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**PEOPLE'S ATTITUDE AND VULNERABILITY AS DETERMINANTS OF  
POVERTY: THE CASE OF LESOTHO**

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**ABSTRACT**

Lesotho is one of the poorest countries in the world. After reviewing the growth and poverty debate, which suggests that policy reforms and economic growth have largely failed to contribute to the alleviation of poverty in Lesotho, the paper explores the core constraints to poverty reduction. It is argued that the attitudes of the people in Lesotho and the extent to which they are vulnerable to exogenous shocks are important variables towards removing structural and fundamental constraints that impede poverty alleviation. In order to quantify the values of attitude and vulnerability, an econometric model is constructed that makes use of an HSRC public perceptions survey in Lesotho. The economic significance of this alternative measure will create a new dynamic on how to approach the issue of poverty alleviation in Lesotho.

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# PEOPLE'S ATTITUDE AND VULNERABILITY AS DETERMINANTS OF POVERTY: THE CASE OF LESOTHO

## 1. BACKGROUND AND OBJECTIVE

Lesotho is a small, landlocked and mountainous country surrounded completely by South Africa with no significant subsoil assets. With a population of 2.1 million, per capita GDP was estimated at US\$520 in 2003, about 15 percent of that of South Africa (IMF country report 2004:6). Its economy is small, very open and its people generally very poor. According to the World Bank (2004:55), 36,4 percent of the population earn an income of less than \$1 per day. There is, however, no simple and universal solution toward alleviating poverty. The problem is compounded by the fact that conventional measures to solve poverty, such as Foreign Direct Investment, has little or no impact on the income poverty, education poverty, and consumption-based poverty of the poorest of the poor. In Lesotho, the Lesotho Highlands Water Project ("LHWP") clearly illustrates that during the LHWP period *GDP growth rates of 6 percent per annum for a decade were ineffective in making a dent on poverty* (World Bank 2003:10). An alternative approach to alleviate poverty is required. This is essential since poverty is multidimensional, dynamic and complex. Furthermore, it is people who act as economic agents and drivers that are the key to progress, not material means per se (Yanagihara & Sambommastu 1997:90).

In developing such an alternative approach towards addressing poverty, this paper first considers the state of poverty in Lesotho followed by various theories of development accentuating the important notion of the human interface. The following section derives an alternative working instrument or measure of poverty that encompasses the attitudes and vulnerability of people living in Lesotho. The instrument is then applied and the economic significance of the results is explored.

## 2. POVERTY IN LESOTHO

Poverty, as defined within the context of Lesotho (Kingdom of Lesotho 2003:12), has both quantitative and qualitative dimensions. Quantitative poverty is defined as the extent, distribution and nature of poverty and maintains that access to health, education, clean water and addressing unemployment and other basic services are the key components in poverty reduction. Qualitative poverty, where the assessment is still underdeveloped, is defined as the presence of ill health and malnutrition, powerlessness, low self-respect and self-esteem, vulnerability and insecurity (Kingdom of Lesotho 2003:12).

One of the most serious trends in quantitative poverty is the growing rate of unemployment throughout rural Lesotho due to the retrenchments of Basotho mineworkers in South Africa, leading to significant job losses and political instability<sup>2</sup> (Kingdom of Lesotho 2003). The most recent estimates, compiled by the Ministry of Labour and the Bureau of Statistics (World Bank, December 2000:9), estimate the rate of unemployment as high as 40,5 per cent, leaving a large part of the population dependent on low-yielding activities in

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<sup>2</sup> Referring to the political disturbances during the aftermath of the disputed May 1998 elections during which many businesses were destroyed.

subsistence agriculture and the informal sector, which is a major cause of poverty. Agricultural production also continues to decline, and food insecurity has increased to a level where a state of famine was declared by the government in April 2002 (Kingdom of Lesotho 2003).

Another source of growing poverty is the limited access to basic services. There have been some incidences of typhus that are related to a lack of sanitation. According to the World Bank (2003:58), nearly one half of rural households do not have any sanitation as compared to only 10 percent in urban areas. The World Bank further indicates that access to clean water, however, has increased from 52 percent of households in 1990 and 64 percent in 1993 to nearly three-quarters of the households in 1999. Only an estimated 5 percent of households (20 000 of the 400 000) had access to electricity in 2001.

Still, the biggest issue is the escalating HIV/Aids epidemic with, as one of its consequences, the fact that the standard of education is declining due to high, and rising, pupil/teacher ratios due to the increasing number of HIV/Aids-related deaths (Kingdom of Lesotho 2003). Evidence shows that, in terms of the Human Development Index (HDI) ranking<sup>3</sup>, Lesotho has experienced a decline in human development, particularly in the areas of education, health and life expectancy.

