Methodological Issues in the Measurement of Poverty: An Analysis of two Poverty Surveys in Lesotho

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Declaration

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature:

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Date: .

ABSTRACT

This study analyses poverty and deprivation in Lesotho on the basis of data from two comprehensive household surveys undertaken in 1993 and 1999. The aim of this study was to create a better understanding of poverty and deprivation in Lesotho. The analysis shows that the mountain areas of Lesotho suffer the worst levels of poverty and inequality both in terms of income/consumption and non-income measures compared to the other areas of the country. Poverty was found to be highest amongst households with older heads and higher mean numbers of members. The poor were found to suffer from lack of resources, access to education, basic services such as clean water, proper sanitation facilities and modern energy sources, and have little access to productive resources. The study uses an income-based definition of poverty for most of the analysis. In addition, it develops a broad-based index of deprivation including access to services, education, employment, income, and number of durable assets and traditional wealth. While on average the two indicators correspond fairly closely, the income poverty measure fails to capture those households that are deprived of many of the non-income measures of well-being. The broader deprivation measure provides a more comprehensive understanding of poverty. The conclusions arrived at when the two measures are used show that the concepts and indicators that one uses to measure poverty and deprivation matter a lot in identifying the poor since different conceptions of poverty/deprivation identify different groups with different characteristics as poor. The results also suggest the need for the use of different measures of poverty.

OPSOMMING

Hierdie studie analiseer armoede en deprivasie in Lesotho na aanleiding van twee omvattende huishoudingopnames van 1993 en 1999. Die doel hiermee was om 'n meer omvattende begrip van armoede en deprivasie in Lesotho te verkry. Die analise toon dat die bergstreke van Lesotho, vergeleke met die res van die land, die hoogste mate van armoede en ongelykheid het, soos gemeet deur beide inkomste/verbruik en nie-inkomste gebaseerde maatstawwe van armoede. Armoede blyk die grootste te wees in huishoudings met meerderjarige hoofde asook in huishoudings met gemiddeld meer lede. Daar is ook gevind dat arm huishoudings gekenmerk word deur 'n gebrek aan hulpbronne, toegang tot opvoeding en basiese dienste soos skoon water, genoegsame sanitasiefasiliteite en moderne energiebronne, asook 'n beperkte toegang tot produksiehulpbronne. Die studie maak grotendeels gebruik van 'n inkomste-gebaseerde definisie van armoede. 'n Breër indeks van deprivasie word ook ontwikkel wat onder andere insluit: toegang tot dienste, opvoeding, werksgeleenthede, inkomste, hoeveelheid bestendige bates en tradisionele rykdom. Alhoewel die twee indikatore relatief goed ooreenstem, kon die inkomste-gebaseerde meting van armoede nie daarin slaag om die huishoudings te onderskep wat geklassifiseer word as gedepriveerd op verskeie nie-inkomste indikatore van welvaart nie. Die breër indeks van deprivasie verskaf 'n meer omvattende begrip van armoede. Die gevolgtrekking wat hieruit gemaak word, is dat die konsepte en indikatore wat gebruik word om armoede en deprivasie te meet, van belang is in die identifisering van behoeftiges. Die rede hiervoor is dat verskillende konsepsies van armoede/deprivasie verskillende groepe met verskillende eienskappe identifiseer as behoeftiges. Die resultate suggereer dus 'n behoefte vir die gebruik van verskillende maatstawwe van armoede.

DEDICATION

To my late grandmother Sophie Bloem who was my first
teacher of love and all those I have loved in whatever
capacity.

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List of Acronyms

CDI   Composite Deprivation Index

CDItw   Composite Deprivation Index which includes traditional wealth

HDI   Human Development Index

HPI   Human Poverty Index

M   Maloti (Lesotho's currency) which is pegged to the South African Rand

            R1 = $6.11 at the time of the 1999 survey

UNDP   United Nations Development Program

Chapter 1
Research Methodology

1.1   Background and justification

Poverty and poverty alleviation have always been a cause of great concern for governments, development and international agencies. Lesotho is no exception. In 1991, 1994 and 1999 poverty studies were conducted in Lesotho with the aim of assessing the level of poverty within and amongst households and to assess the strategies that communities and individual households use to sustain their livelihoods. In undertaking these studies, qualitative and quantitative methodologies were used to assess the material and non-material aspects of poverty. Furthermore, the studies looked at poverty from the perspective and experience of the Basotho.

The relevance of the studies on the socio-economic status of households over the period between the two surveys (1993 and 1999) was based on the fact that since the early nineties, Lesotho had experienced economic stagnation. An increase in unemployment, an increase in mine retrenchments, falling real wages and drought have led to increased hardships and greater poverty among the population. Gay (1995:2) argues that, "in Lesotho the combination of continuing rapid population growth and economic stagnation has resulted in a worsening of economic and health indicators such as GNP per capita, malnutrition and infant mortality rates".

Lesotho's young population is rapidly growing, while on the other hand economic performance is fluctuating, the HIV/AIDS pandemic is rapidly increasing, unemployment is high and poverty has affected almost 60% of the population. According to the World Bank (1995)[1], poverty is higher in the rural areas where 71 percent of households in the mountains, 62 percent in the Senqu valley, and 56 percent in the foothills live below the poverty line.

In an attempt to create a better understanding of the level and distribution of poverty in Lesotho, I undertook a secondary analysis of the 1993 and 1999 poverty studies.

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[1] The World Bank assessment relied heavily on the use of the data from the 1994 Poverty study undertaken by Sechaba Consultants.

Hakim (1982:1) argues that secondary analysis can be broadly defined as "any further analysis of one or more data sets which yields findings or knowledge additional to those presented in the original report". On the other hand, Hyman (1972:17) argues that "secondary analysis of a series of comparable surveys from different points in time provides one of the rare avenues for the empirical description of long-term change, and for examining the way phenomena vary under the contrasted conditions operative in one society on several periods". It is on these premises that I used the 1993 and 1999 data sets. By comparing the 1993 results with those of 1999 an avenue for an empirical description of existing changes in the socio-economic status of Basotho over time became clear. A composite index of both income and non-income measures of poverty was also developed to access the situation of the households.

1.2   Statement of Research Problem

1.2.1   Target population and study sample

Households that were included in the study were those that had been investigated in the poverty studies undertaken by Sechaba Consultants in 1993 and 1999. A detailed description of these two surveys is provided in section 1.4 below.

1.2.2   Aims and objectives

The aims and objectives of my study were broken into two sections, that is, the research aims and objectives and the methodological aims and objectives as presented below.

<u>Research Aims and Objectives</u>

The aims of my research were to:
  i.   Create a better understanding of poverty in Lesotho.
  ii.   To provide a comparative analysis of the situation of poverty in Lesotho.

<u>Methodological Aims and Objectives</u>

The study also aimed to explore different measurement techniques for assessing the level of poverty. More specifically:
  i.   To assess the validity of the data produced by the two surveys.

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ii. To construct a composite index using some of the factors included in the 1993
and 1999 surveys to assess the level of poverty.

1.3 Analysis and interpretation

The survey questions as presented in the 1993 and 1999 household questionnaires
(annex 2) were studied, and variables, which appeared on both surveys, were studied
carefully to ensure that they measured the same question. A comparable data set was
created for both survey years, that is, only those variables that appeared on both
surveys and measured the same question were used in the final data set I used for my
analysis.

Conducting a similar analysis to that used by Sechaba Consultants during both
surveys I then looked into the reliability of the data. This was undertaken so as to
assess whether similar results would be obtained.

Since in both studies the same constituencies and in some cases the same villages
were re-visited in 1999, some comparative analysis with regards to certain factors was
undertaken. The Statistical Package for Social Scientists (SPSS) programme was used
for data manipulation (e.g. assessing changes over time of the households'
demographic and socio-economic status, and constructing the composite index).

1.4 Description of surveys

In this section I describe the 1993 and 1999 poverty surveys undertaken by Sechaba
Consultants. I also highlight the main problems, findings and recommendations that
were formulated for each study.

1.4.1 Poverty in Lesotho 1994: A Mapping Exercise

In 1993 the Food Management Unit of the Government of Lesotho, the Delegation of
the European Community and the World Bank commissioned Sechaba Consultants to
produce an updated poverty study in Lesotho. The update was believed to be
necessary because the 1990 data were out of date and because the years between 1990
to 1993 had been a time of serious drought in Lesotho.

Aims and Objectives

The aim of the study was to produce an update on poverty in Lesotho and to highlight specific features of poverty, in particular those which the Basotho themselves indicated as the most critical problems they face. The study was also aimed at producing maps to show the distribution of each type of poverty across the 60 constituencies.

Research Design and Methodology

The study outlined specific features of poverty as indicated by the Basotho, and used both quantitative and qualitative methods. The emphasis was placed on understanding poverty from the point of view of the people.

Sampling method

Quantitative study: The 1986 census list, which gives villages with their populations grouped by constituency, was used. The total population in a constituency ranged from roughly 20,000 to over 30,000. A random number was then chosen and a sum of populations was added in a cumulative fashion in successive villages in the constituency until the nth number was reached. The village that represented the nth number was then selected as the survey village. The process was then repeated to get in most cases two villages for each constituency. An exception was made in those constituencies that were most severely affected by drought, where four villages were chosen.

Data collectors were then sent to the villages and instructed to interview a minimum of 10 households on a random basis. This was defined as starting with a haphazardly chosen household and then selecting every nth person from that household, where n depended on the size of the village. If no household member was present, the adjacent household was selected. At the end of the process a randomly selected sample of 1,719 households was interviewed, covering all 60 constituencies (based on the 1985 redrawing of constituency boundaries).

Qualitative study: The qualitative studies were carried out in 16 villages, 4 in the lowlands, 4 in the foothills, 4 in the mountains and 4 in towns. The villages were randomly selected from those where the quantitative interviews had been conducted,

with the exception of Maputsoe, as there was a need for an additional urban area. In each of these villages, where possible, families that had been previously interviewed in the quantitative study were selected. In cases where families that had previously been interviewed could not be located, new households were chosen and the basic household interview was administered.

A further 201 households were interviewed on issues concerning the strategies which the poor use in order to survive. Here the head of the household or the wife (if the head was absent) was interviewed. These households were selected in the same 16 villages randomly chosen from the four ecological zones. The interviewers were asked to subjectively assess the households; of these 118 were assessed as not being destitute and 83 were assessed as destitute. This was done on the basis of their apparent inability to make ends meet, using signs such the dilapidated condition of the house, poor and minimal furniture, ragged clothing, apparent absence of food in the household and lack of paid employment. It was, however, observed that these assessments were not always completely accurate/reliable, as the data on the household surveys demonstrated.

Operationalisation

Data were collected at the household level using a structured questionnaire. Data from various other surveys (e.g. 1992 agricultural census, 1993 rainfall data, 1993 drought survey; 1993 malnutrition data, 1993 Maseru business survey, 1992 primary school data, 1993 roads data, etc.) were also used. Open-ended interview guides and card-sorting exercises were also used to explore more deeply the meaning of poverty for ordinary Basotho.

Included in the information that was collected at household level were the following aspects:
- Demographic household information;
- Socio-economic household data (e.g. number and type of houses; household possessions; cereal stocks; ownership of fields and livestock; crop production during the last season; income and expenditure; facilities, etc.);
- Information on children under 6 years.

Analysis and interpretation

All quantitative data were analysed using the Statistical Package for Social Scientists (SPSS). The nutritional data were analysed using EPI INFO.

The results of this survey were combined with data from various other surveys to obtain an overall picture of the situation in Lesotho. Data were then weighted to allow for generalisations to the national level. To do this each mean was weighted with the square root of the number of cases on which it was based. In this way an overall mean value was obtained for each constituency.

Results were reported on the basis of constituencies, the 15 geographical areas and three ecological zones. A map of the 60 constituencies and the 15 geographical areas is attached as annex 1.

A factor analysis of the poverty indicators and a cluster analysis were undertaken in order to group constituencies together, depending on the similarity of the values of the 32 indicators of poverty. The choice of indicators took into account the multi-dimensional nature of poverty. It was believed that the indicators chosen gave an overall picture of poverty, which was not limited to the lack of M50 per household member per month. The M50 per household member per month was taken as the cut-off point i.e. poverty line. The 1991 poverty report[2] used a poverty line of M20 per household member per month; this amount was chosen on the basis of interviews with poor people about the minimum basket of supplies that they required for maintaining the household. These included maize meal, cabbage, tea, sugar, paraffin, matches and soap, as well as some cash to maintain the house and buy a minimum of clothing. The figure was then updated using the national inflation figures for the intervening years to arrive at the M50 per member per month in 1993.

The criterion used to calculate income was also used for total expenditure, i.e. M50 per member per month. The cut-off point of M10 per member per year spent on clothing and health is arbitrary. The cut-off point used for education represents the

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[2] Sechaba Consultants had conducted a poverty study in 1991. In this study the baseline used was 1986, as data from several surveys conducted in the late 1980s were used in order to draw conclusions.

absolute minimum that a family has to pay to have a child in primary school for a year and does not include the cost of a school uniform.

The following indicators were used:

% of households with no latrine

% of households with no piped water

% of households with no livestock

% of households with no fields

% of households with no bank account

% of households with income less than M50 per member per month

% of adults 16-65 in area with no wage income

% of households with no wage income

% of households with no adult 16-65 wage earner

% of households with no radio

% of households with more than 3 persons to a room

% of households with cereal production less than 180 kg per member

% of households spending less than M10 per member per year on clothing

% of households spending less than M10 per member per year on health

% of households spending less than M50 per child 6-15 per year on education

% of households spending less than M20 (1986 level) per member per month

% of households with less than M200 of possessions

% of households which had not bought fuel in the last two weeks

% of households which gather fuel

% of households which rely on wood, dung, crop residues or shrubs as fuel sources

% of adults 16-65 with no schooling

% of schools with no piped water

% of schools with no latrine

% of students who are over-age

% of students with no road access

% of students who are female

% of under-qualified and unqualified teachers

% of children 6-15 not in school

% of children who fail the Primary School Leaving Exam

% of children without desks or chairs

% of primary schools which do not have Standard 7

General problems

Some of the problems that were experienced as identified by Gay *et al.*. (1994:140-141) are highlighted below.

Sampling method: There was an inherent bias in the method toward larger households, because of the probability that in smaller households it was possible that there would be no one at home at the time that the interviewer visited the household. This resulted in a household size larger than that which the Bureau of Statistics reported in comparable areas in Lesotho (5.34 compared to 5.1). It was however felt that the bias was not so great as to prevent the use of the data as representative of the population as a whole.

Child measuring: Difficulties were experienced in weighing and measuring children under six years old. Children were not always present and in some cases the weights and heights were doubtful because the children were not held still.

Total income: The researchers felt the figures provided were too low, particularly in the case of income received by miners, since the amounts recorded in the interviews did not correspond with published minimum wages in the mines. Miners are also known to rarely bring home all the money they receive, even when taxes, travel expenses and deferred pay are taken into account.

Expenditure: Information was requested on expenditure on a limited range of items, some of which are bought on a regular weekly basis and others of which are long-term purchases. The data obtained indicated low expenditure levels when compared to the results of the 1987 Household Budget Survey, as the method used there was more intensive than the one used in this survey. Interviewers made several visits to a household and encouraged people to keep accurate records. In the case of the 1994 survey, only one visit had to suffice and as a result many of the expenses were most probably forgotten or omitted.

<u>Crop production</u>: Problems were experienced in collecting accurate information on cereal crop production and yield. The figures were believed to be too low as they were based on field area measurements made by the interviewers and on crop estimates given by the farmers. It was believed that the estimates made by the farmers were low because the survey was conducted when an effort was being made to provide food aid to poor households. Slight adjustments were made upwards, so that the reported bags of cereal were assumed to be 90 kg bags.

Summary of main findings

A summary of the main findings as outlined in the 1994 poverty study by Gay *et al..* (1994) is presented below.

The mountain areas were found to be the poorest areas in the country, with the exception of the ownership of livestock and fields, followed by the more remote parts of the foothills and lowlands; the urban areas were generally the best-off areas within the country. People in the mountains were found to have the lowest income, the fewest bank accounts and the least wage work. Household possessions were found to be fewest in the remote areas. The number of amenities such as clean water, latrines and convenient fuels were found to be lowest in the mountain areas and remote foothills.

The urban and lowland areas were found to have better educational systems compared to other areas. Infrastructure such as piped water, latrines, seats and desks and road access were found to be absent in most remote schools, but they were present in the urban and peri-urban primary schools. Mountain and remote foothill schools were also characterised by the presence of unqualified teachers, a lack of a complete set of primary classes, over-age pupils and a low proportion of male students.

Measures that were most closely correlated with poverty were found to be the lack of a latrine, modern fuels, a radio, a good income and expenditure on school. Ownership of livestock and fields were found to correlate strongly with poverty.

According to the respondents, the principal strategy for escaping poverty is seeking help from relatives and neighbours; such assistance was reflected as gifts. This is

mostly in the form of food, clothing, furniture, housing and money. Relatives and neighbours are almost always the ones who help the destitute. Seeking employment and self-help options such as growing crops were also mentioned.

Recommendations

A general recommendation was that there was a need to provide employment through public works rather than to provide food directly. Specific public works that were stated as possible areas for consideration were road construction, tree planting and the provision of social services such as schools and clinics. It was further recommended that such assistance should be provided at the local level wherever possible.

It was recommended that more attention should be paid to ensuring that all citizens, regardless of place of location, should have equal access to resources and social services. In particular, it was recommended that government should pay early childhood development workers and include these pre-school centres in the school feeding programmes as they cater for the most vulnerable children. The provision of decent housing and working environments for civil servants working in the remote rural areas should be given priority so as to make these areas more attractive.

1.4.2 Poverty and Livelihoods in Lesotho, 1999

Since 1994 there have been major political and socio-economic changes in both Lesotho and South Africa. At the same time changes have also taken place in the research environment and these motivated the need for a new poverty study in Lesotho. When the 1993/94 study was conducted, South Africa was just in the process of democratising and Lesotho was still under military rule. Also, in the research environment, a number of participatory poverty assessments had been conducted which provided a wealth of experience and lessons that could be drawn upon in conducting a new updated poverty report for Lesotho. In June 1999 the Lesotho Ministry of Education, the Irish Consulate in Lesotho, the World Bank, the United Nations Children's Fund, the World Health Organisation and the Department of International Development of the UK commissioned Sechaba Consultants to undertake another study.

Aims and objectives

The aims of the study were outlined as follows:

i. Provide a better understanding of the politics of the period as this had recently had a major impact on economic and social development;

ii. Include more detailed analysis of the relationship between the macro-economic environment, the allocation of resources and how this relates to the micro-economic well-being of individuals;

iii. Provide a clearer picture of the individuals and/or groups who are presenting a condition of poverty and how they are dispersed geographically;

iv. Examine in greater detail people's ability to manage assets;

v. Evaluate the impact of the 1994 report and set the findings in the context of the government's policies and programmes.

Research design and methodology

In designing the study the researchers took note of the multi-dimensional nature of poverty and the current theoretical approaches and models in defining and measuring poverty. As a result a number of instruments and techniques were used to collect data for this study. The overall conceptual framework adopted in the report was that of the livelihoods model. More detailed consideration was given to the multiple livelihood strategies of rural and urban households and the ways in which these are used to develop assets and capabilities that enable them to survive in the increasingly difficult environment. The study explored trends over time using a wide range of indicators dealing not only with income but also with human development in its broadest sense. It also placed an emphasis on the lives of the political and macro-economic environments that impact on the lives of the poor.

Sampling Method

The same areas of research that had been randomly selected on a national basis in the 1993/94 poverty study were revisited to allow for detailed comparison with the previous years. It was felt that it would be useful to have a longitudinal study.

Operationalisation

An outline of the different components of the study is presented below:

- The first component was a household survey of 3,280 randomly selected households in 130 villages in the 60 constituencies, as defined for the abortive 1985 elections. These constituencies were retained as the basis for the new study as they had been used in the 1993 poverty survey. In most cases the households were not the same as those interviewed before, since a new sample of random households was chosen. Among the information that was collected at household level, the following issues of interest to the research were included: questions on household membership, household assets, household income and expenditures, migration, family health, pregnancy history, child health, deaths and education.

- The second component was a detailed survey of selected primary and secondary schools.

- The third component consisted of focus group discussions, conducted with children (in and outside school), parents, medical personnel, patients and community leaders.

- The fourth component was a livelihoods study. It consisted of interviews with households and communities which had been studied both in the 1993 and 1999 surveys, to find how their access to wealth and well-being had changed during the intervening years. In particular people were asked to evaluate strategies for staying alive and getting along.

An analysis of already existing data in the fields of agriculture, economics, education and health was also carried out. In carrying out this task assistance was sought from the Ministry of Education, the World Health Organisation, the United Nations Development Program, the Central Bank of Lesotho and private specialists.

A two-day workshop on the discussion of poverty and its alleviation was also organised. Two representatives from 18 of the villages that had been visited during the fieldwork participated in this workshop. A report on these poverty hearings was later issued.

Analysis and interpretation

All quantitative data were analysed using the Statistical Package for Social Scientists (SPSS), while the qualitative data were analysed using NUDIST.

Data were weighted to allow for generalisations to the national level. The weights were calculated by dividing the projected 1993 and 1999 populations for each of the 60 constituencies by the number of household members actually included in the survey. These weights have been used throughout the analysis where comparisons of geographical areas and ecological zones are carried out or where projected national figures are given.

Results were reported on the basis of constituencies, the 15 geographical areas and three ecological zones. The maps attached are applicable in this case too.

As in the 1993 study a factor analysis of the indicators and cluster analysis were conducted to group constituencies together depending on the similarity of the values of the 32 key poverty identifiers. The indicators that were chosen were believed to give an overall picture of poverty, which was not limited to the lack of M80 per household member per month. The M80 per household member per month was taken as the cut-off point, i.e. poverty line. The 1994 poverty report used a poverty line of M50 per household member per month; to get to the 1999 figure, the 1994 figure was updated using the national inflation figures for the intervening years. This criterion was also used for total expenditure, i.e. M80 per member per month.

In order to make meaningful comparisons between the 1993 and 1999 surveys, a choice of income data from the 1999 survey which were comparable to those obtained in 1993 was necessary. The 1999 survey had a more complete set of categories for household income, not all of which were included in the 1993 survey. The full set of income questions was used to analyse income in detail for the 1999 survey, while for comparisons with 1993 a truncated set was used.

Since income per household member per month was regarded as the primary measure, further analysis was carried out on this so as to be able to group households. This was done through the use of income quintiles (mean monthly income per member).

The same cut-off points used in the 1994 report were used, but they too were updated using the national inflation figures, as was the case with the income per household member per month.

The same set of 32 indicators of poverty that were used in 1993 were also used in the 1999 study. They were grouped into the following categories: child growth, educational infrastructure, educational practice, educational effect, expenditure, fuel, income, livestock, and fields and possessions.

General problems

Below is a presentation of the problems encountered during the survey as outlined in the field notes by the Sechaba Consultants Research team (1999).

Sampling: It was noted that there was a likelihood that the interviewers may have under-sampled four categories of households: the very wealthy households as they resist interviews, small households as there was a greater chance that no one was at home on the day of the interview, households living in rented accommodation, as they are likely either to be at work or at the original home in the village, and impermanent and floating households (e.g. those composed of job seekers or street children, etc.) as they are hard to identify and interview.

Measuring and weighing: Children were not always present, and in some cases the weights and heights were doubtful because the children would not keep still. Some children were too small (day olds) and parents refused to have them measured.

Income and expenditure: Day to day expenditures were not recorded. It had been hoped that a detailed expenditure study in the sample villages, with randomly selected households keeping diaries of expenses during at least two two-week periods in the course of the year, could be conducted. Unfortunately funds were not available, so the researchers had to rely solely on a single interview recall of major items over the course of the year. An apparent under-reporting of income, particularly at the lower economic levels, was noted.

Summary of main findings

A summary of the main findings as outlined in the 2000 Poverty report by Sechaba Consultants is presented below.

General: Poverty was found to be greatest in the mountains. Inadequate education, lack of facilities and services and low household worth were found to be most serious in the mountain areas. Out-migration from the mountains was also found to be high. It is important to note that, while the macro economic analysis indicated that there had been good economic growth between 1994 and 1997, this was not reflected at the household level, especially at the lower end of the poverty scale.

Household income and employment: Comparisons of the 1993 and 1999 income data showed a slight decrease in the proportion of destitute and poor households (51.5% to 49.0% and 19.5% to 18.7% respectively), and an increase in the "well-off" category (from 9.7% in 1993 to 13.4% in 1999). Poverty was found to be worse in the rural areas and worst in the remote mountain areas and Senqu valley.

Income per household member per month was taken as the primary measure, as it reflects the actual amount of money available to each person in the household. On the basis of income per member, it was found that 32% of mountain households belong to the poorest 20% of households and only 9% to the richest 20% of households. On the other hand, only 5% of urban households are in the poorest income quintile and 40% are in the highest income quintile, thus indicating a badly skewed distribution against mountain people.

At constant Maloti, using official rates of inflation, slightly fewer households in 1999 than in 1993 (68% as opposed to 71%) fell below the line of M80 per member per month, which was used to define poverty. In general the mountain areas are worst off, with all the areas being more than 81% under the poverty line.

The employment pattern had shifted significantly from 1993 to 1999. Mine work showed the most dramatic shift from 10.3% to 5.1% of the total labour force for the 1993 and 1999 surveys. The total unemployment and under-employment were reported at 45.7% in 1993 and 47.7% in 1999.

At the household level there was an increase in the percentage of households without a member who brings in some income. The most important source of income overall was found to be wage work within Lesotho, followed by work on the mines.

The proportion of households with bank accounts dropped from 37% in 1993 to 20.2% in 1999. In addition, 80.4% of households reported that their accounts were with Lesotho banks and the remaining 19.6% held accounts in South African banks.

Expenditures: A comparable decline in household expenditures between 1993 and 1999 was noted. There was a decline in money spent on major expenditures. In 1993 72% of households spent less than an equivalent of M80 per month on major expenditures compared to 90% in 1999. School and clothing expenses were found to be important expenses for all income groups. Health expenditure was also found to have declined dramatically in all of the geographical areas. An increase in the percentage of households, which pay less than M80 per 6-15 year old child per year on education, was also noted.

Crop production: Crop production was found to be on a decrease, with overall production of cereals in 1998, according to the survey being reported, at 26.6 kg per household member. There was an increase from 87% of households in 1993, which produced less than the Food and Agriculture Organisation (FAO) standard for self-sufficiency in cereal crops of 180 kg per household member per year, to 97% in 1999. Overall only 2.8% of households across the country were found to have reached the FAO standard.

Schooling: The overall level of education in the country was found to be a problem. Using the definition of literacy whereby a person has completed at least class 4, 72% of adults over 15 years were found to be literate. Fewer males (60%) than females (82%) were found to be literate.

Schooling for children was found to be strongly dependent on income as well as geographical area. The gap between boys and girls was found to be widest at the lowest economic group and gradually narrows as wealth increases. In the mountain areas more than 20% of the school-aged boys were shepherds.

Most of the schools in the mountain areas lack proper school facilities. Whereas the majority of schools in the lowlands and foothills have piped water and latrines, most of those in the mountains lack such amenities. Mountain schools were also much less

likely to have desks and chairs. Unqualified teachers were also more common in the mountain schools than in the more accessible lowlands and foothills.

78.9% of all interviewees reported that children drop out of school because of financial problems. The percentage of children who dropped out was reported at 90.1% for the lowest quintile.

Water supply: The percentage of households without clean water and a latrine was found to have gone down steadily by about ten percentage points per year for the whole country. With increasing wealth households were found to be more likely to use a private piped system, whether piped on site or a borehole, and were found less likely to use a spring. Time spent on collecting water was found to correlate strongly with wealth, as households in the lowest quintile were found to spend more time collecting water than those in the highest quintile (30 minutes versus 20 minutes daily respectively). Overall the time spent collecting water has decreased from a mean of 28 minutes per day in 1993 to 23 minutes in 1999.

Private systems and water purchasing were found mostly in urban areas. Communal piped systems were found to be common everywhere. On the other hand, springs were found mostly in the rural areas, and in the mountains these were mostly unprotected springs.

Sanitation: About 15% of urban households had no toilet, compared to over 80% in the mountain areas and Senqu valley.

Fuel use and lighting: Electricity in whatever form was mainly used by the wealthy, although there were a few households at the lower economic levels who had electric connections. Wood, dung and shrubs/weeds were used by the poor. Paraffin lamps were found to be the main choice of the poor.

The proportion of households without modern fuels (i.e. electricity, coal, gas or paraffin) increased from 38% in 1993 to 59% in 1999; this was observed throughout the entire country. However, the average time spent collecting fuel had gone down

from 88 minutes in 1993 to 67 minutes in 1999. The time spent collecting fuel was much higher in the mountains and foothills than in the lowlands and urban areas.

Housing: The survey found that those in the lowest quintile occupy 2.3 rooms per family on average, while those in the highest quintile have 3.6 rooms on average. The number of rooms per household member was found to range from 2.9 members per room for the poorest households to 1.7 for the wealthiest households.

