

Poverty and Inequality in Lesotho

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1 INTRODUCTION

Understanding the extent and nature of poverty in a country or a region, and subsequent development of policy interventions relies upon the type of data that is available. In some cases use must be made of sample surveys from a variety of sources, while in others, donor agencies play an important role. However, increasingly national statistical agencies are being called upon to provide high quality data on a regular basis. Lesotho is fortunate in that there has been a long history of data collection both by government agencies as well as by NGO's and the private sector. However, resource and other constraints have resulted in these data being under-utilised, and there is little recent information on the levels and distribution of poverty in Lesotho.

Through the preparations for Lesotho's Poverty Reduction Strategy Paper (PRSP) it has been possible to bring together data series concerning income and expenditure collected by the Bureau of Statistics, the source of all official statistics on Lesotho. Although somewhat dated, important advantages of these studies have been their use of an accepted and common sample frame, the rigorous approach that used the diary methodology for the collection of expenditure data, the consistent questionnaire design and finally, the relatively large sample size. A range of technical and logistical problems have had to be overcome, and new methodologies used in order to improve both the quality and compatibility of the data. These new data now give a more complete picture of poverty and inequality in Lesotho than has been possible in the past, and form a critical component of Government of Lesotho's (GOL) poverty reduction programme.

Developing a deeper understanding of how poverty is changing over time is central to the concerns of human development. The poverty analysis contained within this paper represents a contribution towards the emerging culture of evidence-based policy-making in Lesotho in that it explores changes in key poverty-related indicators in the interval between the 1986/87 and 1994/95 Household Budget Surveys, which were conducted by the Bureau of Statistics. As such, it allows for the monitoring of the extent to which government policy effectively translated into improvements in terms of widening people's choices and the general level of well-being, especially with regard to the ability of the Basotho to lead long and healthy lives, acquire knowledge and gain access to the resources required to achieve acceptable levels of human needs.

While the coverage of the survey data only takes us to the mid-1990s, the framework established in this paper will be updated when results from the next Household Budget Survey, which is scheduled for later this year, become

available. Furthermore, the construction of this new time series dataset allows for a process of triangulation with other existing resources (both quantitative and qualitative) on poverty and inequality in Lesotho. Such validation will undoubtedly assist Lesotho's poverty reduction programme in its attempts to become more pro-poor, target inequality and empower the poor.

This paper focuses on the distribution of household income in Lesotho, and develops consumption-based measures of poverty to explore the poverty profile of Lesotho, and the trends in this profile between 1986/7 and 1994/5. Section 2 engages with some of the methodological considerations pertaining to the measurement of poverty, including the choice of an indicator of living standards, the selection of poverty lines and the choice of an aggregate poverty measure. This is followed by an examination of the broad poverty trends between the two periods of observation, namely 1986 and 1994, focusing in particular on changes in the extent, depth and severity of poverty together with the relationship between economic growth and impoverishment in Lesotho.

Given that the design of effective national poverty reduction strategies has to be premised upon an awareness of the distinguishing characteristics and circumstances of the poor, a poverty profile has been constructed, one that is concerned not only with portraying a snapshot of poverty and the poor, but also with capturing trends over time. This *dynamic* profile focuses on the geographic distribution of poverty (section 4), the demographic (section 5) and socio-economic characteristics (section 6) of the poor, access to basic services (section 7), livelihoods strategies (section 8), and asset accumulation (section 9). Section 10 focuses on trends and patterns of inequality in Lesotho between the two survey periods and disaggregates these indicators by both location and district. The paper concludes with a discussion of the policy implications of the analysis, suggesting possible considerations for future debate and research on appropriate poverty reduction strategies for Lesotho, especially with regard to options for direct income transfers.

2 POVERTY LINES AND POVERTY MEASUREMENT

Despite the obviously large numbers of people still living in poverty, and the renewed attention on poverty reduction, the definition of poverty remains the subject of some debate amongst policy analysts. Views that hold that an absolute definition of poverty is possible and appropriate can be contrasted with those that define poverty in relative or relational terms. In a recent review of more than 40 national poverty studies it was found that a mix of three approaches are commonly used (May, 2001):

- Poverty conceptualised as the inability to attain a minimum standard of living reflected by a quantifiable and absolute indicator of poverty. By necessity measurement is quantitative and relies upon surveys of income and consumption;
- Poverty conceptualised as being the lack of resources with which to attain the type of diet or life-style that is socially acceptable. This approach places emphasis on a relative indicator which would vary according to the standards of the society being measured, and may also take into account distributional issues. Measurement is usually quantitative, although frequently subjective or qualitative approaches may play a role in setting definitions and standards.
- Finally, poverty can be conceptualised as being constrained choices, unfulfilled capabilities and exclusion. Measurement is recognised as being complex and, as yet, there is no generally accepted approach being used although institutions such as the UNDP have begun to explore alternative methodologies. Qualitative and participatory research techniques frequently play a central role.

All of these approaches have merits, with the first being the easiest to calculate and to interpret, while the last tries to draw out the multi-dimensional nature of poverty and the implied link between economic growth and human well being. Rather than seeing these as competing methodologies, it has become accepted that this

situation arises from the multidimensional nature of poverty. The different approaches thus reflect different aspects of poverty in society, and should be used in combination. This is often referred to as a process of triangulation.

In many ways, this is the approach adopted by many national Human Development Reports including that of Lesotho in 2001. This paper focuses on the consumption aspects of poverty and makes use of the income and expenditure data collected by the Lesotho Bureau of Statistics in 1986/7 and again in 1994/5 as a part of the Household Budget Surveys undertaken in

An Emerging Consensus?
In the editorial comment of a recent World Development special edition, Lipton (1997) suggests a consensus on the definition and measurement of poverty has begun to emerge and that the principal components of this consensus include:
<ul style="list-style-type: none"> ▪ A recognition that poverty may be defined as private consumption that falls below some absolute poverty line; ▪ A recognition that low levels of capabilities (such as literacy and life expectancy) is a major component of poverty, and is best measured separately rather than amalgamated with consumption measures; ▪ A recognition that the lack of consumption is better measured than lack of income.

these years. A starting point for analysis of these data is identified by the Government of Lesotho as being the development of a poverty threshold or line that can be used to examine the distribution of poverty and to compare trends in income levels with progress in poverty reduction (GoL, 2001).

As with the definition of poverty, poverty lines may be relative, absolute or some combination. Analyses that require quantification or numeric measurements tend to prefer a money-metric and absolute approach to the measurement of poverty as a means of operationalising poverty comparisons and this is the approach followed for much of this paper. This approach accepts that money is commonly, but not *always*, the means of indirectly translating inputs into human development. It is the means of purchasing *some* of the direct means to well-being, such as food, clothing and shelter. Conventionally, money-metric measurement requires setting of poverty line of some type, and in some cases, a second lower line is set for 'ultra-poverty' (Lipton, 1983). The poverty line is usually some form of a 'needs threshold' that is linked to a specific welfare level whereby the 'poor' are separated from the 'non-poor'. This is based on the expenditure deemed necessary to buy a minimum 'basket' of nutrition and other necessities.

From this, it is evident that a number of decisions have to be made in the development of any poverty line¹. The first relates to the items that are to be included in the 'basket'. In the case of Lesotho, the existence of detailed household budget data allowed for the calculation of an 'expenditure based' basket derived from the actual expenditure of the poorer segment of the population. Applying complementary data used to calculate the Consumer Price Index, the expenditure on 30 items of food and 10 items of home produced food was converted firstly into quantities, and then into calories.

The minimum expenditure on food necessary in order to meet an international threshold of 2200 kilo-calories required for an healthy and active life could then be calculated based on the cost-per-calorie actually incurred by Basotho families. As families required more than food for their well being, an amount was added to this figure, once again based upon the actual expenditure on non-food items incurred by households living on the threshold. From this, a per-capita poverty line of M124.00 per person per month in 2001 prices could be calculated for Lesotho².

In an analysis of poverty that uses a poverty line, it is important to focus not only on the number of households that are categorised as being poor but on the depth and severity of their poverty. Not all households categorised as poor suffer the same degree of deprivation and in recognition of this, analysts are increasingly making use of three measures of poverty.

Known as the Foster-Greer-Thorbecke (FGT) class of poverty measures, these measures are:

- The headcount index or incidence of poverty. This is the easiest to interpret of the three measures which shows the proportion of the population that are below a given poverty line and is usually expressed as a percentage of the total population;
- The poverty gap index, which measures the depth of poverty given by the gap between actual income of poor households and the poverty line. This measure is somewhat more complex to interpret than the headcount, but can be thought of as the percentage of the poverty line income needed to bring those below the threshold up to the poverty line. As a result, this measure can also be expressed in money terms as the hypothetical minimum income transfer required in order to eliminate poverty.
- The poverty severity index, which gives more weight to the shortfall in incomes further below the poverty line. This index is expressed as a score, with higher numbers indicating increasing severity, and is best used to compare the severity of poverty at different times or in different regions or social groups (Foster, Greer and Thorbecke, 1984).

Finally, useful recourse can also be made to the concepts of poverty dominance and of poverty elasticities. The analytical framework of the former assesses whether the results of differing poverty lines are robust in that the poor are consistently identified and ranked whatever poverty line is used³. Poverty elasticities relate growth in income or consumption, typically measured by per capita Gross Domestic Product, to the incidence of poverty⁴. In this paper, use will be made of an ultra-poverty line equal to half of the poverty line, all three FGT measures of poverty, cumulative distribution functions which show poverty dominance and a poverty elasticity calculated for the period 1986/7 – 1994/5.

3 POVERTY TRENDS BETWEEN 1986/7 AND 1994/5

Monitoring poverty trends is an important element in the analysis of poverty, and due to the availability of comparable data from two periods, this task can easily be undertaken for Lesotho.

The Depth and Severity of Poverty has Worsened

The data collected for the 1986/7 Household Budget Survey shows that 58.8

percent of Lesotho's population were living in households categorised as being poor in 1986/87 while 34.7 percent were very poor or ultra-poor (Table 1). Alarming, the overall incidence of poverty had not altered significantly by 1994. Approximately 58 percent of the population were still poor, a reduction of just 0.6 percent from 1986. More importantly, there is *not* a corresponding downward trend with regard to the percentage of households that are ultra-poor. Instead, about 38 percent of the population were ultra-poor in 1994, an increase of nearly 4 percent.

Table 1: Incidence, severity and depth of poverty (1986/7 and 1994/5)

	Poverty Line (PL)		Ultra Poverty Line (½PL)	
	1986/7	1994/5	1986/7	1994/5
Incidence	58.8	58.3	34.7	38.6
Depth	32.8	35.4	17.7	21.4
Severity	22.8	25.9	11.8	14.9

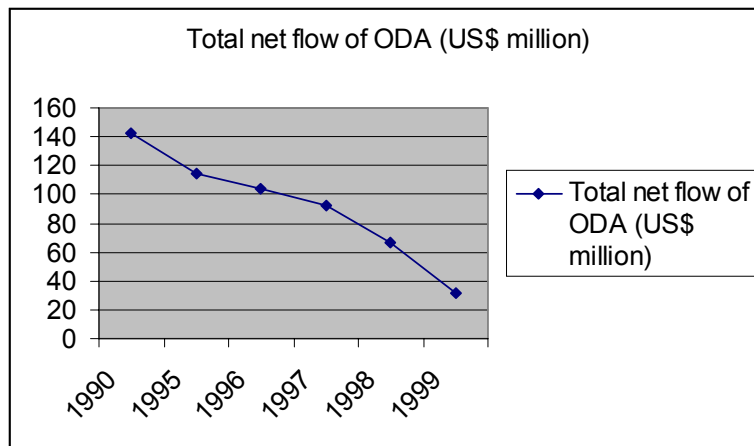
Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

The poverty gap, which is an indicator of the depth of poverty, is moderately high, and has increased between 1986/87 and 1994/95. This implies that despite the slight decline in the incidence of poverty over the period, those that are poor are on average further below the poverty line in 1994/95 than was the case in 1986/87. In 1994/95, using the ultra-poverty line, the poverty gap was 21.4 percent, which means that if perfect targeting were possible, a transfer of M159.1 per person a year in 2001 prices (or 6.1 percent of average per capita spending) would be enough to eliminate ultra-poverty. Using the higher poverty line, M526.3 per person a year in 2001 prices (or 20.3 percent of mean per capita spending) would be needed to eliminate poverty. That translates nationally to M132.2 million (US\$17.0 million) a year at the lower poverty line and M651.7 million (US\$83.8 million) at the upper poverty line (both are expressed in 2001 prices).

According to the World Bank (1995), official development assistance (ODA) to Lesotho averaged US\$104.7 million a year between 1990 and 1993, which would have been more than sufficient in absolute terms to meet what was required to eliminate both ultra-poverty and poverty in 1994/95. However, DAC data reveals that the total net flow of ODA has declined substantially during the mid to late 1990's (Figure 1). Moreover, it is widely acknowledged that perfect targeting is virtually impossible, and it would be an exceptionally difficult task to identify poor households and develop policy interventions that

directly transfer the specified amounts to these households. Nonetheless, the above findings do suggest that, at least at the time of the 1994/95 Household Budget Survey, reducing poverty was a possibility.

