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Macroeconomic Adjustment
and Growth

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The Labor Market and Economic Stabilization in Zambia

Christopher Colclough

Labor markets are assumed, in orthodox stabilization programs, to be flexible. The experience in Zambia proved this assumption unfounded.

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This paper examines trends in the Zambian labor market over the period since independence. It focuses particularly on two phenomena — skill shortages and wage rigidities — which have made it more difficult for the economy to recover from the fall in the price of its main export commodity, copper, in the mid-1970s.

Real wages did fall somewhat over the following decade, but insufficiently so to promote economic diversification and recovery. The rigidities also help to explain the failure of more recent stabilization efforts, including the IMF program of 1985-87.

This paper is a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Raquel Luz, room N11-057, extension 61588 (40 pages with tables).

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Introduction

Conventional stabilisation and adjustment policies for developing countries typically presuppose the existence of labour market flexibility. Variation in the nominal exchange rate is usually given a central place in such reforms because it can change the structure of relative prices in virtuous ways. In the presence of labour market rigidity, however, such price changes will not be achieved. If, for example, real wages were inflexible downwards, reduction of the nominal exchange rate would have scarcely any real effects: except during a short transitional period, relative prices would remain unchanged and resource reallocation would not occur.

Inflexibility of the labour market can also explain a lack of output response even where relative prices have been successfully altered. Low supply elasticities often arise from a lack of available physical inputs - raw materials, equipment, intermediate goods - but they can also be caused by shortages of or qualitative deficiencies in human resources, by ignorance of technological possibilities or of market opportunities. These facts are demonstrated in this paper, which examines the relationship between successive attempts to stabilise the economy of Zambia and trends in its domestic labour market. It is shown that both skill shortages and real wage rigidity exacerbated Zambia's economic decline over more than a decade, notwithstanding successive nominal devaluations of the Kwacha. Furthermore it is shown that the early demise, in 1987, of the adjustment package imposed by the IMF resulted from an unrealistic (or unconsidered) assumption that the majority of middle and lower income urban Zambians would tolerate pauperisation at the hands of a rapidly depreciating nominal exchange rate, notwithstanding the lessons and history of the previous decade. It follows that serious analysis of the labour market is a necessary input to (and the major past omission from) the design of stabilisation and adjustment programmes if they are to stand much chance of either economic or political success.

The analysis begins with a short account of Zambia's macroeconomic record since 1970. This is followed by an assessment of some of the main influences on and characteristics of labour supply and labour demand over the period. The central section of the paper identifies the major labour market rigidities in Zambia and their contribution to the country's economic decline. The final section examines the impact of the 1985 IMF stabilisation package on the labour market, and the reasons for its ultimate rejection. Conclusions are drawn for future policy in Zambia, and for other countries contemplating - or being urged to introduce - economic reforms.

Economic Change in Zambia 1970-85

In recent times there have been few countries in the world which have had a more catastrophic economic record than Zambia. Over the two decades ending in 1985, only six countries - from amongst the 120 or so for which data are available (World Bank 1987: Table 1) - had a worse record of income loss. Furthermore in four of these six cases (Niger, Chad, Uganda and Nicaragua) the occurrence of natural or political disasters in the form of drought and/or war largely explain their demise. 'Easy' explanations are

absent in Zambia's case. Its recent economic history therefore has some important, and unusual phenomena to explain.

As argued elsewhere, the major causes of Zambia's economic decline lie in the interaction between the prolonged fall in export prices, and the particular ways in which the Zambian Government (GRZ) reacted to the payments deficits which this price trend caused (Colclough 1988). There were, nevertheless, aspects of the evolution of the labour-market in Zambia which prompted (or prevented the alleviation of) Zambia's difficulties. Table 1 summarises important aspects of recent economic change. During the early 1970s output growth was steady. But, at about 4 per cent per year, it was more modest than during the heady expansion of the immediate post-independence years. In 1975, however, growth was arrested. The first part of Table 1 shows the performance of each of the main branches of the economy over the period, expressed in 1970 constant prices. It can be seen that agriculture did continue to grow after 1975, but, at around 2 per cent per year, this was not as fast as population growth (see below). Thus, per capita agricultural production declined over the period. The picture in other sectors appears to have been even worse, with the output of mining, industry and services each remaining roughly unchanged, or falling slightly over the following decade.

The immediate reasons for this lie in the performance of the mining sector. These reasons are somewhat hidden by the constant price production series for mining shown in the table. Since that is basically a volume index - converting quantities to values on the basis of prices obtaining in 1970 - it hides any value losses, or gains, accruing to Zambia over the period as a result of changes in the real international price of its main export commodity, copper. Such price changes have, in fact, been substantial. Most notably this was so in 1975, when the price of copper on the international market fell by almost 50 per cent. At that time the value of copper exports represented about half of Zambia's GDP, and over 90 per cent of exports in value terms. This, the price fall had an immediate, and massive, effect upon Zambia's current income. Table 1 shows that the terms-of-trade loss in 1975 amounted to more than one quarter of GDP in comparison with prices obtaining in 1970. The whole of this loss arose from the collapse of the copper price.

The most immediate impact of these disastrous events was felt on the balance of payments. From a fairly comfortable position in 1974, both current and capital accounts swung sharply into deficit the following year. That on current account amounted to approximately 30 per cent of GDP. There were few alternatives to financing the deficit by Zambia increasing its international borrowing and by running down its reserves of foreign exchange. The latter were sufficient to cover only about 10 per cent of the deficit on current account. Accordingly there was heavy recourse to borrowing as a short-term response. This, of course, carried the implication of higher debt-service commitments over the longer term, which could be met only if the external earnings/expenditure imbalance were to be quickly corrected.

Table 1: Gross Domestic Product and Income (total and per capita), by Type of Economic Activity
(millions of constant 1970 Kwacha)

	1970	1974	1975	1980	1983	1984	1985
Agriculture	136.1	150.5	157.0	166.4	172.3	181.9	198.7
Mining	460.3	474.3	427.9	398.7	446.5	402.8	381.4
Industry	235.0	339.4	345.0	326.8	346.7	349.7	366.4
Other	437.1	509.7	508.2	525.9	506.9	500.8	513.0
GDP (market prices)	1268.5	1473.9	1438.1	1417.8	1472.4	1435.2	1459.5
Plus T/T adjustment ^(a)	-	-104.7	-387.2	-367.3	-427.1	-350.0	-360.0
GDY ^(b)	1268.5	1369.2	1049.9	1050.5	1045.3	1085.2	1099.5
Population (000's)	4159	4700	4846	5647	6285	6500	6725
GDP per capita (K)	305	314	297	251	200	191	190
GDY per capita (K)	305	291	217	186	166	167	163

Notes: ^aRough estimates for 1984 and 1985

^bGross domestic income: this is equal to GDP plus adjustment for variations in the terms of trade.

Sources: Calculated on the basis of data in World Bank 1984, Tables 2.02 and 2.04 and World Bank, 1986, Tables 2.02 and 2.04.

A range of policies were utilised by the Zambian Government in its attempts to achieve such a correction. Gross domestic expenditure fell by 18 per cent in 1976. This was necessary if more domestically produced goods were to be released for export, or, alternatively if imports were to fall. However, owing to the structure of the economy, export growth required substantial product diversification, rather than mere contraction of domestic demand. Thus the main impact of the latter was felt on the side of imports which fell by one quarter, in real terms, in 1976. The composition of the expenditure reduction, however, gave additional cause for concern. Almost the entire brunt of the fall in spending was concentrated on investment expenditure, whilst consumption continued to rise in absolute (though not in per capita) terms. This pattern was sustained during the following several years, which drastically reduced the possibility of a return to economic growth, even from the depressed levels of the mid 1970's.

Spending by the Government was also cut back sharply. Here again, however, the burden of the cuts was focussed upon the capital, rather than the recurrent budget. Capital spending fell by 70 per cent over the eight years ending in 1983. In spite of this the public sector deficit continued to amount to approximately one-third of total spending. This was partly financed by borrowing from the central bank, and partly by foreign borrowing, both of which tended to aggravate the size of the external payments deficit.

As regards policies focused directly upon the external sector, protection was sharpened by the introduction of an elaborate system of import licensing and of foreign exchange allocation. As has been found in many other country contexts, however, this system of controls was administered often inefficiently, and sometimes corruptly. It certainly served to reduce the level of expenditure on imports, but it did so in ways that further undermined the productivity of the domestic economy, owing to the shortages and delays which it helped to generate.

The exchange rate was gradually depreciated after 1975. By 1982 it had fallen to approximately two-thirds of its level in the mid-1970's. The pace of domestic inflation, however, was faster than in Zambia's main trading partners and, in spite of nominal adjustments, the currency in fact became increasingly overvalued. The prevailing price incentives, therefore, tended to decrease the profitability of export or import-substitute production over the period. In response to the high, and rising inflation rate, the Government increased the administrative regulation of consumer prices, and extended the range and extent of subsidies on basic commodities. Although this protected consumers, it further reduced the profitability of domestic industry.

