

CENTRAL BANK OF LESOTHO

MIGRANT WORKERS RETRENCHMENTS:

IMPLICATIONS FOR LESOTHO ECONOMY

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**MASERU
KINGDOM OF LESOTHO**

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1. Introduction

1.1 Problem Setting

That Lesotho's economic and its people's well-being depends to a great extent on labour income earned by Basotho male workers employed in the Republic of South Africa (RSA), is a well established fact. During the past five years to 1990 for example, these factor incomes from abroad averaged 46 per cent of the country's Gross National Product (GNP). During the same period, they financed 64 per cent of Lesotho's merchandise imports. Over 50 per cent of government revenues, excluding grants, consist of customs duties. For those who subscribe to the Keynesian import functions, this would mean that the performance of labour income from abroad, as a major component of total national income, is a strong determinant of government revenues. Other government revenues such as sales tax are directly determined by the level of economic activity which in turn depends on labour income through the multiplier effects. An average of 125 thousand Basotho male workers were employed in RSA mining industry during the past five years to 1990, each mine worker having an average of six dependents. Thus, nearly 40 per cent of the country's estimated population of 1.88 million depend directly on labour income from RSA.

There is currently a wave of uncertainty in the official, academic, business as well as the general public concerning the future employment prospects of these workers. This uncertainty concerns not only short to medium-term employment situation, but also long-term employment prospects.

The number of Basotho employed in the gold mines declined for four consecutive quarters between the second quarter of 1990 and the second quarter of 1991 by a massive 11 per cent from a high of 105 thousands to only 93 thousands, a trend last seen in 1984.

Given the grave importance of labour income from abroad to Lesotho economy, the immediate questions to ask are: what are the economic implications of the current wave of retrenchments of Basotho mine workers? How many are likely to be retrenched? How long will retrenchments last? What will be the extent of the impact of these retrenchments on national income and employment taking into account the multiplier effects? What will be the impact on external sector position, on government finances and on external debt position?

1.2 Purpose of the paper

This paper has three broad objectives. The first is to give an assessment of the likely intensity of the problem of Basotho mine worker's retrenchments and the consequent impact on labour income from abroad. To this end, the specific objectives will be to offer a quantitative assessment of:

- i) the likely numbers of Basotho to be retrenched;
 - ii) the likely performance of labour income from abroad;
- and

iii) duration of the crisis.

The second broad objective will be to examine the economic implications of Basotho retrenchments with particular emphasis on:

- i) national income performance taking into account the multiplier effects;
- ii) external sector position;
- iii) government finance and
- iv) employment.

Finally, the paper will offer assessment of policy options to address the problem.

1.3 Methodology

In order to give a quantitative assessment of the likely intensity of retrenchments, it has been found necessary first to dichotomise the problem situation into short-term and long-term. As will be argued later in the paper (chapter 2) the long-term problem situation is clouded more by political considerations than by economic ones. The scope of the paper is therefore reduced to the short-term situation, as it lends itself more to economic analysis.

The quantitative assessment is offered within the broad framework of price theory and in particular the theory of resource pricing and allocation. Labour demand is empirically estimated using the method of Ordinary Least Squares. The values of exogenous variables to the demand function are estimated using an eclectic approach, but principally using available studies as secondary sources.

On the second and third objectives of the paper, the Polak Model, in its simplest form, is used as the broad theoretical framework within which to assess both the economic impact of the crisis and the desirability of various policy options. The analysis here is both descriptive and quantitative.

1.4 Organisation of the rest of the paper

Chapter 2 of the paper discusses the short-term and long-term problem situations. A detailed examination of the causes of the problem in the short-term is offered. Potential causes of the problem in the long-term are discussed in the second section of the chapter. In the third chapter, a brief historical evolution of migrant labour phenomenon is offered. The quantitative assessment of the likely intensity and duration of the problem are found in chapter 4. This chapter also offers the broad theoretical framework within which the assessment is made. Economic implications of the problem of Basotho mine workers' retrenchments are offered in chapter 5. The chapter starts with a comparative analysis of the present crisis viz a more or less similar crisis during 1982 to 1984. Thereafter, the analysis concentrates on a broad microeconomic implications of the crisis. In chapter 6, a few policy options that could be adopted to deal

with the problem are assessed and compared. Chapter 7 offers the conclusion and recommendations.

2. Nature and Causes of the Problem

2.1 Short to Medium-term Problem Situation:

In the short to medium-term, the cause of concern is large scale retrenchments of Basotho mine workers necessitated by the gold mining industry's supply-side problems on the one hand, and demand side problems on the other. On the supply side, the problem arises primarily from the declining ore grade per ton of milled ore, escalating mining costs, and the rapid shortening of the working lives of most marginal mines. Figure 1 below shows the grade, in grams per ton of milled ore, for the period 1980 to 1990. It shows that grades have been on the decline since the beginning of the previous decade, falling by nearly 29 per cent from slightly over seven grams per ton in 1980 to around 5 grams per ton at the close of the previous decade. As the result of declining ore grade, coupled with escalating working costs, the profit margins of most mines have been deteriorating. Under the circumstances, marginal mines were left with two alternatives; either to selectively mine higher grade ores and risk shortening the working lives of the mines or to close down. Opening of new mines with higher grade ores is constrained by the high initial capital investment needed, amounting to several millions of rands; and in the face of uncertain market conditions of gold, investors have opted to postpone the opening of new mines.

Figure 1:

Gold Ore Grade; Members of the Chamber of Mines

As if to compound the South African gold mining problems, a series of supply-shocks began to ensue during 1989 and early 1990 depressing the price of gold. Massive sales of gold by Eastern European countries, particularly the Soviet Union and some countries in the Middle East, notably Saudi Arabia, served to push the price of gold below the critical support level of \$385 an ounce to around \$345 an ounce during June 1990.

On the demand side, the problems of fundamental nature served to dwindle the demand for gold. The underlying demand for gold-fabricated products; jewellery, electronics, dentistry and coins slowed down primarily due to recession in major western economies. Further, higher interest rates in these economies, acted as a disincentive for the holding of gold as a store of wealth.

The sluggish demand, combined with an increase in the international supply of gold, by five per cent to 1,734 tons in 1990; served to depress the international price of gold in terms of virtually all major currencies. In terms of the US dollar, for example, the price of gold per ounce fell by 15 per cent from \$477 at the beginning of 1988 to \$404 by the end of 1989. It fell again by a further 7 per cent during 1990 to \$377 and by mid 1991 the price stood at \$357 (see figure 2 below). In terms of the German Mark, the price of gold fell by 17 per cent from DM836 in 1988 to DM696 by the end of 1989. By the end of 1990 it had fallen by a further 20 per cent to DM554. It however improved during 1991, so that by mid 1991 it stood at DM613, an improvement of 11 per cent.

In a bid to reduce the working cost against the background of falling gold prices, declining ore grades and escalating mining costs, the mining houses have reacted by reducing the labour force (Labour charges constituted 52 per cent of mining working costs in 1990¹). For example, in January, 1991, the Harmony Gold Mine announced that it was to retrench 6,500 workers in a bid to cut down operations. The reasons put forward by the mine was the generally low gold price coupled with escalating mining costs.²

Large retrenchments of Basotho mine workers were registered during 1990. The number of Basotho mine workers recruited by The Employment Bureau of Africa (TEBA), declined by 4.6 per cent from 108 thousand in 1989 to 103 thousand in 1990. Further retrenchment in the foreseeable future may be necessary if the condition do not change particularly the price of gold.

¹) Chamber of Mines of South Africa, Annual Report, 1990.