Figure 1: ODA Net Disbursements to Lesotho, 1990 and 1995-99



Source: Development Assistance Committee (DAC, 1999);
<http://www.unctad.org/en/subsites/lcds/country/profiles/lesotho.htm>

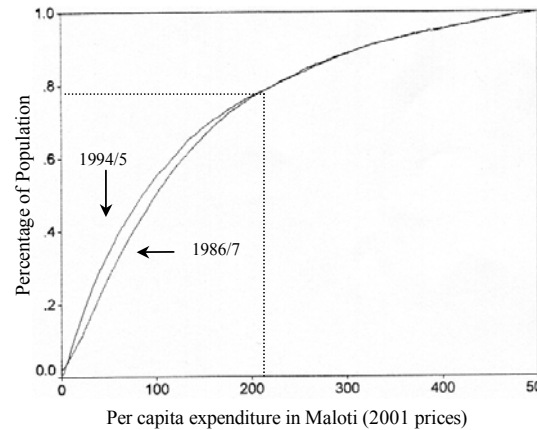
Table 1 also indicates that the severity of poverty increased between 1986/87 and 1994/95 for both poor and ultra-poor households. This, together with an increase in the depth of poverty, reveals how looking at the changing incidence of poverty alone can be misleading. Despite a slight improvement in the overall level of poverty in Lesotho, those households categorised as poor and ultra-poor are substantially worse off in 1994/95 than was the case at the time of the earlier survey. Following Deaton (1997:164-165), Figure 2 compares the cumulative distribution functions for per capita expenditures of M500 per month or less. Each curve in the figure demonstrates, for the year in question, the corresponding percentage of the population that would be classified as poor for values of monthly per capita expenditure ranging from zero to M500 in 2001 prices. By plotting the curves for both 1986/7 and 1994/95, we are able to see whether the finding that the extent of poverty has decreased marginally in the intervening period would be consistent if different consumption-based poverty lines were specified. The results are robust for any poverty line less than M300.

Growth has not resulted in a decline in poverty

Recently, researchers have attempted to measure the elasticity of poverty in order to determine the impact of economic growth. Broadly, this approach looks at the percentage change in the incidence of poverty that results from a 1 percent change in per-capita GDP. This elasticity has been found to vary systematically according to the degree of income inequality in a country,

where low-income inequality countries have been found to have a poverty elasticity of -1.5 while high-income inequality countries had a poverty elasticity of -0.5 (Hanmer and Naschold, 2000). That is to say, a 1 percent increase in GDP per capita resulted in just a 0.5 percent decline in the incidence of poverty.

Figure 2: Cumulative Frequency Distribution, 1986/7 and 1994/5



Using the Lesotho data on GNP per capita, considered to be a better measure of income for the specific context of Lesotho, and the incidence of poverty between 1986 and 1998, a partial poverty elasticity of -0.12 can be calculated. In other words, a 1 percent increase in GNP resulted in just over a 0.1 percent decline in the incidence of poverty. This can be compared to an estimate of -0.21 for Zambia. The situation is even less favourable for the subsequent period during which the economy of Lesotho contracted at almost 2 percent per annum, and also does not take into account the increasing severity and depth of poverty between these two periods.

Poverty Elasticities

Two approaches are conventionally adopted when measuring poverty elasticities. The *analytic* method uses the cumulative distribution function for per capita expenditure and the poverty line to produce a point elasticity. It estimates changes in poverty resulting from changes in per capita expenditure with an unchanged expenditure distribution. The *econometric* method regresses the poverty headcount measure on per capita expenditure and is more suitable for projections. In common with the limited number of studies that have calculated poverty elasticities, this paper, has used the analytic method whereby

$$\eta_p = \frac{\Delta y}{\Delta p_0}$$

where Δy is the annualised growth rate in GNP per capita, Δp_0 is the annualised rate of change in the headcount ratio, and η_p is the poverty elasticity. As more data points become available, this approach can be refined.

Projections are difficult in periods of economic decline since it is unclear whether the poor will be more exposed to contraction than the rich, or are sheltered due to their relative isolation from the formal economy. However, it seems likely that even this marginal progress would have been eroded, and

that poverty levels would have increased. It is also significant that the severity of poverty increased even during the period of economic growth showing that those marginal gains in the poverty rate did not translate into improved well-being for the most poor.

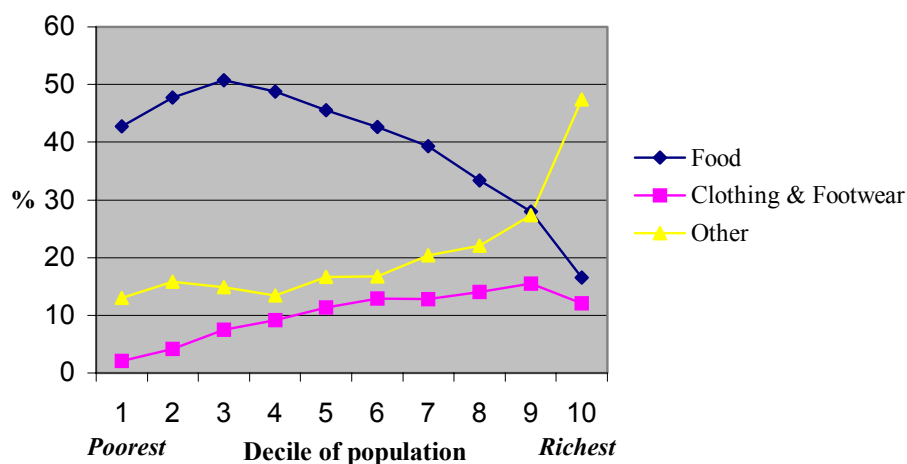
Of the possible reasons for this weak trickle down of the benefits of economic growth, the economic crisis in South Africa during the 1980's and the subsequent retrenchments in the mining sector may be one of the most important. Estimating the vibrancy of the economy of Lesotho during this period is difficult due to its close integration with the much larger South African economy. Although this period was one of high growth in Lesotho, the South African economy was experiencing low and even negative growth rates that would have affect both employment opportunities and wages for Basotho migrants. However, the marginalisation of a large component of the population of Lesotho is also a factor, particularly those in rural areas, whose livelihoods were are largely based on subsistence production and the informal economy and were thus not affected by recorded economic growth. As a result, the impact of growth driven by investments in the Lesotho Highlands Water Project (LHWP)⁵ appear to have been at best confined to a limited area and to a number of limited beneficiaries.

Estimating the future incidence of poverty achieved by current economic growth is possible using these data. However, it must be cautioned that such estimates assume that growth will equally benefit all households, something that is not supported by the historical trends (ie. that growth is distribution neutral), and that the incidence of poverty has not changed since 1994. Under these assumptions, and using the international target of halving the incidence of poverty by 2015 as a reference period, the data show that at a 3.5 percent per annum growth in GNP, the growth rate achieved between 1981 and 1997, Lesotho will succeed in reducing poverty from the 1994/5 level of 58.3 percent of the population to 54.7 percent. No realistic growth rates will enable Lesotho to reach the international target, although a high estimate of 7.5 percent per annum growth in GNP would reduce poverty to below 50 percent of the population. Alternatively, if redistributive policies are adopted which reduce levels of inequality and pro-poor growth strategies are adopted which increase the poverty elasticity to -0.5 which is the level estimated for other high inequality counties, current growth will result in a reduction in the incidence of poverty to below 45 percent of the population. Under these assumptions, the high growth scenario results in a reduction in the incidence of poverty to 32.9 percent⁶.

The poor spend almost 50 percent of their income on food

Figure 3 shows the percentage of consumption that is spent by each decile of the population of food, clothing and footwear and on other goods, mostly consumer durables.

Figure 3: Proportion of consumption allocated to food and other goods (1994)



Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

In 1994, households in the poorest four deciles had a mean expenditure of M16 per person per month on food that they purchase or grow themselves and allocated between 42 and 50 percent of their total expenditure to these items. This in itself is an indicator of poverty and is in marked contrast to households in the richest decile who spend 16 percent of their income on food with an average expenditure per person of almost M200 per month. A different pattern emerges for other goods, mostly consumer durables and clothing and footwear to which wealthier households consistently allocate a large proportion of their income.

4 GEOGRAPHIC DISTRIBUTION OF POVERTY

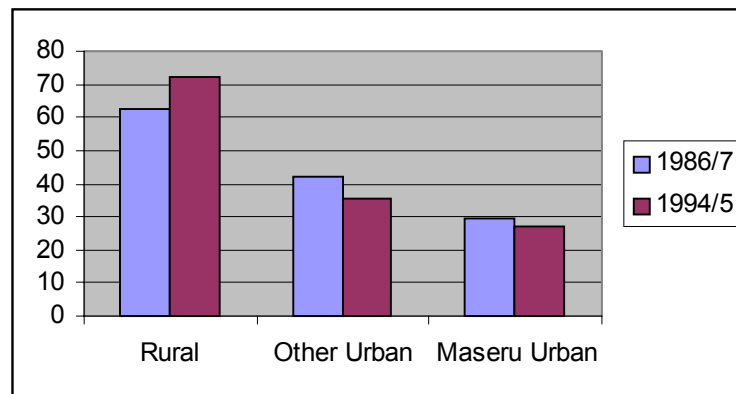
A policy for poverty alleviation in a given region requires analysis of its geographic distribution. This helps policy makers and concerned donors in designing programs for geographical targeting of poverty. In Lesotho there are striking variations between and within regions in terms of wealth, population composition, infrastructure and so forth. Three geographic classifications have commonly been used. Firstly, poverty has been mapped in terms of Maseru urban, other urban and rural. Secondly, it has been mapped

in terms of four ecological zones, and finally the poverty measures were mapped in terms of the ten administrative districts of Lesotho.

The incidence, depth and severity of poverty is highest in rural areas

The national figures reported earlier conceal striking geographic differences in all of the measurements of poverty as well as in the general trend. Figure 4 compares the incidence of poverty between two time periods. It shows that the proportion of individuals living in households categorised as being poor had improved in the case of other urban areas and Maseru urban while that in rural areas had increased between 1986/7 and 1994/5. Almost 63 percent of households in rural areas were poor in 1986 and by 1994 the incidence of poverty had increased to 72 percent.

Figure 4: Incidence of Poverty by Rural/Urban Status



Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

In addition to a greater proportion of households in rural areas being categorised as poor, the depth and severity of poverty is worse in these areas, and had also increased. In contrast, the incidence, depth and severity of poverty in both the Maseru urban areas, and in other urban areas had declined over this same period. However, there has been a decrease in the proportion of poor people who are living in rural area. In 1986/7, 92 percent of all poor households were rural, which had declined to 82 percent by 1994/5. The poverty share in other urban areas and in Maseru increased from 4.5 and 4.0 percent of households respectively to 10.5 percent and 8 percent in 1994/5. Similar trends are found in terms of the proportion of the ultra-poor in each area, and in terms of the proportion of poor individuals, although the decline in rural poverty is less, suggesting the poor households in these areas remained larger than rich or urban households.

Mountain areas have higher incidence of poverty

Disaggregating poverty status according to ecological zones (Urban Maseru, other Urban, Lowlands, Foothills Mountains, and the Senqu River Valley) provides further evidence of the varied geographical distribution of poverty in Lesotho. The mountain and Senqu River Valley areas were found to be poorer than the foothills and lowlands in terms of incidence, depth and severity of poverty. An estimated 77 percent of households in the mountains were classified as poor in 1994/5, compared to just 27 percent of households in urban Maseru, which implies that poverty in the mountainous areas was almost three times higher than urban Maseru. The incidence of poverty has worsened between the two surveys in all ecological zones, with the exception of urban Maseru and other urban areas, which showed slight improvements. The depth and severity of poverty has also increased substantially in the mountain and Senqu River Valley regions between 1986/87 and 1994/95. The implication of this is that not only has a greater share of households become poor in these regions, but the general well-being of these poor households, as measured by a shortfall in consumption below the poverty line, has deteriorated. In contrast, measurements for depth and severity of poverty in urban Maseru and other urban areas dropped below the national average demonstrating the decline of poverty in these areas over the period.

