Expenditure ceilings, human resources and health: The case for Zambia

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Acronyms and abbreviations

ART	Antiretroviral Therapy
CBoH	Central Board of Health
CHAZ	Churches Health Association of Zambia
CO	Clinical Officer
DHB	District Health Board
DHMT	District Health Management Team
Dr	Medical doctor
GDP	Gross Domestic Product
HICs	High Income Countries
HIPC	Highly Indebted Poor Countries
HIV	Human Immuno-deficiency Virus
AIDS	Acquired Immunity Deficiency Syndrome
HR	Human resources
HRH	Human resources for health
IMF	International Monetary Fund
LICs	Low Income Countries
MDGs	Millennium Development Goals
MoFNP	Ministry of Finance and National Planning
MoH	Ministry of Health
PE	Personnel Emolument
PRGF	Poverty Reduction and Growth Facility
RN	Registered Nurse
TB	Tuberculosis
WB	World Bank
ZEM	Zambia Enrolled Midwife
ZEN	Zambia Enrolled Nurse

Executive summary

As a condition in IMF-supported programmes, the Zambian government has had to restrain its total spending for more than two decades. The objective of these programmes has been to achieve and sustain macro-economic stability with regard to variables such as inflation, interest rates, taxation, money supply, borrowing or inflationary deficit financing. Peculiarly enough, the development objectives defined in the Millennium Development Goals (MDGs) are not part of the IMF-programmes. This raises immediate questions about the social consequences and about the broader development impact of such an expenditure-focused stability programme. One example is the cap on wages and salaries expenditure, which has been set at a maximum level of 8.1% of the Gross Domestic Product (GDP). This paper argues that policy measures that limit expenditures on wages and salaries for macro-economic stability purposes without considering alternative policy options appear to be extending the period of poor health status that has characterized Zambia over the past decades.

The health system in Zambia is slowly collapsing. The burden of ill health and death is predominantly caused by infectious diseases. Reproductive, maternal and child health are suffering significantly, so that Zambia has one of the worst rates for maternal and child mortality in the world. The effects of HIV/AIDS inside and outside the health sector constrain the quality of service provision even more.

Zambia's health system faces chronic and severe staff shortages. The current establishment is far below the internationally agreed minimum standard of 2.5 health staff per 1,000 inhabitants. The Ministry of Health (MoH) spends less than 60% of its budget (14 USD per capita in 2006) on wages. Attrition levels, due to AIDS, migration and other reasons, are very high.

Health services are labour-intensive. Human Resources for Health (HRH) constitute the key input into healthcare delivery. Experience in other countries demonstrates a direct link between health outcomes and the number of skilled staff. Within developed countries, the share of wages and salaries or personnel emoluments is as high as 80% of total health expenditures. Within developing countries, this share reduces to within 55% to 70%.

A comprehensive set of interventions is needed to address the HRH crises and increase staffing levels to international minimum standards. Current efforts by the MoH and donors to solve the human resources crisis in Zambia are important, but insufficient. These proposals include the provision of non-wage incentives to retain staff, such as the construction of housing, provision of electricity and water for staff houses, and improvements in the working environment. These are the kind of medium- to long-term improvements which can be financed by the natural increase in spending, as the wage bill is aligned to GDP growth. However, they will not allow an increase of the number of staff to international standards. This would require a doubling of the share of the total wage bill going to the health sector.

Therefore, under the current PE:GDP ceilings, changing health outcomes is not feasible. The PE:GDP ratio must be reviewed to enable the social sector (Ministries of Health and Education) and the Water and Sanitation sectors to expand their staff establishments. Staffing must be expanded to begin to address the burden of ill health and reverse the negative indicators and health status. Unless there are immediate increases in the HRH budget by removing the PE ceiling or by adjusting it to a more realistic ceiling that provides for at least 70% allocation to HR within the sector budget, it will be impossible to achieve the health MDGs.

The Ministry of Finance and National Planning (MoFNP) and donors must start to appreciate the relationship between health and human capital development with its association to economic development. The MoH must articulate the case for HRH clearly and strategically. Additional and sustainable donor funding is needed to support this. The civil society should support this call loudly.

1. Introduction

The paradox of Low Income Countries (LICs) regarding development, growth and macro-economic stabilisation is reflected in a variety of issues, but perhaps none more so complex and significant as the social sectors of Health and Education. Driving the ideological perspectives on national and sectoral focus are the Bretton Woods institutions of the International Monetary Fund (IMF) and the World Bank (WB), plus to some extent the macro-economists of the Ministry of Finance and National Planning (MoFNP) and donor agencies. Healthcare financing is a pre-requisite for improved health status. The share of human resource financing from the total healthcare financing is very important. Such a matter is reflected in a multitude of studies and documented performance of productivity and health status changes for a number of countries.

Several issues need to be considered in developing the context of healthcare financing and human resource financing. The first is the relationship between human resources and results or impact. Technology differences determine the intensity in capital and labour dependence of different health systems. Resource-constrained economies are therefore more than likely to be labour intensive. This appears to relate to the epidemiological environment in most of these countries, which is predominantly that of infectious diseases.

As data shows, the median share of wages and salary costs in the High Income Countries (HICs) is about 80% of total costs. This proportion declines in poorer and resource-constrained settings to about 55% - 70%. However, this should also be interpreted in the context of the total expenditures on health. More often than not, health budgets are marginalised and lower than ideal. In Zambia for instance, the allocation of the discretionary budget to health has remained more or less stagnant at about 10.5% on average during a period of time (see various Ministry of Finance and National Planning Economic Reports).

This study assessed the effect of budget ceilings on the status of the health sector, in particular the status and implications for HRH. More specifically, the study serves the following objectives:

- To provide an insight into the impact of the wage bill for the health sector.
- To assess the roles and positions of various stakeholders (such as the MoFNP, the MoH, the IMF, WB, bilateral and multi-lateral agencies, WHO and NGOs) in the determination of the conditions relating to expenditures on HRH. In the case of Zambia, expenditure on HRH has been capped at 8.1% of the GDP.