²) The Star, January 11th 1991

Figure 2

The Price of Gold, in U.S. Dollars

Figure 3

The Number of Basotho Miners on the Gold Mines, as Recruited by TEBA

2.2 Long-Term Problem Situation

If the political developments now taking place in RSA are irreversible, the long-term future employment of Basotho mine workers is likely to be affected. One of the basic objectives of the future majority government in RSA will be income distribution. Whether this will be pursued through nationalisation or through market oriented policy instruments remains to be seen. However, one thing is certain: the mining industry ranks high as one of the industries likely to be focused upon as a machinery towards achieving the goal of income distribution.

At one end of the spectrum, complete nationalisation of the mines may be seen as one of achieving the objective. This approach is favoured by the so-called 'radicals' in the political spectrum. However, whether complete nationalisation of the mining industry will result in the complete retrenchments of all Basotho or will result in the intensification of the current internalisation policy remains a political decision.

Since it is generally agreed that the market forces coupled with race-based legislative machinery have failed to address the problem of redistribution, a certain 'mix' of market and non-market redistributive measures is another possibility. This is likely to include one or more of the following measures in one form or another:

- (i) Continuing private ownership of the mining industry but accompanied by heavy taxation in order to raise more revenue for the government which will be redistributed to other sectors of the economy³;
- (ii) Privately owned mining industry coming under increasing pressure to realign the mining industry wage level to those ruling, or even above, other sectors of the economy (mine wages are currently below the average industrial wages);
- (iii) Improvement of safety conditions to make mining more attractive to the black urban unemployed population;

³) It is felt, by some people, that the current level of taxation is already too high and that heavier taxation could force mines to close down resulting in numerous job losses.

- (iv) Intensification of the internalisation policy to deal with the problem of black unemployment. At present the mining houses have a policy of employing 60 per cent workers from RSA and 40 per cent foreigners as opposed to the reverse situation prior to the adoption of internalisation policy in the early 70s;
- (v) Improvement in the housing facilities in such a manner as to allow miners to settle with their families around the mines. Mining houses are currently considering the possibility of having the families of the miners visit on a short-term rotating basis. The argument is that settlement around the mines on a permanent basis would place considerable logistical problems and would demand increased municipal services. (For example, one mining house alone, employs over four thousand mine workers. If each mine worker brings with him four members of the family, 16 thousand individuals in the vicinity of the mine would certainly require increased planning and logistical support services).

3. The Historical Evolution of Labour Migration Phenomenon

Notwithstanding the existence of various conceptual difficulties in defining the phenomenon whereby persons; whether as individuals or as families, leave their normal country of residence and go to another country in search of economic benefits which they would not otherwise find in their home countries; it is possible to formulate a definition that allows one to trace the Lesotho - RSA human resources relationship right back to the formation of the Basotho nation. Some writers (e.g. Kimble, 1978) choose to make a distinction between labour migration and labour migrancy. Under this conceptual distinction, labour migration is used in reference to a situation whereby men oscillate between their home country, usually in some rural area, to another country - their place of work. Labour migrancy on the other hand, is usually reserved to characterise enforced oscillation between production modes and home country brought about as a result of a deliberate labour strategy.

However, for the purpose of sketching out the historical evolution of Lesotho - RSA labour relationship, a broader definition is necessary. Consequently, labour migration is defined for the purposes of this paper, as the oscillation of individuals and families between RSA and Lesotho whether prompted to do so as a result of war, drought or just seeking employment with the ultimate objective of exchanging their labour service for money. The duration of stay in RSA is not primary significance for, as it will be seen, this has been varying over time.

3.1 The Period During 1824 - 1847:

Labour migration, defined as above, dates back to the period immediately after the formation of the Basotho nation in the aftermath of Lifaqane (1818 - 1824). Lifaqane wars had reduced thousands of people to a position of almost complete destitution, chased from their villages, cattle and fields. Many of these

moved southwards into the Northern and Eastern Cape Colony (Lye, 1969). That the primary objective of these Basotho was not to seek permanent residence in the Cape Colony, but rather to replace their lost stock is evidenced by the following extended quotation (Maeder, 1824).

'The farmers hire them for the year, and give them, perhaps a cow, or six sheep, or six goats, on top of that they feed them and give them sometimes a present of some old clothing no longer fit for use .. When the natives are obedient and stay several years in service, they can earn a small flock which they take back with them to their country.

It is also evident that the labour relationship entered into between these Basotho and the white farmers was of a semi-feudal nature with labour tenancy and squatting being the most common forms.

However, by the time news had filtered through that there was a stability in Moshoeshoe's Kingdom, many Basotho began returning, so that throughout the 1830s and 40s there was a 'steady stream of such people returning to Lesotho.' (Lye, 1969)

3.2 The Period of 1848 - 1869:

During this period, two factors seem to have played a dominant role in encouraging labour migration. As in the earlier phase, natural disaster, mainly in the form of prolonged droughts which had also resulted in the heavy losses of livestock, forced most Basotho to hire themselves to the whites (Germond, 1967). Those who could not find employment in the colony:

'rise every morning two hours before dawn to gather them (locusts) .., which they roast alive in pots. It would be no exaggeration to say that for several months in the year, they eat scarcely anything else'.

Bournet (1856) also made a similar observation:

'it was a question of daily bread on the one hand and absolute starvation on the other, unless they go as servants among the farmers'.

This period, 1848 - 1869, also coincided with a boom in commercial wool farming in the Cape Colony and the establishment of the sovereignty of the Orange Free State. These two developments necessitated the increased demand for labour services in the area of wool shearing, reaping and cattle herding on the other hand, and roads, ports and dam building and other infrastructural developments on the other.

However, in sharp contrast to the situation in early phase, labour demand was characterised by seasonality and increased regulation particularly in the Cape colony. Despite evidence of growing dissatisfaction on the part of Basotho against the restrictions, a series of regulations and proclamations which culminated in the introduction of the Kafir Employment Act of 1858 were established. The Act essentially established maximum and minimum contracts of five to one year respectively.

There is evidence also, of the gradual emergence of wage employment during this phase although semi-feudal labour relations predominated.

3.3 The Period 1870 - 1969:

The period around 1870 in many ways marked the turning point in the history of Lesotho and not least in the area Lesotho-RSA labour relations. The discovery of diamonds in 1867, and sometime thereafter (around 1886) of gold around the Witwatersrand area, with the resultant emergence of a multiplicity of towns in these areas; were primarily driving force behind the change in labour relations.

It is useful at this point to distinguish between the nature of labour relations during the period of 1870s, when labour migration was largely discretionary, and the period thereafter. During 1870s, labour shortages resulting from increased competition between 'old' forms of employment - farming and infrastructural construction, and 'new' forms of employment - mine labour; led to the general increases in wages.

The decade also experienced unprecedented increase in arms and ammunitions trade between employers and Basotho labourers. Basotho had just emerged from a crippling war (1865 - 1868) with the Afrikaners of the Orange Free State. The experience of the war had shown them that ownership of guns could play a decisive role in the protection of their country. Several reports indicate that the primary motive for working in the mines during this time was the desire to acquire guns. Some employers reported to Governor Barkly who had visited the Diamond Fields to investigate the phenomenon that:

'the natives come here more for the sake of getting guns than for money - a sufficient amount of labour to work the - soil could not be obtained if the supplying of guns to the natives were prohibited' (Mathews, 1887).

Two factors led to this illicit guns trade despite the establishment of the Peace Preservation (Disarmament) Act. The first one is the generally favourable economic conditions in Lesotho during the same time and the second one is linked to the generally depressed diamond prices to the extent that employers had to offer guns trade as some kind of 'fringe' benefits in order to retain miners who would not accept lower wages.

