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Fiscal implications for health financing in African countries recently graduating from low to lower-middle income status: the case of Ghana and Kenya

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<td>Acquired Immune Deficiency Syndrome</td>
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<tr>
<td>ART</td>
<td>Antiretroviral Therapy</td>
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<tr>
<td>ASAL</td>
<td>Arid and Semi-Arid Lands</td>
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<tr>
<td>BOPA</td>
<td>Budget Outlook Paper</td>
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<td>CPA</td>
<td>Consolidated Premium Account</td>
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<tr>
<td>eMTCT</td>
<td>Elimination of Mother to Child Transmission</td>
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<td>ETR</td>
<td>Electronic Tax Registers</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GIS</td>
<td>Geographical Information System</td>
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<td>GNI</td>
<td>Gross National Income</td>
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<td>GoK</td>
<td>Government of Kenya</td>
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<td>GOG</td>
<td>Government of Ghana</td>
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<td>GRA</td>
<td>Ghana Revenue Authority</td>
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<td>GSS</td>
<td>Ghana Statistical Service</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>HSMTDP</td>
<td>Health Sector Medium Term Development Plan</td>
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<td>IDA</td>
<td>International Development Assistance</td>
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<tr>
<td>IGF</td>
<td>Internally Generated Funds</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>KDHS</td>
<td>Kenya Demographic and Health Survey</td>
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<tr>
<td>KEPH</td>
<td>Kenya Essential Package for Health</td>
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<td>KES</td>
<td>Kenyan Shilling</td>
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<td>MDG</td>
<td>Millennium Development Goal</td>
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<td>MOF</td>
<td>Ministry of Finance</td>
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<td>MOFEP</td>
<td>Ministry of Finance and Economic Planning</td>
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<td>MoH</td>
<td>Ministry of Health</td>
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<td>NCDs</td>
<td>Non-Communicable Diseases</td>
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<td>Non-Governmental Organizations</td>
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<td>NHIA</td>
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<td>National Health Insurance Authority</td>
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<td>NHIL</td>
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<td>National Health Insurance Levy</td>
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<td>NHIS</td>
<td>-</td>
<td>National Health Insurance Scheme</td>
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<td>ODA</td>
<td>-</td>
<td>Official Development Assistance</td>
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<tr>
<td>OPD</td>
<td>-</td>
<td>Out Patient Department</td>
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<tr>
<td>PAYE</td>
<td>-</td>
<td>Pay As You Earn</td>
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<tr>
<td>PBF</td>
<td>-</td>
<td>Performance-Based Financing</td>
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<tr>
<td>PIN</td>
<td>-</td>
<td>Personal Identification Number</td>
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<tr>
<td>POW</td>
<td>-</td>
<td>Programme of Work</td>
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<tr>
<td>RH</td>
<td>-</td>
<td>Reproductive Health</td>
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<tr>
<td>SFA</td>
<td>-</td>
<td>Stochastic Frontier Approach</td>
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<tr>
<td>SSA</td>
<td>-</td>
<td>Sub-Sahara Africa</td>
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<tr>
<td>TB</td>
<td>-</td>
<td>Tuberculosis</td>
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<tr>
<td>THE</td>
<td>-</td>
<td>Total Health Expenditure</td>
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<tr>
<td>UFM</td>
<td>-</td>
<td>Under-Five Mortality</td>
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<td>UHC</td>
<td>-</td>
<td>Universal Health Coverage</td>
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<tr>
<td>UN</td>
<td>-</td>
<td>United Nations</td>
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<tr>
<td>VAT</td>
<td>-</td>
<td>Value Added Tax</td>
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<tr>
<td>WDI</td>
<td>-</td>
<td>World Development Indicator</td>
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Executive Summary

Health care financing remains a major challenge in several developing countries across the world. This is particularly profound in sub-Saharan Africa (SSA) where resources are generally limited. Encouraging developing region governments to scale up resources to the health sector was necessary for several reasons. Countries with generally improved population health status are likely to experience improvement in the performance of the economy as a whole as well as in individual and household welfare. Another important reason for government commitment to the health sector is to reduce dependence on external aid to the sector, or to compensate for falling external grants. The recent global economic down turn and some recent trends in the global economy have adversely impacted the amount of resources channeled to the health sector from various partners. While some partners have completely withdrawn their support, others have resorted to earmarked funding (Anemana, 2015).