2. Description of the challenges

2.1. Brief of the macro-economic background issues

The macro-economic performance of Zambia has been plagued by a difficult external environment and, related to that, a deterioration in the domestic economy, with unfavourable key economic indicators during the 80s and the 90s. The earlier years (the 60s and 70s) saw unprecedented economic growth through the development of infrastructure, plus access to and provision of social amenities. These were buoyed by a relatively high per capita income of about US$700, which made Zambia a high middle income country. The deterioration of the economy during the latter 70s led to experiences of high inflation, budget deficits, a deterioration of the level of socio-economic conditions, emerging unemployment and a constrained economic environment in general.

Box 1 Lusaka District Health Management Team and District Health Board Experiences

Dr. Moses Sinkala is the District Health Director for the Lusaka District Health Management Team of the District Board (LDHMB). The DHB has a catchment population of approximately 1.7 million people as it also caters for Greater Lusaka. Consequently, it is the largest DHB in the country. Correspondingly, it has the most advantaged position for retaining and employing staff. It is also the most resourced, with a variety of donors and has the largest budget, comprising both donor and government funding, in terms of vertical programmes and through the Sector Wide Approach (SWAp) mechanism, popularly called "the basket" i.e. a co-mingling of donor and government funds for common allocation rather than project-based support to finance recurrent expenditures. The average funding per capita is about US$8.5 per annum. In the past, the Lusaka DHB has recruited employees who are either non-civil servants or were expected to be placed on the payroll of the government. However, because government procedures take as much as two to three years to resolve, the Board did proceed to recruit due to the requirement for human resources. In spite of this, the Board has the following deficit in key requirements: medical doctors 70%; Clinical Officers: 35%; midwives 55%; laboratory personnel 50%, nurses 35%. The DDH has assessed that the attrition rate is 15% on average. (This is just within the national average.) Prior to commencing a workplace programme on ART for staff, the DHB was losing 3-4 nurses a month. Since the programme started in late 2004, the DHB has lost only one nurse in 10 months. The effects of ceilings both at the national level and at sector level have been:

1. To prevent the permanent recruitment of much needed staff.
2. A failure to fill in the deficit areas outlined above.
3. A failure to retain key staff.

It is anticipated that the problem of 'ghost workers' may be between 5-15% and would fluctuate due to administrative oversights and a lack of control at other levels where responsibility lies for the removal or placement of staff on the payroll. The ceilings have been one of the most detrimental factors to human resources in the sector and for the LDHB in particular. "*unless the wages are at a level of the equivalent of a monthly salary or wage of US$3,300 for doctors and 1,500 for nurses, this will continue to be a chronic problem in the sector".* This is a four-fold PE adjustment compared to the current status.

The 2003 Economic Report notes that there was an annual worsening of the MoH overall GRZ budget deficit of approximately 5%. This was attributable to the payment of wages

and salaries. Consequently, this was perceived as being an unstable macro-economic environment, leading directly to the failure to conclude a new economic programme with the IMF under the Poverty Reduction and Growth Facility (PRGF). Furthermore, the country was deemed to have failed to reach the floating Completion Point of the Enhanced Heavily Indebted Poor Countries Initiative (HIPC). The same Economic Report, however, continued to state that the Government Policies and Objectives were anchored in the Poverty Reduction Strategy (PRSP). The stated overall goal is given as the reduction of poverty.

The emphasis has three components:
1. Investment in human development.
2. Restoring and preserving macro-economic stability.
3. Promote efficiency.

The "failure" to reach the Completion Point led to the placement of Zambia on a Staff Monitored Programme (SMP) with the IMF. The lack of completion of a new economic programme resulted in donors withholding funds (MoFNP, Economic Report, 2003). This was in spite of a GDP growth of 4% for the preceding year and a reduction in inflation from 27% to 17% for the previous year.

During 2004, the government attempted to reduce the budget deficit from 5.1% of GDP to within 2.2% of GDP. During the year, the government discretionary budget spent on health declined from 2.7% of GDP to 1.7%, representing a decline from 12% of the discretionary budget during the previous year to 11.5% during 2004. The budget for 2005 increased to 12%.

2.2. Earmarking social sector expenditures and national performance targets

One of the issues within the government/IMF programme was the earmarked social sector expenditures. The level of these expenditures was to be maintained at a minimum of 36% of the Government discretionary budget. However, during the year, education sector spending was 19.7% and the health sector spending was 12%. The 12% includes transfers to the Ministries of Defence, Home Affairs and Community Development. In reality, therefore, the actual expenditure for the health sub-sector was about 10%, because the other expenditure accounted for about 2%. The total expenditure on the social sector (Education and Health) was 32%, 4% below the minimum threshold. Whereas the education sector target of a minimum of 20% was virtually met, that of health was not. In particular, the health expenditure target of 15% as defined and accented through the African Heads of State in the Abuja Declaration was not met.

The public health system, managed through the Ministry of Health and the now-dissolved Central Board of Health (CBoH) is and has been responsible for providing the major share of health services in the country. Another key player in the provision of healthcare has been the Churches Health Association of Zambia (CHAZ). The CHAZ affiliates account for about 45% of rural healthcare provision in the entire country as well as about 30% of overall health services in the country. Together, the Ministry and CHAZ account for over 90% provision of healthcare services. Yet, the relationship between CHAZ and MoH is

intrinsically woven, because the bulk of human resources in CHAZ affiliates is seconded and paid for by the government. Although this is the case, due to perceived differences in the quality of care by clients, the CHAZ affiliates are understaffed and sometimes face far worse acute constraints on human resources than do the MoH facilities, despite carrying a greater workload.