There is also evidence of some Basotho seeking employment in the mines in order to pay the hut tax. It has been the condition of political incorporation in 1870 that the cost of administering the territory should be met out of a hut tax based on the number of huts in each family compound (Murray 1981). In a colonial annual Report for Herschel, Halse (1876) reported that during shearing and reaping seasons:

'large parties rush into the adjacent districts and return quite satisfied .. if they have realised enough to pay their hut tax'

The period following the 1870s brought with it the decisive turning point in the history of labour migration. Firstly, a series of internal shocks in the form of a succession of droughts, cattle diseases and locusts rendered agriculture an unreliable source of income for most Basotho, so that by 1907 the Government Secretary, in the Colonial Annual Report, reported that:

'the native population is showing a tendency to divide itself into two district classes of labour, namely the agriculturist and mine labourer ..it appears that the native farmer who in bad years, went out to miscellaneous farm and domestic labour, in a good year remains at home and tills his land'. (CAR, 1906-7).

This succession of droughts was coupled with a series of wars: the Gun War (1880-1881) and the Anglo Boer War (1899-1902) which led to the closure of the traditional outlets for the export of Basotho grain and subsequently let several farmers to abandon farming as a major source of income.

Secondly, from 1896, the Chamber of Mines begun to consolidate a uniform strategy of recruitment and wage determination. This led to the emergence of the monopsonistic market structure in the mining labour market with the results of maintaining black wage at low levels.

Thirtly, a series of measures designed to control the influx of labour into white areas' culminating in the establishment of the Black (Urban Areas) Act of 1923, were established. The laws essentially stated that a native should only be allowed to enter the urban areas or 'white areas' only when he is willing to minister to the needs of the white man and should depart there from when he ceases to so minister. The upshot of these laws, and a series of other regulations that followed, was to force black workers to spend their working lives oscillating between their rural homes and their places of work.

The period of 1963 and 1968 saw the further tightening of influx control measures. The Black Laws Amendment Act of 1963 required all foreign African entering South Africa for work, except those recruited to work on the mines and other specified industries, to have prior permission to do so from the Secretary of Bantu Administration. In 1968, one year worker contracts were established.

3.4 The Period of 1970 to Present

Two events led to the change in the general policy of the mining industry in the early 1970s. The plane crash in Botswana in 1974 in which 72 Malawin citizens returning home from South African mines wer killed, led to the total ban on the recruitment of labour from Malawi. The ban was however short-lived for it resumed five years later. The newly independent Mozambiquen government with communist ideological inclinations rendered the supply of labour from this country very uncertain to the south African mining industry. These two events exposed the vulnerability of the industry to external sources of labour.

Accordingly, the mines sought to reduce their dependency on external sources of labour. The subsequent increases in real wage rates in 1971 and 1975 (Cobbe, 1983), improvements in working conditions and safety standards and attempts to mechanise certain areas of mining are evidence of this. By so doing the industry sought to make mining as attractive to South African Urban population as any other employment sector in South Africa. The Black Laws Amendment Act of 1963, which essentially restricted black foreign workers into employment in the mining and agricultural sectors, was repealed in 1989.

3.5 Historical Trends of Basotho Workers in RSA

The table below, and the graph that follows, show the actual numbers of Basotho and trends in employment in RSA for the period between 1875 and present. The statistics have been collected from different sources.

Table. 1

Number of Basotho workers in South Africa: 1875 - 1990

Year	Number	Sources:
1875	15 000	1975; Kimble, (1978)
1885	30 000	1885 & 1890; Deduced from Accounts
1890	20 000	in Murray (1981)
1911	21 000	1911 - 1976; Monyake (1974) and Bureau
1921	37 827	of Statistics Census preliminary
1936	78 604	results (1976)
1946	95 697	1986 & 1990; Central Bank of Lesotho
1956	112 790	
1966	96 350	
1976	129 103	
1986	121 450	
1990	127 385	

FIGURE. 4

HISTORICAL TRENDS OF BASOTHO MINE WORKERS IN RSA

The increase in the number of Basotho mine workers employed between 1875 and 1886 is associated primarily with the 'gun fever' that was observed during this period and secondarily the increased need for cash needed for payment of hut tax. The subsequent decline and levelling off at around 20 thousand workers during 1890 and 1911 is a result of massive repatriation that followed the outbreak of rinderpest around 1896 and the subsequent establishment of quarantine regulations during the same period.

Following a series of external and internal shocks experienced by Lesotho economy during the early 20th century - two wars, droughts, locusts, diseases and culminating with the rise of protectionist policies by the Tranvaal authorities, Labour migration intensified for the most part of 1911 and 1956. The observed decline in 1966 is difficult to explain and could probably be the result of some statistical error.

The chart below gives a summary of the evolution of labour migration from 1824 to present.

CHART. 1

OVERVIEW OF THE HISTORY OF LABOUR MIGRATION

	Form of Employment	Labour Relations	Primary Motive/ Driving Force
1824-1847	Farming, Domestic Work	Semi-Feudal: Labour Tenancy and squatting	War & Famine
1848-1869	Commercial Wool Farming Infrastructural Construction Domestic Work.	Semi-Feudal Emergence of Wage Employment	Famine, destitution
1870-1969	Diamond and later Gold mines, Farming and Domestic Work to a Smaller Extend	Predominantly Wage Employment	Initial Gun Fever & Hut Tax Various External Shocks
1970-1990	Gold, Diamond Coal and other Mines.	Wage Employment.	

4. Theoretical Framework and Quantitative Considerations

This chapter seeks to give an assessment of how the short-term problem situation, as outlined in chapter two, will impact on labour income earned by Basotho migrant workers. It is necessary first to give a brief description of how this component of 'labour income from abroad' is statistically measured. To arrive at the total figure of labour income from abroad arising out of migrant workers' earnings, one has to have a total number of Basotho mine workers actually employed in RSA during a given period. This total number is then multiplied by the average wage rate during the same period. It could therefore be seen that labour income is determined by both the actual numbers employed and the wage rate.

What is needed therefore is an assessment of how the parameters of the crisis will affect: (I) the number of Basotho mine workers and (ii) the average wage rate.

Theoretically, the level of employment of a given resource as well as its price, are determined by the interaction of demand and supply curves of these resources. However, the mechanism through which these variables are determined varies depending on the type of the market structure in which these resources are traded.

The structure of the labour market in question has the following main features. On the demand side of resources, there exists a uniform strategy of labour recruitment to the extent that there is, by and large, a single buyer of gold mine labour - The Employment Bureau of Africa (TEBA). On the labour supply side, the highly unionised labour force exists under the single umbrella of the National Union of Mine Workers (NUM). The mining companies on the other hand, sell their gold in a more or less perfectly competitive market structure. Therefore there exists, in broad terms, the monopsonistic market structure in the procurement of resources while the products are sold under competitive conditions.

Below, is a graphical illustration of how both the level of employment and the wage rate are determined under the above mentioned market conditions.

The quantity of labour is measured on the x-axis while the wage rate is measured on the y-axis. The initial short-run labour demand curve is equal to the marginal revenue product of labour and is represented by the DL curve. It is downward sloping from left to right. This is the labour demand curve of a monopsonist who sells his product under competitive conditions. A highly unionised labour supply situation makes labour supply curve infinitely elastic at a given rate. The initial labour supply curve is represented by the SL curve.

FIGURE. 5

WAGE RATE AND EMPLOYMENT LEVEL DETERMINATION

The initial situation is as depicted by point A where the wage rate is W_0 and the level of employment is L_1 . The fall in the price of gold decreases the marginal revenue product at every level of employment, thus shifting inwards the demand curve for labour. The new labour demand curve arising out of the fall in the price of gold is represented by DL_1 . If the union is still content with initial wage rate W_0 , the new level of employment will be L_2 . Therefore, as the result of the fall in the price of gold, L_1-L_2 units of labour will lose their jobs.

Suppose however, that the union successfully negotiates a higher, nominal wage rate W_1 . This has the effect of shifting the labour supply curve upwards to SL_1 . As the result, the new equilibrium position is established at point C where the new wage rate is W_1 and the new employment level is L_3 . The number of workers who loose jobs is now L_1-L_3 .