All the development programmes, such as the Lesotho Highlands Water Project (LHWP), the Rural Road Construction Programme, Privatisation and Private Sector Development Projects, Small/Medium Industrial Development Project, Food Self-sufficiency Project and Sustainable Agricultural Development Programme, failed to improve the economic situation of the people of Lesotho.

The result of this is the failure to significantly reduce poverty and can be observed from two perspectives. On the one hand, although the economy grew at an average of 6 per cent per annum during most of the LHWP era, poverty has not declined (World Bank 2003:10). Persistent inequalities meant that the poor were unable to participate fully in the benefits of the growth that took place. This is confirmed by the IMF country report (2004:8) through the number of ultra poor people growing from 500 000 in 1986/87 to 600 000 in 1994/95 and, as Turner (2003:50) reports, the Gini coefficient<sup>4</sup> grew from 0,60 to 0,66 during the same period. In line with this, the study by May (2004:11) challenges the view that economic reform and fiscal prudence is enough to achieve pro-poor growth by making use of examples, such as ul Haque (1994) and Goldsmith (1995) and a special edition of Third World Quarterly (1996). Furthermore, Dollar and Kraay (2000) pointed out that the question whether standard and conventional economic reform is sufficient to address rural and urban poverty within an African context far from being resolved. Also, Sahn and Younger (2004: 73) identify a need to analyse complementary measures and actions, such as non-macroeconomic factors, that can spur improvements in living standards. But even among the countries most committed to the reform agenda of the World Bank and IMF, progress in achieving poverty alleviation has been painfully slow. Therefore Sahn and

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<sup>3</sup> In 2000 Lesotho ranked 127 (0.497) out of 174 countries and dropped to 132 in 2002 (World Bank, 2003:21).

<sup>4</sup> The most widely recognised statistic on income inequality, where 0 is perfect equality and 1 is perfect inequality.

Younger's judgment is that it is the institutional weaknesses and structural impediments in a country that retard the economic and social progress of Africa's poor (see also Collier and Cuning 1999a and 1999b, Easterly 1998, Pritchett 1997, Olson 1996).

This evidence shows that an alternative approach to combating poverty is required and that more emphasis should be placed on qualitative poverty. As mentioned before, these are the dimensions of poverty that are not based on a money-metric and include the lack of human capability as well as the presence of ill health and malnutrition, powerlessness, low self-respect and self-esteem, vulnerability and insecurity. According to the Basotho definition of qualitative poverty, poverty is defined as (Kingdom of Lesotho 2003:12):

*... powerlessness and exclusion, resulting in denial of access to basic human needs and lack of capacity to influence the direction of one's own life.*

In addition, the World Bank (2000:34) describes qualitative poverty:

*...as the intrinsic value through a sense of voicelessness and powerlessness of the poor in the institutions, the state and society and their vulnerability to exogenous shocks, linked to an inability to cope with them...*

These descriptions show that it is important that the human interface must be incorporated to design appropriate and effective measures to alleviate poverty. Although these measuring techniques are still underdeveloped, a move towards developing qualitative poverty assessment may have more direct policy relevance and permit a more dynamic process of research, monitoring and policy review (Kingdom of Lesotho 2003). This paper will focus on this human interface dimension in developing an alternative approach to tackle poverty. The following section will emphasise the importance of human interface dimensions through alternative economic theories.

### **3. THEORETICAL FRAMEWORK**

The main question that arises is whether or not it has any merit to emphasise the human interface when considering strategies and programmes to alleviate poverty and to promote economic development. Before embarking on an empirical investigation, a theoretic perspective is warranted.

In the 1970s the best empirical evidence seemed to indicate that growth did not necessarily help the poor (Adelman 1975:302). Adelman argued further that the human potential of an economy's members must be released before the economy can properly develop. He claims that the *proper long-term goal of national development policy must be the successive relaxation of the systematic obstacles to the full realization of the human potential of its members* (Adelman 1975: 306). Adelman was therefore convinced that there are imbedded obstacles within an economic system that inhibited development and these obstacles were directly related to the potential of the human interface.

In the early 1980s, Manfred (1981) attempted to incorporate the human interface in economics to practice '**economics as if people matter**' and also dedicated to the

reorientation of development in terms of stimulating local self-reliance and satisfying fundamental human needs. In addition, Sen argues that economists will have to take a different view of **human economic agents** (Sen 1984, 1985). Hence, the theories by Manfred and Sen indicate that people and not economic policies, act as catalysts for development.

Sen's approach has changed the development paradigm from promoting economic growth to promoting human well-being; where growth means producing more things regardless of what happens to the people producing and consuming these goods while human well-being involves 'expanding the capabilities of people' (Sen 1984:497). The goal of economic development thus becomes expanding individual choices or opportunities and providing more positive freedoms to people (Sen 1984, 1985).