As economic growth remained constant or regressed, the IMF, World Bank and the MoFNP apparently grew concerned at the growth of the personal emoluments and of the share of personal emoluments of total government expenditures. It was pointed out that the growth of PEs rose to about 60% of government revenue (MoFNP), with the wages and salaries bill absorbing 11% of GDP by 2002/3. Government revenue collection is approximately 18% of GDP. It was proposed that the extent of a manageable wages and salaries bill or PE expenditure bill required to be between 6 - 8% GDP and that this range was in conformity with the average in sub-Sahara Africa. The proposed range of expenditures leads to about 40 - 50% of domestic revenue being expended on PEs. At the time, it was also felt necessary that the debt servicing requirements should be assured by limiting the share of resources being absorbed by PEs (MoFNP).

Other concerns were also attributed to public borrowing, which was equivalent to about 20% of the GDP. Therefore, the concerns stated by stakeholders (e.g. the IMF and MoFNP) were that macro-economic targets were deemed essential. These targets would yield low inflation, limit government borrowing and introduce fiscal discipline, as well as ensuring that debt servicing obligations were met. Consequently, it was necessary that:

1. Wages and salaries (PE) expenditures were controlled.
2. A limit or ceiling of 8.1% as a share of GDP was placed on the total allocation for wages and salaries.
3. Employment and salary increases were frozen in 2003 except health and education.
4. Any additions or increases on employment or PEs could only be met through realised GDP growth and would only be proportional to this growth rate. For instance, if GDP was projected to grow by 4%, the employment by the public sector could only grow by 4% or less.
5. The ceilings were deemed essential in order to meet the expectations of the Highly Indebted Countries (HIPC) completion point. This was desirable in order to draw debt cancellation that would yield greater resources for the implementation of development programmes, particularly those within the social sector.

2.3. Human resources for health and the millennium development goals: the problem

The World Health Organization's World Health Report (2005) summarises most succinctly the evidence relating to the association or relationship between human resources and outcome or impact. It is acknowledged that skilled professional care during and after birth makes the difference between life and death for both maternal and neo-natal deaths. HICs halved their maternal mortalities by providing professional midwifery at child birth during the early 1900s. This was further reduced to the current minimal levels (6-4 per 100,000) during the last half of the 20th century, through improved access to hospitals and health centres.

Several LICs have also made similar notable achievements utilising the same principles. Countries such as Sri Lanka, for instance, were able to reduce maternal mortality from 1500 per 100,000 during the mid-1900s to 80 per 100,000 during the 70s. This was further reduced to below 30 per 100,000 during the 90s. Sri Lanka focused on ensuring access to skilled midwifery services and on improved access to health facilities and related drugs and equipment. Other countries facing similar experiences have included Thailand and Malaysia. It has been consistently shown that the availability of the necessary infrastructure, human resources and first level care are paramount factors in the improvement of outcomes and impact relating to maternal and child health.

In brief, this translates to the development of social and economic foundations of the country through improved health services resulting from increased investments or expenditures on healthcare and related public health (multi-sector) investments, such as education, water and sanitation.

The Zambian government has committed itself to implementing the MDGs. This commitment relates to the realisation of all ten MDGs. However, for health, the MGDs specifically significantly relate to the following:

1. Child mortality
2. Maternal mortality
3. HIV/AIDS
4. Malaria and other diseases.

Related MDGS include:

- Water and sanitation
- Extreme poverty
- Universal primary education
- Environmental sustainability.

In other words, the MDGS are either directly or indirectly related to the performance of the health sector as a consequence of the performance of the health sector. Periods of acceleration in health have been sparked by popular mobilisation of health workers. The density of health workers in a population can make an enormous difference in the effectiveness of MDG intervention to reach the MDGs. For instance, the prospect of achieving 80% coverage for measles immunisation and skilled attendants at birth are greatly enhanced where worker density exceeds 2.5 workers per 1,000 persons. (Human Resource for Health: Overcoming the Crises, Joint Learning Initiative, 2005).

Tables 1 and 2 on the next page show the current status of the human resources situation in Zambia. Other tables showing the staff establishment and total human resources in the health sector are provided in the appendices. Tables 1 and 2 demonstrate the severity of current and medium-term problems that face the Zambian health sector. Table 2 depicts both the particular staff to population ratios and comparative variations across the nine regions of Zambia. The doctor to population ratio varies extensively from almost 66,000 persons per doctor in the Northern Province to 6,250 persons per doctor in Lusaka province. The nursing to population ratios are slightly better. However, in view of the extensive workload that the nursing care entails, these fall short of ideal or recommended ratios. The overall human resources for human to population ratio is shown in the last

column of Table 2. The ideal should be a worker density ratio of 2.5 staff or rather 3 to 1,000 persons. For Zambia, the ratio averages 1 healthcare worker per 1039 persons.

Table 1 Select staff and total clinicians in the country

Province	Doctors	Clinical Officers	Registered midwives	Reg'd. nurses	Zambia enrolled midwives	Zambia enrolled nurses	Grand total	Population
Central	35	132	60	84	242	388	1126	1012257
Copperbelt	202	187	126	288	505	1160	2830	1581221
Eastern	29	138	15	645	159	506	1661	1306173
Luapula	15	65	10	197	39	274	707	775353
Lusaka	256	212	129	60	305	1014	2304	1391329
North Western	21	55	5	467	41	281	988	583350
Northern	22	107	18	61	149	320	837	1258696
Southern	38	174	31	184	359	663	1693	1212124
Western	28	91	16	412	64	350	1094	765088
Grand total	**646**	**1161**	**410**	**94**	**1863**	**4956**	**10936**	**9885591**

Source: Ministry of Health/Central Board of Health Human Resources Sub-Information Systems