The consequence of the above range of domestic policies was that the economy continued to stagnate over the period 1976-1983. By the early 1980's, capacity utilisation in manufacturing had dropped to as little as 30 per cent, whilst transport and marketing bottlenecks prevented the effective distribution of those commodities that were available. Continued over-valuation of the exchange rate provided few incentives for diversification. Although imports were held back, the sustained decline of the copper price implied a continued reduction in real export revenues, and, therefore, in the capacity to import. The rising price of oil exacerbated the

difficulties. The real value of exports (adjusted for changes in import prices) was halved between 1974 and 1975 - but it was halved again by 1983. The impact of these trends is shown in Table 1: domestic income remained stagnant between 1975 and 1985, and by the latter year, income per head had fallen to a level which was scarcely more than half that of 1970. Meanwhile, current account deficits continued, which were financed by borrowing. Both loans and attendant debt service grew sharply, and by 1983 the latter was equivalent to more than half of export earnings, exclusive of arrears equal to about two years of current debt service payments. An already disastrous situation thus became untenable. A major injection of external resources was needed, which would be forthcoming from the country's main donors only in return for a sharp change in the direction of domestic policy. Such changes were, in fact, introduced, following extensive negotiations with the IMF. The most fundamental of these came in late 1985. Their centrepiece was the introduction of a weekly auction of foreign exchange, which engendered a massive fall in the value of the Kwacha and a sharp readjustment to the whole structure of relative prices. Nevertheless, the reforms proved to be short-lived. A later section of this paper examines the reasons for this, together with the impact of these recent events upon the labour market.

Aspects of Labour Supply

Population Growth and Age-Sex Composition: Against this gloomy background of economic decline there have been important changes in the characteristics of the labour force over the past two decades. The population had, by 1987, more than doubled since 1963. Table 2 provides estimates to 1980. It shows that its rate of growth has itself increased sharply over the period - from 2.5 per cent per year in the early years of independence, to 3.3 per cent over the period 1974-80. One of the major consequences of the acceleration in the rate of population growth is a change in its age structure. On the one hand it is becoming more youthful: the proportion of the population under 15 years increased from 46 to almost 50 per cent between 1969 and 1980 (Table 3), whilst the proportion in the working age group decreased. At the same time, because of declining mortality rates the proportion of elderly people increased over the period. Table 3 shows that similar trends in the age structure have occurred for both sexes - although if anything the decline in the proportion of males in the working age-group has been sharper than that for females.

These trends have had a number of important consequences. First, even if individual fertility declines, birth rates will remain high for a considerable number of years by consequence of the age structure. Second, the number of new entrants to the labour force will continue to increase sharply well into the next century. Third, the decline in the proportion of people in the working age-group implies an increase in the dependency ratio, with consequent needs for proportionately higher health and education expenditures, as well as heavier demands on the household budget, at a time when the economy has been in sharp decline. The interaction of these trends has undoubtedly resulted in extreme hardship being experienced by a large number of individuals and families.

Table 2: Population Growth and its Distribution, 1963-1980

	1963	1969	1974	1980	Average Annual Growth (%)		
					63-69	69-74	69-80
Total Rural	2774484	2864879	3014000	3239389	0.5	1.0	1.1
Total Urban	715020	1192116	1663000	2440419	8.9	6.9	6.7
of which - Lusaka	123146	262425	401000	538469	13.4	8.9	6.8
Kitwe	123027	199798	251000	314794	8.4	4.6	4.2
Ndola	92691	159786	229000	282439	9.5	7.4	5.3
Total Zambia	3490170	4056995	4677000	5679808	2.5	2.9	3.1
Percentage Urban (%)	20.5	29.4	35.6	43.0			

Sources: Population Census Results from each of the years shown

Table 3: Population by Sex and Age Group, 1969 and 1980 (percentages)

Age Group	Male		Female		Total	
	1969	1980	1969	1980	1969	1980
Under 15 years	47.5	50.7	45.6	48.7	46.4	49.8
15-44 years	37.9	36.3	42.9	40.0	40.5	38.3
45-64 years	12.1	9.6	9.5	8.7	10.8	9.1
65+ years	2.5	3.3	2.0	2.6	2.3	2.8

Source: GRZ 1980a, Table 2.3

Internal Migration: The physical location of the population has also changed markedly. Analysis of the two most recent census results shows that rural-rural migration, primarily within provinces outside the line of rail, has been numerically the most important type of population movement. Nevertheless, rural-urban migration has remained very important - albeit with important shifts in volume over the years since independence. Urbanisation has been extremely rapid, such that by the mid 1980s Zambia was the most urbanised country in Sub-Saharan Africa (excluding South Africa), with almost half of the population living in urban areas by that time (World Bank 1987, Table 33). The movement to the towns was greatest in the early post-independence years. Table 2 shows that urban growth of 9 per cent per year in the 1960s, slowed to about 7 per cent by the early 1970s. Further reductions in the annual rate of growth to around five per cent, appear to have occurred. Although the most recent disaggregated data are for 1980, it is probable that urban growth slowed sharply after that date as a result of the increased economic hardships associated with urban living. Data for the three largest towns are shown in Table 2. Their growth was particularly marked until 1974. Subsequently, the growth of the two copper-belt towns of Kitwe and Ndola fell behind that of other urban centres. The capital city, Lusaka, however, continued to grow rapidly, at least until 1980, - albeit at a somewhat slower pace than during the first independence decade. There has, therefore, been a redirection of migration away from the Copperbelt - which was initially worst hit by the recession of the late 1970s - towards the capital. Net-migration to the Copperbelt fell in relative terms by almost 50 per cent between 1969 and 1980, whilst that to Lusaka changed little over the period. Already by 1980 there was evidence of increased return flows of migrants from the Copperbelt to Northern and Luapula provinces. Such out-migration from the urban areas most affected by economic decline will almost certainly have further increased over the past few years.

Schooling: The provision of schooling for Zambians has increased enormously since independence. Access at primary level has quadrupled, such that by 1984 more than 1.2 million children were in primary school. Secondary school places had increased ten-fold to 125000 by the same year, and university and technical college enrolments had increased likewise to approximately 10000 students. Even such rapid expansion of schooling as this, however, takes many years to change the educational profile of the population significantly - particularly in the context of Zambia's high rate of population growth. Thus, the population census of 1980 revealed that almost half of the population aged 15 years and above had not completed lower primary schooling, and were thus probably still illiterate. Moreover, only 10 per cent had had some post primary schooling, with tiny proportions having proceeded to the tertiary level. These facts help to explain the continued skill shortages which, as will be shown below, represent an important constraint upon Zambia's social and economic development.

Participation in the Labour Force: Somewhat unusually, the 1980 census defined the labour force to include all persons aged 12 years or more. They comprised 3.3 million persons. Of those, just over half (1.7 millions) were regarded as being economically active, with the remainder being students, housewives, retired or disabled persons, etc. Using these conventions, 71 per cent of the male labour force was recorded as being economically active, with

only 37 per cent of the females being so classified. For the usual reasons these estimates result in a significant understatement of the amount of productive work undertaken by women. Half of the working population were engaged in agricultural work (two-thirds of the females and about 44 per cent of the males). One third were self-employed and a further 5 per cent (but 12 per cent of the females) were unpaid family workers - again, preponderantly in the agricultural sector.

Aspects of Labour Demand

Data on the number of employees in the formal sector are shown in Table 4. As is to be expected from what has been said earlier, experiences in the labour market before and after 1975 were very different. The first decade of independence was characterised by steady growth of formal employment at about 4 per cent per year, such that, by 1975, approximately 50 per cent more workers were employed than had been the case at independence. Subsequently, however, employment fell back, declining, on average, by about one per cent per year to 1984.

This circumstance of absolute decline in formal employment over the decade beginning in 1975 is the most fundamental feature of Zambia's recent labour market history. Its effects have been momentous. The proportion of the labour force employed in the formal sector has fallen by one third since 1975. An even more startling implication is that whereas one in thirteen Zambians had a job in the formal sector in 1975, ten years later only approximately one in 18 persons had such a job. Thus, the number of persons without access to any (direct or indirect) support from wage or salary incomes is now vastly greater than it was in the early 1970s.

The structure of formal employment by industry is indicated in Table 5. A number of important features emerge from this table. First, job losses after 1975 were heavily concentrated in the construction industry, which lost more than half of its jobs by 1984. The primary cause of this concentration was the massive fall in investment expenditures, which resulted from the curtailment of domestic expenditures in response to the country's growing payments deficit. Second, employment also fell in mining and quarrying, particularly after 1980, in response to the sharply curtailed profitability of the copper industry. Thirdly, apart from agriculture, which stagnated over the period, employment elsewhere actually rose: in manufacturing and transport by about 10 per cent, and in services, by about 7 per cent to 1984 (but by somewhat more to 1980). More detailed analysis of the data for services reveals that the rise to 1980 was almost entirely due to expansion of employment in the public sector, which could not be sustained, for financial reasons, beyond that date. Nevertheless, it remains true that the most severe employment problems were contained in a rather narrow industrial range: outside mining and construction job losses were not so severe.

