewise, a family business may be left to children to run because of no adults in the household. Likewise, an adult may be forced to run a micro enterprise instead of a child because the household has no children.

⁸¹ Total income includes value of home production consumed.

labour income (*ganyu* and employment), agriculture income (crops, livestock and fruits) and non-agriculture income (enterprises, remittances and others), nonpoor households have three times more income than poor households in the three villages. Poor households are worse even in agriculture and labour income. See Table A6.5.

Table A6.5: Income from various sources

Factor	Poor		Non-poor	
	N	Mean	N	Mean
Share of food in total consumption	51	51.3	113	60.5
Agriculture income (MK'000)	51	1.1	113	8.2
Non-agriculture income (MK'000)	51	26.0	113	76.1
Annual income from work (MK'000)	51	11.7	113	41.7
Share of <i>ganyu</i> income in work-related income	26	54.8	49	75.6
Proportion with wage income heads	51	17.6	113	8.8
Proportion with wage employment members	51	21.6	113	9.7

Source: Author's computation from primary dataset

This could be a reflection of their labour constraints as manifested in the high dependency ratio. Again, those from poor households who are in wage employment seem to get a 'raw deal' judging from the share of *ganyu* income in total work-related income. The share of wage income is much lower in poor than in nonpoor households yet the proportion of households whose heads are in wage employment is almost twice as high as those in non-poor households.

A6.8 Implication of the characterisation

The characterisation of poor and nonpoor households shows that most of factors are potential poverty correlates of poverty. Those factors that were earlier found to distinguish the poor from nonpoor have also been found to do the same in the three villages. Further, those that have been modified or added are found to be credible factors in terms of distinguishing the two groups of households. This provides some confidence that these can be used in the correlation analysis. Obviously some have strong relationship with poverty status than others.

Factors that stand out include household size, dependency ratio, household human capital stock, child school enrolment, days lost by adults due to household illness or injury, ownership of bicycles/cell phones/non-farm enterprises, money spent on inputs and level of income from all sources. What is of interest for the research problem is whether these differences are significant because it is only then that these factors can be used as good poverty proxy indicators.

A discussion of the factors found significant as poverty correlates in the three villages

Out of the long list of demographic factors, only three factors are significant. These include dependency ratio, household size and number of children below the age of 15 years. These last two factors mean that a household with a large number of child dependents (as opposed to the aged) it is more likely to be poor. Unlike the 2000 and 2007 analyses, age or sex or marital status of the household head are not associated with a household's welfare status. In terms of education factors, only two factors namely 'highest class by any adult in the household' and 'average highest class for members of the household aged 15 years or older' are significant poverty correlates. This implies that the higher the education level of all adults in a household the less likely the household is to be consumption poor. However, the relationship is not as strong as that of the demographic factors.

No health factor is associated with welfare status. This is in line with earlier profiles. Even anthropometry-measured nutrition status defies conventional wisdom (GoM & World Bank, 2007a). Even the new factor 'total number of days lost by all adults in the household due to their or household's members illness or injury' is not a significant associate of poverty. To confirm the similarity, the statistic on the morbidity rate is negative which implies that the nonpoor are more likely to report being sick than the poor. The positive sign on 'number of days lost' confirms that lost days and poverty go hand in hand although the association is not strong.

In the three villages, running a household enterprise and being in wage employment per se are not strongly associated with welfare status. It is the 'number of hours spent in an enterprise' and the 'value of loan accessed' that are. Further, it is the 'application of fertilizer' and not 'receipt of an inputs subsidy' that is more associated with welfare status. With the indiscriminate allocation of subsidy coupons between the poor and nonpoor, it is the total cost of inputs that distinguishes the poor from nonpoor. This gives only four of the nine economic factors that have been found to be significant.

Other economic factors that are significant include share of food in total consumption and share of agriculture income in total income. Thus having non-agriculture income does not necessarily households escape poverty. This is also true of *ganyu* and business income sources. This underlines the important of agriculture income in rural Malawi. Apparently, the need to access non-food essentials force households to divert resources from food to non-food consumption. This could be in the form of selling food crops in order to purchase the essential non-food items.

Contrary to popular expectation but in line with other findings, land is not critically associated with welfare status. Further, quality of dwelling units does not reveal the welfare status of a household. It is the ownership of a mobile phone and bicycle that is strongly associated with poverty status. As for livestock, it is the livestock diversity rather than the standardised number of livestock (tropical livestock units) that distinguishes the poor from nonpoor.

The factor on giving gifts is not associated with welfare status in the three villages. There are possible explanations. The first is that giving out is a cultural practice to the extent that people do so even when they can ill afford. The second is that poverty status measured by consumption is not good enough to take into account all resources that determine giving out. The two explanations are not mutually exclusive.

Apparently, where a household is located amongst the three villages has a bearing on its poverty status. A household in Ngochera is likely to be poor and a household in Dzilekwa is likely to be non-poor⁸². Chikhwaza is a neutral village with few fixed effects, if at all.

⁸² The Pearson Chi-squared statistics for Ngochera and Dzilekwa of 8.2 and 9.0 respectively, are statistically significant at 1% level.