Table 2 Derived staff: Population ratios

Province	Doctors	Clinical Officers	Registered midwives	Registered nurses	Zambia enrolled midwives	Zambia enrolled nurses	HRHs
Central	33,243	8,815	19,392	13,851	4,808	2,999	1,033
Copperbelt	8,998	9,719	14,425	6,311	3,599	1,567	642
Eastern	51,771	10,879	100,090	2,328	9,442	2,967	904
Luapula	59,414	13,711	89,122	4,524	22,852	3,253	1261
Lusaka	6,247	7,544	12,397	26,654	5,243	1,577	694
NorthWestern	31,930	12,191	134,104	1,436	16,354	2,386	679
Northern	65,763	13,521	80,377	23,718	9,710	4,521	1729
Southern	36,665	8,007	44,944	7,572	3,881	2,101	823
Western	31,408	9,664	54,964	2,135	13,741	2513	804
National	17589	9787	27714	120881	6099	2293	1039

Table 3 shows the attrition rates. Note is made of the relatively high rates of attrition in the country. The largest causes of attrition are death and resignations, which reflect losses of human resources to the public health system. They are above the 5% norm that the sector is expected to experience.

Table 3 Annual attrition rate 2003

Cause of attrition	Number of staff	Percentage of staff
Retirement	55	10
Resignation	181	32
Termination of contract	0	0
Dismissals	67	12
Death	209	38
Expiration of contract	28	5
Transfers	28	5
TOTAL	**555**	**100**

Source: Derived from the HRM MIS

Table 4 shows the total wage bill based on the budgeted amount for 2004. This is based on the current staff establishment of approximately 23,000 employees. The total health sector public wage bill is approximately 1% of GDP.

Table 4 Total wages (budgeted) 2004

Province	Budget Allocation
Central Province	20,896,835,388
Copperbelt Province	56,901,345,064
Eastern Province	18,978,115,859
Luapula Province	11,436,853,627
Lusaka Province	67,922,094,995
Northern Province	16,646,829,819
North-Western Province	10,041,780,409
Southern Province	30,915,070,482
Western Province	14,834,908,920
Zambia	248,573,834,564
US$	55,238,630
% share of GDP	1.06%
Exchange rate	US$1: ZMK4500

Source: MoH, MoFNP

In May 2005, following the reaching of the HIPC Completion Point, the health sector was "permitted" to recruit 1,500 much-needed front line staff. This was a partial lifting of the freeze on recruitment, but one which is grossly and extremely insufficient. For instance, as the DDH for Lusaka stated, of 130 employees recruited by the Board but who were not allowed on the payroll, only 38 were approved under the 1,500 for Lusaka DHB.

2.4. Healthcare financing: expenditures

Tables 5 and 6 show the trends in health expenditures. These tables show the sources of financing which includes the government (central treasury), donors and households, who comprise the key sources of financing for healthcare in the country. The share of government expenditures to total expenditures is also shown.

Table 5 Trends in healthcare expenditures

Year	Total health expenditure (K' million)	Total health expenditure as % of GDP	Total Govt. health expenditure (K' million)	Govt. health expenditure as % of total health expenditure	Donor health expenditure (K' million)	Donor health expenditure as % of total health expenditure	Household health expenditure (K' million)	Household health expenditure as % of total health expenditure
1995	162,770	5.4	63,933	39.3	19,043	11.7	49,057	30.1
1996	230,788	5.8	78,230	33.9	43,405	18.8	69,331	30.0
1997	316,833	6.2	103,329	32.6	72,916	23.0	90,510	28.6
1998	399,192	6.6	119,787	30.0	95,496	23.9	115,916	29.0
1999	411,898	5.5	146,525	35.6	40,457	9.8	163,514	39.7
2000	545,482	5.4	153,437	28.1	101,091	18.5	206,418	37.8
2001	746,023	5.7	295,707	39.6	104,257	14.0	269,118	36.1
2002	950,138	5.8	348,921	36.7	176,811	18.6	337,065	35.5

Source: National health accounts

Table 6 shows the share of government expenditures to total health expenditures as well as government expenditures as a share of GDP. The trends show that government expenditures on health as a share of total government expenditures has been more or less below 8% and remained stable in the region of 7% over a 7 year period.

Table 6 Trends in healthcare expenditures

Year	Per capita govt. health expenditure US$	Per capita govt. health expenditure ZMK	Real total health expenditure growth	Real govt. health expenditure growth	Govt. health expenditure as % total Govt. expenditure	Real donor health expenditure growth	Real household health expenditure growth
1995	8.1	5,202			6.5		
1996	6.9	4,289	(0.9)	(14.5)	7.2	59.3	(1.2)
1997	8.0	4,399	10.3	6.1	7.7	35.0	4.9
1998	6.4	3,968	1.3	(6.8)	6.5	5.2	2.9
1999	6.0	3,790	(18.6)	(3.5)	6.7	(66.6)	1.2
2000	4.8	3,118	5.1	(16.9)	4.9	98.2	0.2
2001	7.8	4,835	12.7	58.8	7.0	(15.0)	7.4
2002	7.5	4,558	4.2	(3.5)	6.7	38.8	2.5

Source: National Health Accounts

Table 7 Expenditures by cost items in 2003 and 2004

Expenditure item	2003	% share	2004	% share
Personnel costs	279.6	52	308.4	48
Drugs	58.6	11	89.7	14
Non medical costs	26.4	5	32.1	5
Transport	24.2	5	33.1	5
General charges	85.8	16	80.7	13
Repairs and maintenance	12.0	2	17.8	3
Training and capacity building	18.1	3	38.3	6
Capital costs	29.3	6	35.8	6
Totals	**534**	**100**	**639.5**	**100**

Source: Central Board of Health

2.5. The fallacy of the PE:GDP ratio in terms of total actual PE costs

As much as the PE:GDP ratio may exist, its efficacy and/or fallacy in terms of effectiveness may be measured by the extent to which civil service workers and the HRH use their ingenuity to devise various mechanisms for supplementing their salaries. Unfortunately, this leads to the sub-optimum use of resources, because the use is untargeted and unplanned, but is in large amounts. Although no estimates exists, proxy data through the 'sitting allowances', for instance, indicates the extent of the resources devoted to such payments that do not appear as PE expenses, although they are in reality. This issue has been recognised by donors, yet there appears to be little movement either way, i.e. to eliminate it and factor these expenditures into an expanded PE:GDP ratio that can then be targeted towards incentives, recruitment and expansion in the staffing position.