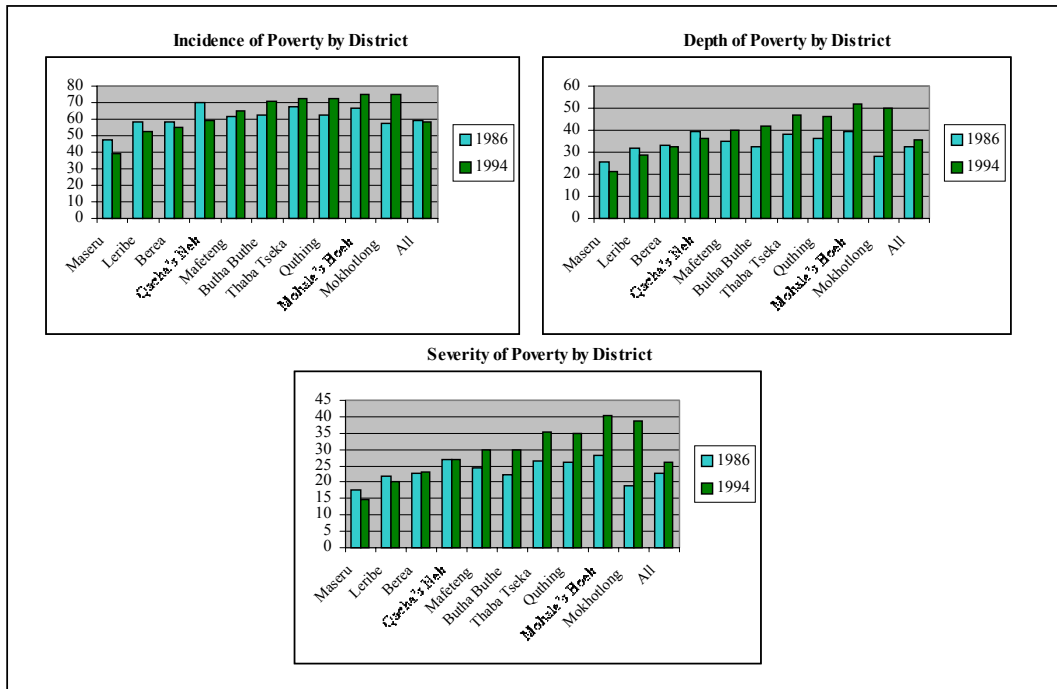
Poverty is most Severe in Mokhotlong and Mohale's Hoek

Of the ten administrative districts, the incidence of poverty in 1994/95 was found to be highest in predominantly mountainous districts - Mokhotlong (75.4 percent), followed closely by Mohale's Hoek (74.9 percent), Quthing (72.7 percent) and Thaba Tseka (72.3 percent). The same applies to both the depth and severity of poverty. Conversely, the incidence of poverty is considerably below average in Maseru district, where only 39 percent of households are poor. The incidence, depth, and severity of poverty are also generally below the national average in the mostly lowland/foothill districts of Leribe and Berea. A similar pattern is found in 1986/87, although the incidence of poverty was highest in Qacha's Nek (70.3 percent), followed by Thaba Tseka (67.2 percent) and Mohale's Hoek (66.9 percent). The higher incidence of poverty in these districts is related to the higher incidence of poverty in the mountain areas as a whole.

The changes in poverty measures between the two survey periods are important as these reveal which districts had shown some signs of improvement by 1994 and which ones are worse off relative to 1986. Figure 5 shows that Maseru, Leribe and, to some extent, Berea and Qacha's Nek experienced an improvement in both poverty incidence and severity. For the

remaining districts, the poverty situation has deteriorated, in that all three measures have increased over time. This trend is particular severe for Mokhotlong, which is fast becoming the most deprived district in Lesotho in terms of consumption poverty.

Figure 5: Poverty Measures by District (1986/7 and 1994/5)



Source: Bureau of Statistics-University of Natal estimates based on the 1986/7 and 1994/95 Household Budget Surveys.

Comparative findings on the geography of poverty

The findings derived from the Bureau of Statistics' Household Budget Surveys (HBS) with regard to the geographic distribution of poverty in Lesotho are generally consistent with other poverty research that occurred during the 1990s. For instance, the 1995 World Bank Poverty Assessment (PA), which made use of 1993 Sechaba data, also found that poverty is greater, deeper and more severe in rural relative to urban Lesotho. There is also agreement, for all three poverty measures, between the HBS data and the PA with regard to the concentration of poverty and ultra-poverty in the Mountain and Senqu River Valley regions, which are Lesotho's most poorly endowed zones. Similarly, the Sechaba Poverty Mapping Exercises (1991,1994, 2000) revealed poverty to be concentrated in the mountains, with the lowest incidence occurring in Maseru. At the district level, the predominantly mountainous districts tended to be the poorest in both the PA and HBS analyses, with minor variation in ranking. In both cases, poverty is generally below the national average in the predominantly lowland/foothill

districts of Leribe, Berea, and Mafeteng, with Maseru possessing the lowest levels of poverty.

This does not mean that there are not differences between the studies. As an example, while the PA indicates that the incidence of poverty is lowest in urban areas outside of Maseru, the HBS analysis shows that urban areas in Maseru possess the lowest incidence. The World Bank report (1995) also shows the Mountains to be slightly worse off than the Senqu River Valley, whereas the opposite is true according to the HBS findings.

5 DEMOGRAPHIC CHARACTERISTICS OF THE POOR

While it has already been shown that the level and trends of poverty for Basotho households differ substantially by location, it is important to recognise that certain types of households are also likely to be relatively more disadvantaged irrespective of the region, district or zone in which they are situated. This section examines the extent to which demographic factors, such as household size and composition together with characteristics of the household head, are related to poverty classification in Lesotho.

Larger households tend to be poor

Very or ultra poor households in Lesotho are somewhat larger than poor households, which in turn tend to be larger than non-poor households (Table 2). Similarly, there is a positive relationship between poverty status and age dependency ratios. These trends are consistent with what would typically be expected, since the larger the family size and the higher the ratio between the number of mouths to feed and the number of productive adults, the more difficult it would be for a household to accumulate wealth and cater for the basic needs of its members. The ranking by household size remains unaffected when comparing the 1986/7 survey results with those of 1994/5, though the average values do exhibit a modest increase for each of the three poverty groups. With regard to dependents, ultra poor households have, on average, approximately one more child under 16 relative to non-poor households, and nearly twice as many adults of retirement age (aged 60 and above). As a result, 66 percent of children younger than 6 years of age are to be found in poor households, as are 65 percent of children of school-going age, while 71 percent of the elderly live in poor households.

Since rural households are demonstrably poorer than their counterparts in either Maseru or other urban areas throughout the country, they are also predisposed towards having on average both a larger number of members and a higher dependency ratio. Accordingly, rural households also tend to have a

higher average number of children and persons of retirement age. While household size, dependency ratio, and the average number of children and elderly all show an upward trend (though admittedly small) in the interval between the two surveys, the same is not consistently true for households located in Maseru and other urban locales. The size of Maseru-based households increased between 1986 and 1994, but the dependency ratio decreased slightly, as did the average number of children. The average number of elderly persons did however increase. For households located in other urban areas, all the indicators are marked by a declining trend, with the exception of the average number of persons of retirement age.

Table 2: Demographic Characteristics of Basotho Households by Poverty Status (1986/87 - 1994/95)

	All Lesotho		Income Group					
			Non-Poor		Poor		Ultra-poor	
	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5
Household size	5.2	5.4	4.7	4.7	5.5	5.9	5.5	6.0
Age dependency ratio ^{a/}	0.9	0.8	-	0.7	-	0.9	-	1.0
Avg no. of children <16 yrs	2.2	2.2	-	1.7	-	2.5	-	2.5
Avg. no. of adults > 59 yrs	0.4	0.5	-	0.3	-	0.5	-	0.6
Avg age of household head	50	51	46	46	53	54	55	55
% of households headed by women ^{b/}	27.3	30.5	23.6	27.7	29.8	32.5	33.4	33.2

Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

Notes: a/ The number of dependents (aged <16 & >64 years) as a ratio of the number of household members aged 16 to 64. The 1986/7 individual level file does not have a household identifier variable, so we cannot aggregate to the household level and analyse dependency ratio by poverty status. b/ Refers only to households officially headed by women (not including households headed by absent men)

Women headed households are poorer

As with general household size and composition, the characteristics of the head of the household may exert an influence on the well-being of the entire household. For example, ‘studies in several countries have shown that households headed by women or older adults tend to be poorer than otherwise comparable households headed by men or younger people’ (World Bank, 1995:23). In 1986/87, an estimated 27 percent of households were officially headed by women who were single, divorced, widowed, or abandoned by

their spouses. These households are referred to as being *de jure* female headed households. By 1994/95, this figure had increased to 30 percent, which is higher than in many other Sub-Saharan African countries (Lampietti and Stalker, 2000). Poor and ultra-poor households tend to have a higher percentage of *de jure* female-headed households than non-poor households. In addition, women are effectively heads (also referred to as *de facto* female heads) of households in another 30 percent of households, an unsurprising figure given the high proportion of Basotho men employed in South African mines.

In Table 3, a more detailed picture of poverty by gender of the household head is provided. In both 1986/87 and 1994/95, *de jure* female-headed households had a higher incidence of poverty than either *de facto* female or male-headed households. Nonetheless, the difference in the percentage of *de jure* female-headed households and male-headed households is marginal in 1986, though the gap does widen substantially by 1994. This is attributable to a notable drop in the poverty rate of the male-headed households relative to a much smaller decrease for *de jure* female-headed households. The case of *de facto* female-headed households is a particularly interesting one. For each of the three poverty measures, members of *de facto* female-headed households are consistently better off than households *de jure* headed by women or those headed by men. This trend remains constant between 1986 and 1994, though there is evidence of a narrowing in the incidence and to a certain extent the depth and severity of poverty between *de facto* female-headed households and the other two types of headship.

Table 3: Distribution of Poverty by Gender of Household Head (1986/87 - 1994/95)

	Incidence		Depth		Severity	
	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5
<i>de facto</i> headed by women	47.8	54.5	23.6	29.4	15.2	20.0
<i>de jure</i> headed by women	64.6	62.1	38.8	38.7	28.3	28.7
Headed by men	64.5	57.7	36.1	36.2	25.1	27.1
All	58.8	58.3	32.8	35.4	22.7	25.9

Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

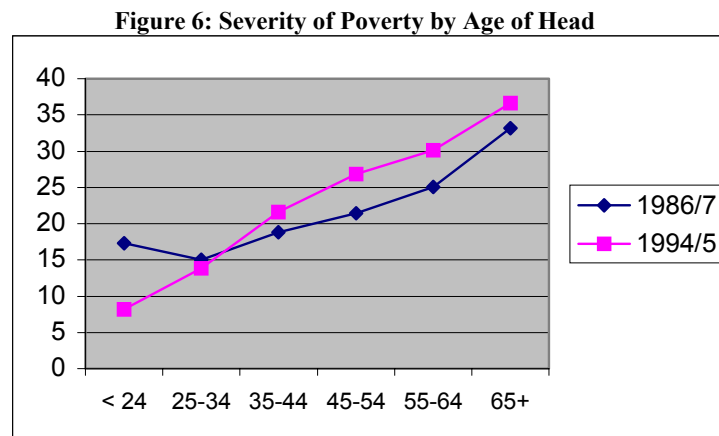
The lower occurrence of poverty for *de facto* female-headed households can almost certainly be explained by the fact that these households are profiting

from the wage income of absent husbands, most especially those working in the South African mines. The worsening poverty levels for this group between 1986 and 1994 possibly serves as a preliminary indication of the effect that mine retrenchments in South Africa are beginning to have, and raises some concern about the extent to which this comparative prosperity is sustainable in the medium to longer term (Turner, 2001).

In terms of understanding why *de jure* female-headed households are particularly vulnerable, the survey data reveals that they are typically headed by aging widows who may have lost the assets that they possessed and who may struggle to secure a cash income. In 1994, approximately 67 percent of *de jure* female heads were classified as widows and their average age was 56, which exceeds the average for resident male heads by 5 years and *de facto* female heads by 11 years. This finding reaffirms what has been found by other studies that have looked at the relationship between poverty and type of headship. Gustafsson and Makonnen (1993) find that female heads are particularly vulnerable to poverty and make particular reference to widowhood due to the high incidence of early mortality amongst miners as being a key determinant. Turner *et al* (2001) arrive at similar conclusions.

Households with older heads are poorer

Poor households tend to have heads that are significantly older than non-poor households, a situation that has also deteriorated between 1986/7 and 1994/5. Mapping the age of the head against the poverty severity measure shows that higher age groups are consistently associated with more severe poverty, and that the line for 1994/5 lies above that for 1986/7, implying that the severity of poverty has increased for almost all age groups (Figure 6).



Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

The lack of social security and adequate pension systems in Lesotho makes age a crucial factor for welfare policy considerations. The figure clearly illustrates how vulnerable older heads are to poverty. Of the heads aged 65 and older in both the 1986/87 and 1994/5 surveys, 73 percent were poor and approximately half were ultra-poor. Comparing the poverty indices for this group with the indices for the entire of Lesotho, it becomes immediately apparent that elderly household heads are particularly prone to poverty. Shifting focus to the other age cohorts, there is a tendency for the incidence, depth and poverty to be lower the younger the head.

Drawing on 1993 data from Sechaba Consultants, the World Bank (1995) has added a further dimension to the discussion on poverty and the age factor. It was found that households headed by an older person are especially vulnerable to poverty in instances where they do not have access to pensioned income from past employment in the mines or from other formal sector jobs in Lesotho.

Evidence from the above exploration of some of the demographic characteristics associated with poor households in Lesotho suggests that household size and composition, gender and type of household head, in addition to the age of the head are important factors in determining the risk of being poor. These characteristics of poor households further point towards there being a discernable life-cycle component to poverty, which may be aggravated by the fragility of the family structure caused by male labour migrancy. From a policy perspective, interventions that take account of life-cycle events could make a significant contribution towards alleviating the high levels and detrimental consequences of poverty in (World Bank, 1995).