Further, Sen (1999:48) supports the argument that there are grounds for believing that growth and human development might actually go hand in hand, stating *in achievement than growth-mediated success, where the increase in economic opulence and the enhancement of quality of life tend to move together*. This view on what stimulates economic growth has only recently been acknowledged by the introduction of endogenous growth models (Todaro 1997) and the work of the Institute of Developing Economics on what is known as the Economic System Approach ("ESA"), showing that economic growth and development is therefore a joint process driven by these subjects (Yanagihara & Sambommastu, 1997:8-13).

Sen and the ESA to economic growth and development differ quite substantially from the conventional approaches in pursuit of the same goal. Sen's contribution to the human development approach has been of enormously influential, however, Sen's approach has been less successful in terms of the analysis of long-run dynamics, which are characteristic of conventional development economics. Gore (1997:247) has also expressed concerns that the focal variables of the mature specification of Sen's capability approach exclude the institutional contexts within which individual actions are embedded and as a consequence give a biased view in development comparisons which, of their nature, involve complex society-wide changes in the ways people relate to each other.

On the other hand, the ESA emphasises economic relationships that acknowledge the dynamic nature of the real world. The ESA revolves around building the productive capacity of subjects by focusing on their personal capacities and developing the infrastructure in which they operate. The ESA is descriptive, focusing on people and their capabilities in order to achieve progress. Additionally, ESA captures the fact that markets (i.e. their quality, volume, scope and nature) can and will be influenced by people and the infrastructure surrounding them. An application of the ESA constitutes a decisive paradigm shift from past practices. The ESA recognises the fact that the structure of society is complex; it captures the diversity by postulating that markets are an integral part of the diverse economy and its development process. This radically differs from conventional theories with simplifying abstractions, assumptions and functional equations. This creates an environment where markets are not treated as being neutral. The ESA has broken ties with a mechanical and deterministic conception of economic growth and

development. It postulates that people and dynamic relationships are essential to economic development.

It is simply not possible to separate economic from non-economic phenomena when dealing with real world development problems. Sen argues that in pursuing the view of development as freedom, *we have to examine-in addition to the freedoms involved in political, social and economic processes-the extent to which people have the opportunity to achieve outcomes that they value and have reason to value* (Sen 1999:291). Sen, therefore, accepts that income levels are an important factor affecting living standards but he argues that some opportunities that people value (e.g. long life, worthwhile employment, peaceful neighbourhoods) are not strictly linked with economic prosperity. Hence, factors influencing the economic growth, employment and inequality, however, do not operate in a vacuum, but are interactive. This is indicated by the fact that low income also contributes towards poverty.

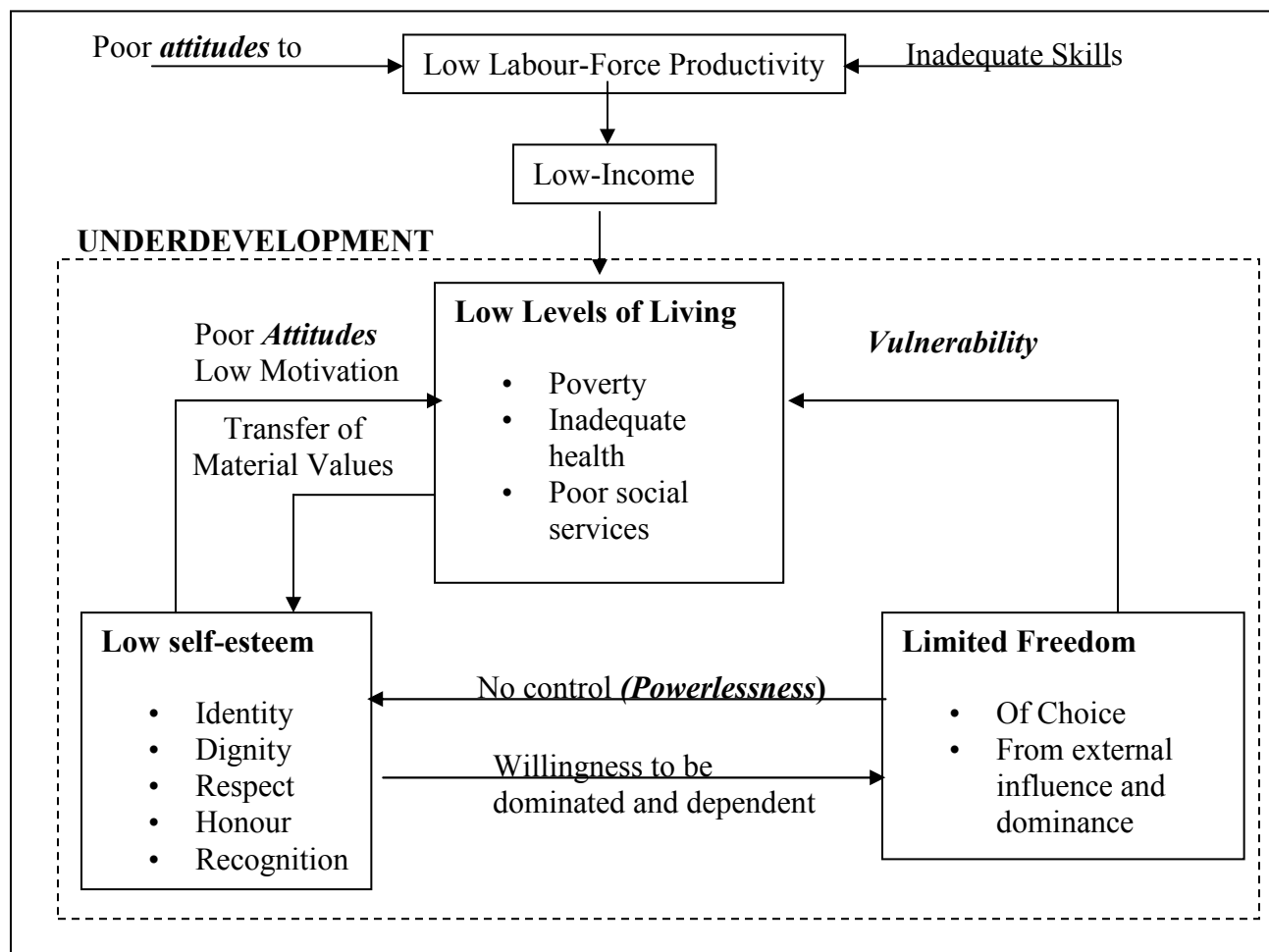
In line with this, the framework below reflects the linkages between low income, vulnerability and attitudes of the poor. One observes that low levels of living (insufficient life-sustaining goods and inadequate or nonexistent education, health and other social services) are all related in one form or another to low income. These low incomes result from the low average productivity. Low labour force productivity can result from poor work attitudes, inadequate skills and underemployment. The important point to remember is that productivity, low incomes and low levels of living are mutually reinforcing phenomena.