3. The decision-making process

The decision on the PE:GDP ratio being maintained at a maximum level of 8.1% was based on general experiences of wages and salaries within the sub-Sahara. This average is about 6-8% according to various informants. The general levels of government revenue through taxation to GDP in Africa is estimated at between 12-15%. In Zambia, the government's current revenue accounts for about 18% of GDP. The wages and salary bill rose to 67% of total government revenue or approximately 11% of GDP in 2001. The IMF, World Bank and donor community were concerned that the level of wages and salaries would destabilise the macro-economic environment, resulting in increased inflationary pressures, fiscal and monetary instability as well as a lack of expenditure controls in government. Other related effects were bound to lead to an unstable and rising exchange rate and high interests rates. This level of instability would prolong the negative growth of GDP and lead to persistent poor economic performance adversely affecting the poor. It was argued that the wealthy sections of society have alternative hedging measures and are able to sustain poor economic performance better than the poor, who would be hardest hit. This would also partly be through reduced social sector spending by the government. The government is supposed to live within its means; i.e. limit the share of wages to what is considered a 'reasonable' level.

The recommendation on the wage bill ceiling is agreed upon by the IMF and MoNP. This Agreement forms the basis for obtaining cabinet approval on behalf of the government.

According to the Director, Planning and Development in the Ministry of Health, "we are called to sit in the review meetings when the IMF are here…..but not in the programme design work with the Ministry of Finance …" This view was recognised by the MoFNP and the World Bank, who stated that there was a shift to be more consultative in the process. Evidence of this was the involvement of the MoFNP officials on the Sector Advisory Groups (SAGs), who are responsible for part of the formulation of policy in the sectors as well as accountability through receiving reports of the monitoring and evaluation of both programme performance and utilisation of resources; human, financial resources and others.

The participation of the civil society in the health sector decision making appears to have been limited to CHAZ. Unfortunately, even for CHAZ, inclusion in the budget process has been very limited. Civil society participation is necessary for central issues such as the budgetary process, but more so for community mobilisation, awareness and for ensuring that community requirements (such as HRH) are available and providing due services to the communities. This can only occur with the advocacy and participation of the different dependent and independent stakeholders.

3.1. Determining the human resources for the health expenditure ceiling

The process adopted so far in determining the PE:GDP ratio is essentially a technocratic process limited within the confines of the Ministry of Finance, National Planning and IMF and WB agencies. It is based on a limited, narrow perspective of economic management that associates only to macro-economic management and variables.

The human resources allocation ceiling has been pegged at 8.1% of GDP for the public sector. The IMF, World Bank, Ministry of Finance and donors such as the Netherlands Embassy all appear to have a consensus on the issue. Of this 8.1%, the health sector allocation is approximately 1% of GDP. This currently represents about 67% of the government revenue budget for health. The revenue share of GDP is about 18%. Proponents of the ceiling limitation argue that the government's challenge is to ensure that the social sectors of education, health, water and sanitation are funded adequately. The options they propose are discussed below.

Emphasis has, however, been placed on the expectation that the government mandate and current policy priority goal is to ensure the stability of the macro-economic environment. Accordingly to the Ministry of Finance:
"….it is a matter of balancing things, you cannot consider only one side….if inflation is high, we have erosion of wages and negative effects on staff morale. Government ends up borrowing to finance its expenditures and runs deficits, interest rates are high."

In terms of the health sector, it is stated that: "there is a heavy presence of donors in the sector…" The justification therefore is that there is room for fiscal space existing in the health sector and the sector has therefore alternative sources for funding.

These views may be examined in the context of others' views, such as the Ministry of Health and the Churches Health Association of Zambia, etc., who state the following:
"….is almost impossible to provide good quality health services with a staff of 23,000, especially when coming from the background where health services had virtually collapsed and we are far from the internationally recommended staff-staff ratios and staff-population ratios. We need to stick to the minimum accepted ratios."

Furthermore, it was pointed out that:
"Health is an investment in human capital and, unless there is this realisation, it is difficult to see how prevalence of ill-health negatively impacts on economic growth and

productivity…this realisation would assist all of us to view the health sector as an economic sector."

"…The health sector should be considered as an economic sector dealing with human capital…when we are dealing with crises of HIV/AIDS (with a prevalence of 16% that compounds the current problems of human resource) and the burden of infectious diseases, the health sector must be given priority, allowing it to meet international agreements such as the Abuja targets on governments allocating 15% of the discretionary national budget to the health sector and striving to meet the per capita expenditure of US$33.."

Table 8 outlines the recommended staff establishment. This is based on an attempt to attain basic minimum standards, which are a ratio of 2.5 health workers per 1,000 persons. The establishment is based on reaching a health workers' ratio of 2 per 1,000 persons. In this case, it is still below the desirable international standard.