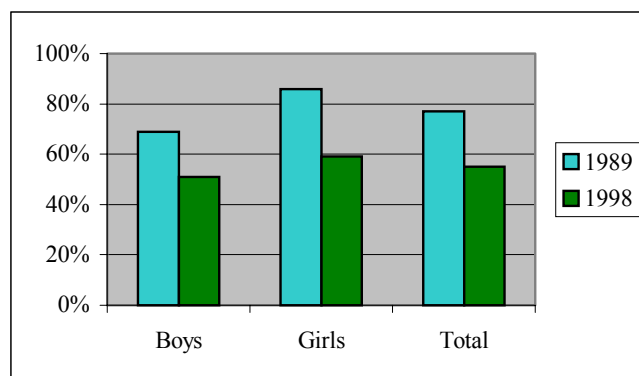
6 SOCIO-ECONOMIC CHARACTERISTICS

In addition to the demographic characteristics of those who are poor, socio-economic characteristics can also help to identify target groups and show some of the causes of poverty. Educational attainment and occupational status are important components of the poverty profile of Lesotho.

Educational attainment is lower among the poor

In 1990 the Government of Lesotho adopted the Jomtien *World Declaration on Education for All*, thereby committing itself to the international development targets of universal access and completion of primary education and reducing adult illiteracy by half before 2015. Yet, in spite of this, school enrolment has shown a disconcerting downward trend since the late 1980s (Figure 7).

Figure 7: Net Primary School Enrolment Rates for Children Aged 6-12, 1989-1998



Source: UN (2000) based on Ministry of Education (1999)

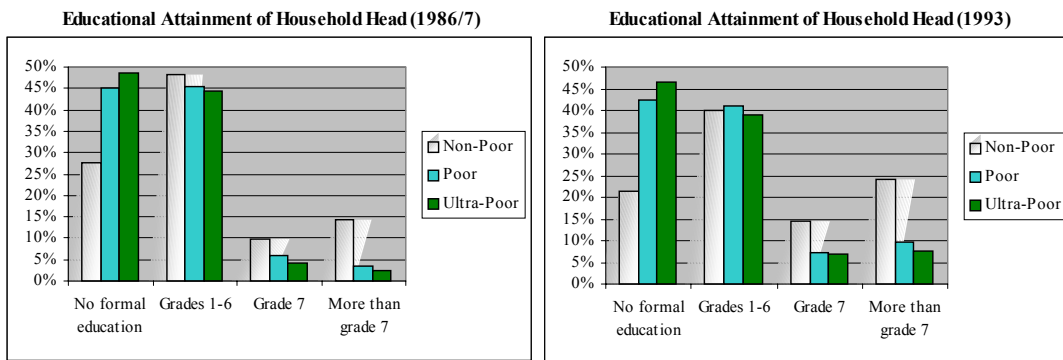
The observed tendency for girls to have higher school attendance rates than boys is widely acknowledged as being primarily attributable to the traditional involvement of young Basotho boys in the herding of livestock. Other contending explanations for this trend include the inability of parents to afford school fees and the possibility that parents view working in South African mines as the most promising job prospect for Basotho men, and de-emphasise boys' education as irrelevant for such mining work (Sechaba, 2000; World Bank, 1995)⁷. As a result, Lesotho's experience contrasts with that of many other developing countries, where efforts are aimed at eradicating discriminatory practices against girls gaining access to education. In 1994/5 boys had lower school enrolment levels than girls. Among 6 to 17 year olds, 77 percent of girls attend school compared with only 66 percent of boys.

Lower school enrolment for boys is found in all three poverty groupings, and that attendance is lower in both ultra-poor and poor households in comparison with non-poor households, irrespective of gender. Boys in rural areas are much less likely than girls to attend school relative to urban areas outside Maseru, where the differential is marginal. Interestingly, a slightly greater percentage of boys than girls aged 6 to 17 were found to be enrolled in school in Maseru. This lends credence to the assertion that the herdboys phenomenon has a negative effect upon boys' school enrolment levels, since livestock tending in Lesotho is more prevalent in rural than urban environs. This is further corroborated when examining enrolment patterns by ecological zone. The greatest disparity between boys and girls is to be found in the herding-oriented Mountain and Senqu River Valley zones. In the former, approximately 30 percent more girls than boys attend school, while in the latter the disparity is nearly 20 percent. Finally, the differential in attendance between boys and girls tends to be larger in female-headed households than male-headed households.

A negative relationship is found between the educational attainment of the head of household and poverty status in Lesotho, such that households with less educated heads are more likely to be poor. In 1986/7 an estimated 45 percent of heads of poor households and 49 percent of the heads of ultra-poor households had no formal education at all, as compared with less than 28 percent of heads from non-poor households. Moreover, about one quarter of the heads of non-poor households have completed primary school (grade 7) or higher, in contrast to only 9 percent in poor households and 7 percent in ultra-poor.

At present, there is a problem with the educational attainment data for 1994/5 that has yet to be resolved by the Bureau of Statistics. Until this happens, an inter-temporal analysis of education status using Household Budget Survey data is not possible. Nonetheless, by referring to the analysis of the 1993 Sechaba Poverty Mapping Exercise data conducted by the World Bank (1995), it is at least possible to gain an understanding of whether the pattern observed for 1986/87 remains consistent or if there has been any discernible change⁸. Figure 8 clearly shows that the education-poverty relationship in 1993 remains largely unaffected in that the heads of consumption poor households continue to exhibit lower levels of education.

Figure 8: Educational attainment by poverty status (1986/7 and 1993)



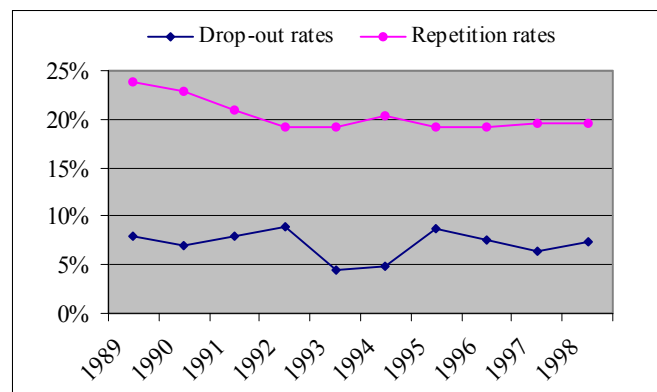
Sources: Bureau of Statistics-University of Natal estimates based on the 1986/87 Household Budget Survey; World Bank (1995) estimates based on 1993 Sechaba data.

The World Bank (1995:35) study further revealed substantial geographic differentials in education data. Almost two-thirds of residents aged 16 and older in the mountains had either no formal schooling or an incomplete primary education. Urban areas have the highest levels of education, with 61 percent of Maseru residents and 65 percent of other urban residents having completed primary school or above.

A review of existing literature reveals that various structural barriers beleaguer Lesotho's educational system. While a comprehensive review of

these is beyond the scope of this paper, some of the more salient obstacles to human capital accumulation in the country will be briefly outlined. Apart from the worrisome trend of declining school enrolment figures, there are a substantial number of school dropouts and repeaters (Figure 9). With the exception of a slight decline between 1993 and 1994, the primary school dropout rate has remained near the ten percent level throughout the 1990s. More disturbing though is the reality that, despite laudable efforts to increase and improve teaching staff and physical facilities since the 1980s and the increasing share of public resources being devoted to primary education, high repetition rates persist. Admittedly, there was a decline in the average primary school repetition rate between 1989 and 1992, but since then it has stagnated at an estimated 20 percent.

Figure 9: Primary School Drop Out and Repetition Rates (1989 – 1998)



Source: Ministry of Education (2001)

According to Sechaba (1995), the principal cause for children dropping out of school is financial, as parents find that they are unable to afford the fees, most especially at the post-primary level. While most of the schools in Lesotho are church-owned, the government subsidises formal education in Lesotho, mainly through the payment of teachers' salaries, the provision of administration and other services, which in turn keeps fees lower than they would otherwise be if schools had to pay for such services themselves. However, despite this, poor households with insecure income are unlikely to be able shoulder the burden imposed by even the already subsidised fees, hence the observed pattern that children from low-income households tend to drop out of school more readily than children from higher income households (Sechaba, 2000).

The introduction of Free Primary Education in January 2000, which plans to phase out education fees and charges by 2006, should go some way towards redressing this problem of affordability and inequitable access to schooling. However, this does not address other factors that explain the disjuncture

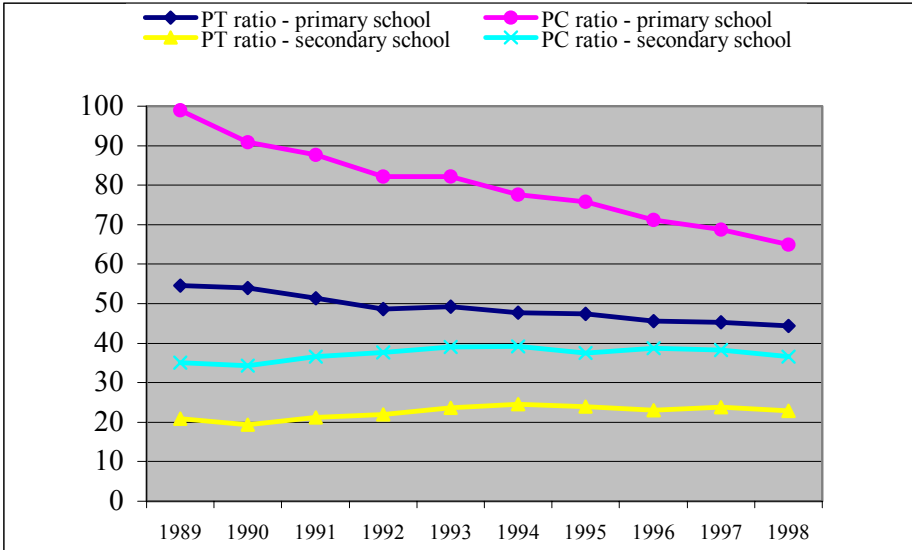
between increased government spending on education and improved primary education.

The United Nations' Common Country Assessment for Lesotho (2000:35) identifies these factors as including, *inter alia*:

‘weak school management, inadequate school facilities and teaching materials, overcrowded and understaffed classrooms and in general, a tendency of the government to focus on quantity rather than quality in its design and implementation of educational sector policies.’

Although the situation with regard to primary school pupil teacher and pupil classroom ratios has shown signs of improvement since the late 1980s, the figures remain exceedingly high (Figure 10). By 1998, the pupil teacher ratio was 44 in primary schools, while there was on average 65 children to a classroom. In secondary schools, the situation is not as dire. In 1998, the pupil teacher ratio was 23, with an average of 37 children to a classroom. Lesotho's education system also suffers from a dearth of qualified teachers. An estimated two-thirds of teachers have less than the primary teacher's certificate that is issued by the National Teacher's Training College, while 22 percent of primary school and 17 percent of secondary school teachers have no qualification at all (United Nations, 2000). Teachers are also poorly paid - in 1993 a nurse received almost three times the salary of a qualified primary teacher and four times the salary of an unqualified teacher – and this, together with the severe overcrowding and teacher shortage, has contributed towards low morale amongst teachers (Sechaba, 1995).

Figure 10: Pupil:Teacher and Pupil:Classroom Ratios (1989 – 1998)



Source: Source: Ministry of Education (2001)

It is important to note also that, in common with many other indicators discussed in this paper, there are strong geographical disparities with regard to the problems associated with the education system. For instance, there is evidence suggesting that the poorer, mountainous regions of the country are disproportionately burdened, especially with regard to educational infrastructure, unqualified teachers, higher pupil-teacher ratios and repetition rates (World Bank, 1995; Sechaba, 1994, 2000; BOS-UNICEF, 1998, 2001).

Heads that are homemakers or unemployed are poorest

While the primary occupation of the heads of poor households in 1986/87 exhibited certain differences compared to their counterparts in non-poor households, by 1994/95 there had developed a more distinct disparity between the different poverty groupings. In 1986/87, most of the poor and ultra-poor lived in households headed by either regular wage or salary earners or self-employed workers and farmers. Similarly, the two main activities of heads of non-poor households were found to be regular wage or salary employment or self-employment. Nonetheless, wage/salary employment was a substantially more significant occupation than self-employment for non-poor household heads, whereas the distribution between these two categories for poor and ultra-poor household heads was approximately equal.

By 1994/5, the occupational pattern of the heads of poor and ultra-poor households had altered considerably. While the share of poor heads that were regular wage or salary earners had not changed, there was a substantial decrease in the percentage that were self-employed workers or farmers and a concurrent and equally sizeable increase in the percentage that declared themselves housewives or homemakers. There was also a substantial increase in overall unemployment rate amongst heads of poor (from 9 percent to 15 percent) and ultra-poor households (from 9 percent to 16 percent). As for the heads of non-poor households, the pre-eminence of regular wage or salaried employment remained unchallenged by 1994/95. As with poor and ultra-poor household heads, there was a significant decrease in self-employment (halving from 18 percent to 9 percent) and parallel increases in both unemployment and housewives/homemakers. The fundamental difference is that, regardless of these changes, non-poor household heads remain primarily wage/salary earners, while for poor and ultra-poor household heads housewives/homemakers became the most significant occupation.