In almost every geographical area an improvement was observed in the conditions of crowding at the household level. Only in the eastern and central mountain areas had the percentage of households with more than three persons per room increased since 1993.

Radios: The percentage of households without radios has held steady since 1993. More than half the households in the mountain areas do not have a radio.

Livestock and fields: The study observed a decline in the number of animals owned per household.

Migration: There was a steady out-migration from the mountains to the urban areas, which have better services and greater job opportunities.

Livelihood strategies: Non-monetary assets, social networks, the informal sector and government support were noted as the main survival strategies to support livelihoods. Farming assets were mentioned under non-monetary assets as a survival strategy. For most of the rural poor households farming was still seen as a way of life. Agriculture, land tenure and small businesses emerged as the most significant form of livelihood to the poor.

The family and community (social capital) were the second major assets. The truly poor rely on the support of the not quite so poor. Almost 20% of households reported receiving gifts, usually from a relative.

About a quarter of all households were engaged in some type of informal business, despite the fact that these businesses were reported to bring in only a small amount of income. Traditional beer brewing and selling was mentioned as one such business and was reported by almost 20% of the households. A very large proportion of the interviewees expected handouts from government, either in the form of agriculture, work on construction projects, food aid or pensions.

People placed considerable emphasis on the role of the state as a way out of poverty. They indicated the need for government to play an active role in the creation of jobs and extending social services. They felt that more aid was required to assist in the alleviation of poverty.

Summary of Recommendations

According to Sechaba Consultants (2000:189), the recommendations that were made were the result of extensive consultations with various stakeholders. The researchers noted the multi-dimensional nature of poverty and took this into consideration in drawing up the recommendations.

A summary of the recommendations as presented in the Poverty and Livelihoods report of the year 2000 is presented below. The recommendations are grouped into the overarching recommendations, and those specific to the political and economic context, the geographical distribution of poverty, surviving in the face of poverty, and cutting across issues. A list of about 80 different recommendations was drawn up. Only a few of the recommendations made will be highlighted, however, and greater emphasis will be placed on the recommendations made in relation to the geographical distribution of poverty.

General recommendations:

Some of the overarching recommendations and a few which are more of a political nature include the following:

- The government must take prime responsibility for ensuring that the rights of the poor are met wherever they live.

- Anti-poverty plans must be nationally owned. They should be developed with the participation of all stakeholders.
- Decentralisation must go beyond districts.
- Government and donor agencies should support conflict management groups.
- Regional links must be strengthened and negotiations on closer links with South Africa should be pursued.
- Examination fees should be abolished in the mountain areas
- Ways of creating micro-financing schemes should be explored.
- Government should increase its allocation of funds to hospitals owned and operated by members of the Christian Health Association of Lesotho.

Geographical distribution of poverty:

A number of recommendations were made under this section, a few of which are highlighted below:

- The government must maintain its efforts to provide citizens with basic services and ensure that all enjoy the same entitlement to basic services wherever they live.
- The detailed maps provided in the report should be consulted to improve targeting and public works and pilot pension schemes should be concentrated in the mountains.
- Paraffin and gas should be exempted from tax in the mountain areas.
- It was noted that a pilot project is needed to explore the feasibility of periodic service provision and markets.
- The government must explore all possible means to increase the security of livestock and other property.
- Government's anti-poverty plans should identify neglected areas where key service centres are absent as new areas.
- An effort should be made to involve people in planning. The decentralisation process should be given high priority and adequate resources should accompany new responsibilities.

<u>Surviving in the face of poverty</u>:

It was noted earlier that agriculture, land tenure and small businesses emerged as the most significant form of livelihood for the poor; as a result the recommendations focused on these areas.

- It was recommended that alternative farming systems that are ecologically friendly and that aim to maximise yield and conserve the soil should be promoted.

- Peri-urban households should be encouraged to use their sites for agriculture.

- Settlement should be regulated so as to promote the use of high-quality arable soil for intensive horticulture.

- The improved management of local natural resources should be given a high priority.

- The government should privatise livestock services and livestock credit schemes should be developed.

- A cost-benefit analysis of different subsidies needs to be conducted.

From the paragraphs above it is evident that many households are living in poverty in Lesotho. It is also clear that while slightly fewer (68% compared to 71%) households fell below the poverty line of M80 per member per month in 1999 than in 1993, quite a significant proportion of the households lack facilities and basic services. It was therefore deemed necessary to carry out a further analysis of the 1993 and 1999 poverty data sets in order to create a better understanding of the level and distribution of poverty in Lesotho (chapter 3). A composite index of deprivation was then created using some of the indicators that were included in both the 1993 and 1999 surveys (chapter 4).

Chapter 2

Literature on poverty and the measurement of poverty

Over the years many discussions and debates have taken place within the different fields of the social sciences on the definition and measurement of poverty. These have ranged from definitions based on different approaches, models and theories to different perspectives and stages of measurement. As will be argued below the way that poverty is conceptualised or defined has a direct bearing on the way it is measured and the indicators that are used/constructed. Some of these debates are outlined below.

2.1   Introduction

The perception of what poverty is has evolved over time and varies widely from culture to culture. Different societies have different perceptions of what constitutes poverty, with the result that there is no single 'socially approved' definition of poverty but rather a range of consensual definitions. The ways in which we distinguish the poor from the non-poor reflect national priorities and standard concepts of welfare and rights. According to Baulch (1996:2-3), "poverty is a portmanteau term, which has distinct meanings to different people, and this basic problem of meaning pervades the debates both on the measurement of poverty and on poverty-reduction policies". The conventional measures of poverty as pioneered by Rowntree were based on income and consumption. The basic needs approach came into being and was widely used in the 1970s. In the 1980s and 1990s issues of human development were incorporated into the definition. Presently the definition has been broadened to include vulnerability (as expressed through risk and volatility of incomes) and powerlessness (as expressed through lack of voice and political rights).

Traditionally, poverty has been viewed as encompassing low monetary income and consumption.   According to Kanbur and Squire (1999: 3), Rowntree – who is regarded as the pioneer in the measurement of poverty and who conducted various studies on the subject in 1902, 1937, 1941 and 1951 – "arrived at a 'socially acceptable' amount of money by estimating the budget required to obtain the minimum necessities for the maintenance of merely physical efficiency". His

calculations were based on the nutritional content of various foods and their local prices.

Rowntree's definition also included some elements of the basic human needs approach, though this approach really became popular only in the 1970s. The basic needs concept of poverty takes the income approach one step further as it defines poverty as the deprivation of requirements, mainly material, for meeting basic human needs. In this instance deprivation is conceived of as inadequate fulfilment of basic needs relating to education, health, nutrition, sanitation, shelter, water, etc.

In the 1980s to the 1990s the definition was expanded to incorporate other dimensions of poverty such as longevity, literacy and health. During this period the notion of human development came to play a more vital role in the definition of poverty. Kanbur and Squire (1999:13) argue that the way in which poverty is perceived in the 1990 World Development Report is by supplementing the consumption-based poverty measure with others, such as nutrition, life expectancy, under-5 mortality and school enrolment rates. Poverty is seen as encompassing low monetary income and consumption, and low human development in such areas as education, health and nutrition. Poverty is thus defined as the inability to attain a minimal standard of living. The United Nations Development Program (UNDP) has played a leading role in defining poverty in terms of human development and developing the Human Poverty Index (HPI). According to de Haan (1998:14), "the Human Poverty Index is often regarded as an alternative to income-based measures of welfare as it reflects concerns that 'human development', and not just rising income, is the central development objective".

Current views on the issue go beyond this traditional view to include risk and vulnerability. Today poverty is seen in a much broader way and includes risk and vulnerability, voicelessness and powerlessness, as noted in the current debates within the World Bank in the preparation of the 2000/01 World Development Report. These views are supported by the philosophical and analytical arguments for viewing poverty and the experiences of poverty in its social context.

Kanbur and Squire (1999:19-20) argue that conventional measures of poverty draw heavily on the statistical information contained in household surveys combined with a more or less arbitrary cut-off separating the poor from the non-poor. They further state that an alternative empirical approach to measuring poverty involves asking people what, to them, constitutes poverty. It is through these participatory approaches that concerns about vulnerability (as measured through risk and volatility of incomes) and powerlessness (as expressed through lack of voice and political rights) have been captured as constituting a broader definition of poverty.

Poverty is a multi-dimensional phenomenon and this leads to problems of definition and measurement. No one definition encompasses all the aspects. Also with regards to the measurement of poverty, there are usually some neglected problems such as the exclusion of time and home production factors, choice, constraint and diversity.

2.2   Perspectives on the definition of poverty

Glewwe and Van der Gaag (1990:804) have shown that "any definition of poverty rests upon some prior conception of welfare; the selection of a 'poverty line' separates the population into those who have an adequate level of welfare from those who do not". They argue (1990:804) that this is the case because in "welfare economics, the starting point for the measurement of economic welfare is the utility function, which can be viewed as an index of well-being that increases as more goods and services are consumed". Once a cut-off point is chosen, a definition of poverty is arrived at, i.e. once one decides which level of welfare is the minimum level necessary for a decent human existence (the poverty line), then in effect one has produced a definition of poverty.

Poverty can be viewed in absolute or relative terms. It can also either be approached from an objective or a subjective perspective.

2.2.1   Relative and absolute poverty

Poverty can be viewed in absolute and relative terms. Relative poverty can be defined in relation to a general standard of living and an accepted quality of life of the society/class in question. On the other hand, absolute poverty is a condition of failure

to meet the bare essentials of physical existence (Cutler, 1984:1119). Whereas the level of absolute poverty may be reduced by economic growth, relative poverty only decreases when income inequality decreases.

Absolute poverty

Since absolute poverty is usually measured in terms of adequate nutrition, a person can only be considered poor in the absolute sense if his/her consumption falls below the poverty line. In his discussion Culter (1984:1119) shows that most of the current debates around the measurement of poverty are based on two assumptions. The first is that absolute poverty is best measured as a failure to achieve the minimum energy intake. The second is that the minimum caloric requirement can be determined in individuals, adjusted for a whole population and used as a firm guide to the necessary levels of nutrition.

According to Ravallion *et al.* (1991:346), absolute poverty is interpreted in the developing world as "the inability to attain consumption levels which would be deemed adequate". It refers to subsistence below minimum socially acceptable living conditions.

On the other hand, Hagenaars and De Vos (1987:212) define absolute poverty as "having less than an objectively defined, absolute minimum." In this classification of poverty they come up with further definitions, i.e. the basic needs approach, the food/income ratio, fixed cost/income ratio and the total expenditure/income ratio. These will be discussed in detail at a later stage.

Relative poverty

Hagenaars and De Vos (1987:212) define relative poverty as "having less than others in society". In their definition of relative poverty they come up with two further definitions based on the theory of relative deprivation, i.e. defining one with respect to income and one with respect to various commodities. The definition of relative deprivation with respect to various commodities defines households as poor when they lack certain commodities that are common in the society they live in.

It has been shown that relative poverty provides a sound way of comparing the lowest segments of a population with the upper segments. It is usually measured in income quintiles.

2.2.2   Objective and subjective perspectives

There are both objective and subjective perspectives on poverty. Objective approaches involve a normative judgement of what constitutes poverty, while the subjective approach places the emphasis on individual utility.

Objective perspective

The objective approach is sometimes referred to as the welfare approach and has traditionally been the basis for the work of economists. It has also been the most dominant form of poverty measurement. It involves normative judgements as to what constitutes poverty and what is required to move people out of their impoverished state.

In the welfare approach poverty is more commonly defined as "the extent to which the socio-economic structure fails to provide adequate resources relative to needs and/or the extent to which it systematically denies access to these resources" (Farmer *et al.* 1989:492).

According to Baulch (1996:36), some economists argue that the conventional approach to poverty measurement, which utilises estimates of income or consumption to construct summary measures of the extent of poverty in a sample population, is the most appropriate means of measuring poverty. This is because it is an absolute and objectively determined poverty line.

Shaffer (1996:27) gives an analytical summary of the approaches to the study of poverty and concludes that the objective perspective, i.e. "the income/consumption approach, has close affinities to the naturalist paradigm and the important link between the two runs through utility theory of modern welfare economics". He further argues that under the main constituent of ill-being/poverty is "basic needs deprivation" and the sources of ill-being are "inadequate consumption of goods and services". Here basic needs are defined materially in terms of minimal physiological

requirements. He argues that a third party defines well-being or ill-being externally, i.e. in an *a priori* fashion, using quantitative methodology, in particular, standardised questionnaire techniques to assess income/consumption expenditure levels. The aim here is to give an accurate explanation and description of the state of ill-being as is.

Subjective perspective

On the other hand, the subjective approach places more emphasis on individual utility, i.e. on how much they value goods and services. With the increasing need to understand the perspectives of the poor, this approach is now being taken seriously and is taken to refer mostly to participatory poverty assessment approaches.

Proponents of the participatory approach argue that because poverty is multi-dimensional, the income/consumption approach fails to understand the complex, diverse, local realities in which the poor live. They argue that their approach uses multiple, more subjective measures, as indicators of poverty status. They claim that the approach aims to "elicit local people's own conceptions of poverty/deprivation and to harness their own priorities in the complex and heterogeneous societies in which they live" (Baulch, 1996:37).

Hagenaars & De Vos, (1987:212) also define poverty subjectively, i.e. that poverty is "a feeling that one does not have enough to get along". This category is then further subdivided into income- and consumption-concentrated definitions. The *subjective minimum income* definition; here "survey questions are used to observe the income level that people consider to be 'just sufficient' for their households. If their actual income level is less than the amount they consider to be 'just sufficient' they are said to be poor" (Hagenaars & De Vos, 1987:215). The second is the *subjective minimum consumption* definition, where people are asked what they consider to be basic needs, and are then asked to specify how much they need to meet these basic needs.

Shaffer (1996:27-28) states that the subjective perspective, i.e. "the participatory approach, has important linkages to the critical hermeneutic paradigm which is based on a consensus theory of truth". To highlight this he first argues that under the participatory approach, the basic conception of ill-being/poverty is "multiple deprivations" and the sources of this are "multiple sources". He then goes on to argue

that the determination of both the constituents and sources of well-being or ill-being follow an interactive (i.e. internal/external) process involving facilitator and participants. In this case data generated may be both qualitative and quantitative and social phenomena are critically interpreted in order to provide a better understanding. The sources of data are based on participatory poverty assessments. The aim is to interpret and represent frames of meanings, which have been subject to critical examination, with the ultimate objective being to critically understand and empower the societies involved.

It should be noted that, although the two approaches/perspectives fall into two distinctly different paradigms, they could and have been used in a complementary fashion. IDS in Shaffer (1996:23) has shown that the World Bank has used Participatory Poverty Assessments data in conjunction with household survey data to compile poverty profiles in, inter alia, Zambia, Kenya, Ghana, Uganda, Benin and Nigeria.

Also, while an objective concept of poverty could be measured with both quantitative and qualitative indicators, the same applies to the subjective approach.

In the next section the two models of deprivation, i.e. the physiological and sociological deprivation models, are discussed in greater detail.

2.3   Models of deprivation

According to recent documentation of the World Bank, in the developing world answers to the question "What is poverty?" reveal two different models of deprivation. The first is the long-standing notion of poverty - the physiological deprivation model - which focuses on non-fulfilment of basic material or biological needs, such as inadequate education, health, nutrition and shelter. The second is the social/sociological deprivation model, which uses a wider concept of deprivation, which includes vulnerability, lack of autonomy, powerlessness and lack of self-respect/dignity, etc.

2.3.1 Physiological deprivation model

In the developing world the physiological deprivation model is prominent in two different approaches to poverty, i.e. the income/consumption approach to poverty and some versions of the basic human needs approach. This model emphasises the specification of a poverty line.

According to the income/consumption approach, a person is poor if and only if her/his access to economic resources is insufficient to acquire sufficient commodities to meet basic material needs adequately. Here monetary income or consumption is used to identify and measure poverty. This approach is used extensively in applied welfare economics.

On the other hand, the basic human needs approach views deprivation as the inadequate fulfilment of basic needs relating to education, health, nutrition, shelter, water and sanitation. This approach differs from the income/consumption approach to poverty in that, rather than relying on the indirect methods to determine non-food needs, it usually specifies a complete basket of good/services that fulfil basic needs (food, health, education, water, sanitation, etc.) or related achievements (nutrition, life expectancy, mortality, etc.) Secondly, it represents relevant aspects of well-being in terms of the different goods/services or achievements that fulfil basic needs (or in some cases a composite indicator) but not in terms of equivalent income/consumption. Thirdly, instead of specifying an income/consumption poverty line based on dietary energy adequacy, it sets an adequacy level for each of the different goods/services.

The income and basic needs concepts of poverty are characterised mainly by quantitative indicators, although qualitative indicators may be used to ascertain people's perceptions.

2.3.2 Social or sociological deprivation model

The sociological deprivation model challenges the physiological deprivation model on two different levels: it rejects the representation of relevant aspects of well-being in terms of equivalent income/consumption goods/services or achievements that fulfil basic needs. It rejects the specification of an adequacy level in terms of basic physiological deprivation in the two approaches (World Bank, 2000).

According to Lok-Dessallen (nd:4), the concepts emerging from the sociological deprivation model are "rooted in underlying structural inequalities and inherent disadvantages. They are based on observations that, even when resources are flowing into sectors dominated by the poor, the latter may not be able to take full advantage of them because of structural impediments". In this instance the causal factors lie in power structures and governance.

This model is prominent in three different approaches to poverty, i.e. the human poverty approach, the social exclusion approach and the participatory approach.

Human poverty approach

According to the human poverty approach, otherwise known as the human capability concept of poverty, poverty can involve both the physiological and sociological spheres of deprivation. In this case poverty is seen as the lack of the necessities of material well-being as well as the denial of opportunities to live a tolerable life. The UNDP advances this conceptual framework to include the capability to "lead a long, healthy, creative life and to enjoy a decent standard of living, freedom, dignity, self-respect and the respect of others" (UNDP 1997:15). According to the 1997 UNDP Human Development Report, poverty "is not merely in the impoverished state in which the person actually lives, but also in the lack of real opportunity – due to social constraints as well as personal circumstances – to lead valuable and valued lives".

This approach has, however, been criticised for focusing more on national averages rather than households or groups. For example, de Haan (1998:14) argues that when the HPI was introduced, it provided a disaggregation of Human Development Index (HDI) data, but excluded a measure of income poverty, and it focuses on national averages and less on specific groups suffering from deprivation.

This approach uses both qualitative and quantitative indicators, but may incorporate more qualitative indicators than the income and basic needs approaches.

Social exclusion approach

The European Foundation (in de Haan and Maxwell, 1998:2) defines social exclusion as "the process through which individuals or groups are wholly or partially excluded

from full participation in the society in which they live". The social exclusion approach comes very close to the relative deprivation concept of poverty. The underlying idea of the social exclusion approach is that deprivation is a lack of resources required to participate in activities and enjoy living standards that are widely accepted by society. In this approach poverty is closely connected with issues of citizenship and social integration and their associated resource requirements.

MacPherson (1997:534-535) argues that social exclusion provides an analytical framework over a wide range of dimensions important for an understanding of the notions of deprivation and poverty. It provides a framework for analysing the relationship between livelihood, well-being and rights. It focuses on the links between rights (civil, political and social) and access to livelihoods and markets. Other authors, such as de Haan (1998:12), also support the view and show that "social exclusion is a multi-dimensional concept, which refers to exclusion (deprivation) in the economic, social and political sphere. It goes beyond the analysis of resources allocation mechanisms, and includes power relations, agency, culture and social identity". de Haan further sees social exclusion not only as referring to a state or situation, but to processes, to the mechanisms by which people are excluded.

According to MacPherson (1997:535), social exclusion "is a complex notion which can be used to denote a situation or process experienced by individuals, namely their marginalisation from society through economic deprivation and social isolation. On the other hand, it is a situation or process which occurs in societies, namely the fragmentation of social relations, the emergence of new dualisms and the breakdown of social cohesion".

In de Haan's (1998:12) view, the basic needs and absolute poverty approaches which focus on the individual differ from the social exclusion approach, which focuses on society and the individual's ties to society.

Participatory approach

The participatory approach, on the other hand, argues for the conceptualisation of poverty and deprivation in an interactive process involving a participatory poverty

assessment facilitator and local people engaged in dialogue. Qualitative indicators are the determinants of this approach.

Razavi (1999:421) observes that the participatory approach "determines the constituents and sources of well-being through iterative processes involving the participatory rural appraisal facilitator and participants". In so doing the method is said to enable the local people (in particular the usually marginalised groups, e.g. the poor, illiterate, etc.) to appraise, analyse, plan and act for themselves.

Chambers (1995 in Baulch, 1996:37) argues that the aim of the participatory approach is to "elicit local people's own conceptions of poverty/deprivation and to harness their own priorities in the complex and heterogeneous societies in which they live".

Participatory approaches to the measurement of poverty are useful in identifying the more subjective dimensions of poverty. However, because of the inability to aggregate up from local people's perceptions and priorities, they are only useful for policy making at the village and project level and not the national and regional levels.

2.3.3   Other approaches

There are other approaches used to define poverty that have not been discussed among the broader approaches mentioned above. We will show how these fit into the broader models. These are the subsistence minimum, relative deprivation and accumulated deprivation theories. Ringen (1985) has discussed these theories in his article on "Toward a Third Stage in the Measurement of Poverty". He argues that "on the theoretical side, a relative deprivation concept of poverty has been developed in addition to or as an alternative to the conventional subsistence minimum concept" (1985:99). In this case poverty is defined on the basis of three stages of measurement, firstly the subsistence minimum, secondly relative deprivation and, thirdly, the accumulated deprivation stages.

Subsistence minimum

As noted earlier, Rowntree defines poverty "in relation to the minimum necessities of merely physical efficiency using the 'poverty line'[3]. In this case poverty is seen as an aspect of the individual situation". In this theory the method of measurement used is based on the 'poverty line'.

Relative deprivation

In the second stage the relative deprivation theory was developed as an alternative to the subsistence minimum concept, which has been criticised for being too restrictive. Here 'social efficiency' is considered, and poverty is then defined as an aspect of people's social situation. In this stage too the income poverty line was retained as the basis of measurement, but the poverty line is set at a higher income level than under the subsistence minimum concept so as to accommodate a more generous understanding of what constituted "necessities".

Accumulated deprivation

The third stage of measurement is known as the accumulated deprivation stage. In this instance the first step would be to calculate the conventional income poverty lines. Secondly, the calculated welfare profile of the low-income group is compared statistically to that of the population average in order to see the extent to which the low-income group comes out as a distinct group when described with several welfare indicators in addition to income. Thirdly, problem indicators are then selected for further analysis in order to get some indication of the degree of accumulated deprivation.

Ringen (1985:105) argues that "poverty according to the relative deprivation theory should be identified as the *accumulation of deprivation* both in resources and in the way of life". In order to measure poverty in this way, several indicators are required; these indicators should enable the identification of problematic states (deprivations) in some real meaning, and they should cover both the resource side and the way of life side. He further argues that "in order for us to identify the poor we must know who are deprived both in resources and in the way they live, and that the living conditions

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[3] The income needed to purchase these minimum necessities, where the necessities included food, clothing, housing and heating.

approach is the best method for doing this". He further warns that the concept of poverty should "be reserved for deprivation in 'material' resources and 'material' aspects of the way of life" (Ringen, 1985:105).

It can be argued that these stages of measurement fall into the two broader models of deprivation i.e. physiological deprivation and the social/sociological deprivation models discussed in the section above. The subsistence minimum concept seems to fit the physiological deprivation model as it emphasises the specification of a poverty line and is more concerned with material well-being. The relative deprivation and accumulated deprivation concepts fit the sociological deprivation model, in particular the human poverty approach.
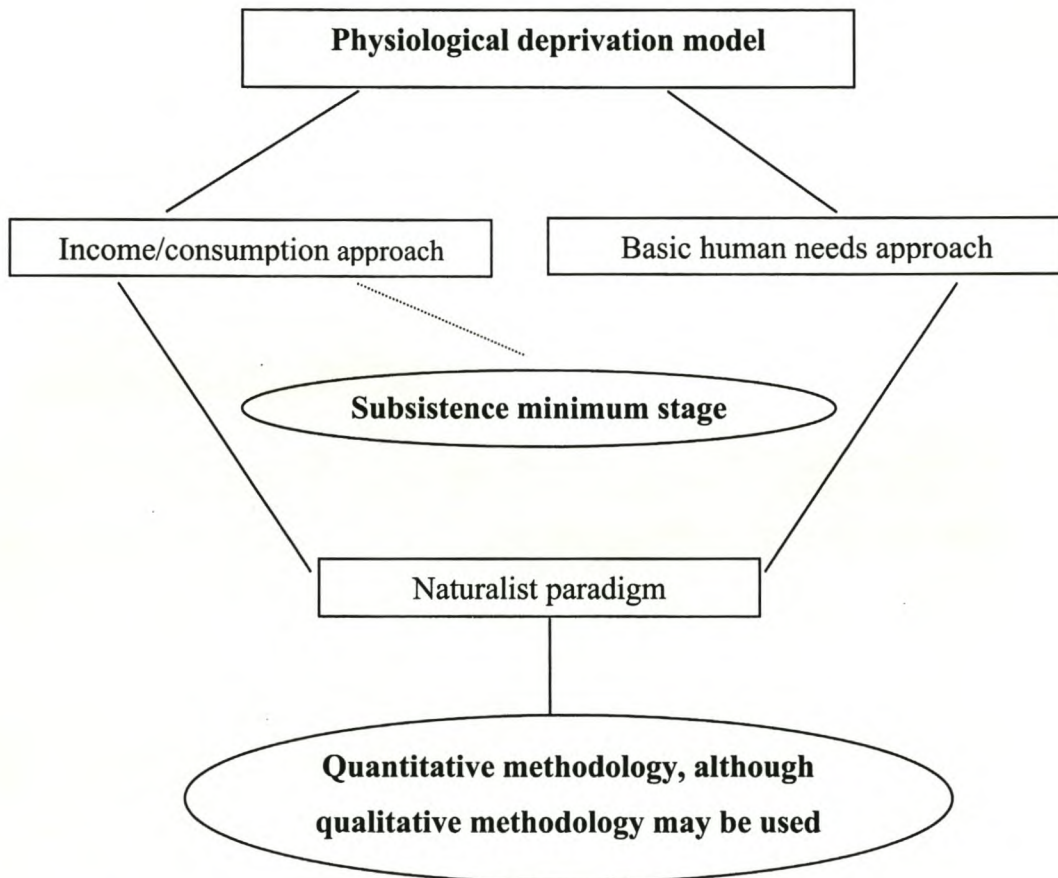
Figure 2.1a: The Physiological Deprivation Model

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                    ┌─────────────────────────────────────┐
                    │    Sociological deprivation model    │
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Human poverty approach	Social exclusion approach	Participatory approach

Relative deprivation theory

Accumulated deprivation theory

Critical hermeneutic paradigm

Quantitative & qualitative methodology but may incorporate more qualitative indicators	Qualitative methodology	Qualitative methodology (participatory poverty assessments)

Figure 2.1b: The Sociological Deprivation Model

2.4   Measuring Poverty

Many questions have been asked, debates have taken place and numerous articles have been written on whether it really matters how poverty is measured. In response to these questions, the answer is always the same "Yes, it matters", for it has been empirically observed that the way we measure poverty affects the outcome. The World Development Report (1990:28) states that "although simple poverty measures often give a good indication of what has happened to poverty over time, for many other purposes – including evaluations of the effects of policy on poverty – it is necessary to look carefully at the distribution of income below the poverty line".

Another factor that needs to be considered when measuring poverty is that of the state of the poor, i.e. the chronically (persistently) poor and the transitory poor (those who temporarily fall into the poor category). This is very important for policy formulation, as the responses to these conditions are very different. Alleviation of chronic poverty requires more costly and permanent interventions that aim to increase the opportunities of the poor and make them more productive. In contrast, transitory poverty requires the promotion of policies designed to even out the incomes and consumption of the poor (Baulch, 1996:40).

Ravallion and Huppi (1991:60) show that there are two fundamental questions that come to mind when measuring poverty: firstly, "how an individual's 'standard of living' should be quantified, and how a minimum acceptable standard - the poverty line, is to be determined. Secondly, how the degree of poverty relative to a particular poverty line is measured and how this is aggregated across those who are deemed to be poor".

As has been noted earlier in this chapter, poverty is a multidimensional phenomenon; there are different perspectives and approaches to its measurement and as a result there are various sets of indicators that can be used, depending on the choice of definition that is used. The different indicators in relation to the different approaches outlined are presented below.

2.4.1 Physiological deprivation model

As noted earlier the physiological deprivation model is comprised of the income/consumption and the basic needs approaches. The indicators that are used to measure these approaches are presented below.

Based on the income/consumption approach to defining poverty, the most basic indicators of poverty are adequate food, rent and other items. However, there are other more detailed/elaborate indicators that can be used in this approach.