Both low self-esteem and limited freedom of choice contribute to low-income levels. Low self-esteem can contribute to low-income levels when material well-being largely determines an individual's identity and worth in the eyes of other people. This intrinsic value in life rather than on goods that provide instrumental value: 'the ability to be well nourished, to avoid escapable morbidity or mortality, to read and write and communicate, to take part in the life of the community, to appear in public without shame' (Sen 1990:126). Low self-respect can contribute to low levels of living as a result of poor attitudes toward life, work, cleanliness and self-improvement. In fact, many human motivations get ignored in traditional economic analysis. Sen (1977:333) has drawn out some of the important policy implications that follow from adopting a broader view of human behaviour. People work hardest at their jobs *not* when financial rewards and penalties are the greatest, but when they have a sense of commitment and a belief that some important goal is being pursued.

Low levels of living also influence, and are influenced by, limited freedom. This makes people and nations vulnerable to, dependent on, and, often, dominated by those who are materially better off. In times of natural disaster, such as flood or drought, the wage earner is immediately vulnerable to a loss of income and will not be able to purchase many goods (Sen 1981; DreÁ ze & Sen 1989). In addition, limited freedom means that nations and individuals have little or no control over their own destinies (Todaro 1997). They are therefore likely to have lower opinions of themselves, and to lose some respect in the eyes of others. This lack of security does more than prevent the rural poor from using assets to self-insure; it directly reduces their incentives to accumulate wealth and hence, to grow out

of poverty (Sahn & Younger 2004: 80-82). Conversely, nations and people with low esteem often do not have the economic, psychological, or physical strength to resist domination and a loss of their freedom of choice.

**Figure 1: Theoretical Framework of the Attitude and Vulnerability Economic Model**



Source: Adapted from: Todaro's model of underdevelopment (Todaro 1997).

These views clearly illustrate that low levels of living, poor attitudes and vulnerability all work cumulatively and both cause and effect processes that perpetuate underdevelopment. It should be clear that without focusing on people that act as catalysts for development, the prospects for development are practically nonexistent.

Kanbur and Squire (2001) acknowledge the importance of Sen's contribution in focusing attention not just on income or expenditure poverty but also on a range of indicators including the human interface. They find that the broader definitions allow a better characterisation of poverty, which is valuable in the design of specific programmes to help people escape poverty.

From the above it should be evident that alternative approaches towards poverty alleviation are required. This alternative approach internalises that fact that people act as economic agents and that should there be any obstacle from a qualitative poverty perspective, then the possible success concerning poverty alleviation is extremely limited. The question therefore basically is: Is there any relationship between aspects of qualitative poverty and escaping poverty in practice?

## **4. ECONOMIC MODEL**

### **4.1. Introduction**

The design of this economic model incorporates the importance of qualitative poverty dimensions, i.e. the perspectives of those who are poor regarding their own situation. The human/economy interface will manifest itself via the vulnerability and attitudes<sup>5</sup> of the people.