Analysing these shifting occupational patterns by gender of the head and location of the household reveals that self-employment has been declining for *de jure* female and resident male heads, most especially in poor and ultra-poor households based in the rural regions of Lesotho. In response, these poor,

rural *de jure* female heads have tended to become housewives or pensioners, while the resident male heads have become homemakers, unemployed or pensioners. Among non-poor households, while self-employment has halved for *de jure* female heads, there has been a resultant upsurge in regular or salaried employment (from 24 percent to 41 percent). While a similar trend can be observed for resident male heads in non-poor households, unemployment among this group has also risen.

In 1986/87, the incidence of poverty was highest among the unemployed: 76 percent of households headed by an unemployed person are poor (Table 4). Other occupations that tended to correspond with high levels of household poverty included, in descending order, unpaid family worker, housewife/homemaker, pensioner or retired person, casual labourer, and self-employed worker. The depth and severity of poverty in 1986/87 was also highest among the same occupational categories, particularly for unemployed heads. The only occupations that were associated with lower than average levels of poverty were regular wage or salary earners, employers, students and members of producer cooperatives (but only just in the latter case). It should be noted, however, that with the exception of regular wage or salary earners, these categories form a very small percent of all poor households (0.5 percent combined).

Table 4: Distribution of Poverty by Main Occupation of Household Head (1986/87 – 1994/95)

	Incidence (P0)		Depth (P1)		Severity (P2)	
	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5
Housewife/homemaker	69.7	77.5	42.9	51.4	31.8	39.3
Regular wage/salary earner	44.4	43.2	21.7	22.7	13.9	15.2
Unemployed	76.2	67.3	44.7	42.7	32.0	32.3
Employer	30.2	49.1	12.3	30.6	6.9	22.7
Self-employed	67.3	42.4	37.5	23.0	25.9	15.8
Unpaid family worker	70.0	68.8	42.3	42.0	30.3	31.0
Retired/pensioner	69.1	66.1	41.0	37.9	28.8	25.5
Student	34.8	27.8	11.8	14.7	5.6	9.5
Sick/too old to work	-	72.3	-	48.2	-	37.6
Casual worker	68.7	-	40.6	-	29.0	-
Member of producer cooperative	52.2	-	28.4	-	20.7	-
Other	78.4	-	49.8	-	37.4	-
All	58.8	58.3	32.8	35.4	22.8	26.0

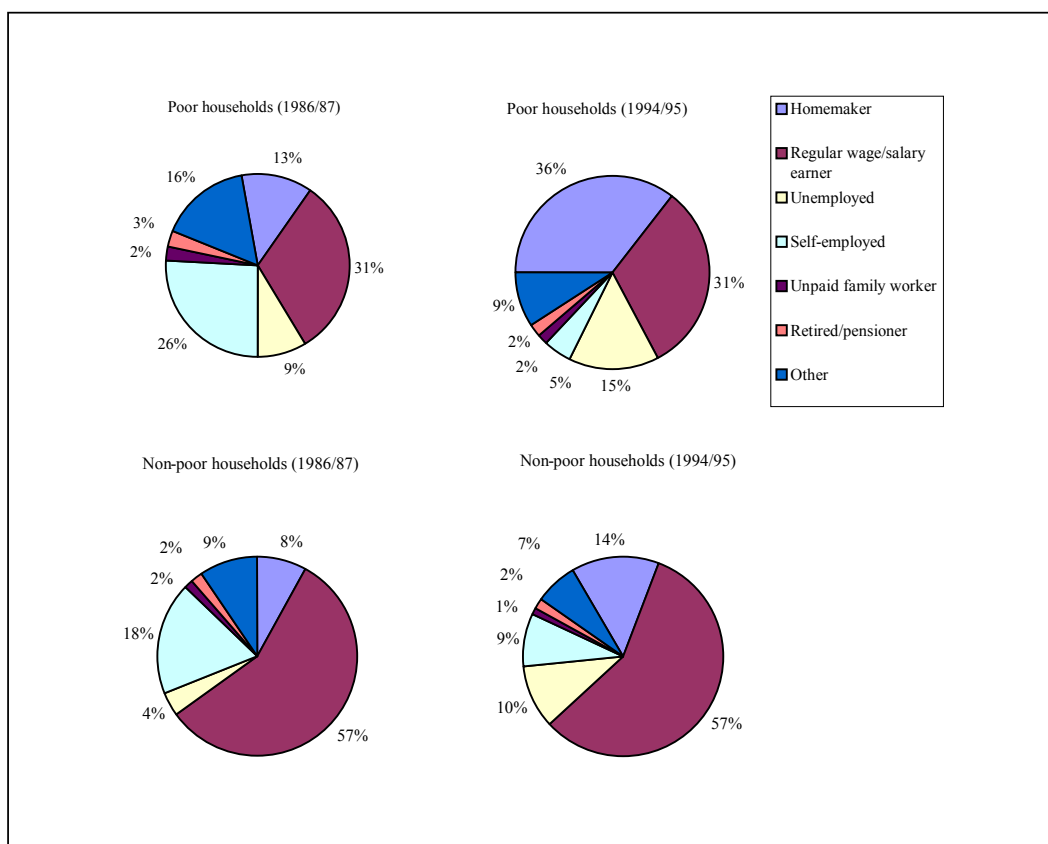
Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

Note: There were slight discrepancies in the categories of main occupation between the 1986/87 and 1994/95 surveys, hence the inclusion of a "-" in some instances.

By 1994/95, the incidence, depth and severity of poverty had become the highest among housewives and homemakers, with 77.5 percent of the heads classified as such being poor. The next highest levels of poverty were found

in households headed by those too sick or old to work, unpaid family workers, unemployed persons, and pensioners or retirees. Resembling the situation in 1986/87, those occupations with lower than average levels of poverty were regular wage or salary earners, employers, students, and the self-employed. If one relates the distribution of poverty by occupational status of the household head (Table 4) to the relative weight of each category in the sample population (Figure 11), it becomes readily apparent that the most vulnerable groups in 1986/87 were households headed by self-employed workers, housewives/homemakers and the unemployed.

Figure 11: Occupation of Household Head by Poverty Status (1986/87 – 1994/95)



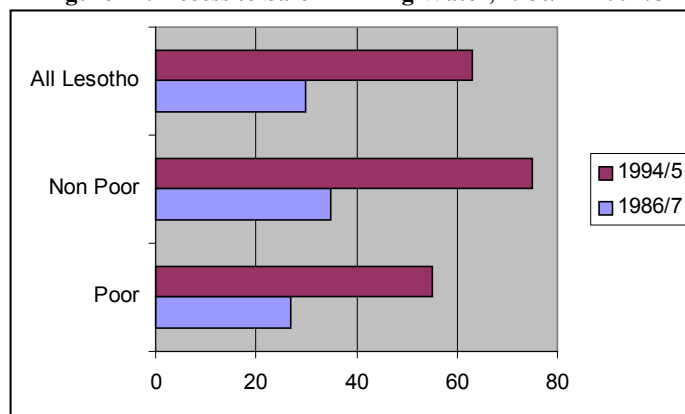
Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

Households headed by unpaid family workers, pensioners/retirees and casual workers, despite their tendency to be relatively poor, did not represent a common occupation. In 1994/95, households headed by housewives/homemakers and the unemployed constituted the most vulnerable groups, since not only was the incidence of poverty the highest amongst these occupations, but about 51 percent of all poor households and 56 percent of ultra-poor households in Lesotho were headed by persons falling into either of these two occupations.

7 ACCESS TO BASIC SERVICES

Access to safe drinking water is one of the fundamental needs of every human being as unsafe sources can be very harmful to human health. In this analysis safe drinking water is described as just those using piped water (either inside the house, outside on the premises or the village water supply). Overall 63 percent of population had access to safe drinking water in 1994, while 55 percent of the poor and 75 percent of the non-poor had access to safe drinking water (Figure 12). On the other hand, in 1986 the total population that had access to safe drinking water was 30 percent, while 27 percent of the poor and 35 percent of the non-poor had access to safe drinking water. The rate of improving accessibility of the population to safe water seemed to be more prominent in non-poor than in poor households. Perhaps more important is the fact that in 1984, almost one out of three non-poor (27 percent) had access to safe drinking water but by 1994 there was three out of four persons (75 percent) that had access to drinking water and this impressive change was not there in the case of the poor households.

Figure 12: Access to Safe Drinking Water, 1986/7 – 1994/5



Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

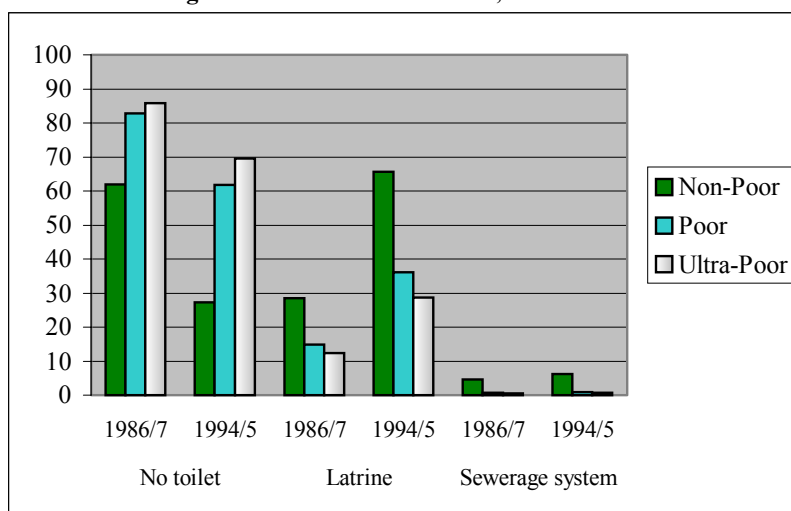
In 1994 more persons had access to safe water in urban Maseru and other urban areas (approximately 91 percent) than in rural areas (approximately 50 percent). When looking at accessibility to safe water by district, Mokhotlong, Quthing and Butha Buthe were far below the average.

Access to sanitation has improved

Access to sanitation has also improved between the two years that were surveyed, with 48.5 percent of households in 1994/95 having access to a latrine (inclusive of both pit latrines and VIP latrines), compared to only 20.4 percent in 1986/87. Nevertheless, as Figure 13 demonstrates, despite these

gains not only do a significant proportion of households remain without sanitation, but there exists a sizeable disparity between non-poor households and poor/ultra-poor households. In non-poor households, the percent of households without sanitation has more than halved between the two surveys, with access to a latrine (particularly ventilated improved pit latrines) improving substantially. For poor and ultra-poor households, the percentage without sanitation did improve between 1986/97 and 1994/95, but the figure still remains alarmingly high (61.8 percent and 69.5 percent respectively). As is the case for non-poor households, the change appears to be related to improved access to latrines. Proper flush toilets are virtually non-existent in both poor and ultra-poor households, with only six percent of non-poor households possessing access to this form of sanitation.

Figure 13: Access to Sanitation, 1986/7 – 1994/5



Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

At the district level, access to a latrine is highest in Maseru (67.7 percent) in 1994/95, followed closely by Berea and Leribe (61.5 percent and 60.9 percent). During the period between 1986/87 and 1994/95, all the districts apart from Thaba Tseka and Mokhotlong experiencing a decline in the percentage of households without sanitation and a subsequent increase in access to latrines. Apart from the exceptions mentioned above, other districts where the share of households without sanitation in 1994/95 exceeded the national average included, Mohale’s Hoek, (67.5 percent), Qacha’s Nek (64.0 percent), Quthing (59.9 percent) and Butha-Buthe (53 percent). The situation in Mokhotlong and Thaba Tseka with regard to inadequate sanitation is dire, with virtually all households having no form of toilet facility. Moreover, the End Decade Multiple Indicator Cluster Survey (EMICS), conducted by the BOS and UNICEF in 2000, reveals that the situation does not improve much for these districts over the next five years, with 87.4 percent of the population

in Mokhotlong and 67.6 percent in Thaba Tseka still possessing no access to sanitation facilities.