The most basic indicator of poverty in this approach is monetary income or consumption, i.e. household income or expenditure, especially per capita income. Current income is sometimes used as a measure of poverty.

Haganaars and de Vos (1988:214) also talk of household income as a measure of poverty, but they refer to their definition as *total expenditure/income ratio*. This is calculated by defining a person as poor if his/her total expenditure cannot be paid for out of current income, i.e. if he must borrow or spend savings in order to get along.

It has been argued (Glewwe & Van Der Gaag, 1990; Lanjouw & Stern, 1991) that this measure is problematic in that current income varies widely from year to year. Because of this, they argue that per capita income can be a poor indicator of a household's living standard in that particular year and the long-term earning opportunities of a household. The measure may also exclude income earned from illegal activities. Another problem is that which relates to the treatment of household size. Lanjouw and Stern (1991:33) noted that "there is a systematic tendency for the scale of apparent prosperity to boost the position of large households and reduce that of small households, compared with the scale of current income". On the other hand, Glewwe and Van der Gaag (1990:804) noted that a practical problem with the use of the per capita income measure is the measurement of the incomes of the self-employed.

Total consumption or per capita consumption can also be used to measure poverty.

Glewwe and Van der Gaag (1990:805) note that per capita food consumption is dependent on a household's propensity to consume food and this is problematic as it may vary across households. One other weakness that has been raised with regards to the use of this measurement is that the consumption of non-food items is ignored.

Another measure is that of the food ratio. This is the fraction of the household budget spent on food. Using this indicator does not require one to adjust for household size. Haganaars and De Vos (1988:213) categorise this definition under the absolute poverty definition, though in their case it is considered as the *food/income ratio*, which is based on the Engel's Law. This "law" states that the ratio of food expenditures to income declines when income increases.

Engel (1895 in Glewwe and Van der Gaag, 1990:805) observed that the food ratio was inversely related to household income. However, recent research (Tomas, 1986 in

Glewwe and Van der Gaag, 1990:805) shows that "Engel's observation may not always hold for the poorest households in developing countries".

Food consumption data can also be used to focus directly on caloric intake rather than on food expenditures or the fraction of a household's budget spent on food. However, the feasibility of identifying precise nutritional requirements has been questioned. This measure also excludes the non-food component.

Another approach to determining economic well-being is the *basic needs approach/concept*. In this instance households are defined, as poor if their food, clothing, medical, educational and other needs are not met. The definition requires the assessment of a minimum amount necessary to meet the basic needs. The amounts are then added up to come with a poverty line in terms of income.

Haganaar and De Vos (1988:213) view this definition as falling under the absolute poverty category. In their view the definition requires the assessment of a minimum amount necessary to meet the basic needs. The amounts are then added up to come up with a poverty line in terms of income. The subjective nature of determining adequate levels of the basic needs is said to be problematic.

Medical indicators of health and nutritional status are also used as a measure of poverty. These include medical tests and anthropometric measures to determine the incidence of stunting and wasting. A criticism that has been levelled against this measure is that it may be misleading because, although health is correlated with household welfare, it is not identical to it.

2.4.2 Sociological deprivation model

It has been noted earlier that the sociological deprivation model includes issues of vulnerability, lack of autonomy, powerlessness and lack of dignity. It also includes issues covered under the physiological deprivation model. This section presents some of the indicators that have been used in this study as measures for the different approaches.

The Human Development Index, which is based on three main indicators, i.e. longevity, education and standard of living, is used to measure poverty under the *human poverty approach*. Here longevity is measured by the percentage of people who die before the age of 40 and literacy by the percentage of adults who are literate. Living standards are measured by a combination of the percentage of the population with access to safe water, the percentage of the population with access to health services, and the percentage of malnourished children under five.

The 1990 World Development Report states that household incomes and expenditures per capita are adequate yardsticks for the standard of living as long as they include the household's own production. Other welfare measures such as access to public goods/common property resources (clean drinking water, sanitation, etc), health, life expectancy, literacy, household size and composition, and region (urban vs rural) have also been found to be relevant in the measurement.

Others, such as Ringen (1985:104), group the indicators for measuring living standards into resource indicators (e.g. income; education and health) and way of life indicators (e.g. employment; housing; leisure and social relations). In measuring the standard of living two main indicators are usually used, these are the "apparent prosperity index" and "income per capita", which can either be on a current or permanent basis. The apparent prosperity index is based on observations and assessments of people who have lived in a particular area for a certain period (usually a year or more). In this case the wealth of a household is based on common knowledge.

Lanjouw & Stern (1991:28) argue that "expenditure or expenditure on food may be a more reliable measure of living standards compared to income".

Grootaert *et al.* (1997:654) argue that evidence shows that "endowments of human and physical capital, in addition to demographic and other socio-economic characteristics, are important factors in determining changes in living standards of households over time". Human capital in the form of education, physical capital in the form of amount of land and farm equipment, size and composition of the household, region of residence and socio-economic status of the household were all found to be

important determinants of welfare changes. Gender of the head of the household was also found to be a relevant characteristic. The age of the head of the household and the number of durable goods owned by a household can also form part of the indicators.

Green (1999) constructed a well-being index based on the criterion that had been defined by some of the members of the communities they visited. The index was of a subjective nature as the respondents had been asked to state whom they believed was poor, average and wealthy in the community. The respondents stated 17 criteria and differentiated these by area of residence (lowlands vs. mountains). Among the items they included were: food shortage; number of cattle; small stock; fields; farm tools; disabled members; rooms in house; wage earners; schooling of children 6-15 years; ownership of formal business; active household members and ability to hire workers.

According to de Haan and Maxwell (1998:3), the following areas and elements are covered under the *social exclusion approach*: rights (human, legal/civic, democratic); resources (human and social capital, labour markets, product markets, state provision, common property resources) and relationships (family networks, wider support networks, voluntary organisations).

The *participatory approach* also covers the same areas and elements as those covered under the social exclusion approach, but places more emphasis on vulnerability. According to de Haan (1998:15), the closest to the concept of social exclusion in the list of approaches to deprivation are notions of vulnerability, which means insecurity, defencelessness and exposure to risk and shocks. Vulnerability emphasises people's own perceptions of their situation, rather than relying on definitions by outsiders.

Vulnerability is a dynamic concept and its measurement centres on variability of income or consumption, or on variability of other dimensions of well-being, such as health or housing. On the other hand, when measuring voice and empowerment there is a need for objective and systematic information about governance, i.e. how authority in a country is exercised, what the role of institutions is, and to what extent the population at large participates.

Lok-Dessallien (nd: 15-17) argues that because of "the recent resurgence of interest by development partners in both poverty reduction and development indicators, there have been numerous debates on how best to measure poverty. These arguments are often endless and at some point one has to come down on one side of the fence, despite the fact that no methodology or set of indicators is entirely perfect". With this in mind some general rules of thumb have been proposed to help guide the process of selecting which indicators to use and when at country level. The rules are as follows:

i. Are we speaking the same language? - Before attempting to measure poverty, it is important to be clear about what definitions are being applied.

ii. Don't be seduced by neatness – a broader human capability concept of poverty suggests a messier approach to measurement, but results in richer and better-rounded policy guidance.

iii. Don't confuse the map with the country – indicators of poverty are often mistaken for the phenomenon itself. The broader one's concept the more critical this pitfall. There is no perfect set of poverty indicators that captures simultaneously all imaginable aspects of the phenomenon.

iv. Be clear about what you want to measure and why – the "what" refers to the types of poverty being addressed (chronic, transient, new, absolute or relative) as well as the level (national, provincial, district, village or household). The "why" refers to what the data are to be used for (poverty mapping, monitoring, policy formulation, programme development or budgetary allocations, etc).

v. Follow the "middle path" – a pragmatic approach to measuring poverty from a broad, human development perspective would be a "middle path" – combining a manageable range and number of indicators.

vi. Beware of composite indices at country level – composite indicators can be useful for advocacy and cross-country comparative purposes, but hide important policy and programme messages instinctive in their constituent variables.

vii. Households are comprised of individuals.

viii. Some indicators are more expensive than others.

The discussion above is summarised in Figures 2.2a and 2.2b below. The figures give a summary of the main approaches found in each model and how poverty is measured under each.
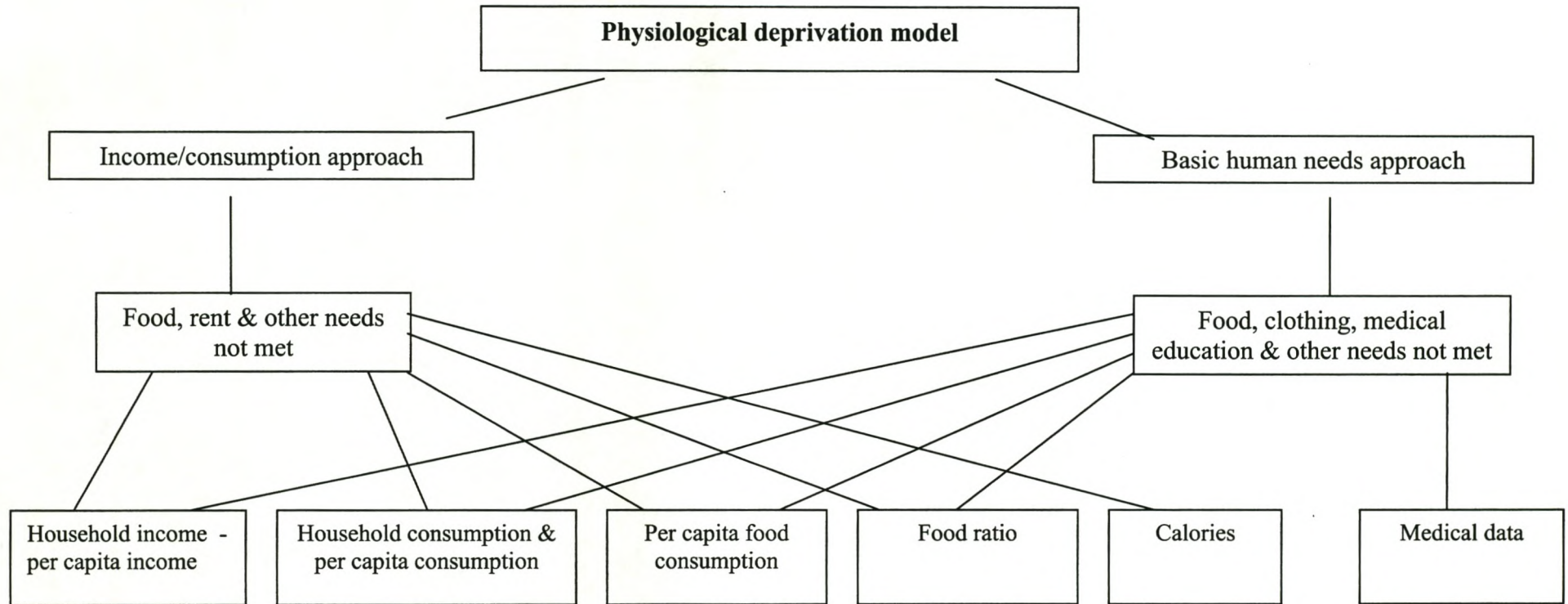
Figure 2.2a: Measuring Poverty using the physiological deprivation model

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                    ┌─────────────────────────────────────┐
                    │   Sociological deprivation model    │
                    └─────────────────────────────────────┘
           ┌───────────────────┴───────────────────┐
┌──────────────────────┐  ┌──────────────────────┐  ┌──────────────────────┐
│ Human poverty approach│  │Social exclusion approach│ │Participatory approach │
└──────────────────────┘  └──────────────────────┘  └──────────────────────┘
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Human poverty approach

Human Development Index + standard of living

Longevity, education & health indicators
(Resource & way of life indicators)

Social exclusion approach

Rights, resources, relationships

Human, legal/civic & democratic rights
Human & social capital, labour & product markets, state provision, & common property resources
Family networks, wider support networks & voluntary organisations

Participatory approach

Vulnerability, powerlessness

Vulnerability (physical assets, human capital, income diversification, links to networks, participation in formal safety net.
Voice & empowerment (indicators of governance e.g. voice & accountability, political stability & violence, government effectiveness, rule of law, graft, regulatory burden)

Figure 2.2b: Measuring poverty using the sociological deprivation model

2.4.3   Poverty line

In recognition of the many different perceptions of poverty, many definitions of the poverty line have been proposed. However, the poverty line can basically be considered as a line that separates the population into those who have an adequate level of welfare and those who do not. The poverty line is the key building block in developing income and consumption measures of poverty. It is the cut-off point in income or consumption below which an individual or household is determined as poor.

As in the case of defining poverty, the poverty line can also be either an absolute or relative line and the choice of the approach has important implications for social policy. Hagenaars and Van Praag (1985:145), however, introduce a third definition of the poverty line, which they term the "Leyden Poverty Line". This notion is based on "the relationship between welfare and income as derived from a specific set of attitude questions in a survey". This definition is dependent on the perception of poverty in society.

This approach to defining the poverty line has been further promoted by Veit-Wilson (1987) in his review of consensual approaches to poverty lines and social security. Veit-Wilson distinguishes between two different approaches based on who decides on what necessities are. He talks of the prescriptive class of definitions, where experts lay down what the minimum standards are and the definitions derived from the whole society in question and terms this the "consensual approach". Under the consensual approach he talks of the income proxy method and the deprivation indicator method. The income proxy method is in effect the Leyden poverty line approach. Viet-Wilson (1987:209) argues that the standards by which poverty is defined and measured are socially derived, and as a result poverty lines are social phenomena. He goes on to argue that because of the very nature of poverty lines consensual approaches provide the evidence of what society sees as the necessities and subsequent technical activities provide the evidence of the real poverty line.

In Greeley's view (1994:54) the conventional approach to the development of a poverty line is "to define it in terms of a consumption expenditure or income level sufficient to meet primary human needs".

From an absolute poverty perspective, the poverty line is usually defined to be independent of the general style of living in society. In this case the poverty line can be defined as "an income level that is considered to be the borderline between the poor and the non-poor" (Hagenaars and Van Praag, 1985:139). Under this measure the position of the poverty line is usually determined by the food energy or the food share methods. In this instance two variants are used, i.e. the standard food basket poor's behaviour and the standard food basket average behaviour.

According to Boltvinik (nd: 26), for the standard food basket poor's behaviour, the cost of the food basket is based on the poor's diets divided by the poor's Engel Coefficient. The measurement variable in this instance is household income per capita and households are classified as poor if the per capita income is below the poverty line in per capita terms. Households are grouped into those which are extremely poor, i.e. income below 50% of the poverty line and the moderately poor, i.e. income below poverty line but greater than 50%.

For the standard food basket average behaviour the cost of the food basket (average diet) is divided by the average Engel Coefficient. Households are classified as poor if the income is below the poverty line for specific household types and size. Households are classified only into one group, i.e. poor.

From the relative poverty perspective the poverty line is defined in relation to the general style of living in society. In this instance deciding that a fixed proportion of the population should be regarded as poor sets the poverty line. This method is rarely used in developing countries (Baulch, 1996:37).

According to Greeley (1994:55), relative poverty lines may be developed "as some fraction of average income or may involve a minimum consumption bundle and these lines try to establish a minimum income requirement relative to the prevailing income levels in the concerned population". This approach is similar to that which Boltvinik (nd: 16) categories as the standard generalised basket, where the cost of a basket which includes all goods and services to meet all basic needs. The measurement variable that is used is that of the total household income or expenditure and a poverty line for an average household size is calculated. In this instance households are

classified as poor if their income is below the poverty line. Households are then grouped into those that are destitute, very poor, moderately poor, etc.

In their review of poverty line definitions Hagenaars and van Praag (1985) introduced poverty lines derived from the *basic needs approach*, the *food-ratio method*, the *fraction of median income approach* and the *percentile of the income distribution approach*. All these poverty lines are based on the economic definition of poverty, i.e. "poverty is a situation where income, representing command over resources, falls below a certain level" (Hagenaars & Van Praag, 1985:140).

Under the basic needs approach the poverty line definition is based on the choice of a certain food basket just sufficient to stay alive. In the case of the food-ratio method the poverty line is derived from the Engel function by setting a maximum value for the ratio of food expenditures to total income. For the fraction of median income approach the poverty line is defined as a certain percentage of an index of average income in society. Finally, for the percentile of the income distribution approach the poverty line is defined as the borderline of a certain percentile of the income distribution (Hagenaars & van Praag, 1985: 141-144).

In the developing countries the poverty line is reached by specifying minimum requirements for both food and non-food items and then calculating the amount of income necessary to purchase these at the current prices (Kanbur, 1987:64).

There are many disputes around what a poverty line should be due to the multi-dimensional nature of the concept "standard of living". A minimum acceptable level has to be specified along each dimension and then be aggregated to form a poverty line.

Greeley (1994:57) sums up his arguments by concluding that an absolute and objectively determined poverty line is the most appropriate means of measuring poverty and this approach provides the most relevant information for poverty reduction policies.

According to the World Development Report (2000/2001:17), country-specific lines are essential for reflecting what it means to be poor in each country. They are needed to access progress at country level and to guide country policy and program formulation. At the end of the day, it is the availability of data that almost always dictates the chosen methods.
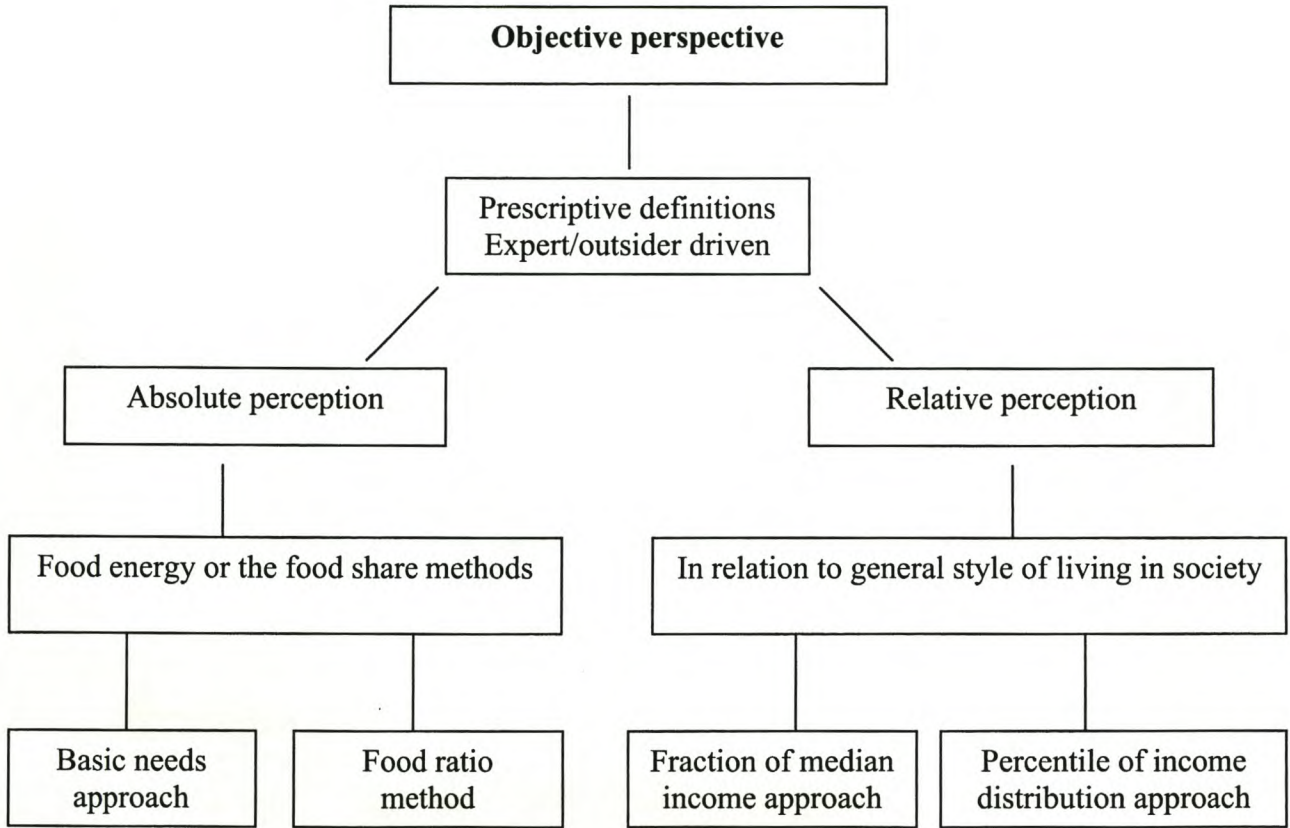
Figure 2.3a: Objective poverty lines
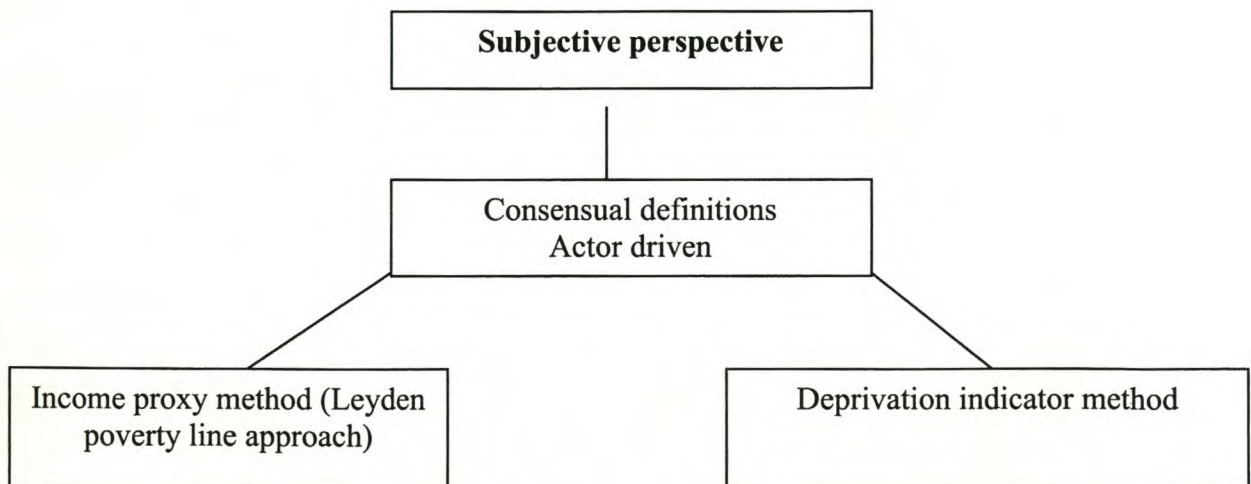
Figure 2.3b: Subjective poverty lines

2.4.4 Methods of measuring poverty

Different measures of poverty have been proposed and used over the years, starting with the simplest form, i.e. the headcount index, to that which caters for the multi-dimensional nature of poverty, i.e. aggregating the measures.

Headcount ratio/index

The headcount ratio represents the number of poor people as a percentage of the total population. This is the simplest form of measuring poverty as in this case it measures the fraction of the population, which is below the poverty line. This measure has been criticised for its failure to pay attention to the depth/severity of poverty. This measure is said to be insensitive to changes that make poor people poorer as well as to transfers from the poor to the rich categories.

Income gap ratio

The income gap ratio measures the transfer that would bring the income of every poor person up to the poverty line. It expresses the average shortfall as a fraction of the poverty line. This measure gives an indication of the depth of poverty, but does not capture the severity of poverty. The measure is also insensitive to the distribution of income/consumption among the poor.

The poverty gap and headcount indexes are said to be insensitive to the extent of inequality among the poor. The magnitude of poverty measured by any index depends on the chosen indicator of well-being and the level of the poverty line.

FGT

Foster, Greer and Thorbecke (1984) proposed a class of additively decomposable measures and these provide a distributionally sensitive measure. The FGT measure is defined as the mean of the squared proportionate poverty gaps. Here the mean is formed over the entire population, with the non-poor counted as having a zero poverty gap. Greeley (1994:56) states that the FGT is a measure where the poverty measure is the function of the total number of household and the incomes of that sub-set whose income is below the poverty line. Greeley goes further to state that varying the parameter from 0 to 1 to 2 provides estimates of the numbers of the poor people, and

the severity and intensity of their poverty respectively, as it is sensitive to inequality among the poor.

Poverty Gap Ratio

Ravallion *et al.* (1991:351) talk of the advantages of following the FGT approach in normalising the income gap ratio by population size, rather than by the number of the poor and come up with the *poverty gap ratio*. The normalisation implies that the aggregate measure across any number of sub-groups is simply the population weighted mean of the sub-group values. Moreover, by squaring the poverty gap ratio more weight is given to the predicament of the really poor. This gives more weight to poverty when it is distributed to the bottom-end of the spectrum. The relevant formula can be found in the technical notes of the World Bank's 2000/2001 poverty report. (World Development Report 2000/2001).

Sectoral decomposition and growth-equity decomposition of a change in poverty

In the interests of exploring factors underlying observed changes, given measurements of poverty at two dates, Ravallion and Huppi (1991:63) came up with two formulae. These formulae namely, the sectoral decomposition of a change in poverty and the growth-equity decomposition of change in poverty, allowed them to decompose a measured change in aggregate poverty into its constituent parts. The sectoral decomposition of a change in poverty is aimed at accessing the relative gains of the poor within specific sectors and the contribution of these changes in the distribution of the population across those sectors. On the other hand, the growth-equity decomposition of a change in poverty decomposes the change in poverty into a change in the mean consumption level of a given distribution and change in the distribution of consumption around the mean.

As noted earlier, poverty has a multi-dimensional nature. In order to capture this there are several possible approaches to aggregating the measures of the different dimensions. These approaches are presented below.

1. Welfare approach – includes various dimensions of well-being and defines poor people as all individuals below a specified minimum level of total welfare.

50

2. Composite index – simply impose weights, as a simplistic, special-case application of the welfare function approach.

3. Other forms of aggregation:

    i)   Count as poor everybody who is poor in any one of the dimensions. This method adds value because it goes beyond income.

    ii)   Count as poor everybody who is poor in all dimensions.

Both measures can be used to measure the extent of poverty, but they do not measure the intensity of poverty for individuals with multiple deprivations or with deprivations in different dimensions (World Bank, 2000:22).

2.4.5 Principles and axioms of poverty measures

Several principles of poverty measures have been established over the years. These include the *monotonicity axiom*, which states that the measure of poverty (poverty index) should increase when the income of a poor household decreases and vice versa. The *transfer axiom* states that the measure of poverty should increase when income is transferred from a poor to a richer household, and vice versa. The *population symmetry axiom* states that if two or more identical populations are pooled, the measure of poverty should not change. The *proportion of poor axiom* states that an increase in the relative number of poor should increase the measure of poverty. In the case of the *focus axiom* the poverty index should be independent of the income levels of people above the poverty line. The *transfer sensitivity axiom* states that an increase of a poverty index as a result of a transfer of a fixed amount of money from a poor person to a richer person should be decreasing in the income of the denominator, and vice versa. In the case of the *decomposability axiom* the poverty index should increase when poverty in a subgroup increases, all other things being equal, and vice versa (Foster *et al.*, 1984; Hagenaars, 1987 and Ravallion *et al.*, 1991).

2.5 Poverty profile

Lok-Dessallien (nd : 1) describes poverty profiles as analytical tools that summarise poverty-related information in an attempt to answer questions such as: who are the poor, where do they live, what are the main characteristics of their poverty and why are they poor? They provide a snapshot of poverty within a country at a specific point

in time. They also provide an indication of poverty trends. They provide information on the extent, depth and severity of poverty.

According to Ravallion and Bidani (1994:75), a poverty profile "shows how a measure of poverty varies across subgroups of a population, such as region of residence or sector of employment." In this situation a specific poverty line is required for each subgroup. In other words, they aim at identifying the relevant subgroups of the poor by their specific characteristics and circumstances, and to emphasise the priority issues and concerns.

According to Hanmer *et al.* (1999:797) "the construction of a poverty profile must confront two conceptual issues, namely, objective versus subjective choice of indicators and relative versus absolute".

Construct			POVERTY		
Perspectives	Absolute poverty	Relative poverty	Objective poverty	Subjective poverty	
Stages	Income/consumption (turn of the century)	Basic Needs (1900-70's)	Human Development (standard of living) (1980's-1990's)	Vulnerability and Voice (current)	
Models	Physiological deprivation model		Sociological deprivation model		
Paradigms	Naturalist research paradigm			Critical hermeneutic research paradigm	
Approaches	Income/consumption	Basic needs	Human poverty	Social exclusion	Participatory
Methodology	Quantitative (standardised questionnaires)	Quantitative, but qualitative may be used to ascertain people's perceptions	Qualitative & quantitative, but may incorporate more qualitative indicators	Qualitative	Qualitative (participatory poverty assessments)
Poverty lines	Prescriptive/objective definitions (expert/outsider driven)			Consensual/subjective definitions (actor driven)	

Figure 2.4: Summary of issues

2.6   Conclusion

From the above discussions it has become clear that poverty has many aspects and as a result has many definitions. Clearly, then, no one definition is able to capture all the aspects of poverty. This would imply that there is no perfect set of poverty indicators that captures simultaneously all imaginable aspects of the phenomenon. It is also clear that current trends in defining poverty have shifted towards the inclusion of more subjective definitions and approaches to the study of poverty and its measurement.