This conclusion is strengthened if one considers only Zambian employees. Rapid progress with localisation was achieved after 1975 - that is, an increasing number of Zambians took over jobs previously held by expatriates. Thus, whilst the total job losses between 1975 and 1984 amounted to about 30,000, almost 20,000 expatriate workers appeared to have been

Table 4: Employees in the Formal Sector by Citizenship, June 1964-1984 (a)

	<u>Total Employees</u>	<u>Zambians</u>	<u>Non Zambians</u>	<u>Non Zambians as % of Total</u>
1964	264,100	232,000	32,100	12.2
1965	301,600	267,760	33,840	11.2
1966	313,360	284,480	28,880	9.2
1967	303,730	274,650	29,080	9.6
1968	319,730	290,800	28,930	9.0
1969	321,460	291,640	29,820	9.3
1970	337,750	310,320	27,430	8.1
1971	358,350	331,670	26,680	7.4
1972	364,740	338,750	25,990	7.1
1973	377,640	342,990	34,650	9.2
1974	386,270	351,190	35,080	9.1
1975	398,840	365,330	33,510	8.4
1976	379,400	346,310	33,090	8.7
1977	372,630	345,320	27,310	7.3
1978	369,310	344,480	24,830	6.7
1979	371,670	348,290	23,380	6.3
1980	381,490	360,980	20,510	5.4
1981	373,720	355,220	18,500	5.0
1982	367,510	350,050	17,460	4.8
1983	363,800	348,270	15,530	4.3
1984	365,190	351,190	14,020	3.8

Notes: Prior to 1972, data are available for Africans and non-Africans only. These are shown in the relevant citizenship columns. Data for 1981-84 are preliminary estimates.

Source: GRZ 1985, Table 6.

localised over that period. Thus, Zambian employment fell by the somewhat lower figure of 10,000 workers over those nine years (Table 5).

The relationships between output and employment growth are investigated in more detail in Table 6. Employment/output elasticities are shown for the 1970-75 and 1970-80 periods. These estimates are rough, in the sense that they take no account of changes in real and relative factor prices over the period. In addition, in a number of sectors the elasticities are not shown, owing to the occurrence of a negative value for one of the relevant variables. Nevertheless, for the economy as a whole the data suggest that the aggregate relationship between employment and output growth has been close to unity. This implies that in the aggregate, no labour productivity growth occurred over the 1970s. This unusual result can be explained in a number of ways. First the elasticities shown are heavily influenced by movements in the services sector, which itself is dominated by the public service. Since, here, output increases are basically determined by increases in the real wages and salaries paid, output and employment can usually be expected to move upwards or downwards at similar rates, in the absence of significant changes in the real value of average earnings. Second, circumstances of negative growth of output and employment are not conducive to the measurement of meaningful elasticities. For example, there are likely to be strong political and institutional reasons for laying off workers less quickly than may be thought justifiable on profitability grounds. Thus, the ensuing fall in average labour productivity will tend to raise the size of measured employment/output elasticities during times of recession. At the least, some adjustment lag is to be expected in the labour market, which partly explains the relationships between output and employment indicated by Table 6.

Labour Market Rigidities

An important question which arises is whether or not conditions in the labour market exacerbated the economic decline. Although cause and effect are not easy to disentangle, it does seem that there were some structural characteristics prominent in Zambia which made adjustment to the new economic circumstances more, rather than less difficult to achieve.

Skill Shortages. The first of these concerns the skill-structure of the labour force. Shortages of skilled and educated workers have always comprised a major problem for the country's development. During the colonial period African education had not been given high priority. In spite of the comparative wealth of Northern Rhodesia, during most years far more money was spent upon the education of European children than upon all forms of education for the remaining 97 per cent of the population. In addition, racial discrimination in both the public service and the private sector was often explicit (for example, until 1959, legislation prevented Africans from being taken on as apprentices). Thus, the training and experience necessary for advancement was often not available to the African population. By consequence Zambia started out with a major deficit of professional and industrial skills, which was to prove very difficult to remove.

Table 7 indicates the changes in the educational structure of the formal sector Zambian labour force that have subsequently occurred. The

Table 5: Employees in the Formal Sector, 1965-84, by Citizenship and Economic Sector^(a)

	1965	1970	1975	1980	1984
Agriculture, Forestry, Fishing	32700	34610	36100	32630	35400
Zambian	32070	34090	34790	31580	34660
Non-Zambian	630	520	1310	1050	740
Mining and Quarrying	52360	57640	64750	63070	58470
Zambian	44820	52130	54440	57110	54390
Non-Zambian	7540	5510	10310	5960	4080
Manufacturing	27770	38160	44330	47760	48200
Zambian	24030	35230	41230	45860	46720
Non-Zambian	3740	2930	3100	1900	1480
Construction	45320	68740	71750	43750	33610
Zambian	43100	66220	67790	42070	32570
Non-Zambian	2220	2520	3960	1680	1040
Transport & Communications	14560	22340	22050	23940	24000
Zambian	11870	19720	20490	23040	23340
Non-Zambian	2690	2620	1560	900	660
Services ^(b)	88350	121480	154510	168150	165510
Zambian	72290	108200	142430	159780	159490
Non-Zambian	16060	13280	12080	8370	6020
TOTAL	261060	342970	393490	379300	365190
Zambian	228180	315580	361170	359440	351170
Non-Zambian	32880	27390	32320	19860	14020

Notes:

- a - Data are for fourth quarter of each year shown, except those for 1965, which are averages of all quarters, and for 1984, which are for June. Prior to 1975, the citizenship breakdown refers to Africans and non-Africans, rather than Zambian/non-Zambian, respectively.
- b - Includes utilities, financial and business services, restaurants and hotels and other services.

Sources: GRZ 1980b, and Meesook et al 1986: Appendix Table 1.

Table 6: Observed relationships between Output and Employment, by Sector, 1970-80

	GDP ^(a)			Average Annual Growth of GDP (%)		Average Annual Growth of Employment (%)		Employment/Output Elasticities ^(d)	
	1970	1975	1980	1970-75	1970-80	1970-75	1970-80	1970-75	1970-80
Agriculture ^(b)	41.5	56.3	58.7	6.3	3.5	0.8	-0.5	0.12	-
Mining	460.3	427.9	398.7	-1.4	-1.4	2.4	0.9	-	-
Manufacturing	129.2	157.6	162.9	4.1	2.3	3.0	2.3	0.73	1.0
Construction	90.3	138.5	79.1	8.9	-1.3	0.9	-4.4	0.10	-
Transport	48.8	57.6	56.5	3.4	1.5	-0.3	0.7	-	0.47
Services ^(c)	403.8	499.5	554.2	4.3	3.2	4.9	3.3	1.14	1.03
TOTAL	1173.9	1337.4	1310.1	2.6	1.1	2.8	1.0	1.08	0.91

- Notes:** a) Millions of Constant 1970 Kwacha, market prices
b) Excluding subsistence output and employment
c) Includes import duties less imputed bank service charges
d) Calculated by dividing average annual growth of employment by that of GDP, for each period and sector

Sources: GDP data: CSO, Monthly Digest of Statistics, various issues
Employment data: Text, Table 5

Manpower Survey which was held shortly after independence (GRZ 1966), documented in some detail the extent of the manpower constraint faced by Zambia at that time. It can be seen from the Table that the vast majority of the 236,000 Africans then employed had had little or no formal schooling, and that less than one per cent of them had had five years of secondary schooling or more. Over the following two decades, however, the educational expansion initiated soon after taking office by Kaunda's United National Independence Party was to alter this educational profile sharply. Table 7 shows that by 1983 over 20 per cent of Zambian employees had at least 'O' level (secondary, Form 5) qualifications, and that about half had had some secondary schooling. These were major achievements for a country which, twenty years earlier, had inherited a school system which was so thoroughly inadequate in both quantitative and qualitative terms.

Nevertheless, this progress fell far short of meeting the needs of the formal sector for the full range of technical and professional skills, and a substantial number of non-citizen skilled workers had to be employed throughout the period. This was in spite of the fact that rapid localisation of the labour force was assigned high political priority soon after independence. A fairly complex set of regulations was established, requiring the satisfaction of strict criteria before work permits for expatriate personnel could be issued by the Ministry of Labour. Foremost amongst these was the production of satisfactory evidence by an employer that no suitably qualified or experienced Zambian was available for the job in question. Under these circumstances, a good indicator of the extent to which skill shortages amongst the Zambian labour force have remained important is provided by trends in the employment of non-citizens. Table 4 shows that the total number of non-Zambian employees remained approximately constant from 1964-76, although their proportional importance declined from 12 per cent to 9 per cent of formal employment over those years. Thereafter, however, the number of expatriate workers dropped sharply, such that by 1984 only 14,000 (less than half the earlier levels) remained, accounting for less than 4 per cent of formal employment.