In theory therefore, a fall in the price of gold is expected to lead to the fall in the number of workers employed. The extend of the retrenchment will also depend on whether the workers are willing to accept lower wage rate or not.

The central question that needs to be addressed is: How will a rise in the nominal wage rate as negotiated by workers accompanied by a fall in level of employment affect labour income (statistically measured as defined earlier) to Lesotho?

The effect, under these circumstances depends on the elasticity of labour demand curve. When the demand curve is elastic, an increase in the wage rate accompanied by a fall in the number of workers employed will result in a fall in labour income. A fall in the wage rate together with an increase in the number employed will result in an increase in labour income. On the other hand, an inelastic labour demand curve, will result in an increase in labour income if the wage rate increases and the number of workers employed falls. The opposite will occur if there is a fall in the wage rate accompanied by an increase in numbers employed.

It could therefore be seen that, in the absence of information on the elasticity of the gold mining industry's labour demand curve, one cannot say whether labour income will increase or fall as a result of increases in real wage rates and subsequent retrenchment. In theory, elasticity tends to be larger the better the availability of labour substitutes. Since the primary concern is the demand for Basotho labour, the question essentially is whether the mining industry can easily substitute Basotho labour with labour from other areas. Experience of the past 20 years shows that the industry in fact prefers Basotho mine workers to other workers. For example, in 1973, foreign workers, including workers from Lesotho, constituted 79.6 per cent of the total work force of the gold mining industry associated with chamber of Mines. In 1978, this percentage dropped, however, the percentage of Basotho mine workers increased from 20.7 per cent in 1973 to 22.9 per cent in 1978 (Murray, 1981).

Secondly, elasticity of labour demand tends to be larger the greater the elasticity of the product for which labour is employed. South African mining industry sells its gold under competitive conditions. Other major suppliers include, Soviet Union, East European countries and countries of the Middle East.

Further, the unique nature of gold and its historical role in international finance are such that almost every country holds gold as a component in its reserve holdings and these could be sold as the need arises. It would therefore be seen that the

demand for gold, from the South African point of view, is perfectly elastic; and so by implication the demand for labour in this industry could be highly elastic.

Thirdly, elasticity of labour tends to be larger the greater the costs of labour in total costs of production. Labour costs constitute over 50 per cent of total working costs. In 1990 for example, this proportion rose to 54 per cent.

It would appear therefore that there are arguments and counter-arguments relating to whether, on a theoretical basis, labour demand curve for Basotho workers could be elastic. On the basis of the above considerations, the arguments weigh heavily towards the possibility that Basotho labour demand is elastic. However, to be sure, one needs to revert to empirical evidence.

Figure 6 below shows the price of gold and the number of Basotho mine workers employed in the gold mines during 1980 to 1990. The figures represent yearly averages. It could be seen from the figure that there is a remarkable correlation between the movement in the price of gold and the number of Basotho mine workers employed. It would appear also from the figure that the change in the number of employed Basotho responds to changes in the price of gold with a one year lag. For example, the fall in the price of gold in 1981 from US\$612.9 in 1980 to US\$459.9, was followed by a fall in the number of mine workers in 1982 to 99.5 thousands from the 1981 figure of 103 thousands. Again when the price of gold recovered in 1983, a similar recovery in the number of Basotho mine workers was experienced in 1984.

FIGURE. 6

PRICE OF GOLD AND NUMBER OF BASOTHO MINE WORKERS

FIGURE. 7

THE DOLLAR PRICE OF GOLD AND NUMBER OF BASOTHO MINE WORKERS
A YEAR LATER

This one year lag in the effects of the change in the price of gold on the number of Basotho mine workers employed is shown more clearly in figure 7. In this figure, the number of mine workers a year later is plotted along with the price of gold. For example, the 1982 figure of employed mine workers is plotted on 1981 and the 1983 figure is plotted on 1982 like that such that the 1990 figure is plotted on 1989. The price of gold is plotted in a normal way. As can be seen, both series are highly correlated.

FIGURE. 8

THE RAND PRICE OF GOLD AND THE NUMBER OF BASOTHO MINE WORKERS A YEAR LATER

There is yet another aspect of the relationship between the gold price and the number of Basotho mine workers that has to be noted. This is the tendency of the number of mine workers to 'overshoot'. It is shown in Figure 8. In this figure the rand price of gold is shown together with Basotho mine workers. Again as in Figure 7 the number of Basotho mine workers is shown with a time lag of one year. An instance of this overshooting was observed during 1982 when the rand price of gold stabilised at around R400, the number of Basotho mine workers continued to fall to 92 thousands in 1983 instead of the expected similar stabilising around 100 thousands. Again more recently, during 1988 to 1990, the rand price of gold stabilised around R990. Instead of showing a similar levelling off, the number of Basotho mine workers employed, fell to around 103 thousands.

The earlier (1983) overshooting doesn't seem to be associated with increases in wage rates. For, in 1983, nominal wage rates increased by only 15 per cent compared to increases of 23 and 18 per cent in 1981 and 1982 respectively. The latter one however, could be associated with increases in the nominal wage rates. In 1990, nominal wage rates increased by 16 per cent compared to an increase of 14 per cent in 1989.

It has been shown that, in theory, large retrenchments could be avoided if workers can be willing to accept lower wages. In figure 5, should workers be willing to accept a lower wage rate such as W2, then the fall in the price of gold would not affect the initial level of employment. The mine would still be willing to employ L1 units of labour despite the fall in the price of gold. Again the central question would still be whether Lesotho's economy would be better off with a lower wage rate such as W2 with L1 workers employ or a higher wage rate such as W0 with L2 workers employed.

Indeed this trade off between higher pay or less workers employed has been shown by the recent miners' strikes at Doornfontein Mine. According to the mines' spokesman, the reason for the strike was:

'Workers' resistance to alternative employment at one level lower than the existing positions in order to avoid retrenchments'. (Business Day, 26 August 1991).

The mine reacted by dismissing 6000 mine workers when they failed to react to the ultimatum to return to work. They were subsequently reinstated on NUM's renewed negotiations. The new agreement signalled the softening of the workers' position. Business Day reported three days later that:

'Depending on the mine's profitability the agreement provided for some workers to be employed at a lower level to avoid retrenchments'. (Business Day, 28th August, 1991).

As it has been noted above, the level of employment, as well as the wage rate, are determined by the interaction of both the demand and the supply curves of labour. It would seem on first thoughts that the simultaneous equation approach to estimating both labour demand and labour supply would be most appropriate. The general form, of the system of equations characterising the labour market would be as follows:

1. DL = f (W,PG)
2. SL = g (W,SS)
3. DL = SL

Where:

W	=	nominal wage rate
PG	=	the price of gold
SS	=	safety standards
DL	=	labour demand
SL	=	labour supply

Equation (1) gives the demand for labour as a function of the nominal wage rate and the price of gold, where an increasing nominal wage rate would be expected to lead to a lower demand for labour for a given price of gold. An increasing price of gold would lead to a higher demand for labour, the nominal wage rate remaining constant.

Equation (2) on the other hand gives the labour supply curve. This would be the function of the wage rate with more and more workers willing to work the higher the wage rate. Lower safety standards, measured by fatality rates and injury rates at the place of work, would be expected to lead to fewer workers willing to offer their labour services for any given wage rate.

Equation (3) is the equilibrium condition that determines both the wage rate and the level of employment. Since the system has two exogenous variables (SS and PG), three endogenous variables and one exogenous variable excluded from both equations (1) and (2), these equations would be exactly identified. This would enable one to use simultaneous equation method to estimate the parameters of these equations.