Appendix 6b: Adaptation of 2000 and 2007 determinants models

The poverty correlates analysis checks the association between one characteristic and poverty status at a time (Mukherjee & Benson, 2003). It ignores the fact that some factors work together or against each other in influencing the welfare status of a household. As such correlates cannot be used to infer causality. What is needed to infer causality is either a theory or conceptual framework. Given that the welfare measure is consumption expenditure, what is needed is to find and test a theory of consumption of goods and services in a rural setting. Chapter 2 shows that so far there is no suitable theory that can be operationalised to determine factors that influence consumption. Instead, just like in many countries, poverty determinants analyses in Malawi use conceptual frameworks⁸³.

To come up with the model that is used for the data from the three villages, there is need to get inspiration from the models that have been used before for similar data. Similar data were collected in 1997/98 and 2004/05 and these were analysed in 2000 and 2007. What follows is a process used to come up with the 2010 model for the three villages' data.

A6b.1 The 2000 analysis model

The 2000 analysis mostly used scale variables. Only regions had dummy variables. The model used disaggregated sex variable (male/female) to test the hypothesis that women are disadvantaged. It also emphasised agriculture-related variables. Below is a quick rundown of the model and the changes that have been made to line them up with the data collected from the three villages

Demographic factors: There were eight demographic variables constructed; age of household head (1), sex of household head (1), household size squared (1) and age of household member (5 age groups). Sex and age of household head has been retained. Likewise, the quadratic form of household size is also retained. However, the household size itself is introduced. Out of 'age of household member' came number of children between 0 and 9 years and 10 and 17 years, number of adults in the prime (18-59 years) by sex and finally number of the elderly (60 years and older). Due to the small sample size in this study and the need to line up the ages with dependency ratio, only four groups are considered (0-4, 5-10, 11-14 and 65 years or older). The numbers of adults by

⁸³ According to Mukherjee and Benson (2003), the model is not used to come up with determinants of poverty but infer causality by using what various theories state about the relationship of various factors with consumption of various goods and services. In this case, the variables used in the model are those that theory suggests would affect the welfare measure, the per capita consumption expenditure.

sex as variables are dropped. However, to deal with the effect of sex envisaged in variables modified and dropped, the proportion of females in the household population is included.

Education variables: Instead of disaggregating the number of members by sex who qualified for education certificates, aggregated variables are used because of the small sample size. The maximum education level attained by any adult is maintained. However, the age range is modified to line it up with labour age; i.e. 15 years and above instead of 20 to 59 years.

Economic variables: There are three variables for number of members engaged in primary, secondary and tertiary industries. Since most of the household members are in rural areas, the three variables are replaced by number of members engaged in agriculture or business or *ganyu* or wage employment in the past seven days. Number of household members with formal employment income is retained while the variable whether the household grew tobacco is dropped because none did. The variable EA maize yield is replaced by 'maize output per cultivated area'⁸⁴ no such data exists. The variable 'number of crops cultivated by household excluding maize and tobacco' is replaced by 'number of all crops cultivated' because there is no tobacco or many cash crops. Maize is used as both cash and food crop and excluding it does not take care of households that may have opted to grow hybrid maize primarily for sale.

Area and regional dummies: Being a community-level study, only village dummies are included in the model to measure location fixed effects.

The final model: Table A6.6 list the descriptive statistics of the variables that are used in the model, which is a modification of the 2000 model.

⁸⁴ This is not maize yield because the area under cultivation is for all crops. Since maize is the main crop in almost all households and that many other crops are intercropped with it, this is considered satisfactory.

Table A6.6: Descriptive statistics for modified 2000 model variables

Variables	N	Min	Max	Mean	S. D.
Log Per capita consumption	164	9	12	10.68	0.67
Age of household head	164	15	100	44.02	18.15
Sex of household head	164	0	1	0.68	0.47
Proportion of females in household	164	0	1	0.54	0.23
Children less than 5 years old	164	0	3	0.68	0.8
Children from 5 to 10 years old	164	0	3	0.93	0.96
Children from 11 to 14 old	164	0	3	0.45	0.68
Members aged 65 years or older	164	0	2	0.22	0.51
Household size squared	164	1	100	22.01	17.45
Highest class by any adult (> 14 years)	164	0	12	6.26	3.65
Members with JC	164	0	2	0.12	0.34
Members with MSC plus	164	0	2	0.1	0.37
Members in agriculture in past 7 days	164	0	6	1.15	1.13
Members in business in past 7 days	164	0	6	0.66	0.85
Members in <i>ganyu</i> past 7 days	164	0	3	0.39	0.59
Members in employment past 7 days	164	0	1	0.11	0.31
Members with wage income past year	164	0	2	0.15	0.37
Maize output per total land cultivated	161	0	12	1.64	2.4
Value of livestock (log)	108	-2	7	2.13	1.71
Different crops cultivated	161	1	14	4.57	2.05
Log land cultivated land (ha)	164	-2	2	-0.41	0.75

Source: Author's computation from primary dataset

A6b.2 The 2007 analysis model

The model used mostly dummy variables. Unlike the 2000 model, it disaggregated characteristics of the household head and not sex. The model introduced ownership of *dimba* land (wetland used for winter cropping) and ownership of non-farm enterprise. It also modified the 2000 education variables. The specifics are discussed below.