The availability of data almost always dictates the chosen methods in the construction of the poverty lines and hence the definition of poverty to be used. However, it should be pointed out that different definitions do not necessarily identify the same people as poor. We have also noted that an absolute and objectively determined poverty line is said to be the most appropriate means of measuring poverty, and that relative poverty lines are not applicable in the developing world.

It is important not to consider the poor as a homogenous group, and this in turn calls for the use of more than one poverty line. The need to provide information on the extent, depth and severity of poverty within a country at a specific point in time and an indication of the trends has also been emphasised.

The definitions that one chooses have a direct bearing on the measurement options and indicators to be used. It is therefore essential that, before selecting a set of poverty indicators, one should be clear on exactly what one wants to measure and why. From a policy perspective it would seem that the definitions and measurement of poverty should correspond to the specific policies under consideration.

Chapter 3
Household profiles

In this chapter the profiles of the households that were included in the two samples by Sechaba Consultants are analysed. Issues of household demography, income, expenditure, assets and food sufficiency will be considered. For each of the profiles an analysis by gender, income level and area of residence will be conducted.

3.1 Introduction

The overall database that has been constructed consists of a total of 4999 households, of which 1719 were interviewed in 1993 and the remaining 3280 were interviewed in 1999. To enable the analysis, the data have been weighted to allow comparisons across geographical areas and ecological zones. According to the data, the sample for 1993 consisted of a weighted population of 293,765, while that of the 1999 sample was 376,068. For both years the samples are biased towards the rural areas. Table 3.1 below shows that in 1999 slightly more (16.3%) urban households were included compared to 1993, where the sample was more biased towards rural households.

Table 3.1:   **Ecological zone by year of survey**

Ecological zone	1993 (n=293765)	1999 (n=376068)
Urban	15.1	16.3
Lowlands/foothills	59.9	59.6
Mountains/Senqu	25.0	24.1

According to the standardised generalised basket as outlined by Rowntree and others, total household income or expenditure is used as measurement variables when defining poverty. The threshold definition in this instance is the cost of a complete basket, which includes all goods and services required to meet all basic needs. Income below the poverty line is considered as the poverty criterion and the unit of analysis is the household. Using this criterion households are divided into groups, e.g. destitute, poor, moderate, etc

In this chapter the analysis is based on the income level of the households, this is done so as to enable comparison with the findings made by Sechaba Consultants in 1994 and 1999. It should be noted however, that income is usually understated in social surveys.

Households are divided into five groups, namely destitute, poor, moderate, well-off and wealthy. To generate these definitions, two factors were taken into consideration, namely income per member per month and the cost of a minimum food basket. The table below presents the cut-off points used for each economic group by year of survey.

Table 3.2: **Cut-off points for economic categories by year of survey**

Economic category	1993	1999
Destitute	0-<M25	0-<M40
Poor	M25-<M50	M40-<M80
Moderate	M50-<M100	M80-<M160
Well-off	M100-<M300	M160-<M480
Wealthy	>=M300	>=M480

For both survey years close to half of the sample (49%) were found to be destitute. The data show a 3% increase in the proportion of destitute households in the mountain areas. A 0.2% drop was noted in the proportion of wealthy households in the same location. The 1999 data show a general decline in the proportion of well-off and wealthy households within ecological zones. The percentage of poor households in urban areas has increased, while that of wealthy households has dropped. Destitution was found to be highest (66% in 1993 and 69% in 1999) in the mountain areas. The results of the breakdown of economic category by ecological zone by the year of the survey are presented in Table 3.3.

The summary column of the table shows that, while there seems to have been a slight increase in the percentage of poor households in 1999, in all the other categories, there has been a decline in the percentages of households compared to what they were

in 1993. This could be taken to suggest that the economic well-being of the households in the sample has declined.

Table 3.3:   Economic category by ecological zone and survey year (%)

	Urban		Lowland/foothills		Mountain/Senqu		Total	
	1993 n=44416	**1999** n=61117	**1993** n=175128	**1999** n=224255	**1993** n=73430	**1999** n=90696	**1993** n=292974	**1999** n=376068
Destitute	26.9	24.3	48.0	47.8	66.1	68.7	49.3	49.0
Poor	13.2	20.1	17.3	20.0	12.5	14.6	15.5	18.7
Moderate	24.6	27.0	19.4	17.8	12.1	10.2	18.3	17.5
Well-off	27.6	25.5	14.2	13.1	8.6	6.0	14.8	13.4
Wealthy	7.8	3.8	1.1	1.3	0.7	0.5	2.0	1.4

The analysis of economic class by geographical area gives a much clearer distribution of poverty throughout the country. As can be seen from the Graphs 3.1a and 3.1b below, the level of destitution is high throughout all the areas, but seems to be worst in the mountains. In 1993 all the mountain areas (i.e. southeast, eastern, central and northeast mountains) had more than 70% of the households falling into the destitute category, with the highest being the eastern mountain areas, which had 74% of the households in this category. The 1999 data show a further increase in the proportion of destitute households in the same mountain areas, with the eastern mountains still reporting the highest (77%) proportion of destitute households. The southwest lowlands had the highest proportion of destitute households, with a reported 29% in 1993 to 46% in 1999.
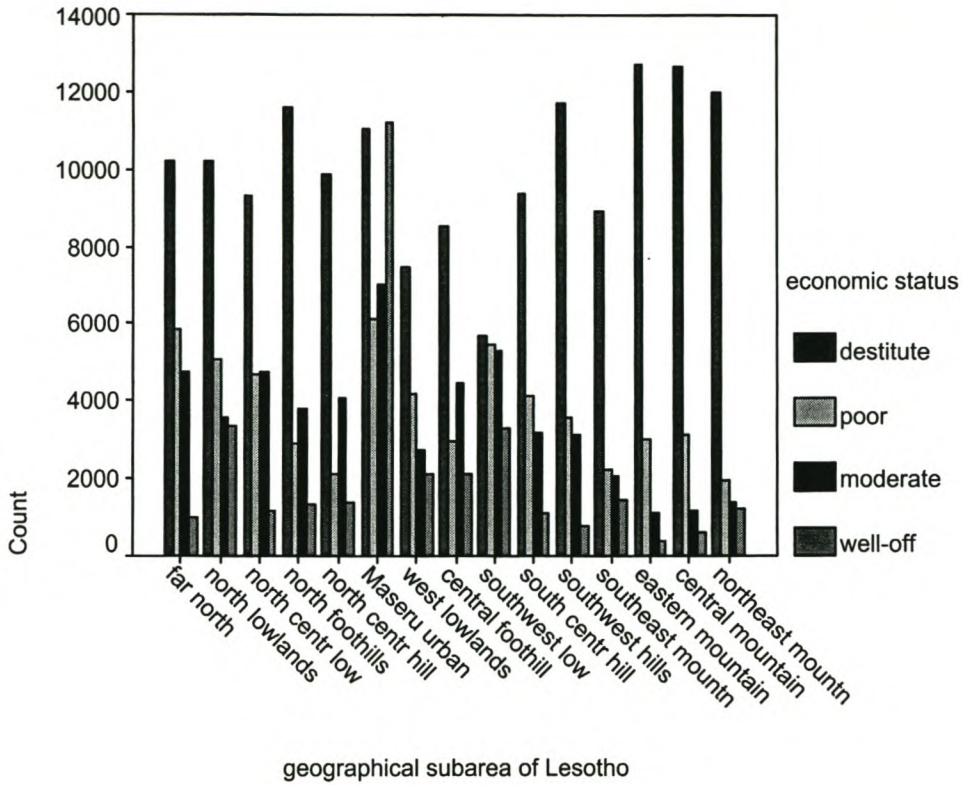
Figure 3.1a: Geographic sub-area by economic category, 1993
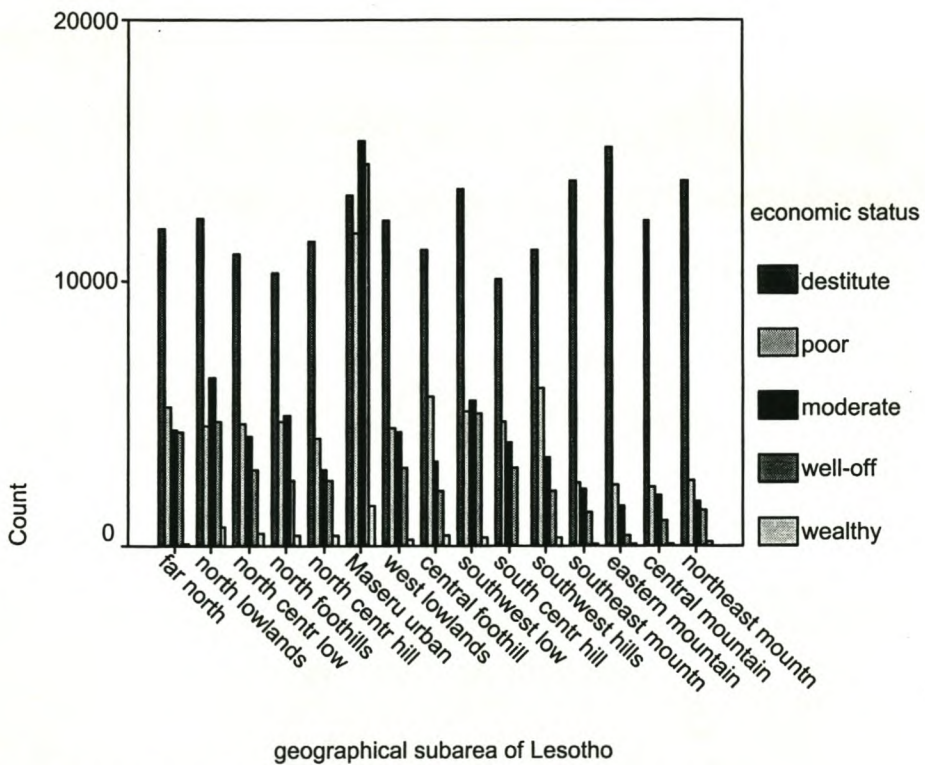
Figure 3.1b: Geographic sub-area by economic category, 1999

The proportion of destitute households in the Maseru urban area has declined significantly from 31% in 1993 to 23% in 1999. On the other hand, in the same area the proportion of poor households increased from 17% in 1993 to 21% in 1999.

3.2   Household demography

This section discusses the following demographic variables: gender, household size and composition, age, schooling and employment.

3.2.1   Gender and age profile

In this section the gender composition and age structure of the households is discussed. The gender and age of the household heads are also discussed. Data on the gender and age of the household head are further broken down by ecological zone and economic status of the household.

In 1993 the sample was composed of 48% male and 52% female. In 1999 the sample was again 48% male and 52% female members. The age of the members ranged from 0 to 105 years, with a mean age of 22.57 years in 1993, and from 0 to 108 years, with a mean age of 25.65 years in 1999.

Gender of the household head is said to be an important factor in determining the economic status of a household. In 1993 there were more female-headed[4] households than male-headed households, while in 1999 there were more male-headed households.

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[4] In this study the phrase 'female-headed' refers to all households that were headed by a female regardless of whether they were female de jure or female de facto household heads.
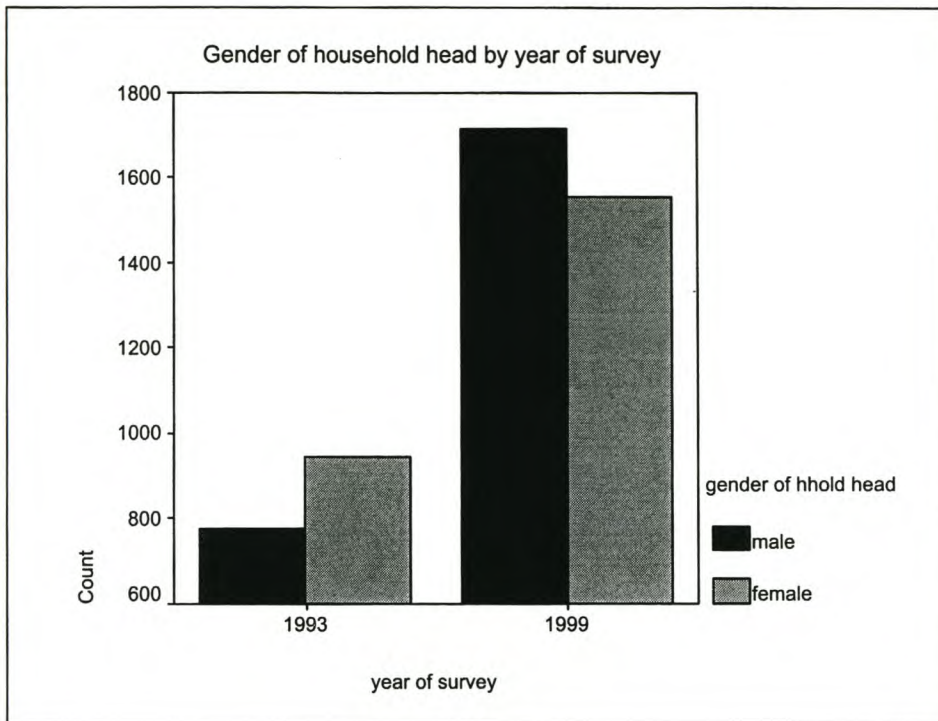
Figure 3.2: Gender of household head by year of survey

In 1993 the proportion of male-headed households was equal in the urban and mountain areas (54%), while the proportion of female-headed households was highest in the lowland areas (60%). This pattern was also prevalent in 1999, except that the proportion of male-headed households in the urban and mountain areas had increased to 57%, while that of the female-headed households in the lowlands had dropped to 50%. For both years mostly males headed destitute households. The proportion of wealthy male-headed households increased dramatically (from 44% in 1993 to 60% in 1999).

An analysis of age of household head by economic level shows that the wealthier households had younger household heads, while older people headed destitute households.

3.2.2   Household size and composition

The findings related to household size and composition are presented below. The data were further disaggregated by ecological zone, economic categories and gender of household head.

Table 3.4 shows that there has been a decline in the mean number of members per household from 6.26 members in 1993 to 5.34 members in 1999. Further analysis of the data shows that the urban households generally had fewer members than their rural counterparts. A reason that has been given for this is that the 1993 sample was biased toward larger households, while this problem was partially overcome in 1999. Some bias still remains, because smaller households are more likely to be overlooked due to members' absence. While the generally more reliable 1986 census gives a mean national household size of 5.1, the 1999 survey is not far from the reality. The rather less reliable 1996 census report gives the estimated national mean of 5.0, which is probably too low, because of the acknowledged undercounting in 1996 (Sechaba Consultants, 2000:76).

Table 3.4:   Mean age of household head and mean number of household members by economic category and year of survey

	Mean age of household head		Mean number of household members	
	1993 (n=285497)	**1999** (n=375416)	**1993** (n=1,836,429)	**1999** (n=2,006,215)
Destitute	53.70	54.05	6.21	5.55
Poor	51.13	52.98	6.92	5.56
Moderate	47.07	49.61	6.48	5.28
Well-off	42.68	46.11	5.63	4.52
Wealthy	42.68	47.61	4.60	3.38
Total	**50.16**	**51.92**	**6.26**	**5.34**

The mean age of household heads shows that poorer households tend to have older household heads. The mean number of members per household shows that wealthier households tend to have fewer members, i.e. there is a positive correlation between households with an average higher number of members and poverty.

In 1993 the mean total number of persons greater than 15 years per household was recorded as 3.22 compared to 3.24 in 1999. On the other hand, the data suggest a drop in the mean number of children less than 15 years per household at 2.93 in 1993 and 1.98 in 1999. The data also show a decrease in the number of children under 5 per household from a mean of 1.56 in 1993 to 1.26 in 1999.

3.2.3 Education

In this section the following education indicators will be discussed: number of years spent in school, the proportions of children of school-going age in school and adult literacy.

The mean household number of years spent in school was reported as 7.68 years in 1993 and 7.73 in 1999. The data show a significant (p< 0.000) improvement in the mean number of children who are in school. In 1993 a mean of 1.93 children 6-15 not in school was obtained, while in 1999 the mean number was 1.45 children.

The data show that the wealthier the household, the higher the level of schooling obtained. The mean number of years of schooling in a household increases with the economic level for both years. For example, the mean number of schooling for destitute households was 6.95 years in 1999, while for that of wealthy households was 10.51 years for the same year. Also, the mean number of children 6-15 not in school was higher for destitute households (2.12 in 1993 and 1.58 in 1999) as opposed to 1.49 in 1993 and 1.00 in 1999 for wealthy households.

The mean number of adults reported as not having attended school was roughly the same for the two survey years, i.e. 1.43 and 1.37 respectively. The data show that the percentage of literate (i.e. with at least standard 4) adults aged 15 years and above has remained constant at 72% for both years.

3.2.4 Employment

Shifts in the employment pattern and the percentage of households that have waged workers are discussed below.

There has been a significant shift in the employment pattern from 1993 to 1999. From the Table 3.5 it is clear that the greatest shift has occured in the case of mine employment. The data suggest that percentages of people involved in household work, farmers and job seekers have also decreased. An upward shift is noted in casual labour, self-employment and studying. An increase was also noted amongst the people who reported not doing anything.

Table 3.5:   Occupation by year of survey, in percent

Occupation	1993	1999
Wage worker	11.4	12.8
Mines	10.3	5.1
Other RSA	1.5	1.7
Self-employed	5.9	8.6
Casual labour	3.8	5.0
Shepherd	6.3	6.5
Farmer	6.2	5.2
Household work	33.0	29.2
Scholar	9.0	11.2
Job seeker	9.7	7.8
Inactive/none	2.7	6.6

Employment patterns were found to vary by ecological zone. Wage workers, civil servants, students and the self employed were found to be more common in urban and lowland communities, while farmers and shepherds were mostly common in the remote areas.

The percentage of households that have some wage worker in the household has remained almost the same at 54% for both years. The lowland areas reported the highest percentage of wage workers in the household during both years, although there was a slight decline in the proportion of households from 61% in 1993 to 57% in 1999. The mean number of adults without wages in 1993 was recorded at 2.68 adults and 2.66 in 1999, thus showing a possible increase in unemployment.

Summary of findings:

The following salient points emerged from the analysis:

- In 1993 there were more female-headed households than male-headed households, while in 1999 the reverse was true.

- The mean number of members per household has dropped from 6.26 in 1993 to 5.34 in 1999, and destitute households tend to have a higher number of members.

- Older household heads tend to fall into the destitute income category.

- A significant improvement in the number of children in school has occured.

- There has been a significant shift in the employment pattern from 1993 to 1999. Mine employment has dropped, while casual labour and self-employment have increased.

3.3 Household income

The indicators related to household income are presented below. First the total annual income of the households is discussed, then the income per member per month, bank account ownership and finally the amount of households' savings.

According to the Central Bank of Lesotho, the Consumer Price Index data (Sechaba Consultants, 2000:42) over the period 1994 to 1999 has seen relatively stable prices. In 1994 the annual inflation rate was 7.2, then it increased to 10 in 1995 and thereafter decreased. By 1999 the inflation rate was 7.8. The rate of inflation is an important indicator in measuring the incidence of poverty, as increases in inflation can erode the purchasing power of household incomes and thus result in an increase in the incidence of poverty. Lesotho's currency (Maloti) is pegged to the South African rand. Between 1994 and 1999 the fiscal policy of the South African Central Bank and the country's economic performance resulted in the relative stability of the rand.

3.3.1 Total income

The data show that, although employment figures have dropped in Lesotho, the total annual incomes of households have increased. According to Sechaba Consultants (2000:73), "when inflation is taken into account, there has been a 14% increase in real income per household member. This is attributed to the fact that retrenched miners often return home with substantial severance packages, which result in short-term income increases, despite loss of employment".

The mean total annual income in 1993 was M2606.42; but declined to M2359.53 in 1999. For both years urban areas reported the highest total income per year, and the mountain areas reported the lowest. In 1993 female-headed households had a higher annual total income (M3137.02) than the male-headed households (M1972.53). The reverse was true in 1999, where male-headed households had a higher annual total income, i.e. M2457.71 versus M2252.65 for female-headed households.

In 1993 the total annual income for destitute households was M396.36 and in 1999 the figure had risen to M647.59 The total annual income for wealthy households decreased from M17,604.97 to M14,282.39.

3.3.2 Total monthly income per member

Total monthly income per member per household was then calculated. In 1993 the mean total monthly income per member was calculated at M38.60, whereas in 1999 it rose to M41.82 per member per month. From Table 3.6 we see that wealthy households showed the greatest absolute increase. The urban areas continued to have the highest monthly income per member, while the mountain areas had the lowest.

In 1993 female-headed households had the highest monthly income per member (M39.65 versus M24.23), while in 1999 the distribution was equal amongst male- and female-headed households (M41.91 and M41.81 respectively). Table 3.6 shows the distribution of monthly income per member for the two years.

Table 3.6: **Mean monthly income per member by economic category**

Economic Category	1993 (M)	1999(M)
Destitute	5.14	10.40
Poor	24.92	29.04
Moderate	48.20	54.64
Well-off	109.16	123.75
Wealthy	353.96	370.49
Mean total monthly income per member	38.60	41.82

In 1993 the income per member per month threshold was M50 per member per month, while in 1999 it was M80 per member per month. A breakdown by households

lower than the threshold by geographical area by year of survey shows that the proportion of households with less than the threshold has declined from 71% in 1993 to 65% in 1999. The mountain areas had the highest number (above 79%) of households below the threshold, with the eastern mountain areas being the worst off (88%). The situation in the southeast mountain areas seems to have been the most dramatically affected (from 76% in 1993 to 81% in 1999). The area with the fewest households below the threshold was the Maseru urban area with 38%.

3.3.3   Ownership of bank account

The data shows a sharp decline in the percentage of households who own bank accounts (from 36% in 1993 to 20% in 1999). Urban areas accounted for the highest ownership of bank accounts.

The data show that bank account ownership correlates positively with poverty, i.e. the poorer the household, the less likely it is to have a bank account. For those who had bank accounts, the mean amounts of savings show an increase across the economic groups, with the exception of the wealthy households, where the amount has dropped significantly. Whereas the wealthy households showed a saving of M1827.13 in 1993, in 1999 the amount had dropped to M432.75.

For both years male-headed households had more savings than female-headed households, e.g. in 1999 (mean of M252.21 versus M187.73). In 1993 savings were highest in the urban areas (M743.69) and lowest in the lowland areas (M203.69), while in 1999 they were highest in the lowland areas (M236.66) and lowest in the mountain areas (175.41).

The data reveal an increase in the percentage of households with no bank account throughout all the geographical areas. The Maseru urban area was the most affected with an increase from 43% in 1993 to 78% in 1999. A possible explanation for this could be the effects of the 1998 political unrest, which led to loss of employment for many urban residents. The 1993 data show a significant difference in the amount of savings between the urban and rural residents. Here the possible reason could be the effects of the huge loss of mine jobs due to the retrenchments that took place during the period. Figures from the Central Bank of Lesotho for the period 1993 to 1998

show a reduction in the average number of mineworkers employed from 116,129 in 1993 to 68,827 in 1999 (roughly 41% decline). Another factor could be the collapse of one of the state-owned banks and the privatisation of the other, which had serious implications for both the availability of and access to banking services and the fact that the minimum threshold was increased (Sechaba Consultants, 2000:51).

Summary of findings:

The following findings can be highlighted as the most important:

- Total annual incomes have increased.
- The mean total monthly income per member per month has increased.
- There was a decline in the percentage of households below the income threshold of M80 per member per month, from 71% in 1993 to 65% in 1999.
- Mountain areas had the highest percentage of households below the income threshold, with the eastern mountain areas being the worst off.
- A sharp decline was noted in the percentage of households that own bank accounts.
- The poorer the household the less likely it was to have a bank account.

3.4   Household Expenditure

This section will examine household expenditure in the form of total major expenses, as well as expenses on clothing, health and schooling and monthly expense per member per month.

3.4.1   Total major expenditure

An increase in the amounts spent by households was noted; whereas in 1993 households spent an average of M905.76, in 1999 the figure had risen to M970.58. The data show that female-headed households spent more than their male counterparts on annual expense per member on clothing, while male-headed households spent more on total major annual expenses, annual expense on health per member and annual expense on school per child aged 6-15 years in 1999. The table below presents the findings.

Table 3.7:   Annual expenditure items by gender by year of survey

	Total major annual expenses		Annual expense on clothing		Annual expense on health/member		Annual expense on school/ child 6-15	
	1993	1999	1993	1999	1993	1999	1993	1999
Male	762.83	1008.24	23.72	30.48	15.12	12.93	114.42	165.60
Female	1023.94	928.92	39.85	32.08	17.15	11.53	130.90	158.14
Total	**905.76**	**970.58**	**32.52**	**31.24**	**16.23**	**12.27**	**123.69**	**162.01**

As can be seen from Table 3.8, the households in the mountain areas spent the least amount of money on all expenditure items compared to their counterparts in the urban and lowland areas during both survey years.

Table 3.8:   Annual expenditure items by ecological zone by year of survey

	Total major annual expenses		Annual expense on clothing		Annual expense on health per member		Annual expense on school per Child 6-15	
	1993	1999	1993	1999	1993	1999	1993	1999
Urban	1250.67	1148.77	70.24	56.62	26.32	21.39	228.85	410.08
Lowlands	954.62	1044.00	29.45	28.58	15.96	11.46	122.62	138.82
Mountains	581.33	668.62	17.07	20.78	10.78	8.09	74.20	79.23
Total	**905.76**	**970.49**	**32.52**	**31.25**	**16.23**	**12.26**	**123.69**	**161.85**

The data show an increase in the mean total annual major expenses. It also reveals a huge gap between the amounts spent by the destitute and the wealthy households. In 1999 the destitute spent an average of M473.02, while the wealthy households spent an average of M2,268.84. The data also show that, whereas in 1993 wealthy households spent more than all other economic groups, in 1999 the well-off economic group spent the most, i.e. M2, 339.22.

In 1993 destitute households spent as little as M58.76 per annum on school per child 6-15 years old, while the wealthy households spent M600.14. A huge difference in expenditure was also noted in terms of annual amounts spent on health and clothing per member. In 1999 the well-off households seem to have spent the most in terms of child education, with an annual expense of M396.67 as compared to M207.74 which was spent by the wealthy households. Destitute households only spent M64.49 per

annum on schooling. What is interesting is the sudden drop in the amount spent by wealthy households on education in comparison to what they spent in 1993, i.e. M600.14 versus M207.73. It should be noted, however, that the overall amount spent on education in 1999 is significantly higher (M161.85) than what it was in 1993 (M123.57).

In 1993 wealthy households only spent M45.24 per annum per member on health; this figure rose slightly to M46.71 in 1999, while it declined among the destitute households (M9.94 in 1993 and M6.45 in 1999).

On the whole the amounts spent on clothing per annum per member has slightly decreased from M32.57 in 1993 to M31.25 in 1999. The amounts spent have increased amongst all economic groups except for the wealthy, where the amount has dropped from M203.36 in 1993 to M128.66 in 1999. The data seem to suggest that households tend to spend more on education and clothing than they do on health.

3.4.2   Expenditure per member per month

The total mean expenditure per member per month was M11.64 in 1993 and had remained almost equal at M11.47 in 1999. Destitute households spent M4.11 per member per month in 1993 and M4.72 per member per month in 1999. On the other hand, wealthy households seem to have spent more per member per month (M71.58) in 1993 than they did in 1999 (M40.76)

3.4.3   Expenditure per member per year on clothing, health and education

In 1993 the mountain areas were the worst off in terms of households that had spent less than M16 per member per year on clothing. The northern mountain areas were the worst affected, followed by the eastern mountain areas. The south-west lowlands had the least affected households. The 1999 data show an increase in the proportion of households that had spent less than M16 per member per year on clothing, with the exception of the Maseru urban area, the south-west foothills and all the mountain areas, where the proportion of households seems to have decreased. Table 3.9 presents the findings.

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A dramatic decline in health expenditure was noted throughout all the geographical areas. In 1993 the mountain areas, the south-west and south-central foothills had the highest proportion of households which spent less than M16 per member per year on health, with the south-east mountain areas having the highest proportion (83%). The northern lowlands and northern foothills recorded the lowest proportions of households spending less than M16 per member per year on health.

As in the case of clothing and health, we see an increase in the proportion of households, which pay less than the threshold of M80 per child per year in 1999 throughout most of the areas. There was, however, a notable decline in some areas, notably the Maseru urban area and the northeast mountains. Once again we see that the mountain areas were the worst off in terms of percentages of households not reaching the threshold. The central mountains had the highest proportion (70%) of households spending less than M80 per child per year.

In 1993 only three areas, i.e. northern mountains, central mountains and the eastern mountains, had more than 51% of the households spending less than M80 per child per year on education. The areas that reported the least proportion of households spending less than M80 per child per year on education all reported percentages around the 20s.