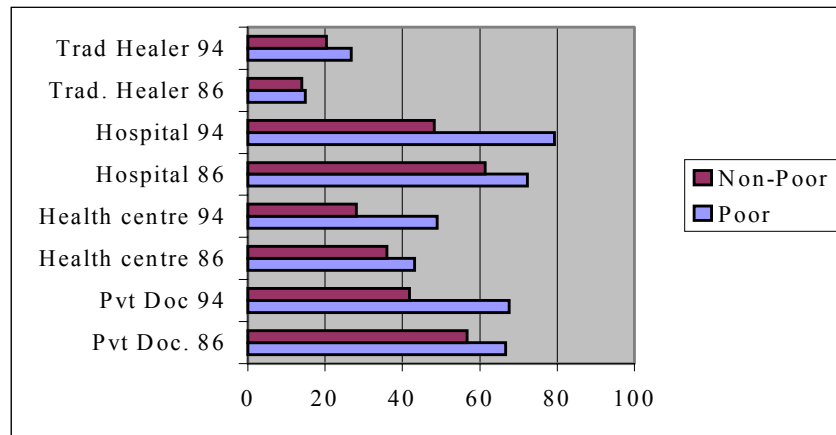
It is clear that in the mid to late 1980s Lesotho was faced with serious environmental health problems, especially since inadequate disposal of human excreta is associated with various diseases including diarrheal diseases and polio. The first efforts to improve rural sanitation began in 1983, when the Ministry of Health launched a program to promote the construction of Ventilation Improved Pit latrines (VIPs) through hygiene education and the training of local builders in Moleleke's Hoek. In 1987, a National Rural Sanitation Program was launched, implemented by district sanitation coordinators (senior health assistants) and assisted by technical officers and other staff of the Ministry of Health. By 1992, the program was operating in all districts, except Thaba-Tseka due to staff problems (World Bank, 1995). Regardless of the progress these programmes appear to have produced, the geographic disparity underlying these beneficial changes is cause for concern and has notable public health implications.

Access to health facilities has improved for some

Comparing 1986 and 1994 results, it is clear that most people, both poor (approximately 70 percent) and non-poor (approximately 50 percent), have to travel more than 5km to get to main hospitals (Figure 14). This could be due to the fact that there are few hospitals in the country. More importantly is to note that the percentage has increased since 1986. A similar situation holds when we look at the percentage of those who travel to see the private doctors, quite a number of people, poor (67 percent) and non poor (50 percent) are located more than 5 km away from private doctors. Contrary to these, relatively few people have to travel more than 5 km to see traditional doctors. This could be due to the fact that, traditional means of healing is still highly valued in Lesotho, and they are quite many in number, especially in the rural areas.

The percentage of those who have to travel more than 5km to see a doctor was high for the following districts: Mokhotlong, Qacha's Nek, Thaba Tseka and Quthing, which are all mountainous districts.

Figure 14: Percentage of households travelling more than 5km to health care facilities



Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

8 LIVELIHOODS

In 1986/87, the most significant source of income for Basotho households was remittances from migrant workers (Table 5). This is by no means surprising given the long-standing tradition of labour migration amongst the Basotho and Lesotho's transformation from a booming agricultural export economy in the mid to late-1800s to what has been described as an impoverished dormitory for migrant workers (Murray, 1981). In fact, by 1989 more than 126,000 Basotho migrants (approximately half the total male labour force) were working in South African gold mines (United Nations, 2000). A further 22 percent of households stated that subsistence farming was the primary source of income, followed by wages or salaries in cash (17 percent) and cash cropping and the sale of livestock (12 percent).

Livelihood patterns have shifted away from migrant labour

By the time of the 1994/95 household budget survey, there had been quite a notable shift in the principal source of household income (Table 5). The relative importance of remittances from migrants had significantly diminished, a situation that is most probably (and plausibly) explained by the depressed developments in the South African mining sector. In 1990, the number of Basotho migrant mineworkers in South African began to decline, and by time of survey this downward trend had begun to gain momentum. During the remainder of the 1990s, employment in South African mines fell precipitously and estimates from the first half of 2000 reveal that only 65,000

Basotho mineworkers remain employed in the mines, less than half the number recorded a decade earlier. With declining remittances from migrant workers, households appear to have become increasingly dependent on subsistence agriculture for their livelihoods, with 32 percent of households declaring it as their main source of income. Income earned from waged and salaried employment in Lesotho also became a significant source of livelihood, to the extent that by 1994/95 it was proportionally more important than migrant remittances.

Table 5: Main sources of income in Basotho HH (1986/87 – 1994/95)

	Total Lesotho		Ultra Poor households		Poor households		Non-poor households	
	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5
Subsistence farming	22.2	31.6	31.3	47.4	27.5	42.6	14.5	16.2
Cash-cropping or sales of livestock	11.5	5.5	11.5	7.6	12.6	6.5	10.0	3.9
Business income	3.4	8.2	2.5	5.8	2.9	6.7	4.0	10.3
Wages or salaries in cash (not migrant workers)	17.1	26.8	11.8	12.8	12.7	16.3	23.2	41.5
Cash remittances from migrant workers	35.0	23.2	27.9	21.1	31.3	23.0	40.2	23.5
Other	10.8	4.7	15.0	6.3	12.9	4.9	8.0	4.5

Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

The principal sources of income vary substantially between poorer and better off households. In 1986/87, the main source of income for ultra-poor and poor households is subsistence farming (31 percent and 28 percent respectively), but if one includes cash cropping and livestock-related activities, these figures rise to 40 percent and above for both cohorts. The other notable main sources of income in ultra-poor and poor households are remittances from mine work and wage employment in Lesotho. By 1994, there had been a sizable increase in the share of ultra-poor and poor households engaged in subsistence farming as a main source of income. The relative importance of migrant remittances in addition to cash cropping and livestock sales decreased somewhat, while waged/salaried employment and business income (principally informal) experienced marginal increases.

In 1986/87, income in non-poor households was coming primarily from mineworkers' remittances from South Africa (40 percent) and regular wage employment in Lesotho (23 percent). Subsistence farming was the main source of income for 15 percent of non-poor households while cash-cropping and livestock sales accounted for a further 10 percent. The picture of main source of livelihood for non-poor households in 1994 revealed that there has been a reversal in the significance of remittances and salaries/wages from regular employment. Due to the worsening scenario in South African mines and the increasing retrenchment of miners (particularly foreigners),

remittances only represented the main income source in 24 percent of non-poor households in 1994, while regular wage employment had expanded dramatically to become as a primary source of livelihood for 42 percent of non-poor households. As with their poorer counterparts, business income, especially informal market activities, has started in play an increasingly important livelihood strategy for non-poor households, while cash-cropping and livestock sales are declining. The relative share of non-poor households dependent on subsistence farming remains virtually unchanged⁹.

Subsistence farmers are more likely to be poor

Households that are reliant upon subsistence farming or cash-cropping/livestock sales as a primary source of income are disproportionately vulnerable to being poor (Table 6). Moreover, not only is the incidence of poverty and ultra-poverty the highest among these farmers and herders, but the depth of poverty experienced by these households is also the greatest than is the case for households engaged in other forms of livelihoods as a main source of income. The severity of poverty is also the highest for this group of households. This trend remains consistent between 1986/87 and 1994/5, though the values of the three poverty indices increased in the intervening period, which is particularly disconcerting given the increasing importance of subsistence farming as the main source of income and the knowledge that mine retrenchments escalated post-1994.

The incidence of poverty (53 percent - 1986; 58 percent - 1994) and ultra-poverty (24 percent - 1986; 19 percent - 1994) is somewhat lower for individuals in households claiming mining remittances as the main income source compared with subsistence farming and livestock-related activities. Nonetheless, in absolute terms, the fact that more than half of the households in this group are impoverished is noteworthy. Trying to understand why households that are dependent on migrant remittances should be poor is not immediately explainable. One credible rationale that has been suggested is that the value of mineworkers' remittances may be smaller, especially in instances when the recipients are relatives other than the worker's spouse and children (World Bank, 1995). Even though the remittance may be documented as the household's main source of income, the remittance could feasibly be too small to raise the household above the poverty line.

The incidence of poverty (35 percent in 1994/95) and ultra-poverty (18 percent in 1994/95) is notably lower for individuals in households claiming wages or salaries from regular employment in Lesotho as the main income source than for any other main source of income. Unfortunately, neither the 1986/7 nor 1994/95 household budget surveys distinguish between

types of wage employment. As such, it is difficult to identify specific types of regular employment that are associated with lower levels of poverty.

Table 6: Poverty's Distribution by Main Source of Income (1986/87 - 1994/95)

	Incidence (P0)				Depth (P1)				Severity (P2)			
	Poor		Ultra-poor		Poor		Ultra-poor		Poor		Ultra-poor	
	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5
Subsistence farming	73.1	78.6	49.0	58.0	44.6	52.0	26.7	34.4	32.5	39.9	18.5	24.6
Cash-cropping or sales of livestock	64.2	69.9	34.7	53.6	34.3	48.2	18.2	33.3	23.6	37.9	12.3	25.0
Business income	50.9	47.6	25.3	27.3	26.9	26.1	13.3	13.3	18.0	17.6	9.1	8.5
Wages or salaries in cash (not migrant workers)	43.9	35.4	24.0	18.5	22.9	17.8	11.4	8.6	15.3	11.7	7.4	5.4
Cash remittances from migrant workers	52.7	57.8	27.8	35.1	26.9	32.6	12.8	17.7	17.6	22.8	8.1	11.8
Other	70.2	62.5	48.1	44.3	43.5	39.6	25.8	25.4	31.7	30.0	17.5	18.7
Total	58.8	58.3	34.7	38.6	32.8	35.4	17.7	21.4	22.8	26.0	11.8	14.9

Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

Nonetheless, it would not be unreasonable to assume that non-poor households tend to work in better-paid civil service or industrial jobs, while poor households probably tend to engage in employment that generally pays lower wages, such as domestic service or farm employment. The finding that non-poor households are increasingly engaging in waged employment while migrant labour, especially in the South African mines, falters is significant in that it provides preliminary evidence that a certain segment of the population may have been able to capitalise on the period of growth experienced in the country in the late eighties and early nineties.

However, by virtue of the fact that it is non-poor households that have been able to make this shift from dependence on migrant remittances to waged employment rather than poor and ultra-poor households also suggests that inequality in Lesotho may be on the increase. This assertion will be revisited in a later section.

9 HOUSEHOLD ASSETS

Poverty analysis has highlighted the importance of assets in determining well-being. Attempting to identify the various asset endowments that the poor have is an important endeavour, since an increasing body of empirical research is revealing that the ownership of assets can serve as an effective means of empowering the poor by ‘increasing their incomes, reserves against shocks, and choices to escape from harsh or exploitative conditions’ (IFAD, 2001:5). Therefore, the more assets that individuals or households accumulate, the less vulnerable they are likely to be, while the greater the erosion of an individual’s or household’s asset base, the greater their susceptibility to risk and insecurity (Moser, 1996).

This section focuses explicitly on certain types of physical assets possessed by sampled households in the two household budget surveys. More specifically, it aims to explore the ownership of productive assets (land, livestock, tools and equipment) and household assets (household goods and utensils), and begin to understand how these differentiate according to poverty status, geographical location, type of household head and over time. Poor households are more likely to rely upon agricultural assets. With respect to productive assets, poor and ultra-poor Basotho households are more likely to own both livestock and fields relative to non-poor households (Table 8). Poverty tends to be higher, deeper and more severe in both 1986 and 1994 for those who stated that they owned fields compared with those who did not. The same applies to the ownership of livestock, though the picture is not as unequivocal in 1986 as it is in 1994.

Table 7: Productive Assets by Poverty Status (percent of households with asset)

Poverty Status	Own Livestock (%)		Own fields (%)		Scotch cart	Ox implement	Tractor
	1986/7	1994/5	1986/7	1994/5	1994/5	1994/5	1994/5
Ultra-Poor	48.06	60.36	75.01	74.73	10.21	29.38	2.12
Poor	51.77	58.02	73.58	69.90	10.58	28.54	2.13
Non-Poor	46.31	38.10	56.94	42.28	9.28	17.51	2.03
All Lesotho	49.53	49.71	66.73	58.40	10.03	23.94	2.09

Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

Unfortunately, given the limitations of the questions asked in the surveys, we are unable to discern whether it is ownership itself or the number or size of the productive asset that influences the poverty status of households. Nonetheless, in the recent CARE report on livelihoods, reference is made to research done by IFAD in 1999 on household well being in Lesotho (Turner *et al*, 2001:7). The results from this research do indicate that it is not solely

access that is an important criterion of wealth, but the number of cattle or fields. This is particularly the case in the mountainous regions of the country.

Although farm equipment and tools were not included among the list of assets in the 1986/87 household budget survey questionnaire, they were to a limited extent incorporated into the 1994/95 questionnaire. Non-poor households do not differ much from poor and ultra-poor households in terms of ownership of farm tools/equipment, and the levels of ownership for both carts and tractors are low. The slightly higher levels of ownership of the tools/equipment among poor and ultra-poor households is probably due to their greater propensity to be engaged in subsistence farming.

Table 8 indicates that the extent, depth and severity of poverty for those households that either owned or had free access to arable land in both 1986/87 and 1994/95 was notably worse than those that did not own land. A similar trend is observed with regard to livestock, though it is important to note that the disparity between livestock owning and other households has widened substantially between the two surveys.