Demographic factors: The model subdivided the age of the household head into five dummy variables for various age groups. Given that there are only 164 household heads in this study, the number of age groups is reduced to three and aligned to the dependency ratio years. The model used three age-group variables for number of children. While the 0-4 and 5-10 years age groups are maintained, the 11 to 17 years age group is modified to cover go up to 14 years only to line it up with others. The model used a scaled down (by 100) 'household size squared' introduced in the 2000 model to capture possible non-linear effects of the number of household members (GoM 2001).

Education: Instead of education of all household members, the model uses dummies for whether a household head attended primary but did not complete or completed primary but did not proceed to secondary school or the head had secondary school education.

Economic factors: Only two variables are dropped; one on the whether the household cultivated tobacco and the household used rain fed plots. The former is dropped because no one grew tobacco and the latter because all 164 households except three used rain fed plots to grow crops.

Area dummies: Village dummies replace all location dummies.

The final model: Table A6.7 presents the variables and related descriptive statistics.

Table A6.7: Descriptive statistics for modified 2007 model variables

Variable	N	Min	Max	Mean	S. D.
Per capita consumption (log) – <i>Dependent variable</i>	164	9	12	10.68	0.67
Sex of household head	164	0	1	0.32	0.47
Household head is aged up to 44 years	164	0	1	0.63	0.48
Household head is aged between 45 and 64 years	164	0	1	0.21	0.41
Household head is aged 65 years old and above	164	0	1	0.16	0.37
Household head has some primary education	164	0	1	0.52	0.50
Household head has primary education	164	0	1	0.15	0.36
Household head has post primary education	164	0	1	0.18	0.39
Household head is widowed	164	0	1	0.16	0.37
Household size	164	1	10	4.34	1.80
Household size squared /100	164	0	1	0.22	0.17
Number of children less than 5 years old	164	0	3	0.68	0.80
Number of children from 5 to 10 years old	164	0	3	0.93	0.96
Number of children from 11 to 14 years old	164	0	3	0.45	0.68
Household has a member with wage income	164	0	2	0.15	0.37
Household has a non-farming enterprise	164	0	1	0.61	0.49
Household owns dimba land	164	0	1	0.30	0.46
Amount of rain-fed land in hectare (log)	164	-2	2	-0.41	0.75
Ngochera village	164	0	1	0.30	0.46
Chikhwaza village	164	0	1	0.36	0.48
Dzilekwa village	164	0	1	0.34	0.48

Source: Author's computation from primary dataset

A6b.3 Results of the analyses

Table A6.8 presents the significant variables and their coefficients. The coefficient is included to show the type of relationship. On the basis of these partial correlations, the important demographic factors include household size and its derivative and children

between 5 and 10 years. The negative sign implies that per capita consumption decreases with increased household size or number of children in the age group 5 to 10 years. In education, only the highest class by any adult in the household is strongly related to the level of per capita consumption. Education level, sex and age of household head do not strongly affect per capita consumption even on one on one basis. The negative and significant relationship between getting involved in *ganyu* or wage employment may be taken as an indication that in rural Malawi *ganyu* and wage employment are more poverty producers than survival strategies.

Table A6.8: Results of bivariate analysis of the modified models

Dep. variable: Per capita consumption (log)	Coefficient	2000 model	2007 model
Household size **	-0.214		√
Household size squared *	-0.172	√	√
Number of children from 5 to 10 years old **	-0.228	√	√
Highest class by any adult (> 14 years) *	0.187	√	
Number of members in <i>ganyu</i> in past 7 days *	-0.184	√	
Number of members with wage income *	-0.179	√	
Household has a member with wage income	-0.179		√
Maize output per total land cultivated **	0.232	√	
Household owns dimba land **	0.268		√
Ngochera village **	-0.349	√	√
Chikhwaza village **	0.242	√	√

* = significant at 5% level and ** = significant at 1% level

Source: Author's computation from primary dataset

The limitation of rain fed agriculture apparently makes ownership of wetland a booster of per capita consumption as household with dimba land supplement their crop production using these pieces of land. Of the three village dummies, two have strong relationship with per capita consumption. What is perhaps more intriguing is that they have opposite effects. Being in Ngochera Village implies low per capita consumption while being in Chikhwaza Village has a positive effect on the level of per capita consumption. Note that Chikhwaza was a neutral village under the poverty correlates analysis. Ngochera continues to show that it is disadvantaged regardless of the model used.

These results cannot be taken as final because there are possible interactions between and among the dependent variables in both models. Using stepwise multivariate linear regression, these interactions are taken care of such that only those with 'clean and strong' relationship with per capita consumption are retained thereby coming up with

only significant determinants of poverty⁸⁵. This means that variables even shown to have strong bilateral relationship with the per capita consumption can be weaned out if they correlate with other variables in the model. Likewise, variables with insignificant bilateral relationship can become significant contributors when working with other factors in the system. Table A6.9 presents the variables that were found significant at least at 5% level after conducting the stepwise multivariate regression analysis. Five variables are found to be strong determinants of per capita consumption using the 2000 model as compared to three for the 2007 model.