Sahn and Younger (2004:80-82) found that the recent surge in qualitative poverty analysis is the emphasis that poor people place on vulnerability when they define their own poverty. They further suggest that people who are vulnerable are understandably averse to risks. Given the importance that poor people place on vulnerability and the relative scarcity of policies designed to explicitly deal with it, they see this an area that deserves more attention. The paper will quantify vulnerability via the non-income risks and can be measured by the prevalence of these risks, crime and natural disasters (World Bank 2000:20).

The attitudes of the people will be addressed by the powerlessness of poor people to influence the social and economic factors that determine their welfare (Leboela and Turner 2000) and by the trustworthiness, accountability, responsiveness, respect and fairness of the state and the community (Narayan, Chambers, Shah and Petesch 2000). Additionally, attitudes also incorporate human motivations as mentioned by Sen, motivation in the sense where the poor have a sense of commitment and a belief that some important goal is being pursued.

### **4.2. The data**

The nucleus of designing the model is to scrutinise general relationships of personal income and the human interface in the Lesotho economy for an improvement of attitudes and vulnerability. These relationships were established by making use of cross-section regression analysis, utilising an HSRC survey of public opinion on development issues conducted in Lesotho in September 2000<sup>6</sup>.

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<sup>5</sup> Quality ascribed to a person or a thing; characteristic quality; object regularly associated with a person.

<sup>6</sup> In collaboration with the Institute of Southern Africa Studies (Maseru), the HSRC (Pretoria) conducted a national Survey of Public Opinion (“SPO”) on development issues in Lesotho during September 2000. A 21-page questionnaire, which formed the nucleus of the study, was the research instrument used to collect information throughout Lesotho. This formed a representative sample of 704 respondents aged 18 years or older, highlighting the voices of the public in relation to development issues.

Although the population of Lesotho is highly homogenous, 99% being Sesotho speaking, all ten of the country's administrative regions were included to ensure adequate coverage of attitudinal diversity that might emerge. The number of respondents from each region reflected the regions' relative population size exactly. The sample of 704 was divided across Lesotho's districts in accordance with the urban-rural divide in each enumerator area, i.e. 20% urban and 80% rural. To make this survey even more representative, 60% of the sample depicts the attitudes of those being poor.

It was established that personal income levels are influenced by a number of explanatory factors, e.g. age, current employment status, gender, region, attitude towards various categories (access to services, corruption, crime, etc.) and vulnerability<sup>7</sup>. To determine the impact of attitudes and vulnerability as such, it was necessary that all of these variables be incorporated in a functional equation that includes attitudes and vulnerability. A system of dummy variables was used to isolate, or depict, the impact of a specific attitude level and vulnerability. By using multiple regression analysis, the functional coefficients of each variable are derived simultaneously.

Individual income levels were analysed across attitude categories, given that income levels of different attitude groups are sensitive to different sets of explanatory variables. The detailed individual reports had to be adjusted to improve their usability (this involves the setting of relevant criteria to eliminate incomplete information, and calculating relevant averages for each attitude group). The following set of perceptions and perspectives, falling within 7 attitude groups, were selected for research purposes in order to cover the 7 attitude groups and based on the premises that it will reflect a representative picture of the type of attitude that is found there. Table 1 lists the different attitude groups on which the regression model has been applied, together with the definition for each category.

**Table 1: Defining attitude categories**

<b>Attitude category</b>	<b>Definition / Elements</b>
Service Delivery Perceptions	Improvement of basic services delivered
Perceptions towards honest conduct and corruption	Honesty of business dealings conducted
National Economic Policies in Lesotho	Perceived effect of government policies
Perceptions of Economic Issues	Improvement of economic, financial and political situation of individuals and Lesotho
Governance	Attitude towards Lesotho's government, labour unions etc.
Institutional Trust	Trust or distrust in Lesotho's institutions
Crime	Victimisation and perceptions of safety

<sup>7</sup> A series of granger causality tests were undertaken to determine whether the income levels are influenced by the attitude/ vulnerability categories or whether attitude/ vulnerability categories are influenced by income. It was established that, within this sample, income is mostly influenced by attitude/ vulnerability categories and not *visa versa*.

### 4.3 The model

An individual's income was taken as the dependent variable, and a variety of variables explaining attitude and vulnerability were used as exogenous variables. Individual income level, as the dependent variable, has an exponential relationship with the explanatory variables; the log of the income level was therefore used. The other variables were used in their natural form. For purposes of this paper, all exogenous (independent) variables were introduced as dummy variables. Thus, for example:

$$Y_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \dots + \beta_k X_{ki} + \epsilon_i$$

where

$$X_{2i} = \begin{cases} 1 & \text{if individual is dissatisfied} \\ 0 & \text{otherwise} \end{cases}$$

or

$$X_{3i} = \begin{cases} 1 & \text{if individual is vulnerable} \\ 0 & \text{otherwise} \end{cases}$$

Each of the attitude groups and vulnerability dummy variables are depicted in Table 2.