It was noted earlier that households tend to spend more on education than on any of the other needs; this was the case in both surveys. In 1993 the total percentage of households that fell below the threshold of M80/child/year on education was only 38%; the percentage of household that fell below M16/member/year on health was 62%, while that of households that fell below the threshold of M16/member/year on clothing was 59%. In 1999 the same pattern was noted, together with the fact that households falling below the thresholds across all items had increased. We also see that in almost all the items the mountain areas report the highest proportion of households falling below the thresholds.

Table 3.9:   Percentages of expenditure indicators in 1993 and 1999

	<M16/member/ year on clothing		<M16/member/year on health		<M80/child/year on education		<M80/member/ month on major expenditures	
	1993	1999	1993	1999	1993	1999	1993	1999
Far north	65	69	62	75	23	45	87	94
North lowlands	58	69	48	86	25	35	90	90
North-central lowlands	53	58	50	79	32	44	91	89
North foothills	59	70	48	65	41	42	92	90
North-central hills	60	65	58	74	44	40	89	93
Maseru urban	53	49	52	63	26	17	83	82
West lowlands	53	61	58	57	29	43	91	95
Central foothills	51	65	67	74	28	38	87	95
South-west lowlands	37	61	65	71	30	40	89	93
South-central hills	54	65	69	77	43	41	92	94
South-west foothills	64	63	71	83	40	59	95	97
South-east mountains	68	66	83	84	45	59	96	96
Eastern mountains	76	64	80	88	51	57	94	97
Central mountains	70	68	67	85	60	70	98	95
North-east mountains	79	75	74	78	69	58	96	98
Total	**59**	**63**	**62**	**38**	**38**	**43**	**91**	**92**

As in the case of expenditure on clothing, the same pattern of an increase in the percentages of households who are spending less than M16 per member per year on health is observed. The eastern mountain areas were the worst affected with 88% of the households falling below the threshold of M16 per member per year. The same areas that showed the worst status in 1993 continued to be the worst off and a new set of areas also showed this status in 1999. The northern lowlands and northern foothills also seem to have deteriorated in as far as health expenditure is concerned. Whereas

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in 1993 there were areas, which reported less than 50% of households being affected, in 1999 none of the areas reported this. In fact the two areas that reported this, namely the northern lowlands and northern foothills , show a 38 and 17 percent increase respectively.

There was hardly any increase (91% in 1993 to 92% in 1999) in the percentage of households who spent less than M80 per member per month on major expenditure during the two survey years. The north-east mountain areas reported the worst situation, with 98% of the households spending less than M80 per member per month on major expenditures in 1999. The eastern mountain areas and south-west foothills, which both had 97% of households spending less than M80 per member per month on major expenditures, followed closely. Maseru had the least proportion (82%) although it too was still quite high. The situation in the central foothills has also become worse.

Summary of findings:

The following points that have emerged from the analysis:

- There was an increase in the amount of money spent by households.
- Mountain areas spent the least on all items as they have less disposable income.
- Total monthly expenditure per member per household has increased.
- There was a decline in monthly expenditure per member for the wealthy households.
- A huge increase was noted in the percentage of households, which spend less than the annual thresholds for clothing, health and education per member.
- On the whole, households tend to spend more on education compared to clothing and health.
- A dramatic decline was noted for health expenditure throughout all 15 areas.

3.5   Household possessions

This section examines traditional wealth measured in the form of livestock and fields ownership, and household assets in the form of radio ownership, extent of crowding, latrine ownership and usage of unsafe water.

3.5.1 Traditional wealth

In Lesotho, as in most African countries, traditional wealth in the form of land and livestock ownership still plays a significant role in the economic well-being of households.

A breakdown of the data by year of survey shows a decline in field ownership from 1993 to 1999. For both survey years a high proportion of wealthy households reported not owning fields, though a decline was noted from 59% in 1993 to 48% in 1999. The 1993 data show a decline in the percentage of households who own fields by economic status, i.e. the wealthier the households, the less likely they were to own fields. In 1999 the same pattern prevails, but is not that evident.

An analysis by geographical area shows an increase in the percentage of households with no fields throughout the fifteen geographical areas, with the exception of the north foothills (32% in 1993 and 28% in 1999) and the north-east mountains (22% in 1993 and 21% in 1999). The Maseru urban area continued to be the worst off, with a reported non-ownership of 89% in 1993 and 87% in 1999. The northeast mountains had the highest level of ownership, with only 21% of households not owning fields.

Table 3.10 also shows an increase in the proportion of households, which do not own livestock. Livestock theft, drought and declining range conditions are believed to have led to the observed decline in the size of herds. For both years wealthy households reported the highest proportion of non-ownership of livestock. The destitute and poor households were better off in terms of livestock ownership compared to households in the other economic groups for both years. For both years more male-headed households owned livestock than female-headed households.

Table 3.10: **Percentages with no fields and no livestock by economic category, 1993 and 1999**

Economic group	No fields		No livestock	
	1993 (n=293,765)	1999 (n=376,068)	1993 (n=293,765)	1999 (n=376,068)
Destitute	24.8	32.1	21.2	21.0
Poor	31.8	40.5	20.9	29.4
Moderate	40.3	54.9	22.2	35.3
Well-off	50.0	55.2	32.2	37.8
Wealthy	59.5	48.4	37.3	47.6
Total	**33.0**	**41.0**	**23.0**	**30.0**

Figures 3.3a and 3.3b show that urban areas were worse off in terms of livestock ownership during both years of the surveys.
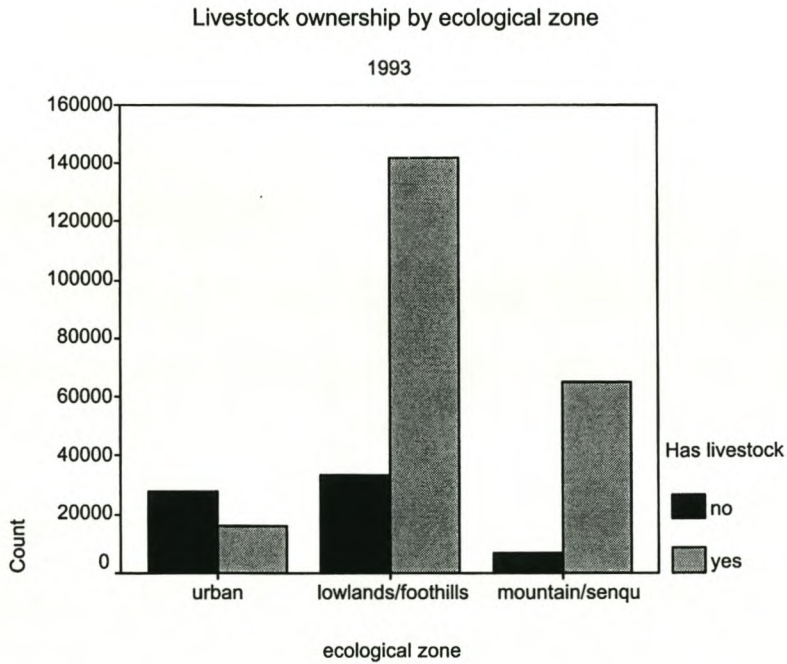
Figure 3.3a: Livestock ownership by ecological zone, 1993

Livestock ownership by ecological zone
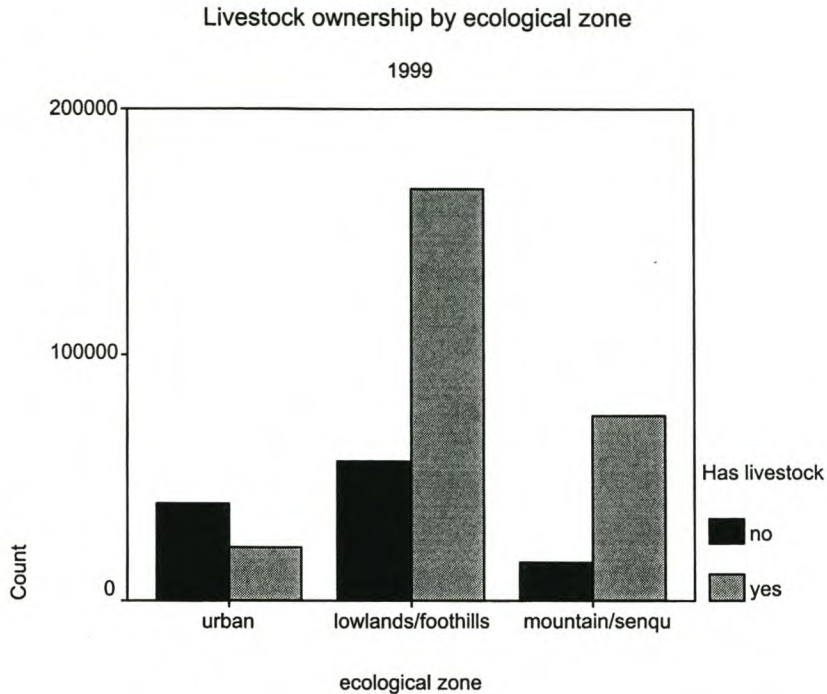
Figure 3.3b: Livestock ownership by ecological zone, 1999

A further breakdown by geographical area also shows an increase in the percentage of households, which do not own any livestock throughout the 15 areas, with the exception of the north-central foothills (23% in 1993 and 21% in 1999). As in the case of field ownership the Maseru urban areas were worse off (64% for both years), and the northeast mountains continued to be better off (18%) in terms of livestock ownership.

3.5.2   Household assets

This section looks at household possessions: housing, i.e. number of rooms, the extent of crowding, radio ownership, access to clean water, toilets, modern fuel and productive material (i.e. stoves and sewing/knitting machines).

In 1993 the mean total number of rooms was 2.80 and in 1999 there was an insignificant rise to 2.89. In 1993 male-headed households occupied more (2.96) rooms than their female counterparts (2.82), while in 1999 the distribution was even (2.80) among both groups. An analysis of the total number of rooms in a household by income level shows that the poorer the household, the fewer rooms it occupies, e.g. in 1999 destitute households had 2.62 rooms, while the wealthy households had 3.29

rooms. Once again the mountain areas were found to be worse off (2.43 in 1993 and 2.89 in 1999) than the lowlands and urban areas, with the urban areas having the highest mean number of rooms.

The mean number of members per room was 2.85 in 1993 and it dropped to 2.41 in 1999; this happened across all economic categories. Here again we see that the poorer the household, the more members per room it had. For example, in 1993 the mean number of members per room for destitute households was 3.00, while it was 1.82 for the wealthy households. During both years male-headed households were more densely populated (2.97 in 1993 and 2.47 in 1999) than the female-headed households (2.75 in 1993 and 2.34 in 1999). The situation was found to be worse in the mountain areas compared to the lowland and urban areas.

The data show a decline in the extent of crowding, i.e. more than three persons per room. In 1993 32% of households lived in crowded homes, while in 1999 the figure dropped to 23%. Destitute and poor households were found to be the main occupants of crowded households for both survey years.

Once again the mountain areas were found to be worse off in terms of crowding. The condition in the urban areas showed a significant decline in the extent of crowding amongst households (from 30% in 1993 to 13% in 1999).

A decline in the extent of crowding within households was noted throughout all the areas, with the exception of the eastern (from 32% to 37%) and central (from 30% to 35%) mountain areas, where the condition had deteriorated. In the north foothills the condition remained the same, while in the Maseru urban areas a 17% decline was noted (from 33% in 1993 to 16% in 1999).

Without the radio many households do not have access to current affairs and information, thus implying that their freedom to information is restricted. Figure 3.4 shows that radio ownership has remained constant. The most significant increase was noted among the wealthy households (89% in 1993 to 92% in 1999).

The data show a decline in radio ownership with declining economic level, with the wealthy households having the highest ownership level and the destitute having the lowest level. Whereas in 1993 more female-headed households (57%) had radios, the reverse was the case in 1999 with more male-headed households being in possession of radios.
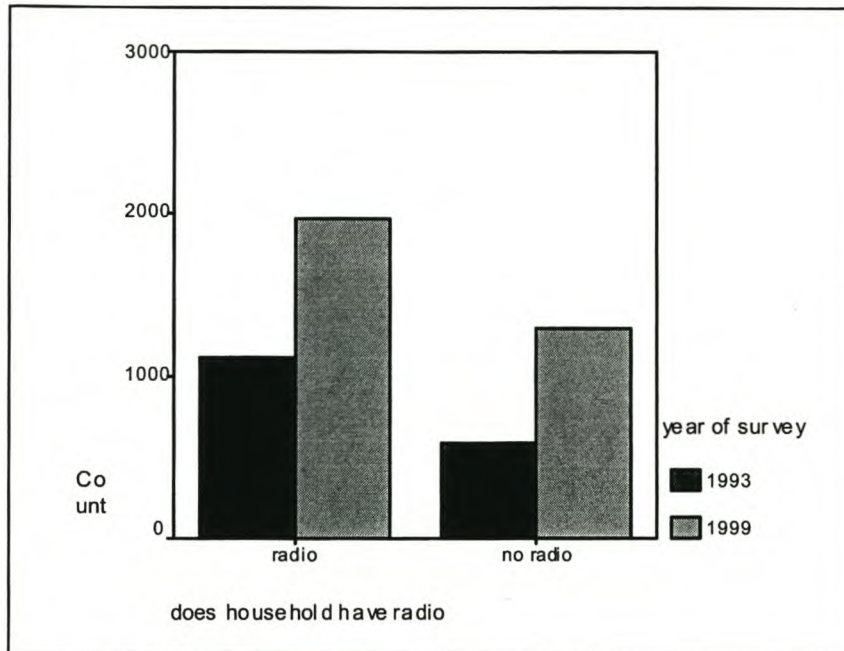
Figure 3.4: Radio ownership by year of survey

An analysis by ecological zones shows that most of the households that owned radios resided in the urban areas, and those who reported least ownership resided in the mountain areas, with the northeast mountains (69%) having the worst status in 1993. In 1999 the central mountains were the worst off, with 63% of households not having any radio. The Maseru urban areas were found to be better off during both years of the survey, although a slight decline in the percentage of radio ownership was noted in 1999 (from 21% to 22%).

An overall improvement was noted in the percentage of households that have access to clean water between the two years, with the exception of the mountain areas. The mountain areas were the worst off in terms of access to clean water during both surveys (66% in 1993 and 51% in 1999). Unprotected water sources and springs were mostly used in mountain areas. Communal water systems are common throughout all the ecological zones and economic categories. Private water sources were most commonly used by wealthy households and by urban dwellers. On the whole private

ownership of water supply had declined sharply from 12% in 1993 to only 7% in 1999.

The percentage of households that use clean water increases with the level of income of the household, i.e. the wealthier the household, the more likely it is to use a clean water source.

Generally, a marked improvement was noted in the use of clean water throughout the geographical areas. The percentage of households, which use clean water, seems to have deteriorated in some of the lowland areas, e.g. in the north lowlands the figure rose (from 24% in 1993 to 43% in 1999) and in the west lowlands it rose from 14% to 24%. On the other hand, conditions in the foothill areas seem to have improved the most. The southwest foothills (46% to 29%), north-central foothills (27% to 14%) and south-central foothills (27% to 14%) showed the biggest improvement. In Maseru the percentage of households that do not use clean water remained the same (7%).

Although a very high percentage of households still reported not using toilets during both survey years, a slight improvement was noted. While in 1993 61% reported not using toilets, the figure had dropped to 51% in 1999. For those who use toilets, the most commonly reported type of toilet was the ordinary latrine, followed by the VIP latrine. Very few households reported the use of a flush toilet during both years.

A majority of households that reported not using any toilet came from the destitute economic group. Wealthy households (23% in 1993 and 7% in 1999) mostly used flush toilets. All households regardless of economic group used ordinary toilets. The data show a decline in non-use of toilets by economic level, i.e. the wealthier the household, the more likely it is to use a toilet. This pattern was observed for both survey years.

The percentage of households without latrines declined in most of the geographical areas with the exception of the west lowlands, where the percentage increased from 50% in 1993 to 53% in 1999. The mountain areas and southwest foothills were found to be worse off; however, a marked improvement was noted in the central and south-east mountain areas. The 1993 data show that, while in other areas the percentages of

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households without latrines ranged from as low as 35% to around 69%, the mountain areas and southwest foothills had percentages ranging from as high as 72% to 92% of households without latrines. In 1999 89% of the households in the eastern mountain areas had no latrine, followed by the eastern (87%) and central (86%) mountain areas, the southwest foothills (79%) and the southeast mountain areas (78%). Maseru was better off in terms of latrine usage (17%).

Significant increases were noted in the use of traditional fuel sources (shrubs, cow dung and weeds) and wood. On the other hand, the use of paraffin has declined considerably. Use of modern fuel sources also declined. In 1999 wood was found to be the most commonly used form of fuel, followed by paraffin and traditional fuel sources. Modern sources (i.e. electricity, gas and coal) were used by only 10% of the households.

For both surveys traditional fuel (dung, shrubs and weeds) and wood were mostly used by destitute and poor households, while modern fuel was used predominately by the wealthy households. Paraffin use was reported by households throughout all economic groups; however, the well-off and moderate households mostly reported use.

Type of fuel used by income level
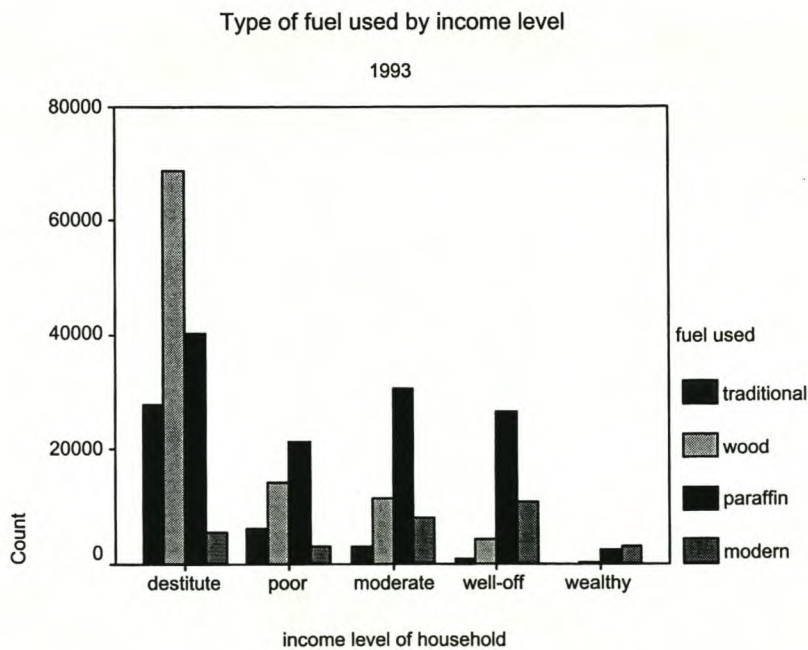
1993

Figure 3.5a: Type of fuel used by income category, 1993

Type of fuel used by income level
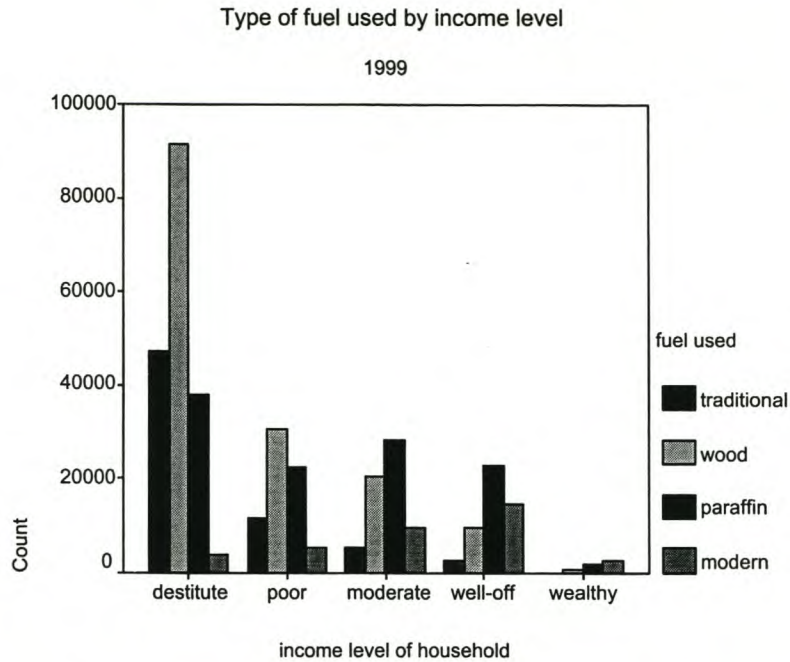
1999

Figure 3.5b: Type of fuel used by income category, 1999

A dramatic decline in the percentage of households that have access to modern fuels (gas, electricity and paraffin) was noted between the two years. In 1993 65% of the households had access to modern fuel; in 1999 the figure had dropped to 40%.

Urban dwellers had the highest proportions (97% in 1993 and 93% in 1999) of households, who use modern fuels, while the mountain areas had the lowest (44% in 1993 and 11% in 1999). A further breakdown by geographical sub-area shows that the situation was worst in the south-east mountain areas (from 36% to 90%) and the west lowlands (from 22% to 72%). Whereas in 1993 the north-east mountain areas were the worst (71%) in terms of households with no modern fuel, in 1999 the eastern mountains were the worst (96%), with the north-east mountain areas following very closely at 93%.

The data show a small increase in the proportion of households which own household productive material in 1999 from 81% to 83%. For both years female-headed households were worse off than male-headed households. Whereas in 1993 the pattern of ownership was quite clear, i.e. the wealthier the household, the more likely it was to own household productive material, this appeared to be the case only up to well-off

households (75%); then the proportion of wealthy households which do not own productive material goes up to 79%.

Once more the mountain areas were found to be worse off (88% in 1993 and 87% in 1999) compared to their counterparts in the lowland and urban areas. Generally there has been an increase in the proportion of households which own productive material within all the geographical areas with the exception of north-central lowlands, north-central foothills, central and northeast mountains. In 1999 the central mountain areas were the worst-off in terms of household production material, with 91% of the households not owning any productive material, followed by the northeast mountains (89%). The north-central lowlands were much better off with 74%, followed by the southwest lowlands (77%) and the far north (78%).

Summary of findings:

The following issues emerged as the main findings:

- There was a decline in the percentages of households, which own fields and livestock.
- Poorer households tend to own fields and livestock compared to the wealthier households.
- Mountain areas are better off in terms of field and livestock ownership compared to the other areas. The north-east mountains have the highest level of ownership.
- The mean total number of rooms has risen.
- The mean number of members per room has dropped.
- A decline in the level of crowding was noted.
- The poorer the household, the more likely it was to live in a crowded home.
- The ownership of radios has remained steady over the two survey years.
- There was a decline in the level of radio ownership by declining economic level.
- The percentage of households that have access to clean water has risen.
- Remote/rural areas mostly used unprotected water and springs. Communal water sources were used throughout all the geographical areas, while private sources were used predominately in the urban areas.
- There was an increase in the use of traditional fuel sources and wood amongst the poor and a decline in the proportion of users of modern fuel sources.

- The use of paraffin has declined considerably.

- There was a dramatic decline in the percentage of households, which have access to modern fuel sources.

- Mountain areas were worse off in terms of ownership of household possessions and access to clean water, sanitation and modern fuel sources.

3.6 Household food sufficiency/security

This section looks at the issue of household food security as defined in terms of current cereal stocks in the household and total cereals per member per year.

Although agriculture was once said to be the backbone of Lesotho's economy, the situation has changed dramatically over the years. Production has continued to decline since the early 1970s. Some of the reasons that have been given for this decline are the continuous mono-cropping of maize, which has contributed to an increasing loss of organic matter in the soil, the overuse of chemical fertilisers and inappropriate tillage methods. When the 1993 study was conducted, Lesotho had just experienced a serious drought. In 1998 there was a late delivery of agricultural inputs (e.g. seeds, fertiliser, etc.) to farmers, which contributed to the poor harvest/production in the 1998/99 production season. (Sechaba Consultants, 2000: 26-26).

3.6.1 Current cereal stocks

There has been a significant drop (p < 0.000) in total kilograms of cereal stocks per household from a total mean of 158.75kg in 1993 to a low of 73.05kg in 1999. For both years the households in the lowland areas had the most (213.81kg in 1993 and 95.66kg) cereal stocks compared to the other areas, although a decline in cereal stock was noted here too.

Cereal stocks in the household show that the wealthy households had the least stocks than households in other income levels, while the poor households had the highest stocks in 1993. In 1999 the reverse was true, where wealthy households had more cereal stocks than the households in other economic groups. Table 3.11 shows the distribution of cereal stocks in the household by economic category.

Table 3.11: Kilogram of cereal stocks in household and cereals per member per year by economic category, 1993 and 1999

Economic category	Cereal stocks in household		Cereals per member per year	
	1993	1999	1993	1999
Destitute	161.79	57.33	64.19	26.99
Poor	193.26	74.29	77.59	25.23
Moderate	136.15	105.58	47.67	22.94
Well-off	146.63	79.21	49.74	29.45
Wealthy	116.33	142.67	80.09	53.14
Total	158.75	73.05	61.41	26.62

3.6.2 Cereals per member per year

A decline in the mean total kilograms per member was noted in 1999. In 1993 the moderate households had the lowest mean per member and the wealthy had the highest mean. In 1999 the wealthy had the highest mean per member while the moderate households had the lowest mean per member (see Table 3.11).

For both survey years the urban areas were the worst off in terms of kilograms per member. In 1993 the lowland areas were better off (56.05 kg) than their counterparts in the mountain (26.66 kg) and urban (3.74 kg) areas. On the other hand, in 1999 the mountain areas were better off (31.78 kg) than the lowland (30.98 kg) and the urban (2.95 kg) areas.

The analysis above clearly shows that there was a decline in cereal production in 1999 and thus a decline in the proportion of households that met the FAO requirement of 180 kg of cereals per member per annum. In 1993 only 7.9% of the households met the requirement and in 1999 the proportion of households that met this requirement dropped to 2.8%.

During both years of the surveys the lowland areas were better off in terms of meeting the FAO requirement, although a decline was noted in 1999, when only 3% met the requirement versus 12% in 1993. The urban areas were the worst off, although a slight

improvement was noted as in 1993 only 0.5% met the requirement, while in 1999 the figure rose to 1%.

In 1993 wealthy households were worse off (7%) in terms of meeting the FAO requirement and the poor were better off (11%). In 1999 only 2% of the destitute and poor households met this requirement and only 9% of the wealthy household met the requirement. This may be accounted for by the fact that wealthy households have money and can therefore purchase the cereals they need.

In 1993 the distribution of households which met the requirement was spread evenly among male-headed households and female-headed households. In 1999 the male-headed households were slightly better off (3%) than their female counterparts (2%).

A breakdown of geographical area by households with less than 180 kg cereals per member by year of survey shows that the situation was worse in 1999, with all the areas reporting above 93% of their households having cereals less than 180 kg per member. There was a decline in the percentage of households that reported cereals less than 180 kg per member in the west lowlands (from 99% to 96%) and the south-east mountain areas, which showed a 3% decrease. The far north, north lowlands, north-central lowlands and north-central foothills were the most hard hit, with between 5 and 10 percent increases in the proportions of households with less than 180 kg cereals per member.

Summary of findings:
The following key findings have emerged from the analysis:
- There has been a sharp decline in cereal stocks in the households.
- A decline in the mean total kilograms per member was noted.
- There was an increase in the proportion of households, which produced less than the FAO standard of 180 kg of cereals per member per year.
- The lowland areas were better off in terms of meeting the FAO requirement.

3.7   Conclusion

The data present a gloomy picture, showing that in 1999 the status of the households had become worse compared to what it had been in 1993 and that the rural areas were the most affected in terms of lack of amenities. The mountain areas are the most deprived of in almost all of the issues (services, assets, income and expenditure) covered by this report, with the exception of traditional wealth. The findings show that the distribution of wealth is skewed, with the mountain areas being the most deprived.

The distribution of poverty by gender shows a mixed picture, with regards to expenditure on basic needs. In 1999 total monthly income per member was almost equal regardless of gender of household head.

The discussion above shows that the destitute and poor households are deprived in all the aspects, i.e. household demography, income, assets, expenditure and food sufficiency.

It is evident from the data that in general the well-being of most of the households in the sample has been negatively affected as a majority of households have fewer resources than they had in 1993. This is reflected in the following findings:
- The percentage of employed persons has dropped, with the most affected employment categories being mine work and wage work;
- Levels of field, livestock and agricultural ownership have declined;
- The use of traditional fuel sources has increased, while that of modern sources has declined;
- Ownership of private water sources has also declined;
- The mean kilograms of cereals per member and the percentage of households with less than the FAO standard of 180 kg per person have also dropped;
- The percentage of households with bank accounts has dropped; and
- Expenditure on health per person per annum has remained the same.

The few positive changes that have been observed are in terms of percentages of:
- Literate persons;

- Persons employed in casual labour and self-employment activities;
- Households with some Lesotho based wage worker/s;
- Use of safe water (in particular communal water sources) and the use of toilets;
- Radio ownership, which has remained constant;
- The extent of crowding within households has declined; and
- Expenditure on clothing per person and education per child of 6-15 years has gone up.