Table A6.9: Wellbeing determinants in the three villages by model

Variable	2000 model		2007 model	
	Coefficient	Std Error	Coefficient	Std Error
Ngochera village	-0.643	0.113	-0.411	0.107
Members in <i>ganyu</i> in past 7 days	-0.243	0.088		
Household size			-0.118	0.027
Household size squared	-0.012	0.003		
Value of livestock (log)	0.078	0.031		
Children less than 5 years old	0.14	0.069		
Household owns some <i>dimba</i> land			0.391	0.112
	R²	Adj. R²	R²	Adj. R²
Explanatory power of the model	0.39	0.36	0.24	0.22

* = significant at 5% level and ** = significant at 1% level

Source: Author's computation from primary dataset

As can be seen, some variables that were not significant under the bivariate analysis are found to be significant under the multivariate analysis. These include value of livestock and number of under-five children. In the same vein, factors like number of children in the age group 5-10 years, highest class by any adult member, wage income and employment, and crops yield have disappeared. The Chikhwaza effect also wilted. Given that the size of the coefficient indicates the strength of its predictive power, being in Ngochera village is the strongest determinant of per capita consumption in both models. Comparing the two models, the 1998 model has more explanatory factors and explanatory power than the 2005 model (36% compared to 22%). It is when these models are applied to a village that the differences between the villages and factors become apparent⁸⁶.

⁸⁵ The stepwise methodology reduces the impact of Multicollinearity where the supposedly explanatory variables explain each other (as opposed of being independent of each other) instead of just explaining the dependent variable. By using stepwise regression analysis all independent variables that are related with each are grouped only the one with the strongest relationship with the dependent variable is included in the model.

⁸⁶ It is recognised that applying the models on village data reduces the sample size and therefore the explanatory power of the model. The results of the analysis are cautiously interpreted.

In Ngochera Village, only household size is the only predictor of per capita consumption using for both models. The 2000 model has only the non-linear effects of household size while the other has the household size at the only factor. Household size squared explained 18% while household size explained 17% of the per capita consumption. This is because Ngochera as a location explains most of the variation in the per capita consumption overall.

In Chikhwaza there are a good number of factors. Using the 2000 model, significant factors include 'number of children in the age group 5-10 years', 'number of children in the age group 11-14 years', 'household size squared' and 'number of household members in wage employment in the past seven days'. The 2007 model yielded only two factors in Chikhwaza namely 'number of children in the age group 5 to 10 years' and 'household owns *dimba* land'. Again the explanatory power of the 2000 model was much higher; 43% compared to 16% for the 2007 model. Using the 2000 model for Dzilekwa Village, only 'number of household members involved in *ganyu*' is significant. That factor explains 13% of the per capita consumption. The 2007 model yielded no factor at all in Dzilekwa Village.

A6b.5 Specifying a village level model

It is apparent that the 1998 model is a better model for the villages visited in terms of explanatory factors and explanatory power. However, it is also clear that both models have unique features that need to be exploited to improve the model specification for the three villages. A logical starting point is to combine the two models and rationalising variables measuring the same factor. The results of the bivariate correlation analysis provide a basis for choosing one over another. First, all factors that have significant relationship are considered. The next step is to include the family of factors related to any of the significant factor just in case the stepwise regression considers any of the factors as more important than the one that was significant on bilateral basis. Thus instead of only the age group 0-4 years, all age groups for children are included. Likewise, all variables in the family related to number of household members in wage employment (i.e. in agriculture, business and *ganyu*) are included. The dummy for Dzilekwa Village is also included to complete the picture.

This gives a list with two variables that are similar: number of household members with wage income and whether a household has wage income. With only one household having two workers in wage employment, these variables are exactly the same if the dummy variable assigns 1 to a household with such a worker – which is the case. In this

case the dummy is retained because it is easier to interpret than the number of workers. Finally all variables found to be determinants of per capita consumption have to be included. So far all of them have been included except the value of livestock. Since the quadratic factor representing household size is not the same in the 1998 and 2005 models, the scaled down version as used in the 2007 is retained. The results of the regression for this group of variables are presented in Table A6.10⁸⁷.

Table A6.10: Wellbeing determinants in the three villages using hybrid model

Model	B	S Error	Beta	t-statistic	Sig. level
(Constant)	11.40	0.15		77.65	1%
Ngochera village	-0.54	0.11	-0.39	-4.80	1%
Household size	-0.16	0.03	-0.45	-5.16	1%
Value of livestock (log)	0.08	0.03	0.20	2.51	5%
Household owns dimba land	0.29	0.12	0.21	2.45	5%
Number of members engaged in <i>Ganyu</i>	-0.21	0.08	-0.19	-2.45	5%
Number of under-five children	0.14	0.07	0.18	2.18	5%

$R^2=0.45$ and adjusted $R^2=0.42$

Source: Author's computation from primary data

They show that the number of factors has increased and the explanatory power of the model has increased. According to these results, being in Ngochera is a surest way of having low per capita consumption. Another depressor of per capita consumption is the household size; per capita consumption declines with increasing number of household members. Strangely, having under-five children is associated with high per capita consumption. It is difficult to explain this finding other than speculating that under-five children are generally prioritised over older children when it comes to consumption because they are considered vulnerability.

The fact that the model explains less than half of the variation in per capita consumption implies that there may be other factors that are not included in the model. While it is possible that data for some of them were are not generally collected, it is possible that there are some that can be included that may explain per capita consumption even better. To check on that possibility, some modifications are made to the model specification. The changes are discussed below.