Table 8 PE: GDP ratio for proposed establishment

Cadre	**Mean salary 2005 US$**	**Proposed establishment**	**Total personnel emoluments US$**
Doctors	9 000,00	2300	20 700 000,00
Clinical Officers	2 600,00	4000	10 400 000,00
Nurses	2 580,00	16732	43 168 560,00
Midwives	2 580,00	5600	14 448 000,00
Pharmacists	4 760,00	162	771 120,00
Laboratory staff	2 560,00	1560	3 993 600,00
Radiographers	2 580,00	233	601 140,00
Environmental Health Technician	2 580,00	1640	4 231 200,00
Other staff	2 580,00	17133	44 203 140,00
Total		**49360**	**142 516 760,00**
GDP			6 300 000 000,00
PE/GDP Ratio			**2.26%**

Source: Derived From Establishment and Budgets, MoH and CBoH

3.2. Rationale

Zambia faces significant and urgent challenges in improving the health status and literacy levels of the population. Table 9 demonstrates the current health and educational status of the country. Zambia has faced retrogression in its social-economic indicators and the indicators are comparatively poor, as demonstrated by the indicators in the table.

Table 9 Key health indicators

Indicator	**1992**	**1996**	**Level 2001/2**
Immunisation coverage 3 DPT vaccinations (%)	55	67	80
HIV/AIDS prevalence (%)			16
TB (cases per 100,000)	100	300	478
Maternal mortality rate (per 100,000)			729
Under-five mortality rate (per 1,000)	174	187	168
Infant mortality rate (per 1,000)	97	123	95

Source: CBoH, Demographic and health survey, 2001-2002

The cause of morbidity and mortality in Zambia are fundamentally infectious diseases, see Table 10.

Table 10 Leading causes of morbidity and mortality

Disease	**incidence per 1,000**		
	Under 5	**Over 5**	**Total**
Malaria	113.4	203.6	383.1
Respiratory infections – non-pneumonia	436.9	85	152.8
Diarrhoea	258.4	30.8	74.7

Source: Extracted from the 2004 Annual Health Statistics Bulletin, CBoH

From data in Tables 9 and 10, we see rather poor maternal, reproductive and child health indicators. These indicators are typical of the problems countries such as Sri Lanka, Malaysia and Thailand have faced. As already stated, evidence from these countries has shown that improving the availability of human resources through increased numbers and skills ultimately led to the reduction in the MMR and IMR. The maternal deaths are symptomatic of weaknesses in the health chain of interventions required to control and reduce the resultant deaths. The immunisation coverage and the child mortality demonstrate the lack of appropriate means, or weakness in the structures, to address child health. Evidence has shown a positive overall impact of increasing the number of health staff on both child and maternal health in other countries (WHO, World Health Report 2005).

4. Potential improvements

Several options for improving the HR situations are being promoted. These options are presented and discussed in this chapter. They have the common factor that they find solutions within the current wage bill ceiling. It is argued that the current economic growth of 5% provides enough 'budget space' for the health sector to replace the attrition suffered and to compensate for erosion in wages, salaries and improve conditions of service.

4.1. Improving non-wage incentive schemes for social sectors

The case for recruiting, retaining and developing human resources is embedded in more than just wages and salaries. Human resources management is concerned with other factors or incentives that all contribute towards the concerted effort of recruitment, retention and development. In this regard, therefore, alternative approaches should consider some or all of the following alternatives:

1. Provision of housing for health workers.
2. Improving housing conditions through the provision of water and power (solar power in areas without electricity).
3. Availing medical care, such as HIV/AIDS schemes for employees and family members.
4. Availability of revolving funds for loans for housing and motor vehicles.

It is argued that some of these alternatives would adequately address the limitation of the PE:GDP ratio and would in the medium- to long-term work to effectively improve the sector and act to stem the attrition rate of the HRH. An attempt at pioneering an HRH programme that aims to meet staff retention has been implemented by the Dutch government, in collaboration with the Ministry of Health. This attempt provides incentives as well as meeting the goal of balancing the distribution of human resources with the disadvantaged areas being catered for. Although this initially targeted medical doctors working in rural areas, it is intended to be applied to all categories of health workers.

The retention efforts form an indispensable condition for improving the HR. It is not a question of either or, but and, and. We need both retention and a higher wage bill to recruit more staff and pay people better. And both should be paid from the MoH budget that donors should agree to. The issue is that things will move far too slowly without a higher wage bill.

4.2. Re-allocation of the government budget to priority sectors

It is argued that the threshold on PEs does not prevent the State from setting priorities within the sectors and allocating resources within these priorities. This would effectively entail that the allocation of resources to different sectors was according to redefined government priorities. Within this framework, the government should be able to re-allocate

additional resources to the social sector at the expense of the other sectors. In brief, the other sectors would have less resources allocated to them and more allocated to the social sector to ensure that the goal of macro-economic stability was maintained.

4.3. Restructuring the public (civil) service

Observations were made that, although there has been a long-running restructuring programme of the civil service, the results of this were not immediately forthcoming. The wage bill ceiling is expected to increase efficiency in spending.

Firstly, the government is required to act more efficiently and effectively in ensuring that the line ministries all undergo restructuring to make them "lean and efficient", with the right HR staffing. The focus should be on quality and performance rather than the number of staff, as appears at the moment.

Secondly, MoH itself is said to be "bloated" by the assertion that:

1. It is said to have "ghost workers" on its payroll, i.e. workers who were previously on the payroll but who are no longer working within the sector, yet continue to be paid their monthly wages and salaries.
2. The ratio of staff to staff, i.e. the number of administrative employees to clinical staff is approximately 1:1 rather than about 1:2, according to international recommendations. There is a distortion in the number of administrative staff that requires to be streamlined to ensure that the numbers of clinical care staff and front line staff are increased.

The restructuring of the civil service entails the development of the existing HR and additions to it. It is estimated that the recruitment and training of the current HR establishment would cost an additional 15% (HR Strategic Plan, 2005).

The MoH has been involved in cleaning up the payroll. In this regard, activities are continuing to ensure that all non-existent workers on the payroll are removed and that other staff who are seconded or excluded from the payroll have their status regularised. At the time this report was written, a new HR strategy plan was developed by MoH, with the help of bilateral donors. This plan is a concrete, feasible and comprehensive plan to address problems in the health sector. However, it does not foresee an improvement of the health staff: population ratio to the internationally agreed minimum of 2.5:1.000. The current, highly inadequate establishment remains unchanged.