Following the rebasing of the economies, some African countries – notably Ghana, Kenya and Nigeria – have seen an increase in gross domestic product per capita. Such increases moved these countries out of the low-income threshold, implying that these countries no longer qualify for aid reserved for low-income countries. Thus, there is pressure on these African countries to significantly raise domestic funding of the social services sectors, particularly the health sector, in order to maintain key services, such as immunization, malaria and HIV services, which depended critically on external funding. All these come at a time that health outcomes in these countries have not been commensurate with the resources invested in the health system (Musango & Ota, 2015)

The overall objective of the study was to assess the fiscal implication of health financing in Ghana and Kenya following their recent graduation from Low to Lower-Middle income status after the rebasing of the Gross Domestic Products (GDP). The specific objectives of the study were to:

i. Assess the funding gap due to reduced donor funding.

ii. Assess the implication of the reduced funding on health in the selected countries.
iii. Estimate the funding requirements to achieve the “Grand Convergence”: comparable reduction in maternal, child health and infectious disease mortality rates to levels common in advanced countries.

iv. Explore alternative funding sources such as indirect taxes, health insurance premiums, hospital internally generated funds and other local funding initiatives that can fill in the health financing resource gaps.

v. Explore ways of increasing efficiency gains within the health system as a way of providing additional fiscal space for health.

vi. Engage policy makers, especially, the Ministries of Health and Finance for potential dialogue on setting the road maps and implementation strategies for the realization of stated objectives and sustainability of the project.

vii. Disseminate the study findings to a relevant stakeholders and policy makers.

The study used secondary data from sources including Ministry of Health and Ministry of Finance of both Ghana and Kenya. Other sources included WHO and published studies on both countries.

The findings of this study show that after Ghana graduated from low income status to lower-middle income status in 2011, general external resources to support government expenditure activities reduced significantly. Net ODA received per capita declined from $72.6 in 2011 to $50.9 in 2013, representing about 30% decrease. A similar pattern was observed in donor partners' budgetary support after migrating to lower-middle income status in 2011. The proportion of donor support to the health sector declined from 22.2% in 2011 to 5.5% in 2013. It is worth noting that the transition to lower-middle income status may not be solely responsible for the decline in donor support even though several stakeholders have mentioned this as a cause. The decline in donor support could also be attributed to recent challenges in the Global economy.

Ghana's financial requirement for the health sector is estimated to be about GH₵3,494 million in 2015 and is expected to increase to GH₵3,509 million in 2016. Like Ghana, Kenya also faces significant funding gap for the health sector that require scaling up resource commitment if
important health targets are to be met. A financing gap of about Ksh. 207,561 million was estimated for the Kenyan health sector. While it is too early to assess the implication of Kenya’s transition to lower-middle income status in 2015\(^1\) available evidence suggests the country, like other recently graduating countries, may suffer from reduced access to concessional finance, debt and relations to other creditors (Moss & Majerowicz, 2012).

With respect to achieving a grand convergence (reducing rates of infectious, maternal and child mortality in low income countries to levels seen in the best-performing middle income countries by 2035), the analysis finds that by increasing public spending on health by about $US 566 million annually, Ghana could avert an average of over 55,000 deaths from now through 2035, with sustained reductions in the future. This total mortality reduction includes 2650 maternal deaths and 25,250 under five deaths averted. These investments would also positively impact the country’s economic growth. For every dollar invested in convergence, about $US 10 would be returned. In the case of Kenya, the estimates suggest that a $US 18.6 billion annual investment in the health sector could avert an average of over 80,000 deaths from now through 2035. This includes 1860 maternal deaths and 45,800 under five deaths averted. Also, each dollar Kenya invests in health could return about $US 14 over the years from 2016 to 2035, indicating significant economic returns on health investment. These very high returns to investment make a powerful case for increasing domestic resource allocation to health.

The discussions above point to the fact that the transition from low to lower-middle income status of Ghana and Kenya will likely have some negative implications for the health sector in terms of financing. There was evidence of significant reductions in budgetary support from donor partners to Ghana. Coupled with the numerous challenges faced by the health sector, there is need for governments to increase their resource commitments to the health sector. Estimates for achieving the grand convergence also suggest that significant financial commitments are needed if lower-middle income countries like Ghana and Kenya are to achieve major global health transformations over the coming 20 years. The estimates also point to the fact that these countries stand to reap