This aggregate picture of good progress with localisation is, however, misleading in a number of ways. First, in one important sense, the 'gap' is even smaller than it appears in Table 4, in that approximately half of the non-citizens currently employed are Zambian residents, mainly originating from other African countries, who, from a labour market viewpoint, can be treated as being equivalent to citizens since they are unlikely to face official pressures to leave.³ On the other hand, in a different sense, the progress with localisation has been less satisfactory than the table appears to indicate: although large numbers of non-citizens left Zambia after 1975, not all of those workers were replaced by adequately qualified and experienced Zambians. Many of their jobs remained vacant. This was particularly so for those expatriates who vacated professional and technical jobs after 1985 and who left the country primarily because they faced declining real incomes in the face of the Kwacha devaluations which occurred. By 1987, the situation in the health sector was particularly serious, with large numbers of foreign doctors having left Zambia, without replacement by either Zambian or expatriate personnel (see below). In addition, the aggregate quantitative picture hid qualitative problems in the labour market which affected most

**Table 7: Educational Qualifications held by
Zambian Employees, 1965 and 1983^(a)**

	1965		1983	
	Number	%	Number	%
Less than Form II	226681	96.0	189514	54.4
Forms II/III	7282	3.1	85123	24.4
'O' Level ^(b)	1516	0.6	45308	13.0
'A' Level ^(b) /Diploma	517	0.2	17566	5.0
Degree	150	0.1	10759	3.1
TOTAL	236146	100.0	348270	100.0

Note: a - Data for 1965 refer to Africans, rather than Zambians. Those for 1983 are based upon a sample survey of employees along the line of rail, covering approximately 70 per cent of total formal employment. The percentage distribution revealed by that survey has been applied to separate estimates for total Zambian employment, published by the CSO.

b - 'O' level and 'A' level are examinations typically taken after 5 years and 7 years of secondary schooling, respectively.

Sources: GRZ 1966, Table II.3, GRZ 1983, Table 8.0, and GRZ 1985, Table 6.

sectors of the economy: localisation had not always and everywhere been efficiently handled. Thus it is evident - particularly in the public and parastatal sectors - that key posts were sometimes filled by Zambians who had had insufficient training or experience. This problem became particularly acute as regards deficiencies in management skills - often at quite senior levels of the public service. Finally, those non-citizens who remained in employment were often concentrated in particular specialised or technical areas, requiring long periods of high-level training. Thus the process of localising the remaining jobs held by expatriates appears more problematic than has typically been the case in the past. Equally, the premature departure of such workers would generate problems that would be commensurately more difficult to solve.

Data on the characteristics of those in wage or salaried employment in Zambia tend to be unreliable, and inconsistent as between different sources. It is, therefore, difficult to build up an accurate picture of the educational, sectoral and occupational composition of non-Zambian employment. However Table 8 shows the occupational breakdown of total employment as revealed by a recent manpower survey, which is of interest given the comparatively high coverage of the formal sector which it achieved.⁴ The table shows that, although non-citizens were, by 1983, a comparatively small proportion of total employment - less than 5 per cent - they were nevertheless proportionately much more important in professional and technical occupations, where they comprised 12 per cent of employment, and in administrative/managerial jobs where they accounted for more than one-fifth of total reported employment. It can be seen from Table 9, which shows all occupations with more than 130 non-Zambian workers, that some occupations in the professional group were still heavily dependent upon expatriate skills. The case of engineers is particularly startling, where more than 1000 expatriates were employed, comprising almost half of all such workers. Zambia also remained heavily dependent upon expatriate doctors. According to the survey, they comprised more than three-quarters of all doctors in the country (although this proportion is probably correct, the figures are significant under-estimates of the absolute number of doctors who were employed). Other occupations where at least one-quarter of all jobs were occupied by non-citizens include physical scientists, statisticians, accountants, university teachers, and managers. These data suggest, therefore, that there was in 1983 a significant training task ahead in order to localise all of these professional posts.

At first sight it may seem surprising that non-citizens still occupied a large number of jobs in the 'production, transport and related' occupational category: they comprised almost 4,200 workers, and accounted for one-third of all non-citizens employed (Table 8). Inspection of the more detailed tabulations from the survey reveals that, numerically, the largest single occupation in this category is miners (736 non-Zambian workers). Nevertheless, it can be seen from Table 9 that there were also substantial numbers of non-citizen production supervisors and foremen (597), machinery fitters and assemblers (435), electrical fitters (177), plumbers and welders (169), bricklayers and carpenters (259), transport equipment operators (425) and other labourers (741). Although the proportional importance of non-citizens in these occupations is modest - usually less than 5 per cent of

Table 8: Sample of Employees by Major Occupational Group and Nationality, 1983

Occ. Group	Zambian (1)	Non-Zambian (2)	Total (3)	(2) as % of (3)
Professional, technical & related	37,676	5,285	42,961	12.3
Admin. & managerial	2,563	744	3,307	22.5
Clerical	39,925	816	40,741	2.0
Sales	4,583	321	4,904	6.5
Service	35,580	752	36,332	2.1
Agriculture, Forestry, etc.	16,021	527	16,548	3.2
Production, Transport & related	114,886	4,188	119,074	3.5
Not stated	900	35	935	3.7
Total	252,134	12,668	264,802	4.8
Estimated % of total Employment	72	82	73	

Sources: GRZ 1983; GRZ 1985.

total workers - these data do indicate that there remained a significant shortage of Zambian artisans in many of the highly skilled craft occupations, both in the mining sector and in other areas of the economy.

It should be recalled, however, that approximately one half of all non-citizen workers have long-term residence status, and are not 'targets' for localisation in the same way as are other non-citizen workers. The manpower survey indicated that over 4,000 of the 6,000 or so expatriates with work permits, as opposed to residence permits, were in the professional and technical occupational group. This proportion (70 per cent) compares with only 15 per cent of those with residence permits who fell into this occupational group (Table 10). This occupational concentration is also to be expected on the basis of the educational background of non-resident expatriates - 55 per cent of whom were reported to have university degrees, with a further 20 per cent possessing professional qualifications of various kinds. (GRZ 1983: Table 10.7). Thus, most of those non-Zambians shown in professional jobs in Table 9 were expatriates who could be localised as more qualified Zambians become available, whereas those with long-term resident status tended to work in the lower-level craft, primary teaching, clerical, farming and nursing occupations.

Thus, the recent sharp declines in the number and proportions of non-citizens employed are not so strongly indicative of an increased availability of Zambian skills as they might first appear. Considerable numbers of expatriates have left the country owing to the declining purchasing power of the Kwacha. Those who have left the public sector have often not been replaced - sometimes because of an inability to attract new staff, and sometimes because of a wish to focus the impact of expenditure cuts on non-citizen, rather than Zambian staff. One result has been a significant increase in the number of vacancies amongst professional and technical grades in all sectors of the economy. Unfortunately, comprehensive data on vacancies in the formal sector are not available. The 1983 manpower survey did not collect such information, nor do the quarterly surveys of employment and earnings run by the CSO. Nevertheless, interviews with senior managers in all sectors of the economy during 1986 confirmed that an increase in vacancy rates was very widely experienced (UNDP 1986).

As for the public sector, more concrete information is available. The civil service grew fairly rapidly by, on average, almost 5 per cent per year over the eight years prior to 1983. Payroll costs accounted, during this period, for a growing proportion of public expenditures. In circumstances of increasing financial stringency, expenditures on supporting services, (such as transport and materials) were reduced to levels incompatible with efficiency. In 1984 the government, at the behest of the World Bank and the IMF and as part of the conditions associated with extending new loan facilities to Zambia, agreed to introduce a freeze on recruitment to the administrative cadre of the public service. Thus, a sharp increase in the vacancy rate occurred, and by 1985 it was estimated that some 10,000 of the 77,000 established posts in the civil service were vacant (UNDP 1986:155). In 1986 GRZ went further, in announcing its intention to make no new appointments to the public service without the special authority of the Cabinet Office, and to

Table 9: Occupations in which Non-citizens are concentrated, 1983

Occupation	Total (1)	Zambian (2)	Non-Zambian (3)	(3) as % of (1)
Physical Scientists	430	292	138	32.1
Architects and engineers	2,476	1,381	1,095	44.2
Engineering technicians	3,222	2,874	348	10.8
Doctors	334	73	261	78.1
Nurses and midwives	4,104	3,798	396	9.6
Statisticians and related technicians	832	625	207	24.9
Accountants	3,531	2,716	815	23.1
University and other Higher Ed. Teachers	1,472	1,081	391	26.6
Secondary Teachers	3,410	2,775	635	18.6
Primary Teachers	14,295	13,809	486	3.4
Managers	2,249	1,573	676	30.1
Stenographers	7,120	6,921	199	2.8
Book-keepers	7,278	7,160	188	2.6
General clerks	15,669	15,430	239	1.5
Cooks	4,602	4,438	164	3.6
Protective service workers	18,362	18,083	279	1.5
Farm managers	1,493	1,345	148	9.9
Agricultural workers	13,348	13,030	318	2.4
Production supervisors/ foremen	8,215	7,618	597	7.3
Miners	15,054	14,318	736	4.9
Machinery fitters	11,345	10,910	435	3.8
Electrical fitters	4,587	4,410	177	3.9
Plumbers, welders	5,841	5,672	169	2.9
Bricklayers, carpenters	9,270	9,011	259	2.8
Material handlers	6,790	6,650	140	2.1
Transport operators	9,846	9,421	425	4.3
Other labourers	29,410	28,669	741	2.5
sub-total	204,585	193,923	10,662	5.2
Other workers included in survey	60,043	58,039	2,004	3.3
Total in Survey	264,628	251,962	12,666	4.8

Source: Calculated from GRZ 1983, Appendix 1.