4.4. Emerging consensus on commitment to paying wages and salaries in SWAp and related arrangements

The advocacy for the support of wages and salaries of HRH for retention, development and expansion has not only received support but is also partially being funded. Norway, for instance, has been instrumental in pushing the programme related to HRH crises in LICs and countries such as Zambia specifically. The Dutch have provided support to both Health

and Education sectors for payment of HR (non-wage), albeit in a limited manner to start with. However, the principle is agreed to and needs to be advocated more aggressively to ensure that it not only receives additional donor support but that the health allocation from the discretionary government budget is also increased in line with international commitments. This is necessary for the very sake of the sector requirements and to ensure that the limitation of the PE to GDP ratio is made flexible in the context of the basic relationship relating to the determinants of improved health (as partly expressed through the MDGs and in the broader public health context).

The PE to GDP ratio is artificial. When donor funds are included in the available resource envelope, the PE to revenue ratio for the health sector appears to be just 44% if this only includes the budgets of the co-operating partners. It goes down to even 22% when the disease-specific programmes are also included. This implies that HR spending in the health sector is not high. Assertions that Zambia should be 'living within its means' is rather strange if one considers that Zambia will be dependent on aid flows for many years to come. This is unfortunate, but if we want to achieve the MDGs and respect human rights, it is unavoidable.

5. Conclusions

The PE:GDP limitation (or cap) on wages and salaries is a contentious issue that has had negative impacts on the social sector in general, and on health and education sub-sectors specifically. However, the concern here is the impact on the health sub-sector and, related to that, to the education and water and sanitation sectors.

Public health has been shown to depend on the improvements to non-clinical functions in attaining improvements in the status of health. Furthermore, education has given good results, with appropriate improvements in public health, particularly because of improvements in child health through improved female education levels. These are simply some of the more known and general relationships between public health and other social sectors. They are, however, significant in the overall quest for demonstrating the relationship between HRH and the provision of interventions in the public health arena.

Oddly, but perhaps not surprisingly, the issue of MDGs features very lowly and hardly ever in the discussions and programme design of the macro-economic stability framework. The IMF economic stabilisation programme is erroneously called the Poverty Reduction and Growth Facility (PRGF). Achieving stability in the macro-economic environment is not necessarily a sufficient condition for attaining a more egalitarian-based Gini coefficient level. This is particularly so when government spending on the social sector has to be constrained. The people who are hardest hit when government expenditure on social services is restrained are the poorest. The consequences of restrained expenditure are not reversible in the short term. Life expectancy, for instance, will not be extended in the very short run. Yet, these are the fundamental effects of the restraint on HRH expenditures. The cap on expenditure on HRH is worsened by the limited expenditure on health as a share of the discretionary budget, which has been constant over time. This is cardinal in understanding the recommendations of this paper.

The example provided of the impact of the wage bill ceiling at district level on the number of employees that can be employed for service provision (box 1) cuts across the country as a whole. This case is reflected in the national figures of the staff establishment.

The existing Zambian HR situation is such that the country falls grossly under the minimum internationally-acceptable levels of health worker ratio of 2.5 workers per 1,000 persons. The cases of Malaysia, Thailand, Sri Lanka, and Vietnam demonstrate that child health and maternal mortality can be reduced from the 100s per 1,000 to less than 40 per 1,000 if the HRH situation is used as a key variable and function in the restructuring of healthcare. The increases in health worker density are a pre-requisite for improved health outcomes. Given the evidence base available, there appears to be too little room for doubt that alternative economic designs that do not factor in health as a necessity for development are limited in nature.

In addition, the poor health indicators confronting Zambia are also related to the HRH conditions. Drawing on the deterioration in the health sector budget allocation, the limitation on wages and salaries, plus the evidence demonstrating how health outcomes change in the context of the changes in HRH, there is a clear need to review the approach that provides these limitation and restraints. Postponing improvements in health gains because of unproven arguments about macro-economic stability is catastrophic for the country as a whole, an unnecessary punishment of the people and lacks a human approach to policy formulation. It must therefore be reviewed and removed as urgently as possible.

6. Recommendations

6.1. MDGs should be central in the formulation of government policies

Human development and the pre-requisites of development should be the overriding objective of government policies, rather than macro-economic stability, which does not take into account long-term effects on the economy of ill health. Addressing ill health is therefore a key aspect of development. MDGs offer attainable prospects for long-lasting development gains.

The limitation on expenditures is the key issue to be resolved. The expenditures on wages and salaries should not just include improved salaries and wages; more importantly, they should include an expansion in the HRH. As shown in the discussion, the case for doubling the HRH in Zambia would lead to more than a doubling of the current levels of PE:GDP expenditures: from 1% to 2.6%.

6.2. A clear and strategic policy position must be stated

Efforts are being undertaken to address the more critical and pressing issues of HRH. However, these can only be meaningful if adequate resources are available; but the MOH must be pushed to do its homework. Better data is needed, management of the wage bill needs improvement, and retention is a serious problem that needs more commitment. The MoH should be encouraged to ensure that:

- its people are present when important decisions are made,
- a higher share of the budget is allocated and disbursed to health, and
- at least 70% of the health budget is allocated to PEs.

The long-lasting gap in strategic and policy directions and the lack of a coherent and sustained response to the HR crisis have contributed to the magnitude of the current problem. Only recently, there was a presidential directive to formulate a clear outlined response to HRH. The HR strategy plan presented in November, 2005 appears to be a start in strategically managing and responding to the HRH. However, this plan is modest. It will not attain the minimum health worker density required for the health MDGs.