Chapter 4

An alternative measure of poverty

In this chapter an alternative measure for poverty is presented; one that uses a composite index of deprivation. A comparison is then made between the results obtained using the income poverty measure and the composite measure. The way the index was compiled is discussed first, including the item selection and internal validation, and then the external validity of the measure is analysed.

4.1 Composite Deprivation Index

In this section I discuss the way in which the composite deprivation index was constructed. This includes the item selection, index scoring and internal validation.

4.1.1 Item selection

The newly created composite index is aimed to measure poverty from a broad human development perspective and thus includes indicators that cover human deprivation. According to Lok-Dessallien (nd: 16), human deprivation can be measured in the form of household income/consumption and human capabilities in the form of adult literacy, access to public services (access to potable water, sanitation facilities, electricity, health services, public transport and schools) and employment, assets (ownership of land, livestock, housing, access to credit, equipment and other consumer durables), and natural resources (trends in food security and in productivity of the resources base). Lok-Dessallien (nd: 16) suggests that such broad measures of deprivation not only provide a more comprehensive understanding of poverty but also result in better-informed policy guidance.

The deprivation measure presented below is a composite index of the following indicators: income, education, employment, household durable goods, access to water, sanitation, energy, traditional wealth (fields and livestock), the extent of crowding and food sufficiency. These indicators were chosen in line with the human poverty approach or standard of living approach, where poverty is seen to encompass both the physiological and sociological spheres of deprivation. Poverty is seen as the lack of essential material wellbeing as well as the lack of opportunities for living a tolerable

life. In this case, income per capita and other welfare measures such as access to public services (clean water, sanitation, energy), human capabilities (adult literacy) employment and assets (share of adults in the household who are employed, ownership of land, livestock, housing and number of durable goods) and natural resources (food security) were used as part of the indicator. Lanjouw and Stern (1991:28) argue that "land and other assets are important indicators of wealth and earning power".

To test whether the selected indicators reflect dimensions of the same concept (i.e. deprivation) correlation coefficients were used. Correlation coefficients were only sought for indicators that were not initially categorical. Water, sanitation and energy sources were excluded in this analysis, as they were all initially categorical variables. While the measure for housing (i.e. extent of crowding) correlated relatively well with assets, it correlated less well with all the other measures and was thus excluded from the final set of measures for the index. The measure of household food security was also dropped as it had a low correlation coefficient. The results are presented in Table 4.1 and 4.2.

Table 4.1: Indicators by correlation coefficients, 1993

Indicators	Income	Employment	Education	Assets	Traditional wealth	Crowding	Food security
Income							
Employment	.299						
Education	.215	.185					
Assets[5]	.245	.151	.230				
Traditional wealth[6]	.180	.144	.179	.056			
Crowding	.071	.048	.065	.138	.065		
Food security	.051	.052	.184	.064	.184	.108	

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[5] Wealth/assets: This is a composite indicator of the household durable goods such as radio, stove, sewing/knitting machine and vehicle. A weight of 1 was assigned for the radio, a weight of 2 for the stove and sewing/knitting machine and a weight of 3 for the vehicle.

[6] Traditional wealth: This is a composite indicator of wealth as measured by ownership of livestock and fields. The items were assigned an equal weight of 1. The total score for this indicator is 2 and households could have scores ranging from 0 to 2. Those who scored 0 were then assigned a score of 1 in the deprivation indicator, while those who had both were assigned a score of 4.

Table 4.2: Indicators by correlation coefficients, 1999

Indicators	Income	Employment	Education	Assets	Traditional wealth	Crowding	Food security
Income							
Employment	.243						
Education	.208	.125					
Assets	.188	.112	.204	·			
Traditional wealth	.157	.127	.133	.067			
Crowding	.109	.034	.032	.086	.032		
Food security	.049	.039	.180	.030	.180	.084	

To test for the correlation of the ordinal variables (i.e. water, sanitation and energy) Kendall's tau-b statistic was carried out. The statistics showed that there is a correlation between the variables, although the correlation between water and sanitation was recorded below 0.3 in 1999. The results are presented in Tables 4.3 and 4.4.

Table 4.3   Indicators by Kendall's tau-b statistic, 1993

	Water	Sanitation	Energy
Water			
Sanitation	.340		
Energy	.319	.421	

Table 4.4   Indicators by Kendall's tau-b statistic, 1999

	Water	Sanitation	Energy
Water			
Sanitation	.278		
Energy	.303	.381	

4.1.2 Index scoring

For each indicator each household is assigned a score of 1 to 4 (with 1 being the lowest and 4 the highest) for each characteristic measured. The aim of this scoring was to ensure that a score of 4 would represent the best possible conditions, 3 average conditions, and 2 poor conditions, while 1 would be an indication of severe deprivation and few physical and human resources. The total deprivation index is a sum of all individual scores. Table 4.5 shows the indicators and how the scores were assigned for each characteristic.

Table 4.5:   Components of the composite deprivation index

Component	Description of indicator	Score (1 signifying most deprived, 4 least)			
		1	2	3	4
Income	Monthly income per member	0-M25	M26-M50	M51-M100	M101+
Education	Average years of schooling of all adult (16+) household members	<=4	5 to 7	8 to 12	13+
Employment	Share of adult members employed per household	0-25%	26-50%	51-75%	76-100%
Wealth (assets)	Number of household goods (radio, stove, vehicle, sewing or knitting machine)	None	1 to 2	3 to 4	5+
Water	Type of water access	No clean water	Covered spring	Communal	Private
Sanitation	Type of sanitation facilities	No toilet	Ordinary latrine	VIP	WC
Energy	Main source of energy for cooking	Traditional	Wood	Paraffin	Modern
Traditional wealth	Household has fields and/or livestock	None	Field or livestock		Has both

The indicators in Table 4.5 were scored as follows:

Income: For this indicator, income per member per month was used. The cut-off points were those adopted in the 1994 and 2000 poverty studies by Sechaba

Consultants[7]. Categories 4 and 5 were collapsed (i.e. well-off and wealthy) into one category. This was done for ease of comparison because the categories for most of the indicators only allow for a scale of 4, e.g. water (1=unsafe water; 2=covered spring; 3=communal and 4=private).

Education: The cut-off points were derived from the schooling system in Lesotho and the standard definition of literacy (i.e. having reached a minimum of Standard 4 or six years of schooling). Primary schooling in Lesotho ends at Class 7. To complete high school one needs an additional five years after the seven spent in primary school, that is twelve years in total. The finally category (score 4) represents tertiary education.

Employment: This indicator shows the proportion of adult members of each household who are employed. To assign the scores a cut-off point of 25% share was used to come up with the categories.

Wealth/assets: This is a composite indicator of the household's durable goods, such as radio, stove, sewing/knitting machine and vehicle. A weight of 1 was assigned for the radio, 2 for the stove and sewing/knitting machine and 3 for the vehicle. The reason for this was that radios are relatively cheap and therefore most households, regardless of income, are likely to have one, whereas the cost of the stove and sewing/knitting machine are comparable. The vehicle was given a weight of 3 as it is a much more expensive item. The total score for this indicator is 8 and the score for individual households could range from 0 to 8. Those who scored 0 were then assigned a score of 1 in the deprivation indicator.

Traditional wealth: This is a composite indicator of wealth as measured by ownership of livestock and fields. The items were assigned an equal weight of 1. The total score for this indicator is 2 and households could have scores ranging from 0 to 2. Those who scored 0 were then assigned a score of 1 in the deprivation indicator, while those

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[7] Gay J. et al., 1994, Poverty in Lesotho 1994: A Mapping Exercise, Sechaba Consultants, Maseru: Lesotho.
Sechaba Consultants, 2000, Poverty and Livelihoods in Lesotho 1999: More than a Mapping Exercise, Maseru: Lesotho.

who had both were assigned a score of 4. This is the only indicator where the poorer households were more likely to score higher points. In Chapter 3 it was noted that the wealthier the household, the less likely it was to have fields or livestock, e.g. while 54% of destitute had both fields and livestock only 1.4% of wealthy had both in 1993.

For water, sanitation and energy the original categories that were used for the variables were maintained in the scoring of the indicators for the composite measure.

4.1.3 Internal validation

Whereas the inclusion of traditional wealth in the composite index yielded a relatively low internal consistency, the internal consistency increased significantly if traditional wealth was removed.

Table 4.6: Composite deprivation index by alpha statistic

Composite index	1993	1999
With traditional wealth	.5919	.5506
Without traditional wealth	.7652	.7396

The composite deprivation index excludes the indicator of traditional wealth based on a statistical reason i.e. the alpha statistic for the index without traditional wealth is much higher, thus indicating that the scale is more reliable. De Vaus (1996:256) states that the higher the alpha statistic, the more reliable the scale is, and that before it can concluded that a scale is reliable the alpha should be at least 0.7.

It was argued that, theoretically, physical capital could be included as a measure of wellbeing. On this basis I created a composite measure that includes traditional wealth but decided not to use this index in Lesotho as traditional wealth is found predominately in the remote/rural areas and very little in the urban areas. The inclusion of this indicator would negatively skew the results, as it is a measure deprivation throughout the country and not only of the rural areas. Grootaert (1997) indicates the need of disaggregating poverty data by region of residence as not all indicators apply equally to all areas.

For the 1993 data there were 53 missing observations, while for the 1999 data there were 184 missing observations. For the missing observations the average score was assigned.

The CDItw measure ranges from 8 for households with the highest degrees of deprivation, to 32 for households with the least deprivation. The distribution is a nearly perfect normal distribution, with 31% of households falling below 14 on the scale and 53% of household having a score of 16 and below. Only 0.4% have scores of 27 and above. Figure 4.1 shows the distribution for the composite deprivation index with traditional wealth for the year 1993. The scores obtained ranged from 9 to 29. None of the households had a score of 8, which means that even those who scored the least on the scale scored at least 2 on one of the dimensions.

Composite deprivation index (traditional wealth), 1993

Cases weighted
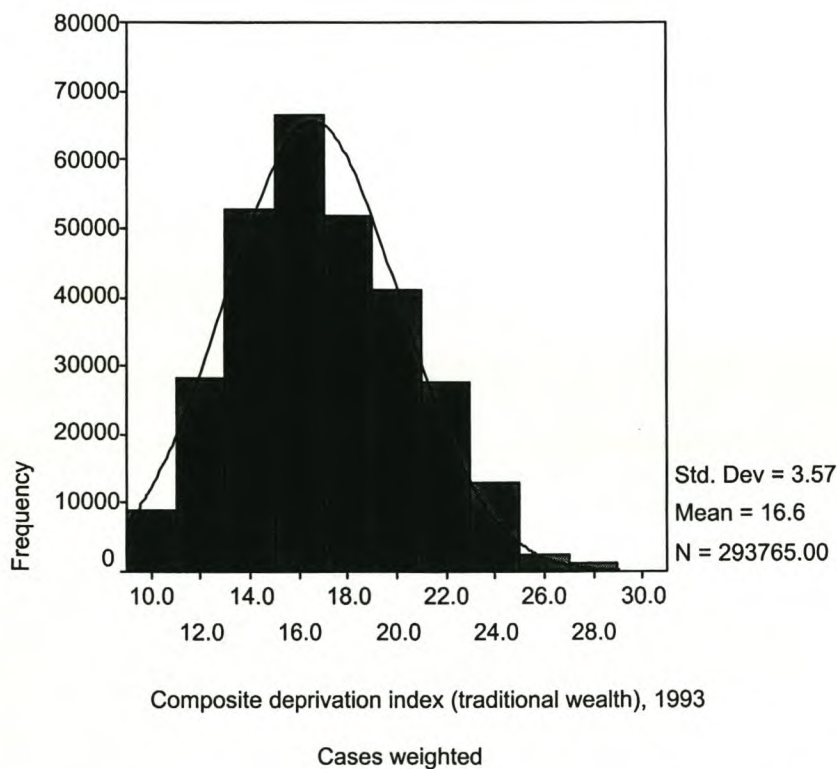
Figure 4.1: Composite Deprivation Index (traditional wealth), 1993

On the other hand, the CDI measure has a possible range from 7 for households with the greatest degree deprivation to 28 for households with least degree of deprivation. The distribution is a nearly perfect normal distribution, with 23.9% of households falling below 10 on the scale, 84.1% of households with a score of 17 and below, thus

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indicating that the majority of the households were categorised as poor. Only 1.8% of the households had a score of 7, implying that they scored 1 on each of the dimensions. Only 0.8% of the households had scores of 23 and above. Figure 4.2 shows the distribution for the composite deprivation indicator for the year 1993. The scores ranged from 7 to 27. None of the households scored the full score of 28, meaning none of the households obtained a score of 4 on each of the 7 dimensions.

Composite Deprivation Index (CDI), 1993

Cases weighted
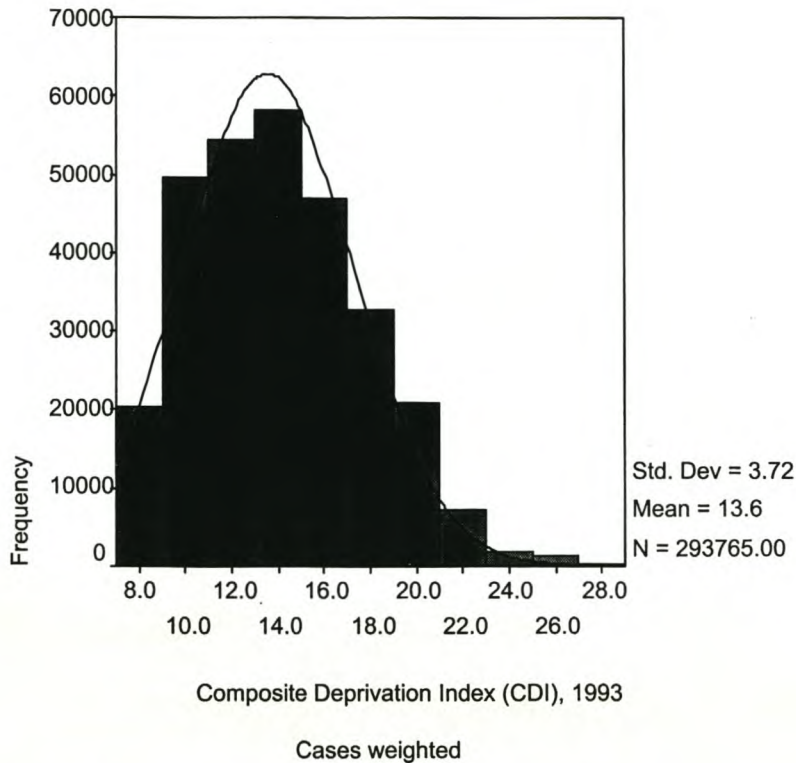
Figure 4.2: Composite Deprivation Index, 1993

Figure 4.3 shows the distribution for the composite deprivation index for the year 1999. The distribution closely adheres to the standard normal probability distribution, with a low percentage of households at the end and a peak in the middle. 29% of the households fall below 20 on the scale and 54% of households have a score of 16 and below. Only 0.1% has scores of 27 and above, and none of the households obtained the full score of 32. Unlike the figures for 1993, where none of the households got a score of 8, 0.2% of the households got this score in 1999. This may be attributed to an observation made earlier that the proportion of households who own livestock and fields is diminishing. The scores obtained ranged from 8 to 28.

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Composite Deprivation Index (traditional wealth), 1999

Cases weighted
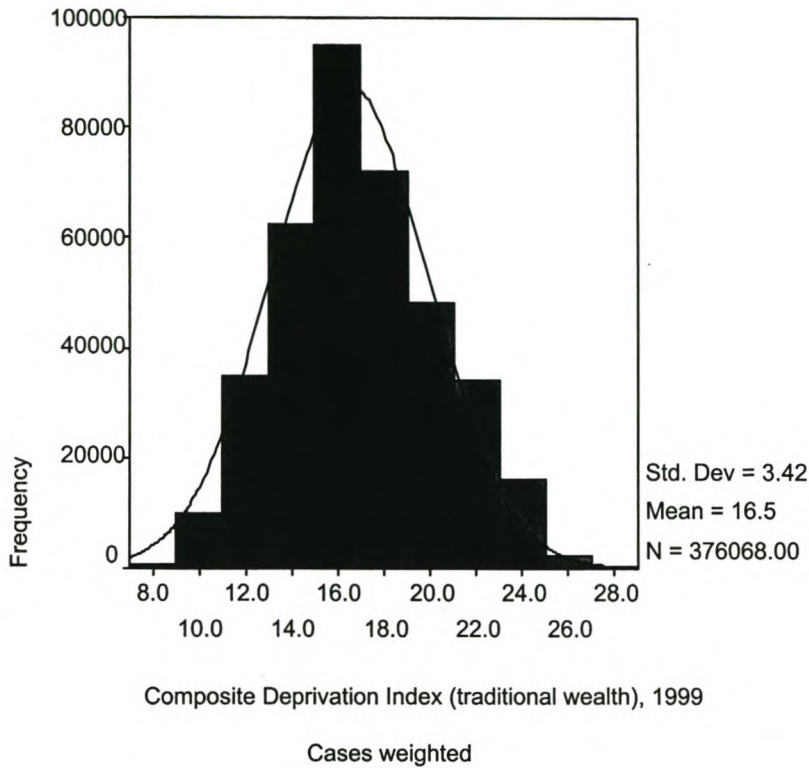
Figure 4.3: Composite Deprivation Index (traditional wealth), 1999

Figure 4.4 shows the distribution for the composite deprivation index for the year 1999. The distribution does not adhere precisely to the standard normal probability distribution as the percentage of households at the lower end of the spectrum fluctuates, though it peaks in the middle. 5.5% of the households fall below 9 on the scale and 19.7% of households have a score of 10 and below. The proportion of households scoring between of 11 and 13 then drops. Only 0.3% have scores of 23 and above. The scores obtained ranged overall from 7 to 26. Although the results are quite disturbing, it is encouraging to note that only 1.9% of the households scored as low as 7, meaning that they scored 1 on each of the seven dimensions.
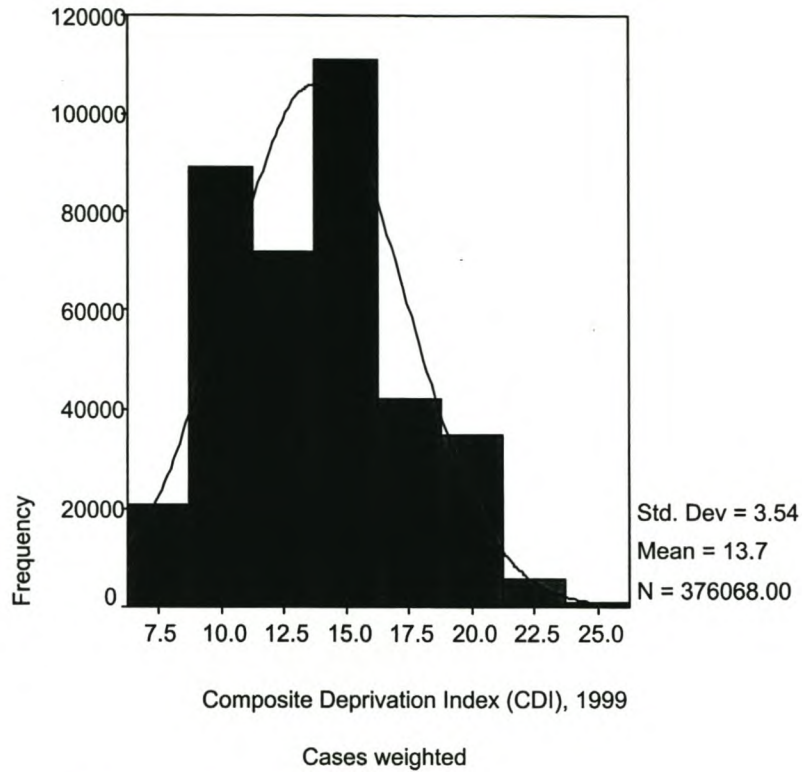
Figure 4.4: Composite Deprivation Index, 1999

Table 4.7:   Summary of scores (theoretical min. and max. in brackets)

	CDItw		CDI	
	1993	1999	1993	1999
Highest score obtained	29 (32)	28 (32)	27 (28)	26 (28)
Lowest score obtained	9 (8)	8 (8)	7 (7)	7 (7)

From the table it can be seen that none of the households obtained the highest possible score on either of the two indices for both years. If the "tw" component is excluded, the households are more likely to cover the full range of possible scores. This applies for both years.

In this chapter the analysis is based on the deprivation status level of the households. Households are divided into four groups, namely: destitute, poor, average and wealthy. These definitions were generated using the scores obtained in the composite deprivation indices. The table below presents the cut-off points used for each index.

Table 4.8: **Cut-off points for deprivation categories**

	CDI	CDItw
Destitute	7-12	8-14
Poor	13-17	15-20
Average	18-22	21-26
Wealthy	23+	27+

An item analysis was then carried out; all the components that had been included in the construction of the index were cross tabulated against the composite measure. The findings are presented in Table 4.9 and 4.10.

Table 4.9 shows that the poorer the households were, the less likely they were to have any income, adults who are literate, adults who are employed, to own assets, to have access to clean water, sanitation facilities and modern energy sources. With increasing levels of wealth the households were more likely to have an income and access to amenities. The highlighted cells on the table show this progression.

On the other hand, Table 4.10 shows that most of the households tend to be clustered in the "poor" category, though the likelihood of poorer households having less income, fewer literate or employed adults, fewer assets, less access to clean water, sanitation facilities and modern energy sources is still clearly demonstrated. In as far as traditional wealth is concerned, in all the categories of the component the poor households have the highest proportions and the wealthy households have the lowest proportions. One could therefore argue that the use of the CDI measure produces more internally consistent results than the CDItw measure.

From the tables it can also be seen that while the CDI measure classifies most of the households as destitute, the CDItw measure classifies them as poor.

While a comparison is made between the two overall measures, more emphasis is placed on the findings obtained from the use of the CDI measure (in this case Table 4.9).

Table 4.9: CDI by components, 1993 and 1999 (%)

Components	Destitute		Poor		Average		Well-off		Total	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Income										
0-M40	69.1	67.0	29.2	32.5	1.8	0.5	0.0	0.0	51.5	46.9
M41-M80	27.2	29.0	63.3	66.1	9.5	4.9	0.0	0.0	19.5	18.4
M81-M160	6.7	9.6	59.5	63.2	33.6	27.0	0.2	0.2	19.6	18.1
M161+	2.6	1.0	28.3	37.8	56.5	56.9	12.6	4.2	9.4	16.6
Education										
<4	73.9	74.2	25.1	25.0	1.0	0.8	0.0	0.0	33.0	28.0
5 to 7	39.3	38.4	50.8	54.8	9.9	6.8	0.0	0.0	39.9	40.2
8 to 12	9.5	8.4	49.1	50.5	38.7	39.4	2.6	1.6	26.4	31.0
13+	0.0	0.0	0.0	33.7	26.2	38.3	73.8	28.0	0.7	0.8
Employment										
0 to 25%	56.3	46.8	36.9	44.3	6.8	8.7	0.0	0.3	67.2	78.1
26 to 50%	15.2	10.3	53.5	51.5	29.2	37.0	2.1	1.1	30.1	19.9
51 to 75%	0.0	8.8	41.3	20.3	54.5	59.7	4.2	11.1	1.2	0.9
76 to 100%	0.0	0.0	18.7	11.8	43.5	70.0	37.8	18.3	1.4	1.1
Assets										
None	81.4	72.6	17.7	25.9	0.9	1.5	0.0	0.0	29.8	33.1
1 to 2	38.9	26.9	54.6	55.8	6.3	16.9	0.2	0.4	40.0	49.7
3 to 4	9.6	7.9	51.1	53.4	36.7	35.9	2.6	2.8	26.9	15.8
5+	0.0	3.4	25.6	30.6	61.6	59.7	12.8	6.3	3.3	1.5
Water										
No clean water	73.1	74.0	25.3	24.2	1.6	1.8	0.0	0.0	31.0	21.0
Covered spring	56.6	55.9	38.7	39.6	4.7	4.5	0.0	0.0	9.3	6.5
Communal	28.9	31.0	54.5	52.8	16.5	16.0	0.1	0.2	47.8	65.5
Private	5.9	2.7	35.3	21.9	48.9	66.8	9.9	8.6	11.9	7.1
Sanitation										
No toilet	64.1	65.7	33.5	32.9	2.4	1.5	0.0	0.0	60.7	51.2
Ordinary latrine	9.4	13.2	56.5	60.1	32.5	26.2	1.5	0.6	37.3	38.1
VIP	0.0	5.7	13.8	44.9	68.0	48.1	18.2	1.3	1.3	10.1
Flush toilet	0.0	0.0	7.8	13.8	27.4	16.8	64.7	69.3	0.6	0.6
Energy										
Traditional	86.3	77.4	13.7	21.1	0.0	1.5	0.0	0.0	13.1	18.1
Wood	72.3	54.3	26.3	43.0	1.4	2.7	0.0	0.0	34.3	41.4
Paraffin	15.9	9.0	66.7	66.7	17.3	24.2	0.1	0.1	41.9	30.6
Modern	0.5	0.3	21.7	22.1	66.5	70.4	11.2	7.3	10.6	9.8
Total	**42.4**	**38.7**	**41.7**	**45.1**	**14.7**	**15.5**	**1.2**	**0.7**		

According to both the composite deprivation index with traditional wealth and without traditional wealth, a slight decrease was noted in the percentage of destitute households who have 0 to M40 per member per month, between 0 and 25% of adults employed, having no assets and using traditional energy sources. The indices also show a slight increase in the proportion of destitute households that have adults with education levels lower than Standard 4, no access to clean water and no toilet. The

CDItw also shows an increase in the proportion of destitute households who do not own livestock and/or fields.

Table 4.10: CDItw by components, 1993 and 1999 (%)

Components	Destitute		Poor		Average		Well-off		Total	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Income										
0-M40	52.4	51.1	45.9	48.2	1.7	0.7	0.0	0.0	51.5	46.9
M41-M80	13.1	19.6	77.2	75.5	9.6	4.9	0.0	0.0	19.5	18.4
M81-M160	4.0	6.0	64.2	73.9	31.8	20.0	0.0	0.2	19.6	18.1
M161+	1.8	0.3	32.6	44.2	60.9	54.8	4.6	0.7	9.4	16.6
Education										
<4	60.1	61.1	38.4	37.7	1.6	1.2	0.0	0.0	33.0	28.0
5 to 7	23.2	24.4	67.7	68.2	9.1	7.4	0.0	0.0	39.9	40.2
8 to 12	6.0	6.1	55.0	60.8	38.4	32.9	0.7	0.2	26.4	31.0
13+	0.0	0.0	0.0	33.1	63.6	57.3	36.4	9.6	0.7	0.8
Employment										
0 to 25%	41.1	34.9	51.9	57.0	7.1	8.05	0.0	0.0	67.2	78.1
26 to 50%	9.7	6.8	61.6	61.7	28.3	31.1	0.4	0.4	30.1	19.9
51 to 75%	0.0	3.3	43.7	16.2	52.1	73.4	4.2	7.1	1.2	0.9
76 to 100%	0.0	2.6	25.1	21.5	55.9	75.9	19.0	0.0	1.4	1.1
Assets										
None	67.0	61.3	32.7	38.4	0.3	0.3	0.0	0.0	29.8	33.1
1 to 2	25.1	15.7	68.3	70.7	6.4	13.6	0.1	0.0	40.0	49.7
3 to 4	1.9	3.7	61.0	56.4	36.3	39.2	0.8	0.6	26.9	15.8
5+	0.0	2.1	25.7	34.2	69.4	60.5	4.9	3.2	3.3	1.5
Water										
No clean water	58.6	64.2	39.5	34.5	1.9	1.3	0.0	0.0	31.0	21.0
Covered spring	42.3	43.4	51.9	50.6	5.8	6.1	0.0	0.0	9.3	6.5
Communal	16.7	19.7	66.3	65.3	17.0	14.9	0.0	0.1	47.8	65.5
Private	3.8	3.0	46.7	41.0	45.8	54.9	3.6	1.1	11.9	7.1
Sanitation										
No toilet	47.3	50.6	49.8	47.3	3.0	2.0	0.0	0.0	60.7	51.2
Ordinary latrine	4.9	7.8	63.0	71.2	31.7	21.0	0.3	0.0	37.3	38.1
VIP	0.0	2.4	37.7	50.9	62.3	46.0	0.0	0.6	1.3	10.1
Flush toilet	0.0	0.0	15.7	13.8	35.3	72.3	49.1	13.8	0.6	0.6
Energy										
Traditional	74.6	62.9	25.4	35.3	0.0	1.8	0.0	0.0	13.1	18.1
Wood	47.7	36.5	50.6	59.2	1.7	4.4	0.0	0.0	34.3	41.4
Paraffin	11.1	8.7	71.1	72.3	17.1	19.0	0.0	0.0	41.9	30.6
Modern	0.0	0.0	29.0	35.2	66.8	63.3	4.1	1.4	10.6	9.8
Traditional wealth										
None	23.4	27.7	54.8	57.0	19.7	15.0	2.1	0.2	14.4	20.3
Field/livestock	40.4	37.5	47.2	50.4	12.2	12.2	0.1	0.0	27.5	30.0
Both	28.0	23.8	57.1	61.4	14.8	14.6	0.2	0.2	58.1	49.7
Total	30.7	28.7	54.3	57.2	14.7	13.9	0.4	0.1		

Both indices show a decline in the percentage of households with an income per member per household of less than M40. Overall there was an increase in households

that had an income per member per month above M160; however there was a significant decline in the percentage of wealthy households i.e. who had an income of above M160.