Table 8: Poverty indices by ownership of productive assets

	Incidence		Depth		Severity	
	1986/7	1994/5	1986/7	1994/5	1986/7	1994/5
Fields:						
Owned	64.9	69.9	36.6	44.6	25.0	33.6
Free Access	56.5	-	33.8	-	25.3	-
None	46.7	41.5	25.5	21.9	17.2	14.8
Own Livestock:						
Yes	61.5	68.0	32.6	42.1	21.9	31.0
No	56.2	48.7	32.9	28.7	23.6	20.9

Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

Consistent with expectations, the ownership of livestock and cultivatable land is more prevalent in rural regions of Lesotho than in urban areas, most particularly Maseru. This is, as previously discussed, attributable to the increased dependence upon subsistence farming, cash cropping and livestock sales as a livelihood strategy and main source of income in rural areas. For much the same reason, we find that households resident in the mountains and Senqu River Valley are more commonly endowed with livestock and fields than their counterparts in the lowlands and foothills. As a consequence of these findings, when analysing the possession of productive assets by district, it becomes immediately clear that households residing in those districts that have a greater tendency to be rural and mountainous in character are precisely those that are more likely to own livestock and land. For example households in the poor, rural district of Mokhotlong, which lies in the mountains, are

shown to have the highest levels of access to these two productive assets, whereas households in the more urbanised Maseru district have the lowest levels of access.

This raises an interesting and important question: if poorer and more geographically excluded households tend have higher ownership of land and livestock, why have they been unable to use these so-called 'productive' assets to reduce their poverty between 1986 and 1994? While there is no definitive answer to this question, a review of existing research on the topics of land and livestock in Lesotho points to various possible reasons.

With regard to livestock, research in the mountainous district of Thaba Tseka revealed a phenomenon that has been termed the 'Bovine Mystique', the essence being that:

'In the rural economy of Lesotho, livestock [including cattle, sheep, goats horses and donkeys] is a category of property not freely inter-convertible with cash. Cash is freely converted to livestock through sale only as a last resort in the face of dire need' (Ferguson, 1985:653).

In understanding why this may be the case, Ferguson (1985) goes on to explain that livestock is very closely associated with the migrant labour system, in that the money used to purchase animals and many of the reasons for purchasing them derive from migrant labourers in South Africa.

A typical example of rural livestock practices follows:

'A man builds up his herd during the years he works in the mines, during which time the animals are of use to the man's family and many others in the village, and structurally 'holds his place'. After leaving the mines, the man returns to the village to 'scratch about on the land' (Murray, 1987:337) and to try somehow to survive. This is the point at which livestock begin to be sold, in response to absolute shortages of minimum basic necessities such as food and clothing...Livestock is thus acquired when working and used up when laid off – a sort of special 'retirement fund' for migrant labourers' (Ferguson, 1985:661).

If one looks specifically at those households owning livestock in 1986/87 and 1994/95, the heads are mostly resident men who are on average in their low to mid-fifties (results not shown). Moreover, between the two surveys, the main activity of these heads has shifted from being regular wage/salary earners to homemakers in both poor and ultra-poor livestock-owning households, though regular employment still features prominently in non-poor livestock-owning households. With regard to the main source of income for these households, in 1986/87, remittances from migrant workers and subsistence

farming were equally important for both poor (34.0 percent and 30.3 percent respectively) and ultra-poor (30.7 percent and 34.4 percent respectively) livestock-owning households. By 1994/95, subsistence farming had become by far the most significant source of income for poor and ultra-poor livestock-owning households. Remittances from migrant workers had decreased noticeably, reflecting the retrenchments in South African mines, but probably also indicating a life cycle effect, according to which older mineworkers retire to their homes in Lesotho. Despite loss of employment in South African mines or the retirement of the head, the household is unlikely to readily convert its livestock into cash, unless the situation gets exceedingly dire. Therefore, while livestock do not appear to be 'productive' in the sense that they have helped alleviate poverty for the owning households, they do however represent a crucial form of savings for poor that can be used as a survival strategy in times of extreme hardship. They also serve other important functions, such as being used to pay *bohale* or bridewealth at the time of marriage, while social prestige is accorded to livestock owners when, as is common, they place some animals with other households, allowing those households to benefit from products such as milk, wool and dung (Ferguson, 1985).

Shifting focus to why owning land may not benefit in poor in Lesotho in terms of experiencing a reduction in poverty over the period, firstly it has to be recognised that Lesotho has a poor natural resource endowment, that is characterised by a mountainous topography, limited arable land, unreliable climate, and serious soil erosion (World Bank, 1995). Additionally, an estimated one fifth of the arable land in the country remains fallow or uncultivated due to lack of financial resources by the poor landholders (United Nations, 2000). Further explanatory factors include the unsuitability of the climate for the production of traditional food crops (wheat and maize), including poor quality soils and the frequent occurrence of droughts or temporary dry spells, and overgrazing. Combined, these factors are, amongst others, likely to militate against poor households reducing their poverty through the ownership of, or free access to, arable land.

Poor female headed household are less likely to own agricultural assets

De jure female-headed households are substantially less likely to be in ownership of livestock than either *de facto* female-headed or resident male-headed households with 55 percent of resident males heads owning livestock compared to 35 percent of *de jure* female heads. This trend remains constant between 1986/87 and 1994/95. In addition, relatively fewer *de jure* female-headed households possessed cultivatable land in 1994/95 than the other two

types of household head, but in 1986 fewer *de facto* female-headed households owned land than *de jure* female-headed households. With regard to farm equipment and tools, a similar pattern is evident, with notably fewer *de jure* female-headed households generally owning such assets.

One reason for this may be that according to customary law, women in Lesotho are treated as perpetual minors whose guardianship is passed from fathers to husbands or a male relative (United Nations, 2000:56). This imposes significant obstacles barriers and restrictions upon Basotho women, especially *de jure* female heads, with regard to accessing land and credit. This is a likely explanation as to why *de jure* female-headed households are as much reliant upon wage employment and informal economic activities as subsistence agriculture as a main source of household income. However, while this type of household head is less likely to be owning the productive assets mentioned above, the fact that 55 percent owned cultivatable land in 1994/95 means that the obstacles imposed by customary law regarding women owning land are at least partially being overcome in practice.

Poor households are less likely to own domestic assets

In contrast to what was observed with regard to productive assets, there is a negative relationship between domestic assets and poverty, such that non-poor households are relatively better endowed with these assets than poorer households. This section will examine this relationship.

Table 9: Ownership of Household Assets by Poverty Status (% Owning)

Poverty Status	Radio		TV		Fridge		Sewing machine		Car		Business	
	'86/7	'94/5	'86/7	'94/5	'86/7	'94/5	'86/7	'94/5	'86/7	'94/5	'86/7	'94/5
Ultra-Poor	41.0	53.5	0.7	3.3	1.4	4.6	9.6	11.4	2.0	1.1	3.1	7.7
Poor	47.1	60.3	0.9	5.3	1.6	5.8	11.3	13.9	2.2	1.5	3.5	10.0
Non-Poor	67.3	82.7	3.6	25.9	8.5	24.0	14.9	21.0	7.5	8.2	5.8	16.3
All Lesotho	55.4	69.6	2.0	13.9	4.4	13.4	12.8	16.9	4.4	4.3	4.5	12.6

Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

A greater proportion of non-poor households tend to own a radio and television than poor and ultra-poor households, a trend that remains consistent between 1986/7 and 1994/5 (Table 9). Radios are generally a more common asset than televisions, a situation that is undoubtedly influenced by access to electricity in Lesotho. Nonetheless, the share of non-poor households owning a television has increased sizably in the eight-year interval between surveys. Refrigerators are also not widespread in Basotho households, especially in poor and ultra-poor households. Non-poor households are more likely to own refrigerators and, as with television ownership, there has been a notable increase between 1986/87 and 1994/95. The ownership of a car is low for all

three poverty groups and has not changed to any noticeable extent between the two survey periods. As is expected, ownership is somewhat higher for non-poor households relative to poor and ultra-poor households. Finally, a small share of households owned a business in 1986/87, irrespective of poverty status. By 1994/95, there is an increase for all three groups, most especially for non-poor households.

Households in urban Maseru are marginally more likely to own a radio than other urban households although the difference between these two categories of households and rural households remains distinctly large. The ownership of televisions was virtually non-existent in rural households in both 1986/87 and 1994/95, while it has become an increasingly common asset in urban areas during the period between the surveys, especially in households residing in urban Maseru. The same trend is evident with regard to the ownership of refrigerators. With regard to the ownership of sewing machines, the pattern is not as clearly differentiated. In 1986/87, while households in urban Maseru remain the most likely group to be in possession of a sewing machine, a higher share of rural households owned this asset than households in urban areas other than Maseru. By 1994/95, this ranking had altered such that other urban households had the greatest probability of owning a sewing machine, followed closely by urban Maseru households. Rural households were least likely to own a sewing machine. The possession of a motor vehicle is not a common trait of Basotho households, especially those residing in rural areas of the country. Even though, in relative terms, a greater proportion of Maseru-based households and households in other urban areas tend to own a car, the levels of ownership are still low in an absolute sense. Lastly, the ownership of a business is more common in urban households (both Maseru and other urban) than rural households.

At the ecological zone level, the tendency with regard to most of the examined household durables is for the households in the lowlands to have the highest reported levels of ownership, while households in the mountainous zones appear, with the exception of radios, to be poorly endowed with regard to this bundle of assets. This ranking tends to correspond with the poverty ranking of the various zones, as outlined earlier. At the district level, possession of household durables also appears related to poverty status. Households in the least poor district, Maseru, have the highest levels of ownership of radios, televisions, refrigerators and motor vehicles in both 1986/87 and 1994/95, while they have the second highest recorded levels of ownership of sewing machines and businesses in 1994/95. Similarly, the poorest district, Mokhotlong, has the smallest share of households with televisions, refrigerators, sewing machines, and motor vehicles. With regard to radio ownership, Mokhotlong is ranked second lowest. Operating a small

business is an exception, for Mokhotlong actually had the highest record level of ownership in 1986/7.

De jure female-headed households are generally more poorly endowed with domestic assets than resident male-headed households and *de facto* female-headed households. This is the case in both 1986/87 and 1994/95 with regard to the ownership of radios, televisions, refrigerators, sewing machines and motor vehicle.

Shared characteristics of those in poverty

The descriptive data presented thus far provide clues concerning characteristics of those most at risk of being in poverty. A logitistical regression analysis permits the calculation of the odds that households with certain types of characteristics are likely to be poor. This analysis shows that households in rural areas are three times more likely to be poor than those in urban areas, while households with heads that are more than 64 years of age are three times more likely to be poor than those in which the head is younger than 24 years of age. Subsistence farmers are twice as likely to be poor as households in which the principal source of income is from wages, while households with no toilet facility are four times more likely to be poor than those with a sewerage system.

10 INEQUALITY

There are many ways of measuring inequality, but the most popular fall into two types:

- **shares of aggregate income** received by households (or other income recipient units such as families); and
- **indices of income concentration** e.g. Gini coefficients.

In the **shares approach**, households are ranked from lowest to highest on the basis of income/expenditure and then divided into equal population groups, typically fifths (quintiles) or tenths (deciles). The aggregate income of each group is then divided by the overall aggregate income to derive shares which can be compared.

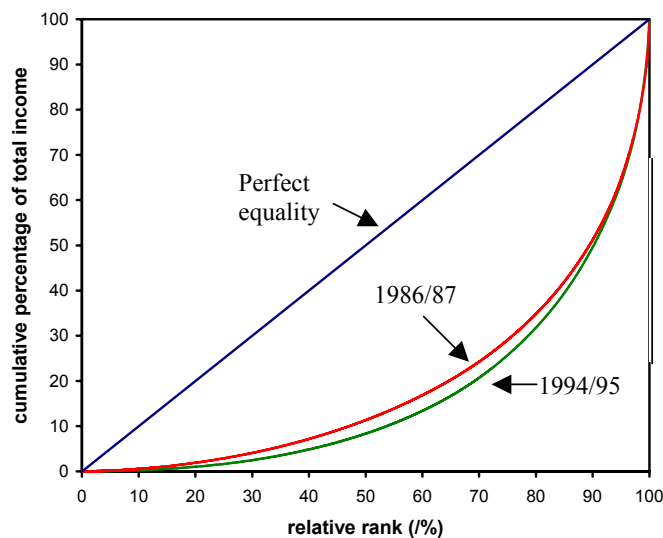
The **Gini index** incorporates the more detailed shares data into a single statistic which summarises the dispersion of the income shares across the whole income distribution. The Gini coefficient may be expressed as a proportion or as a percentage. The Gini coefficient will be equal to 0 when the distribution is completely egalitarian. If the society's total income accrues to

only one person/household unit, leaving the rest with no income at all, then the Gini coefficient will be equal to 1, or 100 percent.

Inequality has increased

The Gini index is also easily understood in relation to the Lorenz curve whereby the proportion of the population ranked from poorest to richest is plotted on the x -axis and the percentage of income accruing to the bottom x percent of the population is shown on the y -axis. Figure 15 shows the Lorenz curve for Lesotho, using household per capita expenditure data for 1986/87 and 1994/95. Everyone is ranked according to their income, then cumulative income is plotted against these ranks. The straight (45° degree) line is the 'line of perfect equality'. In other words, if everyone had exactly the same income then the Lorenz curve would coincide with this straight line.