Table 10: Non-Zambian Employees, by type of permit and Major Occupation Group, 1983

	Work Permit	Residence Permit	Entry Permit	Not Stated	Total
Professional, Technical and Related	4,269	944	23	48	5,285
Administrative and Managerial	364	362	6	12	744
Clerical	127	678	1	9	816
Sales	116	204	1	-	321
Service	140	580	5	28	752
Agricultural	165	358	2	2	527
Production, Transport & Related	840	3,000	100	249	4,189
Not Stated	11	22	-	1	34
Total in Survey	6,033	6,149	138	349	12,668

Source: GRZ 1983, Table 10.0.

cut the daily paid employee work force by 40 per cent (about 20,000 jobs) over a two year period.

Data are not yet available with which to review the detailed impact of these measures. Nevertheless, various sources report that they have tended to further undermine the effectiveness of the public service, rather than to improve its efficiency. The problem is that retirement, or contract expiry, does not necessarily occur in a way which reflects manpower priorities. An unstructured approach to reducing public sector staffing via 'natural wastage' may therefore compound the problems of production and service delivery.

An example can be given from the Ministry of Health, which, in 1985 undertook a review of medical manpower. High and unevenly distributed vacancy rates for nurses and technicians were causing major difficulties for the provision of health care, particularly away from urban centres. The situation amongst doctors, however, was particularly critical. Table 11 shows how the staffing position developed between 1981 and 1985. It can be seen that although there was a net reduction of 86 expatriate doctors over those years, they were 'replaced' by an increase of only 41 Zambian doctors. Thus, the vacancy rate rose from 20 to 30 per cent over the period, after allowing for increases in the number of posts in the establishment. Again the shortages varied widely in different parts of the country - with vacancies reaching almost 60 per cent at Ndola hospital on the copperbelt. As it happens, these vacancies were caused more by the deterioration in the value of local salaries paid to doctors than by the freeze. But they are illustrative of the potentially misleading import of aggregate data on localisation 'progress' over the past decade. The shortage of skills remains an important rigidity in the Zambian economy - increasing the costs of economic restructuring, and reducing both its speed and potency.

Earnings and Labour Costs. The issue of wages and incomes policy and performance in Zambia has received considerable academic attention in the past, with notable contributions from Knight 1971, Daniel 1979, Fry 1979 and Meesook et al 1986. These generally showed that the workers in the copper industry had acted as wage leaders for those in other sectors, and that the strength of their organisation, combined with the government's willingness to accede to their demands in the early years after independence, had established Zambia as a high wage economy from an early stage. There was lively debate as to the extent to which wage increases presented a 'problem' for the country's development. Jolly and Williams (1971) showed that about half of the increase in the cost of living over the late 1960s could be statistically attributed to increased wage costs. In a period where the economy received increasing windfall gains from the rise in copper prices, such increases in average earnings could be accommodated - even though the competitiveness of industry outside copper was badly affected. There was, therefore, a certain complacency about these trends expressed at the time, and even by more recent commentators (eg Fry 1979: 84-85). Whatever view one took of that early period, by the time of the copper price fall in 1975, the Zambian economy was in no way able to restructure production easily away from copper, into manufacturing or service production. Its wages in the non-agricultural sector had by this time become considerably higher than in most countries of a similar size, structure and income level. This is demonstrated by the

Table 11: Staffing Levels of Doctors, 1981-85

Year	Establishment	Zambian	Non-Zambian	Vacancies	Vacancy Rate %
1981	808	62	577	169	21
1982	808	79	586	143	18
1983	830	92	584	154	19
1984	830	88	531	211	25
1985	850	103	491	256	30

Source: Ministry of Health, Manpower Development Office

analysis shown in the Appendix. Data are available for 19 countries which allow a comparison of monthly wage-earnings and per capita incomes. For these purposes the year 1976 has been selected in order to illustrate the relative position of Zambian wage-earners one year after the fall in the copper price. It should be noted that Zambia is not selectively disadvantaged by the particular year chosen for this comparison, since the real average earnings of Zambian employees remained approximately constant between 1975 and 1980 (Table 12). As explained in the Appendix, there are methodological and statistical problems which affect this kind of comparison. Nevertheless, some important contrasts emerge.

Zambia is shown to be a high-wage economy. This can be demonstrated in a number of different ways. First, and most obvious, is the question of the absolute value of wages paid in Zambia in comparison with other countries. The Appendix Table shows that average monthly earnings from wages outside agriculture were generally, in 1976, two-to-three times the US dollar value of any of the other six sub-Saharan African countries included in the comparison. Although Zambian wage-earnings were roughly similar to those in Papua New Guinea, Cuba and Costa Rica, the only country where earnings (converted to US dollars) were significantly higher was Venezuela - much richer than Zambia, and with by far the highest per capita income of any country in the sample.

The results are similar for agricultural wages. Of the eleven countries for which comparable data are available, only two (Korea and Cuba) appear to have paid higher agricultural wages than Zambia in 1976. The latter were about 20 per cent more than the average for all countries having the relevant data (compared with a 33 per cent differential for non-agricultural wages).

As for the ratio between agricultural and non-agricultural wages Zambia appears not to have been unusual. Its wage ratio at 2.62 is fairly close to the mean value (2.49) for all countries shown in column 9 of the Appendix Table. Furthermore, Zambia shares the median ranking with Costa Rica. It is not, therefore, the relative levels of rural and urban wages which have distinguished Zambia from elsewhere, but, rather, the absolute level of wages paid, in all sectors, in comparison with other similar countries.

A further way to analyse the earnings data is to compare them with levels of per capita income. This is done in column 8 where the ratios of earnings outside agriculture to per capita incomes are shown. Once again, Zambia emerges well up in the rankings. Only Burundi and Kenya have higher ratios than Zambia. Both of these countries are considerably less well off than Zambia, and, at least in Burundi's case, the outcome is more influenced by the low value for the denominator (per capita income) than by the numerator (earnings) being high. Finally, it is worth noting that all of the countries which were poorer than Zambia in 1976 had a wage structure which was also absolutely lower - mostly by a considerable margin. For the nine countries in this category, the value of non-agricultural earnings in seven of them were half, or less, those in Zambia. Agricultural sector differentials were less dramatic, but remained sharp.

Table 12 Average Annual Real Earnings of Employees by Sector 1965-83 (1975 Kwacha)^(a)

	1965	1970	1975	1980	1983
Agriculture, Forestry, Fishing					
Zambian	327	492	453	518	393
Non-Zambian	4410	6350	2524	2902	1215
Mining and Quarrying					
Zambian	1570	2179	1478	1668	1186
Non-Zambian	10034	10254	6784	5278	3604
Manufacturing					
Zambian	924	1133	1179	1063	756
Non-Zambian	5836	7590	5657	5243	2972
Construction					
Zambian	612	860	764	805	632
Non-Zambian	6549	9694	6868	3847	2850
Transport					
Zambian	924	1710	1834	1308	1006
Non-Zambian	5743	6651	7377	5182	2662
Services^(b)					
Zambian	869	1119	1246	1146	884
Non-Zambian	5149	5535	4894	4278	2726
Total					
Zambian	890	1210	1140	1134	851
Non-Zambian	6476	7207	5572	4601	2897

Notes: a - generally 4th quarter figures. Nominal earnings estimates for Zambians deflated by low-income CPI. Those for non-Zambians are deflated by the high-income CPI.

b - includes utilities, trade, hotels, finance and other services.

Source: Meesook et al, 1986: Appendix Table 3

These results are important from the standpoint of international competitiveness. They do not, of course, decisively indicate the existence of differences in labour costs. Such judgements would require additional information upon the productivity of labour amongst the countries in the sample. Nevertheless the differences which have been revealed are sharp enough to require implausibly high productivity levels in Zambia relative to other similar countries, if such labour cost differences in the mid 1970s were not to have held. There can be little doubt, then, that the level of wages (and labour costs) were higher than would be easily compatible with Zambia rapidly increasing her export revenues in manufacturing and other 'non-traditional' sectors in order to fill the gap created by lost earnings from copper exports. A reduction in wages would by no means have been sufficient to achieve such diversification, but it is clear from the above comparisons that such a change would have been a necessary component of any serious attempt to respond to the country's changed trading circumstances.