The proportion of illiterate adults (lower than Standard 4) has declined, with 40% of households holding a level of schooling of at least between Standards 5 and 7. Amongst the poor households there was an increase in adults with 13 years of schooling and above, however for the wealthy households the proportion dropped significantly.

There was a significant increase in the percentage of households with 0 to 25% of employed adults from 67% to 78% in 1999. This is in line with an observation made earlier that the rate of unemployment is on the increase in Lesotho. The proportion of households with employed adults has increased significantly (above 76%) amongst the average households, but there was a dramatic decline amongst the wealthy households.

The data show a decrease in the proportion of households without clean water. A decline was also noted among users of private water sources; this is in line with an observation made in the previous chapter. Once again communal water systems were the most common source, with the data showing a huge increase here. For the destitute, covered springs were the most common source of water.

A decline in the percentage of households that do not have toilets was noted. The percentage of households that use VIP latrines increased significantly, while the percentage of households that use flush toilets remained constant.

The data show an increase in the proportion of households that do not have access to modern energy sources. A significant increase was also noted in the use of wood, while the use of paraffin had declined. On the whole destitute households were found to use traditional fuel sources, though the percentages have declined. An increase was noted in the poor households who use wood. Paraffin was used predominately in the poor households, while average households mostly used modern energy sources. The percentage of households that use modern energy remained almost constant.

Although a decline was noted amongst destitute households that had no assets, on the whole the proportion of households without assets has increased (from 30% to 33% in 1999). A majority of households had between one and two items.

The CDItw shows that on the whole, close to half of the households owned both livestock and fields in 1999. The percentage of households without any livestock and fields has increased. Poor households made up the highest proportion of households that had both livestock and fields.

4.2   External validation

In this section a comparison is made between the results obtained using the income poverty measure and the CDI measure. Table 4.15 also includes the findings from the use of the CDItw. In 1993 the income poverty line was M50, while in 1999 it was M80. On the other hand, the CDI measure has a cut-off point at 17 points for each year, that is, every household that scored 17 points or less on the deprivation indicator was regarded as poor. The CDItw measure has a cut-off point at 20 points for each year, i.e. every household that scored 20 points or less on the deprivation indicator was regarded as poor.

Using the income poverty measure, 71% of the households were found to be poor in 1993, while in 1999 65% of the households fell into this category. The CDI measure indicates that 84% of the households were poor for both years. On the other hand, the CDItw measure shows that 85% of the households were found to be poor in 1993, and in 1999 86% of the households were poor.

The CDI measure shows that very few households were categorised as wealthy during both survey years and the proportion of wealthy households had declined. It also shows a slight increase in the proportion of poor and average households. The use of the CDI measure produces different results from the income poverty measure where about 49% of the households were classified as destitute for both years. The income poverty measure also shows a significantly higher proportion of wealthy households for both years.

Table 4.11: **Categories by type of measure and year of survey, (%)**

Category	CDI tw		CDI		Income measure	
	1993 n=293765	1999 n=376068	1993 n=293765	1999 n=376068	1993 n=293765	1999 n=376068
Destitute	30.5	28.7	42.4	38.7	49.5	49.0
Poor	54.3	57.2	41.7	45.1	15.4	18.7
Average	14.7	13.9	14.7	15.5	18.3	17.5
Wealthy	0.4	0.1	1.2	0.7	16.8	14.8

A high proportion of the households fall into the destitute category when the income poverty approach is used. This is not the case when the composite deprivation index measures are used. However, the use of the CDI measure results in a higher proportion of destitute households compared with the CDItw. The indices take into consideration the fact that while households may be cash-strapped and can therefore be considered as destitute, they still have access to other resources. In Chapter 3 I pointed out that a high percentage of households that owned livestock and fields were classified as poor. It could be argued therefore that the CDItw measure takes this into consideration and acknowledges that while these households may be living on incomes below the threshold, they still have some wealth in the form of traditional assets/wealth.

The data suggest that while households may be wealthy in terms of income, they are deprived in terms of many of the non-income measures of wellbeing. A higher proportion of destitute households is obtained when using the income measure, as the measure excludes the non-income measures of wellbeing. While many more households may appear destitute in terms of income/consumption, the composite deprivation indices result in a lower figure, as some of the households fare relatively well on some of the non-income measures of wellbeing. I commented earlier that both samples were biased towards the rural population and that problems had been encountered in capturing wealthier household data during the surveys. I also pointed out that mountain areas were the most deprived in terms of both income/consumption measures and in terms of access to services and amenities. Clearly, then, these could

account for the significantly lower proportions of wealthy households who reside in the urban areas and are, in most cases, more likely to have incomes higher than the M80 per member per month threshold as well as adult members with higher average years of schooling; higher proportions of adult members who are employed; more durable household goods; access to clean water and proper sanitation facilities; use modern energy sources for cooking; and in some instances, own fields and/or livestock.

4.2.1   Demographic and geographical profile of households

In this section an analysis of the demographic and geographical profile of the households is described.

I noted earlier that in 1993 there were more male-headed households than female-managed households and that the reverse was true in 1999. The mean age of household heads also showed that poorer households tend to have older household heads and the mean number of members per household showed that wealthier households tend to have fewer members. This was found to be true even where the composite deprivation measure was used. For both survey years, slightly more male-headed households fell into the poor category compared with female-managed households. On the other hand, slightly more female-managed households fell into the average category.

From Table 4.12 we see that there was a decline in the proportion of destitute households in the urban and mountain areas when both the composite deprivation index measures were used, while the income measure shows an increase in the proportion of destitute households in the mountain areas. The CDI measure shows an increase among the average households in urban areas, while the CDItw measure shows that this proportion remained the same. Both the income and composite index measures show a decline in the number of wealthy households in the same area. The use of the composite deprivation index shows that none of the households in the mountain areas were classified as wealthy during both survey years, unlike the income measure.

Table 4.12:   Ecological zone by type of measure and year of survey, (%)

Component	Ecological zone	Destitute		Poor		Average		Wealthy		Total	
		'93	'99	'93	'99	'93	'99	'93	'99	'93	'99
CDItw (composite measure)	Urban	9.9	6.8	55.7	61.3	31.8	31.6	2.5	0.3	15.1	16.3
	Lowlands /foothills	24.4	24.8	60.5	62.0	15.0	13.0	0.1	0.2	59.9	59.6
	Mountain /Senqu	57.7	53.1	38.7	42.6	3.5	4.3	0.0	0.0	25.0	24.1
	Total	30.5	28.7	54.3	57.2	14.7	13.9	0.4	0.1	100	100
CDI	Urban	6.4	5.6	45.3	46.7	40.9	44.8	7.3	2.9	15.1	16.3
	Lowlands /foothills	38.2	35.4	48.3	51.7	13.3	12.5	0.2	0.4	59.9	59.6
	Mountain /Senqu	74.3	69.1	23.7	28.0	2.0	3.0	0.0	0.0	25.0	24.1
	Total	42.4	38.7	41.7	45.1	14.7	15.5	1.2	0.7	100	100
Sechaba Consultants (income poverty measure)	Urban	26.9	24.3	13.2	20.1	24.6	27.0	35.3	28.7	15.1	16.3
	Lowlands /foothills	48.2	47.8	17.3	20.0	19.3	17.8	15.3	14.4	59.9	59.6
	Mountain /Senqu	66.2	68.7	12.5	14.6	12.1	10.2	9.2	6.5	25.0	24.1
	Total	49.5	49.0	15.4	18.7	18.3	17.5	16.8	14.8	100	100

The income poverty measure does not classify the urban households by economic category i.e. the distribution of the households across the four economic categories is not that clear. The measure however classifies a high proportion of the lowland and mountain households as 'destitute'. The CDI classifies most of the urban households as 'poor' or 'average'. The CDItw on the other hand, classifies a higher proportion of the urban and lowland households as poor and those in the mountains as destitute.

From Table 4.13 we see that, as in the case of the income poverty approach, the mountain areas continued to be the most deprived, even when the composite deprivation measures were used. The use of the CDI shows that a majority of the households living in mountain areas were destitute (reporting between 68% and 74% of households in 1999). Both composite deprivation index measures show that the eastern mountains had the highest proportion of destitute households. The measure also shows that Maseru had the highest proportion of average households during both years of the survey. On the other hand, the CDItw measure produces a different result. Whereas in 1993 the south-west lowlands had a higher proportion of average households, the situation was different in 1999 when Maseru had the highest proportion.

Table 4.13: Geographical sub-area by CDI and year of survey, (%)

Geographic area	Destitute		Poor		Average		Wealthy	
	1993	1999	1993	1999	1993	1999	1993	1999
Far North	36.8	28.1	46.6	56.4	·15.9	14.6	0.7	0.9
North lowlands	27.5	27.7	48.5	51.0	23.0	20.3	0.9	1.0
North-central lowlands	32.7	23.3	41.4	57.7	25.9	18.0		1.0
North foothills	45.2	37.2	44.6	53.6	10.2	8.7		0.5
North-central foothills	44.6	37.9	48.5	51.2	6.9	10.9		
Maseru	8.7	8.1	47.1	48.3	37.3	40.8	6.9	2.8
West lowlands	32.0	44.1	61.1	47.5	6.9	8.4		
Central foothills	31.4	41.6	50.7	49.1	17.8	9.3		
South-west lowlands	14.7	23.8	53.8	51.1	27.6	24.5	3.9	0.6
South-central foothills	45.9	40.8	50.7	51.3	3.4	7.4		0.6
South-west foothills	58.0	56.1	34.8	36.4	7.2	7.5		
South-east mountains	64.0	67.7	34.1	28.0	1.9	4.2		
Eastern mountains	71.1	74.5	28.1	24.5	0.8	1.1		
Central mountains	91.4	72.6	8.6	23.4		4.0		
North-east mountains	80.8	71.8	14.9	25.4	4.4	2.8		
Total	**42.4**	**38.7**	**41.7**	**45.1**	**14.7**	**15.5**	**1.2**	**0.7**

For both measures the mountain areas were worse off, though the CDI measure showed a higher proportion of poor households (97% versus 82% in 1999). While the income measured showed an increase in the percentage of destitute households in the mountain areas, the CDI showed a decrease in the proportion of the destitute in the same area. An interesting issue to note is that the use of the CDItw shows an even lower proportion of destitute household the mountain areas compared to the CDI. This may be attributed to the fact that the CDItw measure recognises the value of traditional wealth, which is most prevalent in the mountain areas

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Table 4.14: Geographical sub-area by CDItw and year of survey, (%)

Geographic area	Destitute		Poor		Average		Wealthy	
	1993	1999	1993	1999	1993	1999	1993	1999
Far North	16.3	13.8	66.0	71.8	17.0	14.1	0.7	0.4
North lowlands	21.0	22.0	55.3	58.5	23.7	19.5		
North-central lowlands	17.1	18.8	58.1	63.4	24.8	17.8		
North foothills	34.8	25.8	56.2	63.9	9.0	9.8		0.5
North-central foothills	22.5	24.1	69.4	64.9	8.1	11.0		
Maseru	11.5	8.7	57.9	61.6	28.3	29.4	2.2	0.3
West lowlands	15.9	30.2	68.0	60.8	16.1	9.0		
Central foothills	21.6	33.8	63.5	56.7	14.9	9.5		
South-west lowlands	12.9	14.1	54.6	65.2	30.8	20.7	1.7	
South-central foothills	29.8	25.0	63.2	62.7	7.1	11.7		0.6
South-west foothills	42.7	42.7	51.5	49.8	5.9	7.6		
South-east mountains	49.2	51.3	43.5	43.0	7.2	5.7		
Eastern mountains	50.2	65.8	48.3	32.3	1.5	1.9		
Central mountains	73.1	61.9	26.9	34.1	0.0	4.0		
North-east mountains	72.1	48.7	22.3	46.7	5.6	4.6		
Total	**30.5**	**28.7**	**54.3**	**57.2**	**14.7**	**13.9**	**0.4**	**0.1**

Both CDI measures show that the situation in the south-east and eastern mountain areas had deteriorated, while an improvement was observed in the central and northern mountains. The Maseru urban area had the highest proportion of average households. A decline was also noted in the proportion of wealthy households in Maseru and the south-west lowlands. The far north reported the highest proportion of poor households when the CDItw was used, whereas the use of the CDI showed that the north-central foothills had the highest percentage of poor households.

4.2.2 Identifying the most deprived: income and non-income measures

In this section the results based on the composite measure of deprivation and the income poverty measure are compared. For the purposes of analysing poverty and deprivation, it may be important to compare the most deprived groups as measured by the income poverty and by the composite index. Using the same indicators that were used by Sechaba Consultants to assess the level of poverty in Lesotho in 1993 and

1999, an analysis using the composite deprivation indices was undertaken. The results are presented in Table 4.15.

The proportion of destitute households that had incomes below the threshold remained almost the same though, on the whole, there was a decline in the percentage of households that had incomes below the threshold. The income approach and the CDI measure categorise a majority of households below the threshold as destitute, while the CDItw measure categorises them as poor. There were more destitute households when the income poverty and CDI measures were used than when the CDItw measure was used.

The income poverty measure shows a higher proportion of destitute households having an income below the M80 per member per month threshold. This is because the M80 per member per month is used to determine the poverty line in this instance. The income poverty measure just focuses on the income of households, regardless of other deprivations.

While the composite measures showed a lower proportion of destitute households spending less than the thresholds for major expenditure, clothing, health and education, the income measure showed a higher proportion of households. All the measures showed a decline in the proportion of destitute households that spent less than the thresholds on all expenditure items, with the exception of expenditure on education, where the percentage of destitute households remained constant when using the income measure.

The CDI measure showed an increase in the percentage of destitute households with no sanitation facilities, no fields and with crowded homes. The same measure also shows a decline in the proportion of destitute households with no clean water, no modern fuel and households that had less than the FAO standard of 180 kg of cereals per member per year. The proportion of destitute households that had no livestock remained the same.

Table 4.15: Component by type of measure and year of survey

Components		Destitute	Poor	Average	Well-off	Total
Household monthly income						
CDItw						
1993	< M50	41.6	54.5	3.93	0.0	71
1999	< M80	42.5	55.6	1.9	0.0	65
CDI						
1993	< M50	57.5	38.5	3.9	0.0	71
1999	< M80	56.7	41.6	1.7	0.0	65
Sechaba Consultants						
1993	< M50	69.4	21.8	5.6	3.3	71
1999	< M80	73.6	24.6	0.0	0.0	65
Household monthly major expense						
CDItw						
1993	< M50	33.4	55.3	11.2	0.1	91
1999	< M80	30.9	57.8	11.1	0.2	92
CDI						
1993	< M50	46.2	41.8	11.5	0.5	91
1999	< M80	41.7	45.0	12.8	0.4	92
Sechaba Consultants						
1993	< M50	53.6	16.4	17.9	12.2	91
1999	< M80	52.4	19.3	16.6	11.7	92
Household yearly clothing expense						
CDItw						
1993	< M10	42.7	49.4	7.7	0.1	59
1999	< M16	36.7	54.8	8.4	0.1	63
CDI						
1993	< M10	56.8	34.6	8.4	0.2	59
1999	< M16	48.6	42.1	8.9	0.4	63
Sechaba Consultants						
1993	< M10	66.4	13.7	11.8	8.1	59
1999	< M16	60.4	17.6	13.1	8.9	63
Household yearly health expense						
CDItw						
1993	< M10	37.3	53.1	9.3	0.3	62
1999	< M16	33.4	55.7	10.8	0.1	75
CDI						
1993	< M10	51.6	38.3	9.1	0.9	62
1999	< M16	44.3	43.3	12.0	0.4	75
Sechaba Consultants						
1993	< M10	58.0	14.6	15.6	11.8	62
1999	< M16	54.2	18.2	15.4	12.2	75
Household yearly education expense						
CDItw						
1993	< M50	49.1	46.2	4.6	0.1	38
1999	<M80	43.8	51.6	4.6	0.0	43
CDI						
1993	< M50	62.9	32.2	4.2	0.7	38
1999	<M80	57.8	37.2	4.9	0.1	43
Sechaba Consultants						
1993	< M50	68.4	13.4	11.5	6.7	38
1999	< M80	68.1	16.4	10.9	4.6	43

Table 4.15 continued:

Components	Destitute	Poor	Average	Well-off	Total
Extent of crowding (>3 members per room)					
CDItw					
1993	35.4	57.1	7.6	0.0	32
1999	40.9	53.9	5.2	0.0	23
CDI					
1993	50.8	40.3	8.8	0.1	32
1999	53.5	39.6	6.7	0.1	23
Sechaba Consultants					
1993	53.5	18.4	16.3	11.8	32
1999	60.6	20.1	14.2	5.1	23
Food security (< 180 kg per member per year)					
CDItw					
1993	31.4	53.8	14.4	0.4	92
1999	28.9	57.3	13.6	0.1	97
CDI					
1993	43.0	41.3	14.5	1.3	92
1999	38.9	45.0	15.4	0.8	97
Sechaba Consultants					
1993	49.9	14.9	18.4	16.8	92
1999	49.3	18.8	17.3	14.5	97
***No clean water**					
CDItw					
1993	56.9	41.2	1.9	0.0	36
1999	59.3	38.3	2.4	0.0	27
CDI					
1993	71.6	26.3	2.1	0.0	36
1999	69.8	27.8	2.4	0.0	27
Sechaba Consultants					
1993	61.6	13.8	15.0	9.6	36
1999	61.8	16.8	13.2	8.3	27
***No toilet**					
CDItw					
1993	47.3	49.8	3.0	0.0	61
1999	50.6	47.3	2.1	0.0	51
CDI					
1993	64.1	33.5	2.4	0.0	61
1999	65.7	32.9	4.8	0.0	51
Sechaba Consultants					
1993	60.7	14.8	14.5	9.9	61
1999	62.0	17.5	12.8	7.7	51
***No modern fuel**					
CDItw					
1993	60.8	38.1	1.1	0.0	35
1999	44.5	51.9	3.6	0.0	60
CDI					
1993	79.8	19.4	0.8	0.0	35
1999	61.3	36.4	2.3	0.0	60
Sechaba Consultants					
1993	75.7	11.8	9.4	3.1	35
1999	62.9	19.1	11.9	6.0	60

Table 4.15 continued:

Components	Destitute	Poor	Average	Wealthy	Total
*No livestock					
CDItw					
1993	34.6	50.5	13.5	1.3	23
1999	34.3	53.7	11.8	0.2	30
CDI					
1993	30.4	44.5	21.4	3.8	23
1999	30.2	45.7	21.9	2.2	30
Sechaba Consultants					
1993	45.5	13.9	17.4	23.2	23
1999	41.3	18.6	20.8	19.4	30
*No fields					
CDItw					
1993	29.3	51.9	17.7	1.0	33
1999	30.1	54.5	15.2	0.1	41
CDI					
1993	26.4	45.0	25.2	3.4	33
1999	27.1	46.0	25.4	1.5	41
Sechaba Consultants					
1993	37.0	14.8	22.3	25.9	33
1999	38.4	18.5	23.4	19.7	41

Please note: All indicators marked with an asterisk (*) were included in the composite deprivation index.

The percentages of households without access to clean water, sanitation facilities and modern energy sources, result in the observed higher proportions of destitute households when the composite measures are used, compared with when the income measure is used. The worse-off households in the deprivation measure fare much worse than the people in the poorest income category. This is because their incomes are offset by other deprivations. A significantly larger number of households were drawn from households with no employed adult; low education levels; poor access to water, sanitation and energy sources; crowded homes; poor food security and no assets.

Summary of findings:

The following emerged as the most salient features of the analysis:

- There was a decline in the proportion of poor households when the income poverty measure was used, while the CDI measure showed that the proportion of poor households had remained constant.

- The composite measure results in significantly fewer wealthy households than the income poverty measure.

- The composite measure showed that poor households were made up of older household heads and had a higher mean number of members.

- The use of the composite measures showed that the proportion of destitute households in the urban and mountain areas had declined.

- None of the households in the mountain areas was classified as wealthy when using the composite measures.

- The mountain areas were found to be the most deprived in both composite measures and the income measure.

- The income poverty measure showed a higher proportion of destitute households than the composite measures.

- CDI measure showed a lower proportion of destitute households spending less than the threshold for all expenditure items than the figures obtained by Sechaba Consultants (i.e. using the income poverty measure).

- All three measures showed a decline in the percentage of destitute households who spend less than the income and expenditure thresholds, with the exception of expenditure on education (as projected by the Sechaba Consultants) where the figure remained constant.

- The income poverty measure focuses on income alone and excludes all other non-income measures of poverty, while the CDI measures include both income and non-income measures of poverty.

- The composite measures show that the worst off households fare much worse than the households in the poorest income quintile.

- The composite measures show that the sample was made up of a significantly larger number of households with no employed adult, low education levels, poor access to water, sanitation and energy sources, crowded homes, households with poor food security and no assets.

- The income poverty measure does not seem to recognise the households that have slightly higher incomes but are deprived in many other ways.

4.3 Conclusions

Below I highlight the salient points that emerged from the analysis:

- The composite deprivation index measure results in slightly lower proportions of destitute households than the income poverty measure.

- Both measures place the majority of the worst-off households in the mountain areas. Both measures classify 69% of mountain households as severely deprived in 1999. This may be attributed to the low levels of services (water, sanitation and energy) in these areas.

- Both measures suggest that high proportions of the most severely deprived households were made up of older household heads that have higher mean numbers of household members.

- It would seem that the composite index is able to identify a group of people who are subject to higher levels of deprivation than suggested by the income poverty measure alone.

The discussion suggests that, while corresponding relatively closely, there are significant differences between the two methods of identifying the most deprived groups. This should not come as a surprise since I noted in the literature that the concepts and indicators used to measure poverty/deprivation play a significant role in identifying the poor, and that the use different concepts and indicators of poverty identify different groups with different characteristics as poor. While the income measure seems to capture only those households who have low incomes, the CDI, on the other hand, takes other forms of deprivations into consideration. This is clearly an indication that there is a need for different strategies to be used in the attempts to alleviate poverty and deprivation.

While use was made of two types of composite deprivation measures, one is more applicable to the rural setting where households have better access to land and livestock. The exclusion of traditional wealth from the index results in a high proportion of households being categorised as destitute. The figures on the distribution of deprivation showed that none, or very few, of the households included in the two surveys had complete access too all the capabilities required to meet the

levels of least deprivation, thus indicating that a high proportion of the households in the survey were poor.

Chapter 5

Conclusions and Recommendations

In this section conclusions and recommendations are made based on the different chapters of the report. Firstly, the conclusions that can be drawn from the literature are discussed, followed by a discussion of those based on the section on the household profiles. Finally, I discuss my conclusions and recommendations on the alternative measures of poverty.

5.1 Literature on poverty and the measurement of poverty

Poverty has many aspects and, as a result, many definitions. No one definition in itself is able to capture all the aspects of poverty. This implies that there is no perfect set of poverty indicators that simultaneously captures all the aspects of the phenomenon. Current trends in defining poverty have shifted towards the inclusion of more subjective definitions and approaches to the study of poverty and its measurement.

The availability of data almost always dictates the chosen methods in the construction of poverty lines and hence also the definition of poverty to be used. Thus different definitions do not necessarily identify the same people as poor.

My literature survey provided persuasive arguments for not viewing the poor as a homogenous group. This therefore calls for the use of more than one poverty line. It is important to provide information on the extent, depth and severity of poverty within a country at a specific point in time and an indication of the trends.

The literature survey also showed that the definitions that one chooses have a direct bearing on the measurement options and indicators one uses. It is therefore essential that one should be clear on exactly what one wants to measure and why, before selecting a set of poverty indicators. From a policy perspective, it would seem that the definitions and measurement of poverty should correspond to the specific policies under consideration.

5.2   Household profiles

In view of the issues highlighted in the literature survey, I undertook a secondary data analysis of the 1993 and 1999 poverty studies undertaken by Sechaba Consultants in Lesotho. My study was aimed at creating a better understanding of poverty, providing a comparative analysis of the situation and testing for the inferential validity of the results produced by Sechaba Consultants. According to Hakim (1982), secondary analysis does not necessarily imply that the focus of the study differs from that of the original analysis. Existing datasets can be reanalysed with a view to challenging the conclusions of the original researcher.

While the comparative analysis of the situation was being carried out, appropriate statistical analysis techniques were used. Reference was also made to the detailed literature survey conducted at the start of the study on poverty and the measurement. In this way the inferential validity of the results was tested. The results obtained are similar to those obtained by Sechaba Consultants; thus one can conclude that the results are valid.

The results obtained from the two surveys portray a gloomy picture of the wellbeing of the households. The results show that the status of the households was much worse in 1999 than they had been in 1993. The rural areas were the most affected in terms of lack of income and amenities. The results also show that the distribution of wealth is skewed, with the mountain areas being the most deprived as far as income, expenditure, assets, household size, education, employment, food sufficiency, and access to basic services are concerned.

The distribution of poverty by gender shows a mixed picture, with regards to expenditure on basic needs. In 1999 total monthly income per member was almost equal regardless of gender of household head.

Since 1993 there have been a number of negative developments/trends as far as the wellbeing of most of the households in the samples are concerned. The percentage of employed persons declined, the most affected employment categories being mine work and wage work. The use of traditional energy sources increased, while that of

modern sources declined. Ownership of private water sources also declined. The mean kilograms of cereals per member and the percentage of households with less than the FAO standard of 180 kg of cereals per person per year also dropped. The percentage of households with bank accounts declined and expenditure on health per person per annum remained the same. These negative developments can only mean that the wellbeing of many Basotho will further deteriorate if nothing is done to alleviate the situation. The increased use of traditional energy sources and the decline in the ownership of private water sources implies that women and children will probably suffer the most since they are the collectors of water and wood. The decline in the level of field and livestock ownership, which is considered as a form of traditional wealth especially in the rural areas, is likely to exacerbate the levels of poverty in the mountain areas as this is where ownership was found to be highest.

While a number of negative trends were observed there were also a couple of positive ones. The proportion of households who have literate members, persons employed in casual labour and self-employment activities and households with some Lesotho based wage worker/s have increased. This can be seen, as an indication that there is the possibility of an improvement in the wellbeing of certain households should there be opportunities of employment.

Another positive sign is that there has also been an increase in the proportion of households that use safe water (in particular communal water sources) and toilets. The extent of crowding within households has also declined. Radio ownership remained constant. Expenditure on clothing per person and education per child (aged 6-15) has also gone up. Use of safe water, proper sanitation facilities and less crowding are strongly correlated with improved health. It can therefore be concluded that should such improvements continue, a higher proportion of households would be able to lead healthier lives. According to Rowntree's definition of poverty households are regarded as poor if they cannot adequately fulfil their basic needs with regard to education, health, nutrition, sanitation, shelter and water. The results also show that in as far as the provision of such basic needs as clothing, education, sanitation, shelter and water are concerned, a higher proportion of households were able to meet these needs in 1999 than in 1993.

5.3   Alternative measures to poverty

I constructed two composite deprivation indices as an alternative measure of poverty. These were aimed at measuring poverty from the perspective of broad human development. These indices took into account the fact that poverty is a multi-dimensional phenomenon as it includes both the material and non-material aspects of wellbeing. One measure was a composite index of the following seven indicators: income, education, employment, durable household goods, water, sanitation and energy. The second measure was also made up of the seven indicators, with the addition of traditional wealth (livestock and fields). The measures classify everybody who is poor across all these dimensions, as poor.

Ringen (1985) suggests that as an alternative to the conventional subsistence minimum concept or income based concept of poverty, a relative deprivation concept of poverty should be developed, and argues that it should be identified as the accumulation of deprivation of both resources and way-of life-indicators. He goes on to argue that for us to identify the poor, we should know who is deprived, both in terms of resources and way of life. The indices that I created seem to fit this concept since they include both resource and way-of-life indicators.

It can also be argued that the composite deprivation index measures are derived from a relative perspective of poverty, that is, they take into consideration that poverty is having less than others in society. This is why I have argued that the use of the composite deprivation index, which includes traditional wealth, is more applicable when used to measure deprivation in the rural areas of Lesotho since here most households own land and/or livestock. From the analysis it became clear that few households in the urban areas own these physical assets. The composite deprivation index on the other hand would therefore be more applicable for assessing the level of deprivation country-wide since the indicators included in its construction apply throughout the country.