**Table 2: Defining dummy variable dimensions for each specific category**

Attitude Category	Dummy Variable Dimension
Service Delivery Perceptions	1- Improved Substantially, 2-Improved, 3-Stayed the same, 4- Worsened, 5- Worsened Substantially
Perceptions towards honest conduct and corruption	1- Too high priority, 2-sufficient priority, 3- Too low priority
National Economic Policies in Lesotho	1- Bad, 2- Hardly any effect, 3- Good
Perceptions of Economic Issues	1- Got a lot worse, 2- Got a little worse, 3- Stayed the same, 4-Got a little better, 5- Got a lot better
Governance	1- very satisfied, 2- satisfied, 3- Neutral, 4-dissatisfied, 5- very dissatisfied
Institutional Trust	1- Strong trust, 2- Trust, 3- Neither, 4- Distrust, 5- Strong Distrust
Crime	<u>Victimisation</u> : 1-twice or more, 2- once, 3-not once and <u>perceptions of safety</u> : 1- very safe, 2- safe, 3- unsafe, 4- very unsafe
Vulnerability	1- Most vulnerable, 2-vulnerable, 3-less vulnerable

Where:

**Service delivery perceptions:** an average was calculated for four main poverty influencing service deliveries during the last 5 years, namely, delivery of education, basic services (including water, sanitation and electricity) and services relating to health. Respondents had to rate services according to five categories, namely, improved substantially, improved, stayed the same, worsened and worsened substantially.

**Perceptions towards honest conduct and corruption:** an average was calculated of the respondent's feelings regarding the prioritisation of good, honest and open conduct by officials. Here, the point was to try and understand the degree to which people felt that principles of honest leadership were being adhered to and pursued by the government. The generalized feeling that officials were corrupt, and had no spirit of public service is confirmed by the data.

**National economic policies in Lesotho:** an average of the perceived effect of government policies on the financial situation of individuals, the general economic situation and the prices people had to pay for goods and services respectively. The verdict was negative in that one in ten, or fewer, were of opinion that these policies had impacted positively on the economic or financial situation, especially in relation to the prices people had to pay.

**Perceptions of economic issues:** reflects the respondents' attitude towards the financial, political and economic situation in Lesotho during the past 12 months, prior to the September 2000 survey. A mood of pessimism seemed to pervade the attitudes of Lesotho's citizens as far as the national financial, economic and political situation is concerned.

**Governance:** relates to respondents' perceptions of, and opinions on, governance and labour unions, from local to national levels. The findings show a pattern of general satisfaction of issues directly related to governance in their local communities, but less satisfaction towards district and country governance. Lesotho's residents appear to favour a strong role for the government in the national economy, and an active labour movement to defend their interests.

**Institutional Trust:** an average was estimated for the level of trust, or distrust, with regard to 14 specified governmental and civil society institutions

**Crime** reports on responses to the crime situation in Lesotho during the September 2000 survey, namely the perceptions of safety, victimisation, experience of crime, and government control over crime. Note should be taken of the fact that safety is used as a separate variable, and an average of victimisation and government control as another variable. From the survey, of concern is the fact that one in five adults had been victims of crime, and more than half of the population indicated that they felt very unsafe on most days.

**Vulnerability:** was calculated as the average prevalence to non-income risks (crime, natural disasters, etc).

#### 4.4 The Results

Table 3 provides the regression results obtained for the database in its totality and are given to indicate that these regressions hold sufficient statistical significance.

From Table 3, the following observations are important:

- In general, the estimated equations could be described as reasonably satisfactory. The R-squared test, which is normally used as a yardstick to describe the quality of the correlation, though be on the low side, 27%, is to be expected for cross-section regression analysis.
- From the t-statistics generated in terms of this particular regression exercise it is evident that most of the independent variables play a statistically significant role in explaining the variation of LN\_INCOME.

**Table 3: Regression Results for Total Database**

Dependent Variable: LN\_INCOME

Method: Least squares

Sample: 704

Description of the Variable	Variable	Coefficient	T-Statistic
Age	AGE	0.1603	2.1913
Current employment status	EMPLOYMENT	0.1099	7.5571
Male or female	GENDER	-0.3285	-2.0400
Urban or rural	AREA	0.2684	4.3966
If unemployed, what is the regularity of earnings	UNEMPL_INC	-0.4103	-4.6997
Delivery of educational services	EDUCATION	0.0897	3.3547
Delivery of basic services	BASIC_SERVICES	-0.1474	-2.8864
Delivery of health services	HEALTH	0.1887	2.6031
Perceptions of honest conduct and corruption	HONEST	-0.1840	-2.7567
Vulnerability	VUL	0.2124	2.4994
Perceived effect of government policies	POLICY	0.1231	2.7583
Improvement of economic, financial and political situation	ECON_SIT	0.0789	2.3559
Victimisation of crime experience	CRIME	0.2265	3.4303
Trust or distrust in institutions	TRUST	-0.1571	-2.3987
Attitude towards governance	GOVERNANCE	-0.1113	-3.4302
Perceptions of safety	SAFETY	-0.0586	-2.4841
Constant term	C	0.0222	1.0235
	<b>R-squared</b>	<b>0.2690</b>	
	<b>F-statistic</b>	<b>15.0414</b>	