The movement of average earnings in real terms for the first two decades of independence is shown, in constant 1975 prices, in Table 12. Average earnings peaked in 1970. But the fall to 1975 was primarily caused by the decline in average earnings in the copper industry. Wage increases during the 1970s in the mining sector were less than the rate of inflation, and represented a period of consolidation after the very large increases in earnings granted to mineworkers resulting from the Brown Commission in 1966. In most other sectors average earnings continued to rise until 1975, particularly in services which - at least as defined in Table 12 - covered a large proportion of total formal employment. By this time, therefore, the mining sector was no longer exerting successful wage leadership over the rest of the economy.⁵

The picture appeared to change, however, over the following years. By 1983 the average earnings of Zambian employees had fallen to three-quarters of their 1975 level, with sharper declines being experienced by workers in manufacturing, transport and services. These declines in real earnings came from a number of sources, including changes in the structure of the employed labour force, changes in the earnings structure, and movements in nominal earnings which less than fully compensated for inflation. It is not possible, on the basis of available data, to disentangle the relative importance of each of these variables to the net results summarised in Table 12. It is clear, however, that government policy towards wages and salaries had a more profound effect upon the earnings structure - particularly after 1980 - than had been the case earlier on. This occurred in a number of ways.

First, the main instrument which had led to the relative protection of real wages in Zambia had been the exchange rate - which had appreciated slightly over the early 1970s. Since most consumption goods are imported, exchange appreciation reduces, ceteris paribus, the Kwacha cost-of-living. Following the devaluation in 1976, however, the value of the currency continued to move downwards. This gathered pace from 1980 onwards, and by 1983 the Kwacha had been reduced to about half of its value in 1975. It can be seen from Table 13 that the impact upon domestic inflation was substantial, with the rate doubling to 20 per cent per year between 1975 and 1983. These

were circumstances in which it was easier to achieve reductions in the real wage and salary bill in all sectors of the economy.

Second, although the income decline was suffered by workers throughout the formal sector, the earnings losses were felt particularly strongly by those in the public sector. Between 1975 and 1980, for example, workers in the public sector experienced a 16 per cent decline in real earnings, yet those in the parastatals suffered only a one per cent loss, whilst Zambian employees in the private sector were, on average, 14 per cent better off over the period.⁶ After 1980, on the other hand, the real earnings of workers in all sectors fell as inflation gathered pace (Tables 12 and 13).

Survey data are not yet available to allow discussion of trends in average earnings beyond 1983. Yet it was in later years that the major changes in macroeconomic policies occurred. Although these changes were introduced primarily to deal with the economy's structural disequilibrium on the balance of payments, they had sharp implications for the distribution of incomes in Zambia, and for trends in real earnings from formal sector employment. Again, public sector workers were affected most, although earnings in all sectors were severely reduced.

This is illustrated by Table 14 which shows the development of the government's general administrative salary scale (covering all sections of the service) since 1967. The nominal salaries payable have been converted, in Table 15, into real terms, and are expressed as ratios of real salaries in 1975. A number of conclusions can be drawn from this table. First, the government has consistently narrowed the gap between the highest and lowest salaries in the administration over the past twenty years. Top salaries declined sharply in real terms to 1975, whilst the lowest paid employees continued to enjoy real earnings increases until that date. Subsequently, although the real earnings of all government employees declined, the fall was much sharper and faster for the senior officers than for those in junior positions. By 1982 the better paid had lost between 40 and 50 per cent of their 1975 real earnings, whereas earlier losses were made good somewhat for the lowest paid, such that in 1983 they were still only 10 per cent worse off than in the mid-70s. These trends continued between 1983 and 1985, with the real incomes of all except the very lowest paid dropping to well below one-third of their 1975 level.

In October 1985 the government implemented a salaries revision. For the administrative grades of the service the increases were in two stages - the first payable in October 1985, and the second instalment payable in June the following year. It can be seen from Table 15 that this review continued the earlier policy of narrowing the income gaps in the salary structure. Nevertheless, even after implementation of the first part of the review, most grades received less than one third the real value of their 1975 earnings. The junior clerical and unskilled groups fared better, but their earnings fell to less than three-quarters of their 1975 level. Moreover, these changes coincided with the introduction of the weekly foreign exchange auction and a resulting 70 per cent devaluation of the Kwacha (see Table 13). During 1986 prices rose by more than 50 per cent above their levels of the preceding year, primarily as a result of the massive increase in import prices engendered by devaluation. By consequence, the additional nominal salary increases that

TABLE 13:**Average Annual Kwacha/Dollar Exchange Rates and Inflation: Selected Years**

	US \$ per Kwacha	Urban CPI		Annual % change in CPI	
		Low Inc	High Inc	Low Inc	High Inc
1970	1.40				
1975	1.55	100.0	100.0	10.1	8.5
1980	1.27	202.9	189.4	11.7	11.9
1981	1.15	231.3	209.1	14.0	10.4
1982	1.08	260.2	236.7	12.5	13.2
1983	0.80	311.2	278.6	19.6	17.7
1984	0.56	373.5	336.8	20.0	20.9
1985	0.37	513.5	446.6	37.5	32.8
1986 July-Sept	0.16(a)	778.4	707.2	51.6	58.4
1987 April(b)	0.05(a)	938.3	921.6	37.4	52.4
May	0.125(a)				

Notes: (a) From October 1985 onwards the value of the Kwacha was determined at a weekly auction of foreign exchange. Wide fluctuations took place during 1986. The value shown is the average value obtaining in the months July-September. Further deterioration took place. The lowest value reached is that shown for April 1987. As from May 1987 the auction was suspended, and the Kwacha's value was pegged at US\$0.125.

(b) CPI figures for 1987 are for the month of January. Inflation rate for 1987 calculated by comparing these data with January 1986 CPI, as reported by CSO.

Sources: World Bank 1986, Bank of Zambia, and GRZ 1987.

Table 14: The General Administrative Scale: 1967-86(a)

Scale	Post	Jan. 67	May 71	July 75	Jan 79	Jan. 80	Jan. 82	Jan. 83	Nov. 83	Oct. 85	July 86
S ₃	Under-Secretary	6,250	7,600	7,812	7,914	10,176	10,176	10,176	10,176	11,536	12,216
S ₇	Assistant Director	5,120	5,800	6,324	6,468	7,440	7,440	7,440	7,440	8,680	9,300
S ₁₂	Univ. Grad. (Entry)(b)	2,184	2,340	2,976	3,132	3,852	3,870	3,876	3,992	4,931	5,400
S ₁₃	Diploma Entry	1,728	1,860	2,388	2,544	3,264	3,300	33,336	3,465	4,283	4,692
S ₂₁	Lowest Paid Salaried Employee	312	396	540	696	984	1,164	1,324	1,470	2,146	2,484
	Unskilled non-established	n.a.	342	480	636	840	1,056	1,236	1,382	2,060	2,400

Notes:

- (a) The dates shown represent dates of implementation for all salaries commissions from 1967 onwards.
- (b) The entry point was moved upwards in 1979. Salaries shown before that date were not entry points, but were the equivalent points on the scale to those shown for later years.

Sources: For sources prior to October 1985, see Messock et al, 1986, Table A.1.3: 76. For October 1985 and June 1986, see GR2 1986a.

Table 15: Indices of real salaries in the Public Sector: General Administrative Scale (1975 = 100)

Scale	Post	Jan.67	May 71	July 75	Jan 79	Aug. 80	Jan. 82	Jan. 83	Nov. 83	Oct. 85	July 86
S ₃	Under-Secretary	135	132	100	60	68	59	51	45	29	22
S ₇	Assistant Director	137	124	100	60	62	53	46	41	27	21
S ₁₂	Univ. Grad. (Entry)	121	106	100	58	63	53	46	41	29	23
S ₁₃	Diploma Entry	119	105	100	59	67	57	50	44	31	25
S ₂₁	Lowest Paid Salaried Employee	95	99	100	71	89	89	87	83	70	58
	Unskilled non-established	n.a.	96	100	73	85	90	91	88	75	63

Sources: GRZ 1986b, Table 1.9., and text, table 14.

were introduced in June 1986 had already been completely eroded by inflation prior to their implementation. Even after their receipt, employees were worse off than in October 1985 by between 15 and 24 per cent at the bottom and top of the service, respectively (Table 15). Thus, the cuts in real earnings incurred in 1985/6 were sharper, for most workers, than the real earnings loss which they had incurred during the previous decade. This was dramatically so for unskilled wage employees. It seemed then that the sharp decline in the exchange rate following from the auction would sharply reduce wage costs throughout the whole range of skills. But these changes proved to be short-lived, and their early success did not imply that a new era of wage flexibility had arrived.

Impact of the 1985 IMF stabilisation package on the Labour Market

The decade ending in 1985 had been difficult for many Zambians. Job prospects for school-leavers had deteriorated and unemployment in the urban centres had increased. By consequence those years witnessed a significant increase in the proportion of the population dependent upon informal and subsistence agricultural production. Yet here, too, incomes remained depressed, as earlier sections have indicated. Agricultural production per capita stagnated, or declined, between 1970 and 1985 - even in the face of a potentially highly fertile and productive physical environment, with much lower ratios of population to cultivable land than in countries like Kenya, Tanzania and Malawi. The rural areas were thus unable to provide an easy alternative for those increasingly excluded from participation in formal sector work.