However, as it has been argued above, the labour supply - side is characterised by a unionised labour force. This makes the labour

supply curve infinitely elastic, so that an employer even if a monopsonist, can buy an unlimited supply of labour at the same wage rate. Thus equation (2) above would assume a different functional form with the labour supply curve being given by the agreed wage rate between the employer and the labour union. This has the effect of making the wage rate exogenous and equation (2) would then contain two exogenous variables hence the relevance of a single-equation method to the estimation of equation (1). Thus the problem becomes that of estimating the labour demand equation, alone, using the single equation method.

The problem of identification of equation (1) is still to be tackled. As a general rule, for this demand equation to be identified, it has to be fairly stable over the sample period. This implies that one has to choose as the sample period, the period during which the price of gold varies very little. The supply curve on the other hand has to vary considerably to allow for the identification of the demand curve.

The postulated functional form of the demand curve is as follows:

$$DL = A_0 + A_1 W + A_2 PG_t - 1; \text{ where } A_0, A_2 > 0 \text{ and } A_1 < 0$$

The following results were obtained on estimation (see Appendix A for a description of the data used, t values are shown in brackets)

$$DL = 76 \ 297.61 - 4.05w + 72.45 PG \quad \frac{\quad}{R^2 = 0.64} \quad (3.1)$$

(7.61) (-1.02) (2.06)

The estimated results clearly show that both coefficients are insignificant despite the high figure of R². This indicates the extent of estimation problems associated with the particular function. However when the demand for labour is regressed on price alone, the following results were obtained:

$$DL = 76 \ 650.74 + 37.17 PG_t - 1 \quad \frac{\quad}{R^2 = 0.62} \quad (3.2)$$

(7.64) (5.74)

These results are in agreement with predictions of the wage and employment determination model outlined earlier. A log linear functional form produced a better fit however. The estimated results of this functional form are as follows:

$$\text{Log (DL)} = 4.63 + 0.13 \text{ Log (PG } t - 1) \quad \frac{\quad}{R^2 = 0.86} \quad (3.3)$$

(143.51) (10.91)

The projections that follow are based on equation 3.3. A few things are worth noting before using the equation as the basis for projections. The first has to do with the possible bias arising out of the excluded variables from the model particularly the variable for nominal wages. This is known as the 'left out variable' of LOV bias.

Secondly, it is important to note that the theoretical basis of the model used to explain labour employment level is basically a theory of resource allocation - a theory of how a profit maximizing firm would adjust its resource utilization when prices

of these variables as well as the price of the product change. Thus the theory's explanatory power is really geared towards explaining or predicting the behaviour of firms which still find it possible to sustain operations under conditions of falling gold price. However data used does not only include workers who have lost jobs due to mines' rationalization but also those who have lost jobs as the result of some mines closing down. Therefore the observed overshooting is probably a result of some firms closing down. In its 1990 annual report, The Chamber of Mines reported that, the gold price fell sharply below its critical support level of \$385 an ounce. The fact that some mining houses have temporarily suspended operations until the gold price recovers has been widely reported in the media. Indeed, one recent study grouped mines according to four categories: Those that will remain profitable, attain profitability if they increase grade, find it difficult to remain profitable whatever they do, and those that show little hope of remaining profitable and face closure⁴. Of the 47 gold mines 14 have been D-rated and are thought to face closure if the gold price remains around R950 an ounce for the next three years. The remaining 33 mines will only remain profitable after intensive rationalization.

Thirdly, with the current political developments taking place in South Africa and increasing speculation about the probable intensification of the internalization policy, it seems likely that the mining industry may wish to use the declining gold price as a reason for retrenching foreign workers in order to gear up for imminent further forced internalization.

Table 2 below shows labour income projections. These cover the period until 1993⁵. The second column of the table shows the dollar price of gold. As can be seen, the price is expected to decline during successive period until it reached US\$344 in 1993. Column 3 shows the rand-dollar exchange rate. The currency (rand) is expected to continue to depreciate until it reaches R2.90 a dollar in 1993. The table shows that labour income is expected to grow by 11 per cent during 1991, to 10 per cent in 1992, 1993 and 1994.

⁴) E.D. Rudolph, 'what if the gold bulls are wrong' in SUNDAY TIMES, BUSINESS TIMES, August 18, 1991.

⁵) Projected figures for the dollar price of gold and the exchange rate are from Bankorp journal Econovision, May 1991. There is a widely held belief that the gold price will remain depressed until 1993. See also the Sunday Times, August 18th 1991; Chamber of Mines Annual Report, 1990. Nominal wage rates for black mine workers are expected to grow by between 6.5 and 10 percent Business Times, 21st August, 1991. Some mines are beginning to insist that wage hikes should be linked to profitability. The upper limit of the growth rate of 10 per cent in wage rates has been used in the projections. Labour income remitted to Lesotho is estimated at 75 per cent of total earnings of Basotho mine workers. The residual 25 per cent is thought to be spend in RSA. The number of mine workers as projected by equation 3.3 has been adjusted downwards by 9534 to take into account retrenchments due to closing down of some mines. The figure is based on a study by Rudolf (1991).

TABLE. 2**LABOUR INCOME PROJECTION UNDER DECLINING GOLD PRICE**

Year	Dollar Price of Gold	Exchange Rate	Rand Price of Gold	Nominal Wage	No. of Mine Workers	Labour Income
1990	383	2.59	991.97	10,068.96	103,040.00	778,129,228.80
1991*	356	2.73	971.88	11,075.86	95,069.16	789,729,255.53
1992*	347	2.88	999.36	12,183.44	94,791.30	866,163,204.32
1993*	344	2.90	997.60	13,401.79	95,170.14	956,587,372.98
1994*	-	-	-	14,741.96	95,146.15	1,051,980,865.11

- The star sign here and in later tables indicate projected figures

In Table 3.1 the impact of declining gold price on labour income is shown. The table shows the expected levels of labour income if the gold price were to stabilize at its 1990 level of US\$ 383 for the next three years while wage rates grow at 15 per cent during the same period. The exchange rate is however allowed to depreciate during the same period. Under these conditions, labour income would grow by 17 per cent in 1991, 16 per cent in 1992 and 1993 and 15 per cent in 1994 as against rates of 11 per cent in 1991 and 10 per cent during the rest of the years under declining prices.

The second part, Table 3.2 shows the impact of declining gold price in absolute amounts. Lost labour income amounts to M118.7 million in 1991, M181.7 million in 1992, M261.5 million in 1993 and M350.1 million in 1994. The total amount of labour income lost (and for the matter foreign exchange) during the period of the crisis is thus expected to amount to M916 million.

Table 3.1**Labour Income Projections Under Stable Gold Price.**

Year	Dollar Price of Gold	Exchange Rate	Rand Price of Gold	Nominal Wage	No. of Mine Workers	Labour Income
1990	383	2.59	991.97	10,068.96	103,040.00	778,129,228.80
1991*	383	2.73	1045.59	11,597.30	104,603.16	908,423,853.12
1992*	383	2.88	1103.04	13,316.20	105,321.49	1,051,861,463.57
1993*	383	2.90	1110.70	15,313.63	106,056.40	1,218,081,266.64
1994*	-	-	-	17,610.67	106,151.85	1,402,054,258.13

Table 3.2

The impact of Declining Gold Price on Labour Income

Maloti (Base: 1990)

Year	Labour Income Under Stable Gold Price	Labour Income Under Declining Gold Price	Impact
1990	778,129,228.80	778,129,228.80	0.00
1991*	908,423,853.12	789,729,255.53	118,694,597.59
1992*	1,051,861,463.57	866,163,204.32	185,698,259.25
1993*	1,218,081,266.64	956,587,372.98	261,493,893.66
1994*	1,402,054,258.13	1,051,980,865.11	350,073,393.02

5. Economic Implications

5.1 Comparative analysis with the 1982-1984 Crisis

Before analysing the economic implications of the above trends it is useful first to put current crisis in perspective.