A series of diagnostic tests were undertaken to determine whether the estimated regression and their parameters are acceptable. In particular, alternative specifications were investigated to determine the robustness of the estimated attitude and vulnerability effects. Notwithstanding the problems and shortcomings that were encountered in conducting the analyses (specifically the regression analysis), it is clear that the results obtained are stable.

**Table 4: Diagnostic tests**

Test for	Test Applied	P-value	Conclusion
Normality	JB	0.062	Errors normally distributed
Serial Correlation	LM	0.348	No serial correlation
	Durbin-Watson	DW1.902 <sup>8</sup>	No serial correlation
Heteroscedasticity	ARCH	0.437	No heteroscedasticity
Stability	RESET	0.049	Model is stable but there might be specification error

The next section will use the results obtained via this alternative working instrument to reflect the economic significance of focusing on people as economic agents in order to alleviate poverty.

<sup>8</sup> Portrays the actual Durbin-Watson statistic and not the p-value as indicated.

## 5. ECONOMIC SIGNIFICANCE OF ATTITUDE AND VULNERABILITY

This section reveals the economic significance of emphasising the importance of the human interface towards alleviating poverty. The economic significance of this alternative working instrument is firstly shown on an individual income level followed by the impact on a national income level.

The economic significance is evaluated by simulating changes in income that would be implied by changes in these qualitative measures; i.e. the attitude and vulnerability of people. The changes in these qualitative measures are suggested by progressing from the current state of attitudes and vulnerability of the people to the most optimistic scenario, within the dimensions of the HSRC survey (See Table 2). Adopting an optimistic scenario, the people will, for example, be less vulnerable, more motivated, honest conduct will be a high priority and institutional trust will be strong.

### 5.1 Individual's income level

In general, this impact was calculated by utilising the estimated coefficients for each specific explanatory variable, reflecting the economic relationship with individual income. The current average income levels are obtained from taking the anti-log from the estimated income. Thereafter, an optimistic view was taken for each specific attitude/vulnerability category. This optimistic income is obtained by taking the anti-log of simulated income after the specific attitude/ vulnerability group is marginally uplifted keeping all other variables constant, i.e. changing the dummy variable dimension from the current dimension to the most optimistic dimension. The economic significance is revealed with the comparison between the optimistic scenario income levels and the current average income levels. Table 5 depicts this comparison between the current and optimistic income levels for the various attitude/vulnerability groups.

**Table 5: Comparison of Individuals' Monthly Income Levels**

Attitude/Vulnerability Category	Current State		Optimistic Scenario		Marginal Advantage [Maloti per Month]
	Average Individual Income [Maloti per Month] 1	Attitude & Vulnerability 2	Average Individual Income [Maloti per Month] 3	Attitude & Vulnerability 4	
Service Delivery Perceptions	33	Stayed the Same	52	Improved	19
Honest conduct and corruption	33	Low Priority	48	High Priority	15
National Economic Policies in Lesotho	33	Bad	42	Good	9
Perceptions of Economic Issues	33	Stayed the Same	39	Got a lot better	6
Governance	33	Dissatisfied	46	Satisfied	13
Institutional Trust	33	Distrust	45	Trust	12
Crime	33	Twice or more	52	Not Once	19
Safety	33	Very Unsafe	39	Very Safe	6
Vulnerability	33	Most	51	Less	18

In column one the current average personal income, M33 per month is portrayed. The second column presents the current average dimensions of attitudes and vulnerability of the people in Lesotho, for example, the current attitude towards safety is that people feel very unsafe and the individual is mostly vulnerable. The third column depicts the simulated income levels, obtained by changing the current dimension of each specific attitude/vulnerability category to the most optimistic dimensions, *ceteris paribus*. Column four presents the most optimistic attitude/ vulnerability dimension of an individual in Lesotho, for example here the individual has institutional trust, feels very safe and is less vulnerable. Column five predicts the marginal impact on an individual's average monthly income for having this optimistic attitude and being less vulnerable. This marginal impact is the difference between the optimistic income level (column three) and the current income level (column one) for each category.