The first modification is the variable used as a proxy for maize yield. Instead of considering only maize, all crops are considered to ensure that all crops grown on the cultivated land are taken into consideration. Two factors: 'access to credit' and 'access to inputs' are introduced to check the effect of inputs and credit accessibility (GoM &

⁸⁷ Note that stepwise regression analysis is still used because the variables are coming from different models with different orientations. Each variable has to be tested for multicollinearity.

UN, 1993). Two variables are constructed for each one of the two factors; dummies for whether 'household accessed loans' and 'household applied fertilizer' and scale variables for 'amount of credit accessed' and 'amount of money spent on inputs' (scaled down by 1000 and natural log), which are used alternatively in various estimations. Table A6.11 presents the descriptive statistics as well as bivariate correlation coefficients for the significant wellbeing correlates. It is noted that the modified 'crop yield' variable and the added variables are all important correlates of per capita consumption on one-on-one basis.

Table A6.11: Descriptive statistics for significant variables for new model

Model variables	N	Min	Max	Mean	S.D.	Coef.	t-stat
Log per capita consumption	164	9	12	10.7	0.668		
Household size **	164	1	10	4.3	1.797	-0.214	0.006
Household size squared (/100) *	164	0	1	0.2	0.175	-0.172	0.028
Children from 5 to 10 years old **	164	0	3	0.9	0.956	-0.228	0.003
Highest class by any adult *	164	0	12	6.7	3.652	0.187	0.017
Members engaged in <i>Ganyu</i> *	164	0	3	0.4	0.591	-0.184	0.018
Household has wage income *	164	0	2	0.2	0.371	-0.179	0.022
Harvest in tonnes per hectare **	164	0	21	2	3.129	0.238	0.002
Household owns dimba land **	164	0	1	0.3	0.459	0.268	0.001
Value of livestock (log) **	108	5	13	9	1.713	0.297	0.002
Amount spent on inputs (log) **	148	5	12	8.2	1.631	0.465	0
Ngochera village **	164	0	1	0.3	0.459	-0.349	0
Chikhwaza village **	164	0	1	0.4	0.481	0.242	0.002
Household accessed credit **	164	0	1	0.2	0.402	0.306	0
Applied fertilizer last season **	164	0	1	0.8	0.393	0.283	0

** Correlation is significant at the 1% level (2-tailed); * significant at the 5% level (2-tailed)

Source: Author's computation from primary dataset

Appendix 7: Self assessed wellbeing characteristics from CPS5 and MOPS

A7.1 Wellbeing characteristics from mobility factors

In CPS5, one of the two small qualitative studies conducted in 2005, household respondents were asked to give at most three reasons why their household circumstances have changed compared to ten years earlier. Table A7.1 presents the mobility factors for both upward and downward movers⁸⁸.

Table A7.1: Mobility factors from the CPS5

Upward mobility	<i>n</i> =288	Downward mobility	<i>n</i> =466
Harvests have been good	23.3	Harvests have been poor	37.8
Wife works hard	11.1	Wife died	9.0
Worked hard	9.7	Have less livestock	5.6
Started growing new crops	6.9	Managed my crops poorly	5.4
IGA has been profitable	6.9	IGA did not do well	4.9
Set up a new business or trade	6.6		
Live in a nicer house	5.9		
Times are better	5.6	Times have been bad	13.7

Source: Author's computation from CPS5 Dataset (CSR, 2005a)

Agricultural-related factors dominate both lists. It is noted that factors like good or bad harvests as outcome factors are dependent on other factors including weather pattern, availability of labour and land, and access to and use of inputs. In turn, access to inputs is dependent on economic conditions like prices and availability. This is also true for factors like 'started growing new crops' because it depends on availability of seeds, fertilizer and market for the new crops, among others. This means that there are some unmentioned factors behind some of these factors.

Other than agricultural-related factors, absence or presence or performance of income generating activities (IGAs) play a vital role in influencing the economic status of households. For example, the economic status of those that had resources to set up enterprises or run profitable enterprises improved and those whose enterprises did not perform well saw their economic wellbeing decline over the period. It is noted that the operating environment of the enterprise, apart from the human capability, is crucial to

⁸⁸ The list only includes factors whose share in the total is at least 5 percent. They represent 76% of all responses for both upward and downward mobility.

the extent that some prosper while others wilt depending on conditions facing the enterprise.

Another factor with close relationship to the operating environment faced by the household in general is the factor 'times has been good' or 'times have been bad'. These factors can easily cover conditions of human capability (level of entrepreneurial skills, strength, physical assets like equipment and start up and operating capital) or economic environment or social or political environment or indeed a combination of these. Since no follow up questions were asked, it is difficult to know what was behind some of these responses.