Figure 15: Lorenz curves for per capita household expenditure, 1986/87 and 1994/95



The Gini coefficient measures the ratio of the area between the Lorenz curve and the line of perfect equality (PE) to the area under the PE line. If there were no inequality, then the area between the Lorenz curve and the PE line would vanish and the Gini coefficient would be zero. If one household had command over all expenditure, then the area between the Lorenz curve and the PE line would be the same size as the triangle and the Gini coefficient would equal one. Thus, the higher the Lorenz curve, the lower is inequality. Therefore it is immediately apparent from Figure 15 that inequality was higher in 1986/97 than in 1994/95.

The Theil statistics have the property, which most other measures of inequality tend to lack, that they can be broken down into components ('group-wise decomposition') when the data on which they are based are organised into groups.

Atkinson's measure can be interpreted as the proportion of the present

total income that would be required to achieve the same level of social welfare as at present if incomes were equally distributed (Atkinson, 1970:48). Atkinson explicitly introduces distributional objectives through the parameter $\epsilon \geq 0$, which represents the weight attached to inequality in the distribution. By specifying different values of ϵ one can vary the importance society attaches to mean living standards versus equality. If society is indifferent about the distribution, the researcher would set ϵ equal to zero. By increasing ϵ one gives more weight to inequality at the lower end of the distribution. When ϵ is set equal to infinity, society is concerned only with the poorest household.

Obviously, there is no single 'best' measure of income inequality. Some measures (e.g. the Atkinson Index) are more 'bottom-sensitive' than others, and therefore more strongly correlated with the extent of poverty. The measures perform differently under various types of income transfers. For instance, the Gini is much less sensitive to income transfers between households if they lie near the middle of the income distribution compared to the tails.

The richest 10 percent account for over half of all consumption

In 1994/95, the poorest decile had command over only 0.27 percent of total expenditure, compared to the richest 10 percent of households who accounted for just over half (51.6 percent) of total consumption. It would appear that inequality has worsened sharply between the two survey periods – the poorest 80 percent of households have all diminished their relative positions in terms of expenditure shares.

Theil Measures	
The Theil measures, Theil-T and Theil-L , are derived directly from the notion of entropy in information theory (Fields 1980:103). The weights used to calculate these two inequality measures are the income shares of the subgroups in the case of the Theil-T and the population shares of the subgroups in the case of the Theil-L. The Theil-T and Theil-L are, respectively, defined as:	
$T(y, N) = \frac{1}{N} \sum_{i=1}^n \left(\frac{y_i}{\mu} \right) \log \left(\frac{y_i}{\mu} \right)$	
and	
$L(y, N) = \frac{1}{N} \sum_{i=1}^n \log \left(\frac{y_i}{\mu} \right) \quad (1.2)$	
where N is the population size, μ is mean income and y_i is the income of the i th recipient unit.	

Inequality has increased in rural areas

While the Gini coefficient is not decomposable, it is the most widely quoted inequality statistic and is thus recorded here. Gini coefficients were calculated on per capita expenditure for the two survey periods by district and urban/rural locale. Table 10 shows that the overall Gini climbed sharply from 0.60 to 0.66 over the period. Every district in Lesotho experienced an increase in inequality (as measured by the Gini). Butha-Buthe, Leriba, Thaba-Tseka and Maseru were less dramatically affected than the other districts.

Table 10: Gini coefficients by district, 1986/87 and 1994/95

District	1986/87 Gini (per capita expenditure)	1994/95 Gini (per capita expenditure)
Butha-Buthe	0.56	0.60
Leribe	0.59	0.60
Berea	0.59	0.64
Maseru	0.62	0.66
Mafeteng	0.58	0.64
Mohale's Hoek	0.61	0.70
Quthing	0.58	0.68
Qacha's Nek	0.54	0.68
Mokhotlong	0.51	0.64
Thaba-Tseka	0.60	0.62
TOTAL (all Lesotho)	0.60	0.66

Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

While the data show that the Maseru district as a whole experienced an increase in inequality, this is not true when we look at urban Maseru only (Table 11). There was a significant *decline* in inequality among the urban residents of the capital (and also in other urban areas). The large increase in the overall Gini can thus be seen to be the result of much increased inequality among those in rural areas and possibly increased inequality *between* rural and urban areas.

Table 11: Gini coefficients by locale, 1986/87 and 1994/95

Locale	1986/87 Gini (per capita expenditure)	1994/95 Gini (per capita expenditure)
Rural	0.58	0.62
Urban Maseru	0.59	0.55
Other urban	0.63	0.59
TOTAL (all Lesotho)	0.60	0.66

Source: Bureau of Statistics-University of Natal estimates based on the 1986/87 and the 1994/95 Household Budget Surveys.

Decomposition of within-group inequality using the Theil measure shows that all of the districts are markedly unequal. The data indicates that there is

considerable inequality within the different area-types, but also some differentiation between area types, with 16-22 percent of inequality being accounted for by between-group inequality. Because rural areas contain a larger share of the population than of total income, the Theil-L (which is weighted by population shares) gives greater emphasis to the share of rural areas in overall inequality.

11 CONCLUSION AND POLICY IMPLICATIONS

The existence of comprehensive data on the income and consumption aspect of poverty that spans 6 years facilitates a more thorough analysis of the extent, nature and trends in poverty. While this is not the only way of understanding poverty and its causes in Lesotho, such data permit better decompositions and allow for projections of the impact of different policy options. The data show that the incidence and severity of poverty is greater among a number of social groups, female headed households, people living in rural areas, especially in the mountainous parts of Lesotho, the elderly, children, those who rely upon agricultural production and agricultural assets, and those living in Mokhotlong and Molepolole. Of concern is that the data also reveal that although there has been a marginal improvement in the incidence of poverty, that is the proportion of households that are categorised as being poor, both the depth and severity of poverty increased between 1986/7 and 1994/5 as did the level of inequality. Inequality may well be higher than in neighboring South Africa and results from increased inequality within districts and not just increasing inequality between urban and rural areas. The two periods of data also allow for the calculation of a poverty elasticity, the percentage change in the incidence of poverty brought about by a 1 percent growth rate in GNP. This shows Lesotho has been highly inefficient in terms of turning economic growth into improvements in the well-being of the poor, and that part of the reason for this may lie with the high levels of inequality in the country. The implication is that significant poverty reduction is unlikely without substantial and structural reforms in Lesotho's economy.

At this juncture, it is important to re-emphasise that consumption poverty does not constitute the only form of deprivation. For instance, there are critical capability-related measures, such as access to services and employment, which could be considered in conjunction with the conventional money-metric measures of poverty. In the period between the two household budget surveys, there was a substantial improvement in the delivery of services, especially with regard to safe water provision. This progress is laudable and should be strongly encouraged. Nonetheless, with regard to

creating livelihoods, some more dramatic action is needed given the disturbing trends outlined earlier in the paper.

The data analysed provide few clues as to how poverty can be reduced to any significant extent without some form of direct transfer. Agricultural assets are limited, job opportunities outside of Lesotho are extremely limited with insufficient growth taking place in the South African economy, and while opportunities within Lesotho are beginning to emerge through niche export markets, these are not adequate in the light of the overwhelming poverty incidence and severity. Direct transfers have tended to be dismissed as being unsustainable, has carrying undesirable incentive effects, and as not reaching the poor. However the empirical evidence for these claims is at best ambiguous and analysis of the South African pension system suggests that some transfers may be not only feasible, but also bring positive second-round effects. That is to say, result in benefits not just to the immediate beneficiary, but also permit investment in a micro-enterprise or the well-being of children, facilitate mobility for job-search, and provide a source of steady income thereby releasing households from risk-constrained behavior¹⁰.

A simple simulation depicts the possible impact of such grants. As an example, the payment of an old age pension of M470 per month, equal to that currently paid in South Africa, to the 78 000 Basotho who are above 64 years of age

Criteria for Choosing Poverty Programs
Grosh (1995) suggests that there are five criteria for choosing between poverty programs:
<ul style="list-style-type: none"> • Administrative feasibility • Political feasibility • Second round effects • Targeting ability • Ability to tailor the solution to the problem

and who live poor households would cost some M440m per annum. This is equal to around 15 percent of recurrent expenditure on the 2001/2 budget. For comparison, the amount paid in principal repayments and interest charges was M617m while that on education was M551m.

The impact on poverty is striking. The incidence of poverty falls from 58 percent of the population to 47 percent, the depth of poverty declines from 35 percent of the poverty line to 25 percent, and the severity index declines by 31 percent from 25.9 to 17.8. Inequality would also be significantly reduced with the Gini co-efficient declining by 12 percent from 0.66 to 0.58, while the share of consumption of the bottom 40 percent of the population increases from 5 percent to 7.5 percent.

To compare different options, shows the impact on the incidence, depth and severity of poverty for three types of transfer payment set at M100 per month. Firstly, an old age pension as described above, secondly a child support grant

payable per child to poor households in which there are children younger than 6 years of age, and finally an education incentive grant payable per child aged 6 to 18 years to poor households on condition that the child remains at school. Each of these options represents solutions to problems that have been identified in this paper: the high incidence of poverty among the elderly and children, and the high levels of non-attendance at school among children from poor households, especially among boys. In addition, each of these options are likely to increase prospects for women who live longer and are more likely to be the care-givers of children but who have been shown to be particularly vulnerable to poverty.

Table 12: Policy Options for Income Transfers

	Poverty Line 1994/5	Pension for persons aged 65+	Child Support Grant for children aged 0-5	Education Incentive Grant for children aged 6-18
Incidence (P0)	58.3	56.1	55	49.1
Depth (P1)	35.4	31.4	30.2	21.9
Severity (P2)	26.0	21.8	20.5	13.0
No of beneficiaries	-	77 970 elderly	165 866 children < 6	443 806 children 6-18
Direct cost per annum (2001 prices)	-	M93.56m	M199.04m	M532.57m
Cost of a 1% decline in poverty	-	M43.31m	M61.06m	M58.33m

Table 12 indicates that the education incentive grant would produce the biggest decline in all measures of poverty, but that the total cost would be over M500m. The old age pension is the most cost-effective option in that a 1 percent decline in the incidence of poverty can be achieved at a cost of M43m per annum. These are the direct costs only, and it should be anticipated that a cost equal to 6 to 9 percent of the direct costs would be required for the targeting process while administrative costs are difficult to estimate (Haddad and Zeller, 1997).

Obviously, simulations such as this cannot result in policy decisions, and the different options would require careful analysis in terms of the relative costs of poverty reduction implied by each, and the efficiency with which such policy would meet goals of sustainable poverty reduction. However, such simulations can at least open debate on options. Considerations would need to include the desirability or necessity of targeting the support, the scale of any second-order impact that might follow which might justify adopting a more costly option, the extent to which funding is available on a sustainable basis, the administrative requirements of delivery, and finally, the ability of the government to supply such support. As an example, although the notion of supporting education has an intuitive appeal, the ability of the education

system in Lesotho to meet increased demand is questionable. Nonetheless, the simulation does show that a poverty reduction strategy based upon a direct transfer of income to those in most need not be unaffordable and can make a significant impact upon poverty in Lesotho.

FOOTNOTES

1. Lanjow (2001) provides an extremely helpful review of activities required when developing a poverty line.
2. It should be noted that this approach yields what has been termed an ‘austere poverty line’ and is based on the tastes and choices of Basotho families (Ravallion, 1994). Data limitations prevented the calculation of adult equivalence and household economies of scale. The Maloti (singular Loti) is the currency of Lesotho, and was pegged to the South African Rand at par values under the revised Union Act of 1986. Both currencies circulate freely within Lesotho.
3. Poverty dominance analysis has been usefully described by Atkinson (1987), Foster and Shorrocks, (1988) and Jenkins and Lambert (1997).
4. Hanmer et al (1999) and Hanmer and Naschold (2000) review this methodology and apply it to recent international development targets.
5. The Lesotho Highlands Water Project is one of the largest infrastructure developments in the world and represents a significant development for the economy of Lesotho. It is a five-phase inter-basin water project developed and financed jointly by Lesotho and South Africa, with some modest financial participation by the World Bank. The project has two main components: (a) the *water component*, whereby water from Lesotho’s Orange-Senqu Rivers is stored behind a series of dams, and is then carried to Gauteng Province, South Africa, by means of extensive tunnels; (b) a *hydropower component* that generates electricity for the domestic market in Lesotho (United Nations, 2000).
6. Hanmer et al’s (1999) estimates are used for these projections.
7. The barriers that prevent herdboys from obtaining an education are further discussed in Parnell and Mapetla (2001).
8. Since there are subtle differences between the World Bank (1995) and this study in respect of the manner in which poverty status is measured (the former uses expenditure per adult equivalent, while expenditure per capita is used in this chapter), trend analysis has not been attempted.
9. It is worth mentioning that in 1986, there was not a main income source code for pensions, the logic being that it is not widespread and would be captured under the ‘other’ category. In 1994, a code was included for pensioned income and the results revealed that it is a main source of income for only one percent of households, irrespective of poverty status.

10. Various views are provided by Case and Deaton (1998) who note that pension incomes are not spent any differently from any other kind of income, Klasen and Woolard (1999) discuss the impact on pensions on household structure while Barrientos (1998) looks at the gender impact in the case of Chile.

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