From Table 5 the following aspects are of importance:

- Most of the attitude/ vulnerability categories show a significant impact on the individual's monthly income by simulating a change in the current attitude and vulnerability of the people towards an optimistic scenario where motivated people will have more freedom of choice and power.
- As the alternative theories suggested, this will increase levels of living and consequently income levels will increase. The average marginal impact on the individual's income will be M19 per month;
- The specific attitude categories to set as a priority, for this developing country, are to boost the attitudes towards the perceptions of service deliveries and crime and to make the individual less vulnerable; and
- Less prioritised attitude categories are the perceptions of economic issues and the feeling of safety of the individual. Still the marginal increase in the individual's monthly income of M6 per month is not to be missed.

## 5.2 National income level

The national impact is calculated by multiplying the income levels in Table 5 (column 1 and column three, respectively) by Lesotho's population. This comparison between the current and optimistic national income levels is represented below.

In column one the current average national income, M69 millions per month is portrayed. The second column reveals the simulated national income levels, obtained by changing the current dimension of each specific attitude/vulnerability category to the most optimistic dimensions, *ceteris paribus*. Column three predicts the marginal advantage on the monthly national income levels implied by these optimistic dimensions of institutional trust, feels very safe and is less vulnerable. The marginal difference between the obtained optimistic national income levels (column two) and the current national income levels (column one) represents the increase in productivity. Column four represents the percentage increase in productivity<sup>9</sup> on a national scale.

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<sup>9</sup>The percentage increase is calculated by dividing column three with column one.

**Table 6: Comparison of National Monthly Income Levels**

Attitude/ Vulnerability Category	Average National Income- Maloti Millions per Month			Increase in Productivity (percentage) 4
	Current State 1	Optimistic Scenario 2	Increase in Productivity 3	
Service Delivery Perceptions	69	109	40	58%
Honest conduct and corruption	69	101	32	45%
National Economic Policies in Lesotho	69	88	19	27%
Perceptions of Economic Issues	69	82	13	18%
Governance	69	97	27	39%
Institutional Trust	69	95	25	36%
Crime	69	109	40	58%
Safety	69	82	13	18%
Vulnerability	69	107	38	55%
<b>Total</b>	<b>624</b>	<b>869</b>	<b>246</b>	<b>39%</b>

From Table 6 the following aspects are of importance:

- The link between qualitative measures such the attitude and vulnerability of people, standards of living and income levels is re-emphasised.
- Within this optimistic view, the total impact on national income is M2, 5 billion per month, representing almost 35% of the Lesotho's GDP in 2002 prices<sup>10</sup>; and
- On the other hand, productivity will increase with an average of almost 40% due to the improved attitudes of the poor and vulnerability of the poor.

## 6. CONCLUSION AND RECOMMENDATIONS

In this paper the argument of an alternative measure to alleviate poverty is set forth, as the conventional measures have not been able to make a dent on poverty. Indicators of qualitative poverty have been used to assess whether they are significant or not when considering levels of income and hence the prospective impact of these qualitative poverty indicators on poverty alleviation in general. Qualitative poverty measures used in this study were attitude and vulnerability as measured by the perceptions of the people in Lesotho on development issues and the prevalence of non-income risks, respectively. This approach was taken to emphasise that it is people and their capabilities, capacities and general commitment that drive economic processes and not material goods, such as capital.

To address this link between qualitative poverty, income and poverty alleviation a model was designed to incorporate all these aspects. The economic model made use of cross-sectional regression analysis to estimate the relationship income levels and qualitative measures. A series of granger causality tests were undertaken and it was established that, within this sample, income is mostly influenced by attitude/ vulnerability categories and not *visa versa*. Hence, the relationship was estimated between attitude and vulnerability as independent variables and personal income levels as the dependent variable. These relationships were established by making use of the HSRC (2000) survey of public opinion consisting of 704 respondents with 60% being poor.

<sup>10</sup>The GDP is reflected as \$714 millions in 2002 (World Bank 2004:187).

In general the estimated relationships could be described as satisfactory and most of the t-values are higher than two in absolute terms.

The economic significance of attitude and vulnerability is emphasized by the results obtained. On an individual level, the average marginal impact on the individual's income will be M19 per month by simulating a change in the current attitude and vulnerability of the people towards an optimistic scenario where motivated people will have more freedom of choice and power. The total impact on national income levels represents almost 35% of the current GDP in Lesotho. On the other hand, with this most optimistic view, productivity will increase with an average of almost 40%. However, further empirical investigation is required to test these results.

In conclusion, this paper found that, although low income is only one of several poverty indicators, this alternative approach towards addressing poverty uses the relationship between income levels and the human interface via the vulnerability and attitudes of the people. This new dynamic qualitative poverty measure is suggestive that feelings of safety, self-esteem, freedom of choice and power are equivalent to income rises. The importance is evident to incorporate people as economic agents and to place more emphasis on this non-economic phenomenon. It is simply not possible, however, to separate economic from non-economic phenomena when dealing with the real world problems.

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