The package of policy reforms introduced at the behest of the IMF in 1985 initially appeared to offer promise of a solution to some of Zambia's most urgent structural problems. Under these reforms, interest rates were de-controlled (and reached 30 per cent for some borrowers); a foreign exchange auction was introduced, accompanied by the abandonment of import licensing; agricultural producer prices were substantially raised and the monopoly of agricultural marketing enjoyed by the National Agricultural Marketing Board was ended. These reforms were welcomed by the aid community, and were marked by the signing of a two-year Stand-By Arrangement with the IMF, and by agreements to reschedule \$500mn of debts owed to the 'Paris Club' group of official creditors.

The direct impact of these measures upon wage rates has been indicated above: earnings were sharply reduced at all levels; but, for the first time since the onset of Zambia's economic problems in 1975, the real value of unskilled and minimum wages were sharply reduced. These changes directly and quickly reduced real wage costs in the formal sector, having an immediate impact upon the economy's productivity and competitiveness, at least in foreign exchange terms. Equally the higher prices obtainable by producers of 'tradeable' goods changed internal relative prices sharply in favour of agriculture, manufacturing and copper production, and away from services and the production of other 'non-tradeables'.

Yet, at the same time, the increased opportunities presented by the reforms were also associated with sharply increased costs for some members of

the population. Wage and salary earners were obviously the most directly hit. But other groups were also affected. Unemployment was initially worsened by reductions in public spending, by the imposition of the freeze on recruitment to established posts, and by reductions in the 'daily paid' public sector labour force. Workers in the informal sector suffered in at least two ways: first, they faced reductions in the demand for the goods and services which they produce, owing to the declining wage incomes received by the formally employed. Second, the sharp reductions in formal sector incomes forced many with jobs to engage in 'moonlighting' - thereby swelling the numbers participating in informal urban activities, and forcing a reduction in the average incomes earned from these activities. Equally, those who were dependent on government services - particularly education, health and extension - experienced a decline in their real incomes resulting from expenditure cuts. These costs particularly affected those with large families, single parent households, the old, the sick and the infirm.

This downward pressure upon other incomes which the reductions in public spending, increasing levels of unemployment and declining real wages set in train, had wide implications. A sample survey undertaken early in 1986 amongst 100 low-income Lusaka households showed that the majority had significantly changed the composition of their diets since the auctioning of foreign exchange had begun in October 1985. In particular, the quantity of more expensive, high protein foods which had previously been bought had been reduced, and often substituted by mealie meal. Some of the very poorest households in the sample, however, had also reduced their purchases of staples. Within the group, female-headed households were shown to be most at risk, since they were often dependent upon a single, irregular income source (UNDP 1986:22).

More generally, incomes in the informal sector were threatened during the initial period of policy reform, largely because of the sharply declining incomes of the wage-earners, on whom they depended for their market. This, together with rising levels of urban unemployment implied that the incidence of serious hardship within the urban centres increased significantly over the short-term. As regards poorer families in the country as a whole the short-term impact of adjustment was also probably negative. For rural producers the re-structuring of relative prices should have been relatively advantageous - except for that important group of food producers in isolated communities, where the previous policy of panterritorial pricing had provided a cross-subsidy from those closer to the line of rail. Equally vulnerable were poorer households with large families. For them the previous decade had been characterised by falling standards of educational provision, medical care and nutrition. Now, further reductions in government health and education budgets in many parts of the country (including the urban areas) selectively disadvantaged those households which - on account of family size - had the lowest per capita incomes. Equally, of course, they hit the prospects for long-term economic growth by undermining the quality and effectiveness of the nation's future human capital.

Rejection of Reform. During 1986 the exchange rate had fluctuated between K5 and K14.6 per US dollar, (compared with a rate of K2.2 which had prevailed prior to October 1985). The inflation rate generated by the

floating of the Kwacha (Table 13), and the impact this had upon domestic incomes, discussed above, caused GRZ increasing concern. Extensive rioting broke out in the Copperbelt towns in December 1986, following an attempted doubling of the price of maize-meal by the government, as part of its commitment to the IMF to remove consumer subsidies. These and other indications of dissent resulted in a series of reversals of economic policy. At the end of January 1987, the price of the Kwacha was pegged in a range of K9 to K12.50 per US\$ - the actual price to be determined by weekly auction bids. This was followed by further modifications to the system notably, in March, by the announcement of a two-tier exchange rate system, only part of which was to be determined by the market.

The difficulties, however, continued. The auction-determined rate for the Kwacha continued to fall sharply; strikes and outspoken criticism of government policies increased. At the beginning of May - by which time the Kwacha had fallen to K21 per US\$ - President Kaunda suspended negotiations with the IMF. He discontinued the auction and imposed a new fixed rate of K8 per US\$. Debt service payments were to be limited to 10 per cent of export earnings, net of the import requirements for the mining sector, the airways, and of fuel and fertiliser. Interest rates were cut by 5 per cent, and price control was resurrected. Foreign exchange licensing was also to be introduced once again.

These changes represented a complete abandonment of the policy reform programme, and a return to the earlier regime. They were a consequence of the speed and intensity with which the IMF programme had been applied. Large sections of the labour force had been impoverished by the stabilisation package - including those sections of the community upon which the government continued to depend for support. Although the revisionist stance could hardly have made the country's foreign exchange position worse, it was Zambia's long-term prospects for diversification and growth which were probably most affected by these events.

Conclusion.

This paper has examined conditions in the Zambian labour market during just over a decade of economic decline. The causes of the sharp falls in income which occurred in 1975 were external: the result of extreme export and income dependence upon the production of one commodity - copper - the price of which was halved in 1975, and which did not recover until 1988/89. The reasons why the Zambian economy then stagnated for more than a decade were, however, primarily internal (with the important exception of the further deterioration in terms of trade caused by the second oil crisis in 1978/9). This paper has argued that two particular 'rigidities' in the labour market made important contributions to this lack of economic response.

The first of these 'rigidities' was the persistence of high level skill-shortages throughout the formal sector. These have acted as a constraint on growth and diversification in a number of ways. First they have increased costs of production. Although production bottlenecks were partly avoided by recruitment of expatriates, the unit costs of such workers have been typically a large multiple of the local earnings associated with the

job in question. Thus the shortage of Zambian skills, and the associated high dependence upon non-citizen personnel has made the costs of industrial expansion and growth greater than they would otherwise have been. Second, during the years after 1975, there is evidence that the wish by the GRZ to make faster progress with localisation, the increasing difficulties of living in Zambia for foreigners, and, in later years, the reduced real value of benefits on offer, led to a faster reduction in expatriate employment than was desirable: vacancy rates in skilled jobs rose, and the replacement of expatriates by insufficiently skilled/experienced Zambians became more frequent. There are other costs associated with dependence upon non-citizen skilled workers which economic analysis often overlooks. Cultural and attitudinal differences can often hamper relationships at the workplace. Expatriate entrepreneurs may be more interested in short-run profit maximisation than in longer-run accumulation and output growth. The process of innovation, and of providing risk capital for new ventures is probably different if the relevant skills, experience and capital are mainly in non-citizen hands. Under these circumstances, labour productivity was held back and opportunities to expand production, where they existed, could often not be exploited.

Wage rigidity was the second - and probably more important - feature of the labour market which contributed strongly to the years of stagnation. The paper has shown, using a number of different indicators, that in the mid 1970s real wages in Zambia were very high in comparison with other countries.

In spite of increased production difficulties and rapidly rising unemployment, the paper has also shown that real wages were maintained, on average, to 1980, and then fell modestly to 1983 (although with sharp differences between sectors). In these circumstances the possibility of expanding the production of tradeable goods was sharply constrained by Zambia's lack of international competitiveness. Although other factors were also unfavourable, high wage costs were an important source of Zambia's difficulties at this time.

It is important to understand why these features can properly be described as 'rigidities' in the labour market. This is so in the sense that they constituted barriers to production which were not removed - or even significantly reduced - by the operation of the market mechanism. Market signals thus proved inadequate to the task of securing the resource reallocation necessary to stimulate production. In the case of the skill shortages, the rigidity proved unresponsive even in the face of high personal returns to investment in post-secondary education and training, and high costs of expatriate recruitment. It was not, then, a matter of incorrect market signals - but of inadequate response. Nor did this response appear to be constrained by state policy. The shortage has not been so much a function of too few student places in post-secondary education and training, as of a shortage of adequately qualified or motivated students emerging from the schools. In short it appears that the intractability of the skill shortage is only partly caused by state policy - it is equally strongly related to matters of social and economic history, of custom and culture and of a lack of industrial and job-related experience. These factors probably have as much importance in explaining the general economic demise of sub-Saharan Africa as

they do in the Zambian case. Much more analysis of them is needed in this, and other country contexts.

In the case of wages, we are dealing with the rigidity of an economic signal - an even clearer case of market failure. Wage levels were maintained in spite of a sharp rise in open unemployment in the urban centres and a decline in the profitability of large sections of industry. This was partly a reflection of the power of labour vis--vis the employers - a historical legacy from the 1960s when the copper industry unions demonstrated to the rest of Zambian labour the benefits to be gained from organisation. Yet it was perhaps more strongly a product of government policy throughout the period - and therefore a rigidity promoted (or permitted) by State action rather than by structural or historical circumstance.