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\(^1\) Kenya’s transition from low income to lower-middle income status was officially declared on 1\(^{st}\) July, 2015 by the World Bank.
significant economic gains from health investment. The discussions so far point to a safe conclusion that creating additional fiscal space for health is inevitable for lower-middle income countries. In this report, a number of options were explored as potential avenues to raise additional resources to support the activities of the health sector. The avenues through which this can be done include:

i. improved tax revenue
ii. enhanced health sector efficiency
iii. Public-private partnerships for health
iv. increase borrowing

Some potential sources of additional resources were also identified for the National Health Insurance Scheme in Ghana. These include:

i. improvement in premium rate and collection
ii. increasing the 2.5% tax rate for the NHIL or broadening the tax base
iii. improving efficiency in the operations of the scheme could also help raise additional resources.
Chapter One

Introduction

Health care financing remains a major challenge in several developing countries across the world. This is particularly profound in sub-Saharan Africa (SSA) where resources are generally limited. The need for individual countries to scale up domestic support to the health sector has become relevant with some efforts made in this direction. A typical example is the Abuja Declaration, which was a commitment by governments to spend at least 15% of their annual budgets on the health sector. Another notable effort is the work of the Commission on Macroeconomic Health, which recommended that increased resources to the health sector could save significant lives and improve economic performance.

Encouraging developing region governments to scale up resources to the health sector was necessary for several reasons. Countries with generally improved population health status are likely to experience improvement in the performance of the economy as a whole (Bloom & Canning, 2008) as well as in individual and household welfare (Jacob Novignon, Nonvignon, Mussa, & Chiwaula, 2012). Another important reason for government commitment to the health sector is to ameliorate the huge dependence on external aid to the sector. The recent global economic down turn and some recent happenings in the global economy have significantly reduced the amount of resources channeled to the health sector from various partners. While some partners have completely withdrawn their support, others have resorted to earmark funding (Anemana, 2015).

The general reduction in global funding to national budgets has also led to a shift in focus to the poorest countries. Countries with relatively higher per capita income and classified as middle income are generally perceived to be capable of largely self-funding their health priorities. That is, such countries are seen to be able to support, to a large extent, their health systems from their
national budgets. In recent years, some African countries have graduated from low\(^2\) income to lower-middle\(^3\) income status (LMIC) after they rebased\(^4\) their gross domestic product (GDP). Examples of such countries include Ghana, Kenya and Nigeria with GNI of $1,590, $1,290 and $2,970, respectively as at 2014 (World Bank, 2015). Studies have predicted that while this rebasing comes as positive news in attracting private investment from developed regions, it may have devastating impact on external budget support to sensitive sectors like the health and education sectors (Bonneau, 2013).

The eligibility for graduation from various global funding mechanisms are varied. For instance, the eligibility is set at US$1,216 (in 2016) for the International Development Assistance and US$1,500 for GAVI (Saxenian et al., 2014). For the Global Fund, eligibility\(^5\) is determined using a combination of income status – as defined by the World Bank – and the official burden of disease. Thus, a lower-middle income country may be eligible for support if the disease for which support is applied for poses a high burden. However, determination of eligibility is made by the Fund. For GAVI, once a country enters the graduation stage, it enters into a grace period, during which the country is expected to co-finance some vaccines (Saxenian et al., 2014). Usually, after the fifth year since graduation, a country is expected to fully finance vaccine purchase. While transitional support has been offered to some countries (e.g India) graduating from IDA, the treatment of graduates is still considered to be ad-hoc. Ghana and Kenya transitioned into LMIC status in 2010 and 2014 respectively.

The implication of this reduction in external budget support deserves particular focus in these countries. For instance, such implication is evident in the performance of the health sector across these countries. In Ghana, while government budgetary allocations to the health sector continue to

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\(^2\)Low-income economies are defined as those with a GNI per capita, calculated using the World Bank Atlas method, of $1,045 or less in 2014 (World Bank, 2015)

\(^3\) Lower-middle-income economies are those with a GNI per capita of more than $1,045 but less than $4,125 (World Bank, 2015)

\(^4\) Rebasing of national accounts refers to replacing an old base year used for compiling the constant price estimates to a new and for a recent base year. This leads to methodological and conceptual reviews in the estimation of a country’s GDP and most often results in higher GDP (GSS, 2010).

raise concerns (though increasing), child and maternal health indicators have remained relatively high. The MDG targets on health expired at the end of 2015 and Ghana is one of the countries yet to achieve the set targets (shown in country background discussion below). Similarly, Ghana has not been able to meet the Abuja declaration target of committing a minimum of 15% of government budget to the health sector. The county’s current government allocations to the health sector actually reduced from 14.0% in 2011 to 10.6% of total government expenditure in 2012 and 2013 (World Bank, 2014). Moreover, both financial and physical access to health care continues to pose significant challenge in Ghana. While the country boasts of a functional National Health Insurance Scheme (NHIS) with exemption for pregnant women, children and the aged, the scheme currently covers less than half of the population.