Some respondents may not have mentioned factors like working hard and diversifying into new crops together with factors like increased harvest. However, it is noted that increased harvest might have come from the respondent 'working hard' or 'wife worked hard', or 'started growing new crops'. By implication, a drop in crop production might have resulted from household members not working as hard or death of a hard working wife or a wife that drinks too much. Indeed, the importance of a wife is evident; as many as 11% of the households that prospered over the ten year period attributed the progress to their hard working wives. On the other hand, those that 'lost ground' attributed the loss to their wives' death (9%), illness (3%), excessive beer drinking and laziness (2%)

The point of this is that while some factors can be analysed on their own, most of them interact with other factors. This then requires a holistic approach to analysing mobility factors. A questionnaire, with pre-coded responses as was the case in CPS5, is not the best method because it does not allow for probing and tangential questioning. Nevertheless, these factors give a pointer as to which factors are important for self-assessed poverty.

A similar module was included in the Moving Out Poverty Study (MOPS) questionnaire. The MOPS was designed to bring out factors that determine household mobility on a number of aspects including economic wellbeing, power and rights, and happiness. Respondents were given the chance to give a maximum of three reasons for their household's mobility status over the period 1995-2005. Unlike in the CPS5, even those whose status did not change were requested to provide reasons. However, MOPS did not for adding new factors over and above the pre-coded responses. Further, a comparison of the pre-coded responses in CPS5 and MOPS shows some differences in orientation reflecting conceptual differences between the IFPRI (CPS5) and World Bank

(MOPS) designers. This sub-section discusses the reasons for changes in economic wellbeing, power and rights and happiness. Only those factors that contributed at least 5% to total responses are presented in the tables.

A7.1.1 Economic wellbeing

From those households that reported upward movement on the ladder of life, a total of 140 responses on reasons for the change were given. Likewise, 114 responses were given by those that reported downward movement in their economic wellbeing. Table A7.2 presents the factors.

Table A7.2: Major mobility factors under economic wellbeing

Factors for positive change	<i>n=140</i>	Factors for negative change	<i>n=114</i>
Increased crop production	15.0	Vulnerability to market price fluctuations	20.2
New /multiple sources of income	14.3	Low Agric. yield/bad harvest	15.8
New Business/Better business	13.6	Ill health/accident/high health expenses	10.5
Crop diversification	12.1	Inflation/Increase in price of basics	7.0
Hard work	7.9	Natural disaster (drought/flood)	7.0
		Death of an earning member	7.0
Better health	5.0	Job loss/Unemployment	5.3

Source: Author's computation from MOPS dataset (CSR, 2005b)

Just like under the CPS5, crop production is a key factor for both upward and downward mobility. The bad harvest is most probably related to natural disasters, which appear as a separate factor for downward mobility. Diversifying crop production and sources of income including into non-farm enterprises also feature as important factors for upward mobility. These are underwritten by hard work and good health. Perhaps reflecting the increased role of the market in improving the economic wellbeing of many households, market price fluctuations and inflation are among the top factors that dragged down economic wellbeing status. Just like in the case of upward mobility, ill-health or high health spending and death of income earner worked against many households over the period. Another factor that negatively affected economic wellbeing of some households was job losses.

Major factors mentioned for those few households that indicated no change (not presented in a table) include poor access to inputs and markets (17%), failure to obtain credit (11%), limited or inconsistent employment opportunities (11%), unemployment (8%), ill-health (8%), death of an income earner (6%) and lack of government social

support (6%). There were other reasons which could not be matched by the codes given. In all, these ‘unspecified’ reasons combined to contribute 25% of the 36 responses for no movement. This shows that the pre-coded reasons were unsuitable for this category of households.

A7.1.2 Power and rights

Apparently, the pre-coded responses for power and rights were also out of line. The proportion for unspecified reasons (others) topped the list of upward and downward mobility factors (13%) for upward mobility and (17%) for downward mobility. Table A7.3 gives the other factors.

Table A7.3: Major mobility factors under power and rights

Factors for improved status	<i>n</i>=107	Factors for declined status	<i>n</i>=52
Conducive government services	12.1	Health problems/accident	15.4
Increased respect within community	11.2	Economy got worse	11.5
Marriage	11.2	Poor government services/support	11.5
Operating new/better business	8.4	Job loss/Unemployment	7.7
Becoming a member of CBO	8.4	Loss of respect within community	7.7
Becoming a leader of a CBO	8.4	Death of earning member	7.7
Economy improved	7.5	Lost a business	5.8
Getting a new or better job	4.7		
Acquired productive tool/good/asset	4.7		

Source: Author’s computation from MOPS data set (CSR, 2005b)

These factors show that institutions (government, the community and family) and the position of a household in the economic sphere are considered vital for power and rights. For example, running a business, getting a job and acquiring a productive asset were mentioned to have contributed to improved power status for some households. Institutional failure feature highly on the negative side. For example, poor government services or support, variously manifested as poor access to government services, worse national government, less government assistance and unfair judicial or legal system, contributed just as bad as worsening macroeconomic environment manifested as worsening national economy and loss of a job or business as manifests. Of all the reasons, however, power and rights are said to be greatly eroded by poor health.

The role of marriage is clear on both sides as getting married is a prominent power/right change and death of a husband curbs a household’s power/rights. The prominence of economic factors in determining changes in power and rights gives the impression that

Malawi is still at the stage where economic power and access rights to productive assets are the key constraints to improved wellbeing.

A7.1.3 Happiness

Perhaps as expected, economic factors especially income feature highly as determinants of happiness; increased household income is the topmost reason for increased happiness while declined household income tops the negative side (Table A7.4).