The Lesotho economy suffered a more or less similar crisis during the early part of the previous decade. The previous crisis could be characterised as follows:

- (i) The dollar price of gold declined by 22 per cent between 1981 and 1984
- (ii) Because of the depreciating rand against the dollar during the same period, the rand price of gold, to which miners employment is linked; declined by 14 per cent between 1980 and 1982, but recovered again by 29 per cent between 1982 and 1984;
- (iii) Nominal wages grew by an annual average rate of 18 per cent during the same period, a growth rate similar to the period during 1984 - 1988;
- (iv) The number of Basotho mine workers dropped by 8 per cent between 1980 and 1983 and recovered again by 7 per cent in 1984;

The upshot of all these was the growth rate of only 14 per cent in labour income in 1982 and 7 per cent in 1983. It recovered however in 1984 to a growth rate of 24 per cent. This should be compared with annual average growth rate of 31 per cent in 1970s and 18 per cent annual average between 1985 and 1990.

Table 4 shows the performance of the dollar price of gold, the rand price of gold, number of Basotho employed, nominal wages and

labour income during 1980 to 1984. Also shown in the table are the projected performance of these variables during 1991 to 1994.

Table. 4

The Current Crisis in Perspective

Year	Dollar Price of Gold	Exchange Rate	Rand Price of Gold	Nominal Wage	No. of Mine Workers	Labour Income	change In Labour Income
1980	613	0.78	476.80	2,037.00	100,450.00	153,474,909.50	-
1981	460	0.87	400.24	2,520.00	102,993.00	194,656,770.00	26.83
1982	376	1.09	408.91	2,985.00	99,441.00	222,623,538.75	14.37
1982	424	1.11	471.66	3,435.96	92,220.00	237,648,173.40	6.75
1984	360	1.46	526.26	3,972.00	98,797.00	294,316,263.00	23.85
1990	383	2.59	991.97	10,068.96	103,040.00	778,129,228.80	-
1991*	356	2.73	971.88	11,075.86	95,069.16	789,729,255.53	1.49
1992*	347	2.88	999.36	12,183.44	94,791.30	866,163,204.32	9.68
1993*	344	2.90	997.60	13,401.79	95,170.14	956,587,372.98	10.44
1994*	-	-	-	14,741.96	95,146.15	1,051,980,865.11	9.97

It can be seen from the table that the number of Basotho mine workers dropped from around 103 thousands in 1981 to their lowest figure of 92 thousands in 1983 but then recovered to nearly 99 thousands in 1984; a figure slightly lower than its 1981 level. During the current crisis however the number of Basotho employed is expected to stabilise at around 95 thousands after falling from its peak figure of 103 thousands in 1990. The primary reason for this levelling off is the expected further depreciation of the rand. Therefore, in terms of the number of Basotho mine workers retrenched, the current crisis is expected to be less intense than the previous one.

With respect to the impact on labour income, the present crisis is expected to be more intense. Labour income is expected to grow by an average of 8 per cent, in nominal terms, during 1991 to 1994 whereas in the previous crisis, it grew by an annual average of 18 per cent. The reason for this is that in the previous case, average wage rates grew by an annual average of 18 per cent while during the present crisis, it is expected to grow at an annual average of only 10 per cent. This leads to the following condition concerning the magnitude of labour income deceleration during the present crisis: since the number of Basotho mine workers is expected to more or less stabilize during 1991 to 1994 (see table 4), labour income growth will be determined primarily by the growth rate in the nominal wage rate⁶. If current trends, where the union are only managing to

) This fact could be demonstrated by the following well known mathematical formulation. If L is a product of two variables N and W (L = Labour income; N = Number of Basotho mine workers and W = nominal wage rate) so that:

$$L = N * W$$

Then: $L = N + W$ (where a dot over a variable represents the percentage change in the variable)

negotiate between 6 and 10 per cent wage increase, can continue into the future⁷; one can expect labour incomes to grow at more or less the same rates.

Table 5 gives a glimpse of selected macro-economic indicators during the 1981 - 1984 crisis. This table gives an indication of the impact of lower labour income growth on these macro-economic indicators. A word of caution is in order here. The period of 1982 to 1984 was also the period during which the economy experienced two other major shocks: drought coupled with the closure of a diamond mine at Lets'eng la Terai. The dismal performance of the economy, as measured by the growth rate of GDP, is a reflection of the combined impact of all these shocks. It can be seen however that despite the slowing down of labour income growth during the same period, its contribution to the real growth rate in GNP and per capita GNP was still significant. For example, in 1982 real GDP growth was only 3.6 per cent while real GNP grew by huge 11.2 per cent. In 1983 when a negative growth rate of 8.6 per cent was registered in GDP, a smaller negative growth in GNP was registered.

Primarily as a result of the slowdown in the growth of labour income, the current account position showed deficits during 1982 and 1983. The small surplus observed in 1984 was a result of a combination of the recovery in the growth rate of labour income plus increased inflows of unrequited transfers. Although there were current account deficits during 1982 and 1983, net foreign assets of the country continued to increase from M102 million in 1982 to M129 and M179 million in 1983 and 1984 respectively. This increase was purely a result of increased loan capita unrequited from abroad by government.

TABLE. 5

**PERFORMANCE OF SELECTED MACROECONOMIC INDICATORS DURING
1981 - 1984 CRISIS**

	1982	1983	1984
% Growth in labour income	14.4	6.8	23.9
% Growth in real GDP	3.6	-8.6	8.4
% Growth in real GNP	11.2	-3.3	4.7
Per capita GNP (maloti)	214	192	202
Per capita GDP (maloti)	412	391	398
% Growth in per capita GDP	0.9	-10.3	5.2
% Growth in per capita GNP	8.7	-5.1	1.8

Since N is more or less zero, then $L \approx W$.

⁷) See for example BUSINESS DAY, 21st August, 1991

Current Account Position (Million maloti)	-41.8	-11.7	2.2
Long term capita inflows of which government loans (net) (Million Maloti)	55.1	37.2	-0.7
Net Foreign Assets position (Million Maloti)	102.1	129.3	179.0

5.2 Analysis of the Economic Impact

The previous chapter has attempted to estimate the amount of labour income to be lost as the result of Basotho migrant workers retrenchments. The task now is to give an assessment of the impact that these losses will have on the Lesotho economy.

To do this, use is made of the Polak model⁸. In its simplest form, the model has three exogenous variables: exports of goods and services, net capital inflows and net domestic credit. Endogenous variables are: the stock of money, nominal income, imports of goods and services and net foreign assets. The model consists of two behavioral equations and two identities. The equations are:

$$\begin{aligned}
 1) \quad Y_t &= vM \\
 2) \quad M_t &= mY_t \\
 3) \quad \bullet mot &= \bullet NFAt + \bullet NDCT \\
 4) \quad \bullet NFA &= X_t + CF_t - M_t
 \end{aligned}$$

Where:

$$\begin{aligned}
 Y_t &= \text{nominal income} \\
 M_t &= \text{stock of money} \\
 M &= \text{Imports of goods and services} \\
 NFA &= \text{Net Foreign Assets} \\
 NDC &= \text{Net Domestic Credit} \\
 X_t &= \text{exports of goods and services} \\
 CF &= \text{Net Capital Inflows}
 \end{aligned}$$

V and m are velocity of money circulation and propensity to import respectively.

By the process of substitution and lagging the following basic conclusions of the model could be shown:

$$\begin{aligned}
 6) \quad \bullet M &= \bullet Q \\
 7) \quad \bullet Y &= \frac{1}{m} \bullet Q
 \end{aligned}$$

Comment:

Where Q represents the sum total of all exogenous variables.

⁸) The original model could be found in J.J. Polak 'Monetary Analysis of Income Formation and Payments Problems'. This model was later modified and published in J.J. Polak and L. Boissonneault, "Monetary Analysis of Income and Imports and its Statistical Application". Both articles are to be found in: IMF, The Monetary approach to the Balance of Payments, (Washington, 1977).