The key issue here was the government's use of the exchange rate instrument. Although a series of nominal devaluations did occur after 1975, these were rarely sufficient to compensate for the differential in the inflation rate between Zambia and her main trading partners. The effects of this were on the one hand to preserve the purchasing power of wages and salaries, and on the other to do little to increase the incentives to engage in agricultural and other 'non-traditional' export production. During this period the government appeared to be responding to a primarily urban employed and self-employed constituency. Between 1980 and 1984, on the other hand, there were increasing signs of willingness on the part of the government to change important aspects of economic policy. The exchange rate was reduced more sharply, and nominal wage increases were held below the rate of inflation; government spending was cut back after 1983, and efforts to increase public revenues were made. The path taken towards reform was gradual and not without deviation. Furthermore, its impact on macro indicators had not yet - by 1984 - been substantial.

The policy reforms which were introduced in 1985 changed things dramatically. Those who had been protected under the 1975-80 policy stance were hardest hit by massive escalation of import prices engendered by the auction. In the short-run, however, almost everyone lost out. The changes caused a sharp change in relative prices - in favour of the producers of agricultural and manufactured goods. But there was a lag before production could respond - during which time production inputs, food and other consumer goods had to be financed at the new higher prices. The rejection of reform, and of the IMF programme, by the government, was certainly a triumph for the sectional interests favoured by policy during 1975-80. But their victory was made easier by the speed and severity of economic change which had hurt even those who were to benefit in the medium term. It is possible, given the composition of power within the ruling party, that a continuation of the more gradualist approach to policy reform that characterised 1980-84 would also, eventually, have been rejected. But it would certainly have reduced the strength of reaction and the size of those groups opposing reform. It is much more likely that the direction of reform could have been maintained than was the case with the IMF package, which, in its design, ignored the labour market rigidities identified in this paper, and which omission ultimately led to its rejection by the Zambian people and government.

Although the copper price has, since 1987, recovered, its rise may well prove to be temporary. The past experience of Zambia suggests that it would be best to treat this price rise as windfall gain. A return to a gradualist approach to policy reform - albeit implemented more consistently than before - seems, in early 1989, still to hold the best promise for future recovery, on both technical and pragmatic grounds.

More generally, the Zambian case shows that serious labour market analysis should both precede and be incorporated in the design of stabilisation and adjustment programmes if they are to stand much chance of success in either political or economic terms. The results of adopting this different approach would be to increase the time frame within which stabilisation is expected to work, to put less reliance upon currency auctions and more upon a managed approach to devaluation, and to pay more attention to the dimensions and distribution of transitional costs. In most cases, the nature of the real wage response will remain critical. But it makes little sense to presuppose that this variable will be infinitely pliant if cursory attention to economic history would demonstrate - as it does in Zambia - that such an assumption belies the facts.

FOOTNOTES

- 1 These statements assume a population of 4,830,900 in 1975 and 6,465,100 in 1984 (projected on the basis of information given in Table 1), together with levels of formal employment, for those years, indicated by Table 4.
- 2 The declining trend indicated by Table 4 for the years 1964-72 relates to non-Africans, as indicated in the notes to the Table. Although their numbers fell consistently, there was a rising tide of non-Zambian African immigrants from elsewhere in the continent. As is suggested by the data which use a changed basis of classification from 1973, it is believed that these trends roughly coincided in magnitude, providing approximate stability in the number of expatriates employed.
- 3 Since, however, such people remain non-nationals, they do have the option of returning to their home countries. Emigration, for them, is thus much more likely than for most members of the citizen labour force. From a supply-side point of view, therefore, it would be unwise to count automatically upon their continued presence, particularly under the recent circumstances of sharply declining incomes from wage and salaried employment.
- 4 The survey covered approximately 70 per cent of total formal employment in 1983. Focused, as it was, on the line-of-rail centres, a substantially higher proportion (perhaps 80 per cent) of non-Zambian employees was captured by the survey.
- 5 Daniel (1979:Chapter 7) provides interesting evidence and argument to suggest that the period of mining wage leadership ended at a much earlier date - around 1960.
- 6 Calculated from Meesook et al. 1986: Appendix Table 6.

APPENDIX

Comparisons of earnings across Countries

The data in Appendix Table 1 compare average monthly earnings in 19 countries for the year 1976. Earnings from wages in local currency have been converted at the then existing market or official rates, for agricultural and non-agricultural citizen workers separately. Countries are ranked according to their level of per capita GDP in the same year.

In using these data it is necessary to be aware of the difficulties associated with these sorts of comparison. First, the concepts, scope and methods used in the compilation of earnings data differ between countries. Such data reflect the influence not only of wage rates, but also of hours worked and of overtime payments. Thus, countries which collect data on average monthly earnings - as do many in our sample - will tend, ceteris paribus, to produce higher earnings estimates than those which are based upon daily or hourly wage rates. On the other hand, monthly earnings data would tend to produce lower estimates to the extent that they are more affected by loss of working time through sickness, absenteeism or part-time work. Differential tax regimes would, of course, additionally affect inter-country generalisations about income distribution, but this is not so important if one is interested mainly in the issue of comparative labour costs.

A more fundamental problem is that the comparison of international differences in real wage incomes of workers should involve the conversion of the data into a common reference currency by means of factors which reflect the relative purchasing power of the currencies concerned. The calculation of such factors is extremely difficult, and can only be properly done for countries with similar social and economic characteristics. They should preferably be based upon uniform enquiries of purchasing power in each country, and should be based upon earnings net of tax. This information does not exist internationally. Table A1 relies upon earnings conversions to US dollars at the market or official exchange rates which held in 1976. This undoubtedly produces some distortions. To take, by illustration, the examples of Sri Lanka and Zambia: part of the reason for the large differences in dollar-equivalent earnings shown in the table lies in the significantly higher domestic purchasing power of the rupee compared to the Kwacha at then current exchange rates.

Notwithstanding the above problems, the data in the table do suggest that Zambian wages were very high in the mid 70s. That appears to be true both absolutely (in comparison to real wages paid in other countries) and relative to per capita income. These and other implications are explored further in the text.

Appendix Table 1: International Comparison of Monthly Earnings and Per Capita Incomes, 1976^a

Country	Currency Unit	Exchange ^b Rate	Non-Agricultural Sector: Earnings, in local Currency ^c	Earnings, in US Dollars ^c	Agricultural Sector Earnings, in local Currency ^c	Earnings, in US Dollars ^c	Per Capita GNP US \$	Ratio Col (4) Col (7)	Ratio Col (4) Col (6)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Burundi ^d	France	78.7500	5028.00 ^g	63.80	3544.00 ^g	45.10	120	0.53	1.41
Malawi	Kwacha	0.9074	44.94 ^g	49.50	10.98 ^g	12.10	140	0.35	4.09
Sierra Leone	Leones	1.1748	49.15	41.80	-	-	200	0.21	-
Sri Lanka	Rupees	8.8280	311.90	35.30	130.83 ^h	14.80	200	0.18	2.39
Kenya	Shillings	8.3100	905.90 ^{ef}	109.00	312.90 ^{ef}	37.70	240	0.45	2.89
Nigeria ^d	Naira	0.6267	42.70	68.10	34.22	54.60	380	0.18	1.25
Bolivia	Pesos	20.0000	1750.00 ^g	87.50	-	-	390	0.22	-
Honduras	Lempiras	2.0000	253.48	126.70	-	-	390	0.32	-
Philippines ^d	Pesos	7.5100	413.00	55.00	135.80 ^f	18.00	410	0.13	3.06
Zambia	Kwacha	0.7934	131.00 ^g	165.10	50.00 ^g	63.00	440	0.38	2.62
Papua New Guinea	Kina	0.8120	144.00	177.00	40.00	49.30	490	0.36	3.59
Botswana	Pula	0.8696	86.50	99.47	30.00	34.50	500	0.19	2.88
Korea (Rep of)	Won	484.0000	62362.00 ^{ef}	128.80	35284.00 ^f	72.90	670	0.19	1.77
Nicaragua	Cordobas	7.0260	974.11	138.60	-	-	750	0.18	-
Peru	Soles	69.3700	6805.60	98.10	-	-	800	0.12	-
Cuba	Pesos	0.8290	143.00 ^g	172.50	135.17 ^g	163.10	860	0.20	1.06
Algeria	Dinars	4.3590	656.90	150.70	-	-	990	0.15	-
Costa Rica	Colones	8.5700	1487.00	173.50	520.00 ^{fh}	60.70	1040	0.17	2.86
Venezuela	Bolivares	4.2900	1816.00	423.30	-	-	220	0.16	-

Notes:

- a) In some cases, source data refer to hourly, daily or weekly earnings. These have been converted to monthly rates, assuming an eight-hour day, and 21.66 days, or 4.33 weeks per working month. Wage-earners only except where otherwise indicated.
- b) Units of national currency per US dollar. Market rates at end year are used wherever possible.
- c) No non-cash earnings received or included, except where indicated.
- d) Data are for 1975.
- e) Including salary earners.
- f) Including the value of payments in kind.
- g) Plantation and fishing workers only.
- h) Minimum rates.
- i) Plantation workers only.
- Data not available.

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