The use of the composite deprivation index with traditional wealth is not advisable for planning and policy formulation as it further alienates the rural poor. The results show that while the income poverty measure and composite deprivation index measure

categorised a high proportion of households as destitute, the composite deprivation index with traditional wealth categorised most households merely as poor. This is because the presence of traditional wealth gives the illusion that these households are better off than they actually are. Also wealth accrued from land and livestock is highly influenced by climatic conditions and cropping seasons. It should be noted however that the composite deprivation index with traditional wealth measure would be suitable for measuring the transitory poor, and would enable the formulation of policies designed to even-out the income and consumption of the poor.

On the other hand the use of the CDI without traditional wealth produces a more comprehensive understanding of deprivation and would therefore be useful for making sounder poverty/deprivation alleviation policies. This measure goes a step further than the income poverty measure as it takes into consideration households that are deprived in both income and non-income measures of poverty. The results show that the composite deprivation index classifies slightly fewer households as destitute, and significantly fewer households as wealthy than the income measure does. This can be explained by the illusion that more households appear wealthy where non-income measures are ignored and the classification is based on income measures alone.

The discussion suggests that while corresponding relatively closely, there are differences between the two methods of identifying the most deprived groups. The income measure seems to capture only those households that have low incomes in isolation, without regard for the other forms of deprivation. On the other hand, the composite deprivation index is able to identify households that suffer higher levels of deprivation than suggested by the income poverty measure alone. The income poverty approach produces a headcount of the percentage of households whose income is below the poverty line, and is insensitive to other deprivations that make poor households poorer. It can therefore be argued that income alone is an insufficient indicator of deprivation.

The results obtained when the composite deprivation index is used are consistent with those produced by the income poverty measure. Both measures show that a majority of the worst-off households are situated in the mountain areas.

Both measures suggest that high proportions of the most severely deprived households are made up of those household with older heads and which have higher mean numbers of household members.

The analysis shows that poverty is not simply lack of income but rather a lack of income, access to services, human capital and assets.

The results show that deprivation as measured by the standard of living or living conditions approach produces different results than when poverty is measured by income alone. Ringen (1985) also made this observation.

5.4   Recommendations

Below I present the recommendations that can arise from the findings of this study. First, I look at those recommendations that relate to the distribution of poverty, then I look at those relating to the income poverty measure and finally those that arise from the newly constructed composite deprivation index.

The recommendations made by Sechaba Consultants with regards to the geographic distribution of poverty still hold, and attempts should be made to implement them. For example, anti-poverty efforts such as public works and pilot pension schemes should concentrate on the mountains. Paraffin and gas should be exempt from tax in the mountains and efforts to expand water supply to the mountains should be accelerated. Government should redirect some of its resources to serve the deprived mountain communities.

It is recommended that an update on the minimum amount necessary to meet the basic needs be carried out. The information used thus far was based on updated data[8] from interviews conducted with poor people in 1991 about the minimum basket of supplies that they required for maintaining the household. These included maize meal, cabbage, tea, sugar, paraffin, matches and soap, as well as some cash to maintain the house and buy a minimum of clothing, but did not include all the items as outlined by Rowntree and others. The data to be collected should include the minimum amount

necessary to meet a households' food, clothing, medical, educational and housing needs.

It is also recommended that in the replication of this study expenditure data be used as opposed to income data. This should be done so as to explore whether similar results will be obtained when expenditure data is used. The reason for this is that income is usually understated in social surveys and expenditure data is usually the most preferred.

Additional work needs to be carried out on the construction and application of the composite deprivation index. There is a need to include all the possible questions that are to be included in the index for the applicability of this index in the context of Lesotho to be further tested. This will permit the creation of a more comprehensive deprivation index related to the broad human development perspective and standards of living approach shown in the literature. Besides income, questions on expenditure on food, health care and nutrition, quality of housing, transport and others should be included.

The results show that while income poverty is an important measure, income poverty reduction alone will not solve the problem of multiple deprivations. Clearly then these differences in income-based and the broader measures of deprivation indicate the need to examine broader measures of deprivation for policy and targeting purposes. The reduction of income poverty is still crucial as it plays a significant role in reducing some of these deprivations, but other strategies that focus directly on reducing non-material deprivations should also be implemented.

While absolute and objective poverty lines empower the poverty reduction agenda and encourage appropriate resource allocation, such as increasing the income of the poor, the results show that employment levels are decreasing. This suggests that there is a need to formulate policies that are aimed at alleviating other forms of deprivation. In order to do this, better-informed policy guidance is needed. I therefore recommend that the CDI be used as an additional measure to the conventional income based

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[8] The figure that was obtained in 1991 was updated using the national inflation figures for the intervening years to get the figures used in 1993 and 1999.

measure of poverty. This measure not only provides a more comprehensive understanding of poverty but also results in richer and better-informed policy guidance.

Poverty alleviation is usually high on the agenda of most governments and the focus of most governments and development agencies has shifted towards a broad human development perspective. It can therefore be argued that the use of the index could provide valuable insights for purposes of monitoring and budgetary allocations for poverty alleviation programmes.

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Annex 1

Area and Constituency Map of Lesotho
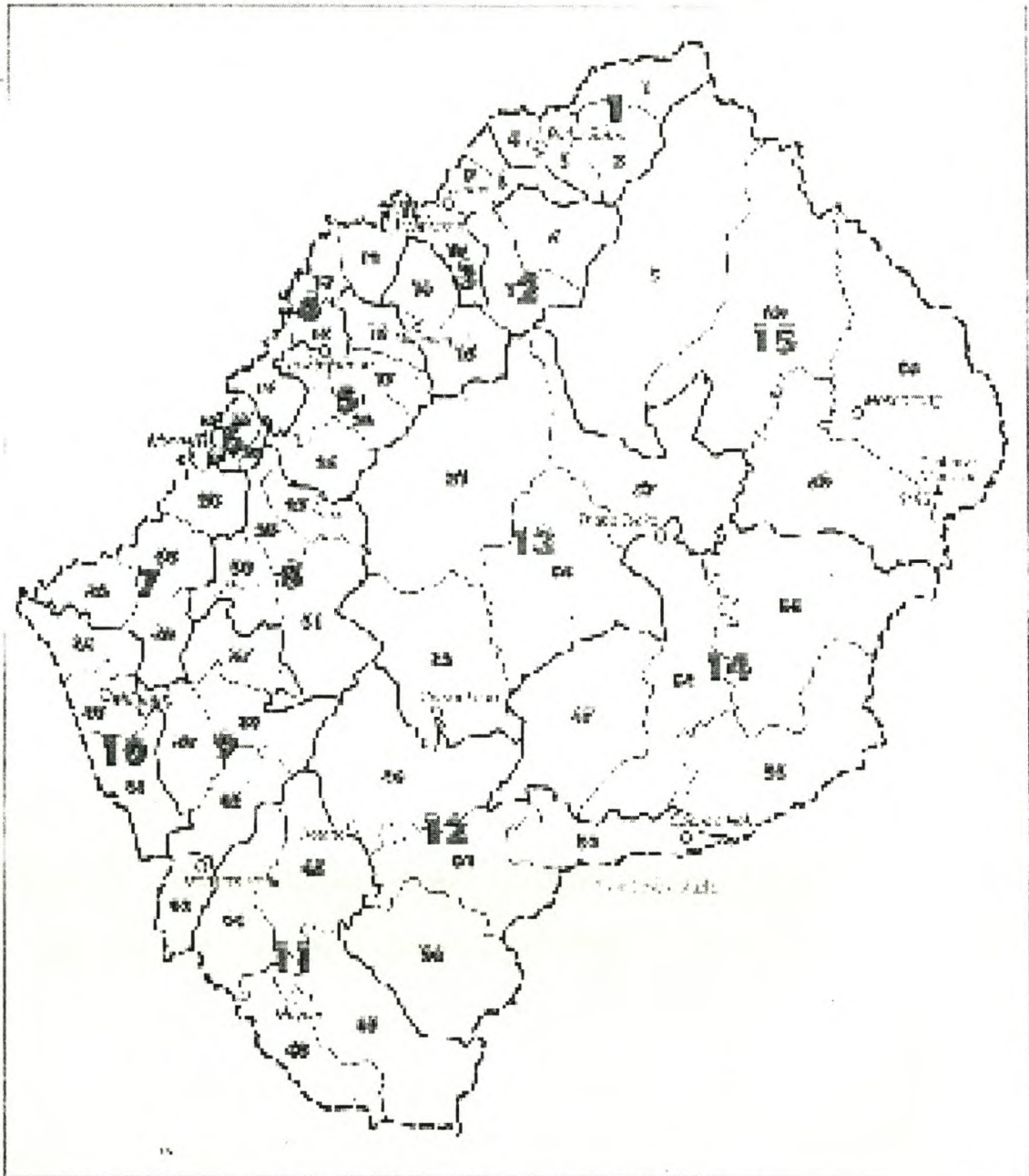
Lesotho is divided into five ecological zones, namely, urban, lowlands, foothills, mountains and the Senqu valley. However, for comparative reasons with the Sechaba Consultants studies ('93 & '99) only three were used, namely, urban, lowlands/foothills, and mountains/Senqu valley.

The geographic areas used in the study, and the constituencies that make them up (the constituency numbers are in parentheses) are listed by number as follows:

1.   Far north lowlands and foothills

Matsoaing (1), Tsime (2), Qalo (3), Lipelaneng (4)

2.   Northern lowlands

Nqechane (8), Qoqolosing (9), Likhakeng (10), Likhetlane (11)

3.   North central lowlands

Manka (12), Kolonyama (13), Teyateyaneng (18), Berea (19)

4.   Northern foothills

Pela-Tsoeu (6), Mphosong (7), Koeneng (14), Mosalemane (15)

5.   North central foothills

Khafung (16), Malimong (17), Thupa-Kubu (20), Matela (26)

6.   Maseru urban and peri-urban

Maseru north (22), central (23), south (24), and east (25)

7.   Western lowlands

Qeme (28), Tsoaing (33), Thaba-Phechela (34), Boleka (36)

8.   Central foothills

Maama (27), Koro-Koro (29), Thabana-Ntsonyana (30), Makhaleng (31)

9.   Southwest lowlands

Qalabane (35), Mafeteng (40), Taung (41), Mohale's Hoek (43)

10.   South central foothills

Maliepetsane (37), Masemouse (38), Thabana-Morena (39), Mpharane (42)

11.   Southwest foothills

Mekaling (44), Qaqatu (45), Moyeni (48), Sebapala (49)

12.   Southeast mountains

Thaba-Telle (46), Tosing (50), Qhoali (51), Qacha's Nek (52)

13.   Eastern mountains

Hloahloeng (47), Tsoelike (53), Thaba-Chitja (54), Mashai (55)

14.   Central mountains

Senqunyane (21), Maletsunyane (32), Thaba-Moea (56), Matsoku (57)

15.   Northeast mountains

Malibamatso (5), Bobatsi (58), Mokhotlong (59), Khubelu (60)

Annex 2

Household Survey Questionnaires

Poverty in Lesotho, 1994: A Mapping Exercise

STUDY TO DETERMINE AREAS IN NEED OF DROUGHT ASSISTANCE

District: _____ Ecozone: _____ Constituency: _____ Village: _____

Interviewer: _____ Date: _____ Household No. _____

1. HOUSEHOLD INFORMATION

HHD MEMBER	SEX	AGE (YRS)	REL TO HHD HEAD	MARITAL STATUS	HIGHEST SCHOOL	YEARS OF SCHOOL	PLACE OF RESIDENCE	TYPE OF WORK	BRINGS INCOME? 1 CASH 2 KIND 3 NO
HEAD									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

SEX
1. Male
2. Female

RELATION TO HH HEAD
0. None
1. Head
2. Spouse
3. Child
4. Grandchild

MARITAL STATUS
0. Unmarried
1. Married
2. Divorced
3. Separated
4. Widowed
5. Abandoned
9. Unknown
5. Child-in-law
6. Parent-in-law
7. Other relative

TYPE OF OCCUPATION
0. Inactive
1. Farmer
2. Household work
3. Mines
4. Farm work RSA
5. Skilled work RSA
6. Other work RSA
7. Construction
8. Civil servant
9. Wage worker
10. Teacher
11. Health worker
12. Shop worker
13. Scholar
14. On pension
15. Casual labour
16. Shepherd
17. Job seeker
18. Self employed (specify)
19. Other (specify)

PLACE OF USUAL RESIDENCE
1. This household
2. Other HHD same village
3. Nearby village
4. Maseru
5. Other Lesotho
6. RSA
7. Other (specify)

2. INFORMATION ON CHILDREN UNDER 6 YEARS OF AGE (use codes or specify other disease)

Member no. from 1	Age in months	Height in centimetres	Weight in kilograms	Illnesses in last 2 weeks	
					1 Respiratory
					2 Intestinal
					3 Malnutrition
					4 Skin & tissue
					5 Viral disease

3. NUMBER AND TYPE OF HOUSES IN HOUSEHOLD

Rondavels _____ Flats _____ Heisi _____ Optak _____ Total rooms _____

4. CEREAL STOCKS IN HOUSEHOLD (bags and tins)

Maize ___/___ Sorghum ___/___ Wheat ___/___ Phoofo _____ (units) _____

HAVE YOUR HOUSEHOLD RECEIVED FOOD AID? Yes   No   If yes, how many times? _____

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5. HOUSEHOLD POSSESSIONS

Item	No.	Item	No.	Item	No.
Plough		Sewing/knitting machine		Coal stove	
Planter		Television		Scotch cart	
Harrow		Radio		Tractor	
Cultivator		Gas stove		Vehicle	

6. HOUSEHOLD OWNERSHIP OF FIELDS AND LIVESTOCK

LIVESTOCK TYPE	NO. OWNED BY TYPE	FIELDS/FENCED GARDEN > .1 HECTARE	FIELD NO.	PLANTED 1993 YES OR NO	SIZE	CODE	CODES
Cattle		No. owned	Field 1	Y N			1 m x m
Equines		No. rented in	Field 2	Y N			2 hectares
Small stock		No. rented out	Field 3	Y N			3 English acres
Fowls	Pigs	No. sharecropped	Field 4	Y N			

7. CROP PRODUCTION DURING THE LAST SEASON (1992) (Give amounts in bags and tins)

Field No.	Crop grown 1 Maize 2 Wheat 3 Sorghum	Harvested 1992	Sold or given away 1992	Cut already 1993	Sold or given away 1993	Still on field 1993	Experienced theft 1993 Yes or No
1		___/___	___/___	___/___	___/___	___/___	Y N
2		___/___	___/___	___/___	___/___	___/___	Y N
3		___/___	___/___	___/___	___/___	___/___	Y N
4		___/___	___/___	___/___	___/___	___/___	Y N

8. HOUSEHOLD INCOME   Monthly   Other   Period

	Monthly	Other	Period
Wage work in Lesotho	___	___	___
Mine work in RSA	___	___	___
Other work in RSA	___	___	___
Casual labour in Lesotho	___	___	___
Farm products	___	___	___
Livestock & products	___	___	___
Informal business	___	___	___
Pensions/disability	___	___	___
Gifts	___	___	___
Other (specify)	___	___	___

9. HOUSEHOLD FACILITIES (circle if used now)
(tick if exists but not used)

WATER SUPPLY	FUEL	TOILET
1. Piped on site	1. Electric	1. WC
2. Private borehole	2. Gas	2. VIP (NRSP)
3. Communal piped	3. Coal	3. Other VIP
4. Communal handpump	4. Paraffin	4. Latrine
5. Covered spring	5. Govt wood	5. Bucket
6. Other spring	6. Other wood	6. Fly screen
7. Rainwater tank	7. Dung	7. None
8. River	8. Crop residue	
9. Dam	9. Shrub/weeds	

Minutes to collect: _____   _____

9. DOES ANYONE IN THE HOUSEHOLD HAVE A BANK ACCOUNT NOW? 1. Yes   2. No   Amount _____

10. EXPENDITURES IN LAST WEEK

Phoofo _____   Moroho _____   Sugar _____   Fuel _____   Water _____   Travel _____

11. EXPENDITURES IN LAST 6 MONTHS

School _____   Health _____   Building _____   Furniture _____   Animals _____   Clothing _____

12. FARMING EXPENDITURES THIS SEASON

Fertilizer _____   Seed _____   Pesticide _____   Ploughing _____   Labour _____

13. HORTICULTURE Number of fruit trees _____   Number of garden crops _____

POVERTY 1999 HOUSEHOLD INFORMATION

District _____ Ecozone _____ Constituency _____ Village _____ Name of head _____

Interviewer _____ Date _____ Field Check _____ Supervisor _____ DE _____ Interviewee _____

Districts: 1 Butha-Buthe 2 Leribe 3 Berea 4 Maseru 5 Mafeteng 6 Mohales Hoek 7 Quthing 8 Qachas Nek 9 Mokhotlong 10 Thaba-Tseka

Ecozone: 1 Lowlands 2 Foothills 3 Mountains 4 Senqu Valley 5 Urban

1. HOUSEHOLD INFORMATION

HHD. member	Sex	Age	Rel to head	Marital status	Highest school	Years in school	Income status	Occup-ation	Hours last week	Where working	Months away/yr	Decides on what	Place living	Group member
Head														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														

SEX
1 Male
2 Female

RELATION TO HEAD
0 None
1 Head
2 Spouse
3 Child
4 Grandchild
5 In-law
7 Parent
8 Grandparent
9 Sibling
10 Other ___

MARITAL STATUS
0 Unmarried
1 Married
2 Cohabiting
3 Divorced
4 Separated
5 Abandoned
6 Widowed
7 Other

INCOME STATUS
1 Wage income this year
2 Own income this year
3 Wage income only last year
4 Own income only last year
5 No income either year

TYPE OF WORK
0 None
1 Farmer
2 House work
3 Mines
4 Farm RSA
5 Wages RSA
6 Other RSA
7 Construction
8 Civil servant
9 Wage worker

10 Teacher
11 Health work
12 Shop work
13 Scholar
14 On pension
15 Casual labour
16 Shepherd
17 Job seeker
18 Self employed
19 Servant
20 Other ___

DECIDES ON WHAT
1 Schooling
2 Building
3 Health
4 Crops
5 Big purchases
6 Feasts
7 Livestock
8 Birth control
9 Everything
10 Other ___

PLACE LIVING OR WORKING
1 This household
2 This village
3 Nearby village
4 Maseru
5 Other Lesotho
6 RSA
7 Other ___

GROUP MEMBER
0 None
1 Church
2 Burial society
3 Stokfele
4 Farmers group
5 Sports group
6 Youth group
7 Choir
8 VDC
9 Land allocation

10 Women's group
11 Communal saving
12 Cooperative
13 Other ___

2. RELIGION: Catholic ___ LEC ___ Anglican ___ Methodist ___ AME ___ Pentecostal ___ Zionist ___ Muslim ___ None ___ Other ___

PREGNANCY HISTORY (What members under 50 have been pregnant?)

Member number	Pregnancy number	ANC or not	Where ANC	If no why	ANC card	Out-come	Prob-lems	Where delivered	PNC or not	If no why	Where PNC	Birth registered

WHERE ANC
WHERE DELIVERED
WHERE PNC
Self
Traditional birth attendant
Village health worker
Traditional healer
Health centre/hospital
Private doctor
Other_____

IF NO WHY
1 Didn't know
2 No money
3 Too far
4 Other_____

OUTCOME
1 Full-term live birth
2 Full-term still birth
3 Premature live birth
4. Premature still birth
5 Caesarian section
6 Vacuum delivery
7 Forceps delivery
8 Other_____

PROBLEMS
0 No problem
1 Heavy bleeding while pregnant
2 Heavy bleeding at birth
3 Prolonged labour
4 Infection in first 24 hours
5 Other_____

BIRTH REGISTERED
1 No
2 Chief
3 District secretary
4 Other_____

ANC OR NOT, ANC CARD, PNC OR NOT: 1 yes   2 no

INFORMATION ON CHILDREN UNDER 5 YEARS OF AGE

Member number	Age in months	Height in cm	Weight in kg	Number BCG	Number polio	Number measles	Number DPT	Months breastfed

NUMBER AND TYPE OF HOUSES IN HOUSEHOLD

Rondavels _____ Flats _____ Heisi _____ Optak _____ Total rooms _____
Rooms Owned _____ Provided _____ Rented _____ Monthly rental _____ Rooms Rented out _____ Monthly rental _____

CEREAL STOCKS IN HOUSEHOLD (bags and tins)

Maize ___/___ Sorghum ___/___ Wheat ___/___ Phoofo _____ kg

HOUSEHOLD ASSETS (put the number of the responsible household member in column 1, and number of items owned in column 2. column 3 put the number of the item bought (or used, for crops) in the year, and in column 4 the number sold in the year)

	Owner	No	Bght year	Sold year		Owner	No	Bght year	Sold year		Owner	No	Bght year	Sold year
Fields					Donkeys					Plough				
Cattle					Pigs					Planter				
Sheep					Chickens					Cart				
Goats					Fruit trees					Tractor				
Horses					Other trees					Car/bakkie				

	Owner	No	Bght year	Sold year		Owner	No	Used year	Sold year	Bght year	Given away
Radio					Bags cereals '98						
TV					Bags cereals '97						
Sewing machine					Tins pulses '98						
Knitting machine					Tins pulses '97						
Gas/electric/coal stove					Garden crops '98						

8. HOUSEHOLD FACILITIES (Circle main use, tick others used)

WATER SUPPLY	FUEL	TOILET	LIGHTING
1 Piped on site	1 Electric	1 WC	1 Mains electricity
2 Private borehole	2 Gas	2 VIP with fly screen	2 Solar electricity
3 Purchased	3 Coal	3 VIP no fly screen	3 Gas
4 Communal piped	4 Paraffin	4 Ordinary latrine	4 Paraffin
5 Communal handpump	5 Wood	5 None	5 Candles
6 Covered spring	6 Dung		6 Firewood
7 Other spring	7 Crop residue		7 Other_____
8 Rainwater tank	8 Shrub/weeds		
9 River	9 Other_____		
10 Dam			
11 Other_____			
HOURS SPENT DAILY	HOURS SPENT DAILY		
_____	_____		

9. HOUSEHOLD INCOME IN LAST 12 MONTHS

TYPE	AMOUNT	TIME UNIT (IF ANY)	TIMES YEARLY	MEMBER EARNING	PRIORITY LEVEL (list most valued sources of livelihood)
Wage work in Lesotho					
Mine work in RSA					
Other work in RSA					
Casual work in Lesotho					
Road construction					
Other fato-fato					
Food aid (in maloti)					
Rentals					
Sale of crops					
Sale of vegetables					
Sale of animals					
Sale of animal products					
Sale of wool/mohair					
Sale of joala (net)					
Sale of dagga (net)					
Sale of beer (net)					
Sale of assets (net)					
Formal business (net)					
Hawking (net)					
Sale of fruit/veg (net)					
Other sale (net)					
Informal business (net)					
Pension/disability					
Gifts _____					
Other _____					

10. TOTAL IN SAVINGS/BANK ACCOUNT Lesotho_____ RSA_____

11. LOANS FROM OUTSIDE FAMILY > M100 IN LAST 12 MONTHS

Loans sought: yes____ no____ Successful: yes____ no -__ Source_____ Purpose_____

Source: 1 Church 2 Union 3 Friends 4 Employer 5 Bank 6 Burial society 7 Savings group 8 Other_____
Purpose: 1 Schooling 2 Construction 3 Health 4 Business 5 Vehicle 6 Feast 7 Agriculture 8 Other_____

12. EXPENDITURES IN LAST 6 MONTHS

Furniture_____ Animals_____ Clothing_____ School_____ Health_____ Building_____ Gift_____ Feasts_____

13. AGRICULTURAL EXPENSES IN LAST 12 MONTHS

Fertilizer_____ Seed_____ Pesticide_____ Ploughing_____ Labour_____

14. FOODS EATEN YESTERDAY Papa____ Moroho____ Milk____ Eggs____ Bread____ Meat____ Fish____ Fruit____ Salad____
Other_____ Number of meals____

15. MIGRATION

When was the household established in its present location? _____

	Country	District (codes on p. 1)	Ecozone (codes on p. 1)	Village
Origin of household if moved or of head if new				
Most recent new member in 5 years: number_____				
Second new member in 5 years: number_____				
Third new member in 5 years: number_____				

Members left in last 5 years	Sex	Age			
Most recently left old member					
Second recently left old member					
Third recently left old member					

Why did the head/household move to the present location? _____
Why did new members come? _____
Why did old members leave? _____
Do they intend to return, and if so when? _____

16. HOUSEHOLD SITUATION

How many months in the last year did the household have a shortage of food?_____
Is the household in debt? Seriously_____ Somewhat_____ Not at all_____ Why?_____
How is the household economy compared with last year? Much worse_____ Worse_____ Same_____ Better_____ Much better_____
Problems in year: Robbery___ Violence___ Burning___ Rape___ Murder___ Witchcraft___ Stock theft___ Land dispute___ Drowning

17. FAMILY HEALTH (List all diseases, accidents or disabilities suffered within the last two weeks)

Member number	Main problem	Second problem	How many days ill	How many days lost	Where/who treated	Time to reach treatment	Time waiting	Total charge	If none, why not

PROBLEMS

1 Respiratory	11 Measles	21 Injury
2 Diarrhoea	12 Hepatitis	22 Assault
3 Malnutrition	13 Kidney	23 Blind
4 Skin & tissue	14 Liver	24 Deaf
5 Viral disease	15 Stroke	25 Crippled
6 Burn	16 Cancer	26 Retarded
7 Tuberculosis	17 Diabetes	27 Mental problem
8 Asthma	18 HIV/AIDS	28 Other_____
9 Heart disease	19 Other STD	
10 High blood	20 Cold/flu/fever	

WHO/WHERE TREATED

1 No one
2 Family/friend
3 Traditional healer
4 Village health worker
5 Drug seller/pharmacist
6 Clinic
7 Private doctor
8 Hospital
9 Chief
10 Other_____

WHY NOT TREATED

1 No need or desire
2 Too expensive
3 Too far
4 Transport too expensive
5 Hours not convenient
6 Did not know where to go
7 Too many people waiting
8 Patient too sick
9 Lose time from work
10 Other_____

18. DEATHS (What persons of what ages have died in the last five years? Use codes from household information for sex, relation to h and codes from illnesses for reason for death.)

	Sex	Relation to head	Age	Reason for death		Extra codes for death in pregnancy
1						29 Excessive bleeding
2						30 Prolonged labour
3						31 Infection after delivery
4						32 Other

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For each child between 6 and 15 or at school up to Form C

member number				
Has attended Initiation School, Why?				
Has attended Informal Learning				

Standards and /or Forms attended over the years

Which Standard/Form <1980				
Which Standard/Form in 1980				
Which Standard/Form in 1981				
Which Standard/Form in 1982				
Which Standard/Form in 1983				
Which Standard/Form in 1984				
Which Standard/Form in 1985				
Which Standard/Form in 1986				
Which Standard/Form in 1987				
Which Standard/Form in 1988				
Which Standard/Form in 1989				
Which Standard/Form in 1990				
Which Standard/Form in 1991				
Which Standard/Form in 1992				
Which Standard/Form in 1993				
Which Standard/Form in 1994				
Which Standard/Form in 1995				
Which Standard/Form in 1996				
Which Standard/Form in 1997				
Which Standard/Form in 1998				
Which Standard/Form in 1999				

Where schooling?

if NOT in formal school in 1999, why?				
Receives School Feeding (1=Y,2=N)				
Name of School				
Proprietor				
Where in 1998				
Why				
If different in 1999, where				
If different in 1999, why different				

Why schooling there (also for change of school)			
1	Preferred school not available	2	This is the Preferred School
3	No relevant school nearby	4	This School is near .
5	Other schools too expensive	6	This school costs less money
7	Supported by relative/friend	8	This is the school of my denomination
9	Expelled from last school	10	Prefer boarding
11	Failed at last school	12	Other

School Fees asked for and actually paid in 1998

Required / Paid:	R	P	R	P	R	P	R	P
1998 School Fees								
1998 Examination Fee								
1998 Book Rental								
1998 Books and Stationery								
1998 Feeding Fees								
1998 Uniform								
1998 Transport								
1998 Boarding								
(If RSA) 1998 Study Permit and Health Insurance								
1998 Additional costs								

Why in Initiation School?	
0	Not attended
1	to become a (wo)man
2	To prepare for marriage
3	Peer pressure
4	Family pressure
5	Other ....
9	No known reason

Informal learning	
0	Not attended
1	Herd Boy project
2	Night School
3	Other Literacy Progs
4	By relatives / friends
5	By self
6	By correspondence
7	On-the-job
8	Craft training centre
9	Other

Why not at Formal School	
1	school not within reach
2	school too expensive
3	Physical Disability
4	Mental Disability
5	Sick/Tempor. Disabled
6	Not performing well
7	Has failed at school
8	Has finished schooling
9	not interested
10	school not relevant
11	Found work
12	Needed at home
13	Family needs money
14	Family cannot support
15	Got married
16	Learning informally
17	Other
18	No reason given

School Proprietor	
0	Government
1	Community
2	LEC
3	RC
4	ACL
5	Methodist
6	Other Mission
7	Private
9	Not known

Where schooling	
1	In Lesotho, from home
2	In Lesotho, not at home
3	In RSA
4	Other

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