Equation 6 shows that a change in any of the exogenous variables will lead to an equal change in exports, other exogenous variables remaining the same. For example, a fall in exports by 100 million will lead to an equal fall in imports if all other exogenous variables do not change. Equation 7 on the other hand, shows that a change in nominal income will be equal to the total change in exogenous variables multiplied by the inverse of the import propensity. Thus, the smaller the marginal propensity, the larger will be the multiplier effect.

However, in order to examine the predictions of the model properly, account must be taken of the duration of any given change in the exogenous variables⁹.

It was shown in the previous chapter that labour income is expected to continue to grow in nominal terms, although at a much slower rate. Thus, according to the model, the total change in Q will be positive, assuming capital flows and net domestic credit will continue to increase. Imports are therefore expected to continue to grow although at a slower rate too. Hence, the external sector position of the country can be expected to remain broadly unchanged. This is so because, although exports, or more specifically labour income will grow more slowly, there is to be a matching slowdown in the growth of merchandise imports.

However, if one uses the three-year lag-structure for Lesotho (Cavendish, 1989), imports will slow down with a time lag, so that initially, during 1991 and 1992, the external sector position growth reverts back to its pre-1991 level of 18 per cent, imports will not immediately recover thereby leading to a surplus in the external sector position.

The nominal growth rate of national income, on the other hand, is expected to grow broadly in line with the growth of labour income. Using the three-year lag structure, even if the crisis lasts until 1994, it will not be until 1997 that national income could be expected to revert back to its pre-1991 level. The important assumption being made here is that capital flows arising out of say the implementation of Lesotho Highlands Water Project (LHWP) remain more or less the same as in 1990.

As shown in the previous chapter, the number of Basotho gold miners expected to be retrenched amounts to 7.9 thousands. However, account must also be taken of other job losses that will result due to the domestic multiplier effects. Estimates of the latter are more difficult to make.

Below is a summary table showing the expected macro-economic impact of the crisis. The figures shown represent averages for the period 1991 to 1994. On the basis of a 15 per cent annual rate of inflation, it can be seen that labour income growth is expected to decline by 7 per cent in real terms leading to a decline of 4 per cent in national income. The external sector position is not expected to change. Government revenue out of

9) In an application of the Polak model to Lesotho, Cavendish (1989) has found that the three-year lag structure is probably the most appropriate for Lesotho.

customs duties are expected to deteriorate by 7 per cent in real terms.

TABLE. 6

MACRO-ECONOMIC IMPACT OF THE CRISIS (1)

MACRO-ECONOMIC PARAMETER	NOMINAL GROWTH RATE	REAL GROWTH RATE (2)
Labour Income Growth	8%	-7%
National Income Growth	11%	-4%
Expected Sector Position	No change	N/A
Unemployment	At least 7900 job losses (3)	worsens by or by 0.7% N/A
Government Finance (4)	8%	-7%
Amount of Foreign Exchange lost (5)	M916 million	N/A

(1) Estimates represent average growth rate during 1991 - 1994.

(2) Assuming a 15% annual rate of inflation during 1991 - 1994.

(3) Does not take into account job losses due to slow down in economic activity resulting from labour income multiplier effects.

(4) Refers to only customs duties, other multiplier effects on other revenues such as sales tax, not considered. Also, because of the time lag the expected growth rate refers to 1993/94 - 1997/98.

(5) See table 3.2

At the microeconomic level, proper analysis is hampered by lack of adequate statistics on certain economic characteristics of returning migrant workers. Statistics on the number of dependents per retrenched migrant worker, their level of education, their forms of wealth ownership, and places of residence of returning migrant workers; would be very useful in providing insights into the impact of the crisis at the household level.

The analysis that follows is based on the 1986 results of the Household Budget Survey. It should thus be treated as indicative only, as appropriate statistics is not available.

TABLE. 7

SELECTED ECONOMIC CHARACTERISTICS OF BASOTHO HOUSEHOLDS

	% of Households With at least One Migrant Worker	Migrants' Remittance As a % of Household Income	Household Size (Average Number of Persons
Urban Maseru	18.8	15.3	4.36
Urban Others	32.1	26.9	4.48
Rural Lowlands	49.2	45.4	5.27
Rural Foothill	42.7	34.2	5.33
Rural Mountain	29.5	24.3	5.07
Rural Senqu	45.2	37.7	5.53

Source: Bureau of Statistics

As can be seen from Table 7, 49 per cent of the households in the rural lowlands reported having at least one migrant worker as a member of the family. Rural foothill come second with 43 per cent of households. Rural lowlands again came first in terms of percentage share of migrants' remittances to total household income. Rural Senqu Valley came second in this regard. With respect to household size, rural mountains came first with the largest household size followed by rural lowlands.

From this table, it could be seen that rural lowlands, rural Senqu and rural foothill are likely to be the worst hit by the crisis. A larger percentage of repatriated mine workers is likely to come from these areas as these are the main labour supplying areas. Further as these areas also have largest family size, a single case of mine worker repatriated from this area, will have wider repercussions than if a mine worker from urban Maseru is repatriated. (See map)

6. Policy Options to Address the Problem

Economic measures that could be adopted to offset the impact of the crisis can broadly be categorised into monetary and fiscal policy measures. Monetary policy measures refer to decisions by monetary authorities made and implemented to achieve certain ultimate economic objectives of the government. Such decisions involve changes in one or some combination of monetary policy instruments such as interest rates, exchange rate and domestic credit. Fiscal policy on the other hand involves decisions on the part of government regarding the level of government expenditure and changes in the tax structure.

It will be assumed that the government's ultimate economic objective is to completely offset the impact of the crisis. In the analysis that follows, three broad policy measures are evaluated. Two criteria are used to evaluate each policy option. Its ability to offset the impact of the crisis - its effectiveness, and the concomitant side effects of the policy measure. The policy options are:

- i) option one: monetary policy - the easing of domestic credit policy.
- ii) option two: fiscal policy - increased government expenditure financed from external sources
- iii) option three: fiscal policy - increased government expenditure finance by increased level of taxation.

Option One

Domestic credit is allowed to expand by M916 million - the amount of labour income (and hence foreign exchange) lost (Table 5). The financial intermediaries give preference to the private sector. On receipt of increased credit, the private sector increases its production activities and provides employment of the retrenched workers.

In terms of the parameters of the model described in the previous chapter, the net change in the sum total of all exogenous variables, Q will be zero. This is so because first, Q would fall short of its normal rate of growth by M916 as labour income from abroad decelerates. This would be followed by an injection of the same amount as the monetary authorities allow domestic credit to expand by M916.

Under the above circumstances, the model predicts that imports would increase by the same amount, M916 million. But since this time the injection would be coming from within the economy, as opposed to externally sourced injection in the form of labour income, there will be an equivalent loss in foreign exchange reserves. National income on the other hand increases by M916 times the inverse of marginal propensity to import or roughly by M5127 million¹⁰. This increase in national income would be equal

¹⁰) Using marginal propensity to import of 0.61 as estimated in Foulo (1991).

to that which would prevail if labour income did not decelerate thereby exactly offsetting the impact on national income.

It can be seen therefore that much as this policy option is effective its side effects are considerable - it would lead to the deterioration in external sector position.

Option Two

Under this option, the government would borrow from abroad, possibly on concessional terms, money amounting to M916 million. (The feasibility of raising such huge amount of money is not addressed). The government would then spend this money on say, self-help projects targeted at giving employment to retrenched miners.

Under this policy option, imports would still increase by an amount of the total injection (M916 million). However, since there would be a matching inflow of foreign exchange, the external sector position would not deteriorate. National income would increase as in option one. Thus, this policy option has the same effectiveness as the previous one.

The immediate side effect of this policy is that the government would increase its external indebtedness by the same amount. This would strain the future debt servicing capacity of the government.