6.3. Additional domestic resources should be mobilised

The government can attempt to create the fiscal space to be able to invest more in human resources. This can be done in several ways:

1. Mobilising domestic revenue, including a broadening of the tax base. Total government spending represents 26.9% of GDP, which is relatively high compared to other low-income countries. This means there is limited scope for increased domestic resource mobilisation to increase the health budget.
2. Debt payments cover 11.3% of the 2006 budget, with domestic payments comprising about one-third of total debt payments. The World Bank is expected to come up with further debt cancellation by July, which will free some resources that could be allocated to the health sector. In 2005, the government announced the recruitment of 1.500 front line staff in the health sector after HIPC debt relief was granted.
3. Maintaining strict macro-economic policies (focused macro-economic stability goals) would increase the investment climate, which would generate increased private sector investments and improved economic growth, increasing tax income (traditional expectations theory).

6.4. The creation of fiscal space requires donor participation and support

So far, donors have supported recurrent expenditures on areas other than health workers' salaries and wages or PEs. In addition, they have also covered capital expenditures. Yet, unless HR is available, all these remain idle assets and capacity. The availability of HRH will ensure that a service is provided. The availability of a building or drugs does not necessarily

ensure that there will be a service. This relationship should be used in the design of future donor support.

Donor support remains an option in ensuring that, in the short- to medium-term, there is a commitment towards resolving the stagnation in attaining progress towards national health status as well as in the wider perspective commitments such as the MDGs and others. One informant in our study proposed that governments should actively engage the donor community to compensate for the exodus of the HRH from Zambia through the donors increased investment in non-wage investments as well as short- to medium-term funding of the PEs.

Part of donor funding to the health sector is provided on a sustainable basis. The proposition is therefore that the pooled or 'basket' funding be included in the PE to revenue ratio for MoH. Other countries have begun to successfully make the case for HRH; and Tanzania, Malawi and Swaziland are adopting such strategies.

It is of the utmost importance that total donor funding to the health sector is increased. Support to PE spending by donors should not go at the expense of other essential expenditure in the health sector.

6.5. Civil society in the health sector should be more pro-active for performance accountability and the MoH Citizen's Charter on Health

There is a need for strong advocacy to support investments in health and to hold MoH accountable for proper execution of the budget.

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Annex 1 Staff establishment

All staff in-post: establishment.

Staff Cadre	In post	Establishment (2001)	Variance
CDE	8141	0	-8141
Clinical Instructor	22	113	91
Clinical Officer	1161	1361	200
Environmental Health Technician	718	679	-39
Environmental Health Technologist	32	0	-32
Laboratory Technician	292	188	-104
Laboratory Technologist	100	0	-100
Lecturer	43	0	-43
Medical Doctor	646	997	351
Medical Laboratory Scientist	25	0	-25
Medical Licentiate	2	0	-2
Nursing Officer	189	81	-108
Nursing Sister	148	78	-70
Paramedical Staff	545	2349	1804
Pharmacist	24	42	18
Pharmacy Technician	13	120	107
Pharmacy Technologist	71	0	-71
Registered Midwife	410	203	-207
Registered Nurse	1140	2060	920
Support	2784	1272	-1512
Tutor	92	63	-29
Zambia Enrolled Midwife	1863	726	-1137
Zambia Enrolled Nurse	4956	6491	1535
Not Stated	29	0	-29
Grand totals	23446	16823	-6623

Summary of staff in-post: establishment

Staff Cadre	In post
Medical Doctor	646
Clinical Officer	1161
Registered Midwife	410
Registered Nurse	1288
Zambia Enrolled Midwife	1863
Zambia Enrolled Nurse	4956
Pharmacist	24
Pharmacy Technologist	84
Environmental Health Staff	750
Laboratory Staff	417
Paramedical Staff	545
Medical Licentiate	2
Support	2973
Tutor/Lecturer	135
Not Stated	29
Grand total	**14608**

Total health expenditure, 1995-1998

Nominal health expenditure Real health expenditure Per capita health expenditure

Year	**Kwacha**	**% change**	**% GDP**	**1994 Kwacha**	**% change**	**US Dollars**
1995	155,782,892,465		5.20	115,480,276,104		19.80
1996	232,228,762,507	49.07	5.89	120,325,783,683	4.20	20.47
1997	318,832,331,617	37.29	6.17	132,736,191,348	10.31	24.97
1998	387,385,158,110	21.50	6.43	129,603,599,234	-2.36	20.73

Source: National Health Accounts

Government Health Expenditures 1995 – 1998

Nominal health expenditure Real Health Expenditure

Year	**Kwacha**	**Percentage change**	**Percentage of total health expenditure**	**Percentage of GRZ domestic expenditure**	**Percentage of GDP**	**1994 Kwacha**	**Percentage change**
1995	63,933,072,077		41.04	11.03	2.13	47,392,937,047	
1996	78,230,392,334	22.36	33.69	10.72	1.98	40,533,882,038	-14.47
1997	103,322,126,531	32.07	32.41	11.57	2.00	43,015,040,188	6.12
1998	119,787,142,313	15.94	30.92	11.75	1.99	40,074,788,328	-6.84

Source National Health Accounts

Annex 2 List of informants

Dr. M. Sinkala	Lusaka District Health Management Team
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Ms B. Mpepo	Civil Society for Poverty Reduction
Dr. Mtonga	World Health Organisation
Prof. C. Gaston	Consultant, Ministry of Health, Swedish International Development Agency
Dr. M. Gerritsen	Royal Netherlands Embassy
Mr C. Simoonga	Ministry of Health
Mr S. Kagulura	Ministry of Health
Mr Chitembure	Ministry of Health
Mr Mwila	Ministry of Health
Mr D Chinfwembe	Ministry of Health
Ms P. Palela	World Bank
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Ms S. Angomwile	Ministry of Finance and National Planning
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Annex 3 List of Tables

Colophon

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