Table A7.4: Factors associated with changes in happiness

Factors for increased happiness	n=105	Factors for reduced happiness	n=85
More household income	24.8	Less household income	32.9
More rights/representation	11.4	Health problems	17.6
Home (improved/move to new)	9.5	Unspecified	12.9
Marriage/Having children	9.5	Problems in the community	7.1
Unspecified	9.5	Worse National Govt	5.9
New business	8.6		
Social relationships	6.7		
Better health	6.7		

Source: MOPS dataset (CSR, 2005b)

Other than income, running an enterprise is another economic reason that increased happiness over the period. One other factor that features on both sides is health status. Again, unspecified factors took a good portion of the responses; 10% on the positive side and 13% on the negative side. This again is a sign that there are other important factors that are related to happiness that were not considered when designing the questionnaire. In general, socio-political factors contribute more to happiness than economic factors.

A7.2 A comparison of factors from CPS5 and MOPS

A comparison of CPS5 and MOPS shows that, by and large, people's perceptions are consistent and differences between the two studies can be explained by differences in questionnaire design⁸⁹. It is noted that due to differences in the breakdown of reasons in the pre-coded responses, there are more factors from the MOPS than the CPS5. It is noted that it is rather difficult to meaningful match the factors and eventually order them in some categories due to apparent conceptual differences in the pre-coded

⁸⁹ Both studies were conducted in the same year and households and by the same institute, researcher (the author) and field manager and research assistants. This fixes most of the factor that can introduce differences.

reasons. Nevertheless, there are few factors that can be matched without losing match of their original flavour. These are discussed below.

'Harvests have been good' is assumed to be the same as 'increased crop production'. The factor 'worked hard' from CPS5 is assumed to be the same factor as 'hard work' from MOPS. Again, all factors related to non-farm enterprises are combined under 'operated productive non-farm enterprise'. Another factor 'times are better' is assumed to cover 'improved national economy', 'increase in community prosperity', 'better national government', 'better local government', and 'improved security'⁹⁰. Likewise, factors 'adopted new methods of farming' and 'managed crops and livestock well' are combined under 'Improved crop/livestock management'. Employment related factors like 'steady job/increase in wages', and 'got a job/better job/more work opportunities' are combined under the factor 'better labour use/returns'.

Given this rationalisation and taking on only those contributing at least 5%, Table A7.5 presents the factors reported to have attributed to the improvement of household economic wellbeing.

Table A7.5: Factors contributing to upward wellbeing mobility by survey

Reasons given as important for upward mobility	CPS(n=288)	MOP (n=140)
Harvests have been good/increases crop production	23.3	15.0
Productive non-farm enterprise	16.3	13.6
Adopted new or multiple sources of income		14.3
Crop diversification/started growing new crops	6.9	12.1
Wife works hard/drinks less	11.5	
Worked hard/ hard work	9.7	7.9
Accumulated assets (livestock and others)	7.6	
Improved crop/livestock management	7.3	
Better labour use/returns		6.4
Moved to live in nicer home	5.9	
Improved national conditions/times have better	5.6	3.6
Better health		5.0

Source: CPS5 (CSR, 2005a) and MOPS datasets (CSR, 2005b)

In both surveys, economic wellbeing was said to have improved due to increased crop production; operating or opening new non-farm enterprises; working hard; adoption of crop diversification; and improved operating environment. There are other factors that are present and prominent in only one study. For example, the role of a hard working

⁹⁰ This assumption has taken a leap of faith. For someone who was not involved in the design of the questionnaire, especially the pre-coded responses, it is difficult to unpack a factor like 'times have been good'. This assumption is meant to make sense of the factor. However, the assumption could be wrong.

wife who drinks less was only recorded in the CPS5 and was a third most important factor. The factor adopted 'new or multiple sources of income' was the second most important factor in MOP but does not appear in CPS5. Likewise factors like asset accumulation and improved crop and livestock management only appear in CPS5. It is noted that MOPS has factors on employment (new jobs, government jobs, increased wages, and more work opportunities) that do not appear in CPS5.

Before analysing factors for downward economic wellbeing mobility, rationalisation of some factors is undertaken. The factor 'harvests have been poor' is matched with 'low agricultural yield or bad harvest' and modified as 'declining crop production'. The factor 'times has been bad' from CPS5 is assumed to cover MOPS factors 'high inflation or increase in prices of basic necessities', 'inconsistent work opportunities', 'the economy got worse', 'rising insecurity', 'worse national government' and 'discrimination'. They are then reconstituted under 'deteriorating operating environment'.

All factors related to poor management or performance of non-farm enterprises are matched and grouped under the factor 'non-performing enterprise'. The factors 'reduced number of livestock' and 'poor crop management' or 'failure to benefit from crop diversification' are put under the factor 'poor crop/livestock management'. Likewise, all factors related to wife's death, illness, alcohol abuse and laziness are grouped under 'declining wife capability'. CPS5 factors on ill and migrant children are matched with MOPS's 'problematic children' and 'too many dependents' and grouped under 'adverse child characteristics'. The factor 'health problems/accident/high health expenses' is replaced by 'declining household human capability' for convenience. This is also true of the factor 'job loss or unemployment' that is combined with 'inconsistent work opportunities'. These come under 'lack of employment opportunities'. Table A7.6 presents the proportion of the responses for CPS5 and MOPS.