Option Three

Instead of borrowing from abroad as in option two, the government could change the tax structure so as to raise an additional M916 million (again the issue of the feasibility of this is not addressed). Money thus raised would be spent on the selected target group as in option two. It should be noted that this policy option merely shifts the domestic spending power from tax payers to government. Thus, in terms of the exogenous variables of the model, neither domestic credit nor capital flows increase. Thus Q slows down by the amount similar to the slowdown in labour income. The external sector position does not change, national income does not change and the overall result is that the impact of the crisis has not been offset.

The table below shows qualitatively the expected effects of the above policy options. It shows that no policy option is completely perfect. Perhaps under the circumstances the government would be advised to do nothing and adopt 'a wait and see' policy until such time that the situation improves. The important point that emerges from the analysis is that in attempting to offset the effects of the crisis the government could end up worsening its external sector position either in terms of deteriorating level of net foreign assets (Option One) or increasing external indebtedness (Option Two). On the other hand, fiscal policy aimed export promotion or import substitution would require a longer time frame to fully offset the effect of the crisis and would in any case miss the target group in terms of offering employment.

TABLE. 8

EFFECTS OF POLICY OPTIONS			
MACROECONOMIC PARAMETER	OPTION ONE	OPTION TWO	OPTION THREE
National Income	Improves	Improves	No change
External Sector Position	Deteriorates	No change	No change
Employment	Improves	Improves	No change
Government Finance	Improves	Deteriorates	No change

7. Conclusion

This paper had three objectives: (i) to assess the likely intensity of the problem of migrant workers' retrenchments; (ii) to examine the economic implications of the problem; and (iii) to assess policy measures that could be taken to offset the impact of the crisis.

The long-term dimension of the problem was found to be linked to the current political developments in RSA. On the basis of the assumption that the current political developments in RSA were irreversible, then the future majority government is likely to have as its primary objective wealth redistribution. The gold mining industry would be one of the areas of focus. It was highlighted that in order to address this objective a clear policy decision concerning future employment of foreigners in the RSA mining industry may have to be made. It argued however, that this long-term nature of the problem did not lend itself to economic analysis and that it could best be analyzed within the context of political economic considerations.

It was therefore found necessary to narrow the scope of the study to the short-term nature of the problem. The short-term nature of the problem was described as being characterised by: falling ore grades, escalating working costs, increasing gold supply in international gold markets arising out of massive gold sales by countries of the Middle East and Soviet Union, and the falling demand for gold-fabricated products. All of these products combined to depress the dollar price of gold.

As a starting point a brief description of the historical evolution of migrant worker phenomenon was given.

It emerged from this account that Basotho labour migration has always been the country's part of life. The phenomenon can be traced from as far back as the formation of Basotho Nation. It emerged primarily as a result of economic difficulties experienced by Lesotho economy; these difficulties arising primarily out of a series of wars, droughts and animal diseases. It was found that even when Lesotho economy was in a period of an economic boom as for example during 1870-1875, labour migration

continued unabated. The primary reason during this time being the desire on the part of Basotho to acquire goods of foreign manufacture, particularly guns and liquor, which they could not manufacture domestically. It was also found that labour migration occurred under different forms of labour relations. Initially semi-feudal labour relation mainly in the form of squatting and labour tenancy.

Regarding the issue of whether there has been, in the history of labour migration, massive retrenchments, it was found that indeed this had occurred several times arising out of differing reasons. As an instance of this, mass repatriations of 1885 to 1890 were given rise to quarantine regulations by the mining authorities. Again around 1981 to 1983 declining gold prices led to significant fluctuations in the number of Basotho gold mine workers.

In order to assess the impact of retrenchments on Lesotho economy it was necessary first to establish whether labour income will actually decline, stabilise or increase. A theoretical exposition showed that it was possible, under certain elasticity conditions, for labour income to continue increasing despite retrenchments. Indeed, the exposition showed that there existed a higher wages more retrenchments' relationship in the gold mining market. This was further substantiated by recent experiences in the industry as reported widely in the media.

On the basis of the estimated labour demand curve and other imperial evidence the following points emerged:

- (i) that the number of Basotho mine workers employed in the gold mines is expected to stabilise at around 95 thousands after falling from their recent peak value of 108 thousands in 1989;
- (ii) that this levelling off is expected to last until 1994;
- (iii) labour income is expected not to decline. But a lower growth rate of labour income is expected and this will be primarily determined by the growth rate of nominal wage in the gold mines. Nominal wages are expected to increase by around 6 to 10 percent during the period of the crisis. Thus labour income is also expected to grow at a rate more or less between these margins;
- (iv) the amount of foreign exchange earnings to be lost as a result of the expected slow down in the growth rate of labour income is estimated at around M119, M186, M261 and M350 million during 1991, 1992, 1993 and 1994 respectively.

In terms of the extend to retrenchments, the present crisis is expected to be less intense when compared to a more or less similar crisis during 1981 to 1983. Around 8 thousands Basotho gold mine workers are expected to be retrenched between 1991 and 1994. This is less than a figure of 11 thousands retrenchments witnessed during 1981 to 1983. In terms of labour income earnings however, the present crisis is expected to be more

intense with labour income expected to grow at a nominal average rate of 8 per cent compared to 18 per cent average in the previous crisis.

National income is expected to decline by around 4 per cent in real terms while unemployment is expected to worsen by an additional 0.7 per cent as the result of the crisis. The external sector position is not expected to be affected. Government revenues arising out of import duties are expected to decline by around 7 per cent in real terms.

At the household level, lack of appropriate statistics did not make it feasible to make proper analysis of the impact. Based on the 1986 Household Budget Survey, some tentative impressions regarding the spatial distribution of the impact were obtained. It was found out that Rural Lowlands, Rural Senqu Valley and Rural Foothills are likely to be affected.

Expansionary monetary policy measures aimed at offsetting the impact of the crisis could lead to the deterioration of the external sector position as measured by the amount of foreign exchange reserves that the country will lose. Similarly, expansionary fiscal policy measures financed by external borrowing could lead to increased government external indebtedness.

Under the circumstances it appears that the government's best alternative is to adopt a 'wait and see' policy until the situation improves.

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DATA USED FOR ESTIMATION OF LABOUR DEMAND CURVE
(LOG-LINEAR FUNCTIONAL FORM)

YEAR	NUMBER EMPLOYED	GOLD PRICE*
1968	4.77	1.44
1969	4.76	1.47
1970	4.80	1.41
1971	4.82	1.47
1972	4.84	1.65
1973	4.86	1.81
1974	4.87	2.03
1975	4.89	2.07
1976	4.93	2.04
1977	4.98	2.11
1978	4.98	2.23
1979	4.99	2.41
1980	5.00	2.68
1981	5.01	2.60
1982	5.00	2.61
1983	4.96	2.67
1984	4.99	2.72
1985	4.97	2.85
1986	5.03	2.92
1987	5.04	2.95
1988	5.02	2.99
1989	5.04	3.00
1990	5.01	3.00

* Maloti /fine ounce

DATA USED FOR ESTIMATION OF LABOUR DEMAND CURVE
(LINEAR FUNCTIONAL FORM)

YEAR	NUMBER EMPLOYED	GOLD PRICE*
1968	59531	27.64
1969	59824	29.36
1970	62576	25.67
1971	65633	29.27
1972	69463	45.07
1973	73232	65.26
1974	74286	108.31
1975	78157	118.06
1976	85233	108.55
1977	95300	128.44
1978	95154	168.05
1979	98601	257.71
1980	100458	476.80
1981	102993	400.24
1982	99441	408.91
1983	92220	471.66
1984	98797	526.26
1985	93481	710.63
1986	106345	840.38
1987	108894	899.48
1988	105107	892.10
1989	108675	990.30
1990	103040	991.88

* Maloti/fine ounce.