It is noted that there are fewer similarities than differences between downward mobility factors under CPS5 and MOPS; only four factors are common. These include declining crop production, deteriorating operating environment, non-performing or poor management of enterprises and adverse child characteristics manifested in their illness, death, migration, young age and lack of cooperation. Even then their importance is different; the four in CPS5 represent 62% of all responses but only 36% of MOPS responses.

Table A7.6: Factors contributing to downward wellbeing mobility by survey

Factors for downward mobility	CPS5 (<i>n=466</i>)	MOPS (<i>n=114</i>)
Declining crop production	37.8	15.8
Volatile product prices		20.2
Declining wife capability	14.4	
Deteriorating operating environment	13.7	14.9
Poor crop/livestock management	12.4	
Declining household human capability		10.5
Lack of employment opportunities		7.9
Death of an earning member		7.0
Natural disasters		7.0
Non-performing enterprises	5.8	2.6
Adverse child characteristics	5.2	2.6
	100	100

Source: CPS5 (CSR, 2005a) and MOPS datasets (CSR, 2005b)

There are unique but prominent factors for each study. These vulnerability to market price fluctuations and health related factors, unemployment, death of an income earner and natural disasters under MOPS; and the quality of wife in terms of death, illness, alcohol abuse and laziness took and poor crop and livestock management under CPS5.

The differences coming from similar studies in the same areas, period and households reflect some fundamental differences in the design of the questionnaire especially the pre-coded responses. As Chamber (1997) argues, research assistants approximate response based on the codes given. They rarely use the code 'other, specify' because it may imply they did not understand the response or just don't want to waste time writing the response instead of simply writing or 'circling' the code that is closest to the response. Again, few and broad codes attract errors of assignment by research assistants. This is why it is recommended to use open-ended discussions on such questions is considered despite the time requirements in post-survey coding or content analysis it is yields clear results⁹¹.

⁹¹ Instead of open ended questions to household respondents, focus group discussions (FGDs) and key informants discussions were held in 15 sites whose reports provided the inputs for chapter 7.

Glossary

Abbreviations

ADB	African Development Bank
ADMARC	Agricultural Development and Marketing Corporation
ART	Antiretroviral Therapy for HIV/AIDS patients
CAQ	Consumption Adequacy Question
CBO	Community Based Organisation
CE	Consumption Expenditure
CM	Community mobility
CPI	Consumer Price Index
CPS5	First round of the IHS1 Complementary Panel Survey conducted in 2005
CSR	Centre for Social Research of the University of Malawi
DHSS	Department of Health and Social Security (UK)
EA	Enumeration Area (primary sampling unit in Malawi)
EU	European Union
GDP	Gross Domestic Product
FGD	Focus Group Discussion
FHH	Female Headed Household
GoM	Government of Malawi
HDI	Human Development Index
HESSEA	Household Expenditure and Small-Scale Economic Activities
HH	Household
HHH	Head of household
IEQ	Income Evaluation Question
IFPRI	International Food Policy Research Institute
IGA	Income Generating Activity
IHS1	First Integrated Household Survey conducted in 1997/98
IHS2	Second Integrated Household Survey conducted in 2004/05
IMF	International Monetary Fund
JC	Junior Certificate
KII	Key Informant Interview
LOL	Ladder of life
MCP	Malawi Congress Party
MEPD	Ministry of Economic Planning Development
MHH	Male headed household
MIQ	Minimum Income Question
MK	Malawi Kwacha – Malawi's local currency
MOPS	Moving Out of Poverty Study conducted in 2005
MPRS	Malawi Poverty Reduction Strategy
MPRSP	Malawi Poverty Reduction Strategy Paper
MPVA	Malawi Poverty and Vulnerability Assessment
MSC	Malawi School Certificate
NEC	National Economic Council (formerly Department of Economic Planning and Development and later Ministry of Economic Planning and Development)
NGO	Non-Government Organisation
NRDP	National Rural Development Programme

NSSA	National Sample Survey of Agriculture
NSO	National Statistical Office (central statistics bureau elsewhere)
OPHI	Oxford Poverty and Human Development Initiative
PA	Peers assessment
PL	Poverty line
PRA	Participatory Rural Appraisal
PWP	Public Works Programme
QIM	Qualitative Impact Monitoring
SA	Self Assessment
SAP	Structural Adjustment Programme
SDR	Special Drawing Rights (IMF currency)
SEW	Subjective Economic Wellbeing
SSRC	Social Science Research Council (UK)
SR	Southern Region (of Malawi)
TA	Traditional Authority (traditional chief or area of the chief's jurisdiction)
TV	Television
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNU	United Nations University
VCR	Video Cassette Recorder
WeD	Wellbeing in Developing Countries Research Programme
WHO	World Health Organisation
Local terms	
BOMA	District headquarters originally British Overseas Military Administration
<i>Ganyu</i>	Temporary piece work with flexible work and payment system
Lobola	Bride price paid by groom for bride
Chitenje	Patterned cloth generally used to wrap around a woman from waist down
Chilundu	Cloth (mainly one colour) used to wrap around a woman's body mostly from upper body to feet

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