It is worth noting that in spite of the challenges faced by the health sector in Ghana, the country has also achieved some strides in terms of health care delivery. Maternal and child health care has improved over the years. For instance, available statistics suggest that by mid-year 2013, supervised delivery had increased from 24.3% in 2012 to 37.5%. Ante-Natal care also increased from 13.7% to 46.3%. Similarly, institutional neonatal mortality reduced to 2.3 per 1000 live births relative to 5.8 in 2012. Institutional infant mortality also reduced to 2.6 per 1000 live births as against 6.6 in 2012. Malaria case fatality rate among under-fives reduced marginally from 0.87% in 2012 to 0.80 in 2013. Other indicators of health sector performance such as family planning access and other communicable and non-communicable diseases all saw improvement. Most of the improvements in maternal and child health were attributed to the free Maternal Health Service Initiatives instituted at various times within the last decade (Ministry of Health, 2014).

Again, Kenya’s economic transition from low to lower middle income status is not reflected in the country’s health investment and health sector performance. Kenya is among the countries that have not met the Millennium Development Goals, particularly, the health related MDGs. For instance, while the MDG target for maternal mortality rate was 200 deaths per 100,000 live births, it was estimated that maternal mortality was still 400 per 100,000 births in 2012. The sector still experiences some challenges especially with regards to the high disease burden. According to the
Health Sector report, 70% of outpatient morbidity is caused by malaria, diseases of the respiratory system, skin diseases, diarrhoea, and accidents. Malaria contributes about a third of total outpatient morbidity. Mortality on the other hand has been increasingly due to infectious and parasitic diseases (42% of total mortality in 2008) followed by diseases of the respiratory system (11%), and diseases of circulatory system (7%). The incidence of non-communicable diseases especially cancer has also been increasing, with over 82,000 new cases and 18,000 deaths (third among the causes of death in Kenya) reported annually.

It is however worth noting that, in spite of the challenges, Kenya has made some progress towards improving population health. Statistics indicate that the health sector has achieved considerable outcomes including but not limited to: a reduction of under-five mortality from 115 per 1,000 live births in 2003 to 52 per 1,000 live births in 2014 and infant mortality from 77 per 1000 live births to 39 per 1000 live births in the same period (KDHS, 2014). The immunization coverage for under one year olds was estimated at 75% in 2014. An estimated 11% of children under-five years were underweight and 26% were stunted in 2014 compared to 2002/03 KDHS where an estimated 20% of children under-five years were underweight and 30% were stunted.

Health services are still not accessible to many Kenyans, with current level of access being estimated at 80% based on the 5km radius norm (Republic of Kenya, 2012). In addition, there are wide variations in access to health care across the country, with the worst areas being in the northern part of Kenya. Although the government has put a lot of efforts in rehabilitating and upgrading health facilities in the country, there continues to be the need to invest more in infrastructure particularly in equipment and technology.

Given this background, and these countries subsequent graduation to lower middle income status, which has implications for financing health, it is evident that a lot more has to be done to ensure universal health coverage and significant improvement in population health in Ghana and Kenya. Much more effort is required in health financing and infrastructural development. Assessing additional fiscal space for the health sector will be a step in the right direction. That is, it is
important to examine the extent to which fiscal space is available to be able to advocate for increased targeted spending, especially spending on health, which is currently very low.

The overall objective of the study was to assess the fiscal implication of health financing in Ghana and Kenya following their recent graduation from Low to Lower-Middle income status after the rebasing of the Gross Domestic Products (GDP). The specific objectives of the study were to:

i. Assess the funding gap due to reduced donor funding.

ii. Assess the implication of the reduced funding on health in the selected countries.

iii. Estimate the funding requirements to achieve the “Grand Convergence”: comparable reduction in maternal, child health and infectious disease mortality rates to levels common in advanced countries.

iv. Explore alternative funding sources such as indirect taxes, health insurance premiums, hospital internally generated funds and other local funding initiatives that can fill in the health financing resource gaps.

v. Explore ways of increasing efficiency gains within the health system as a way of providing additional fiscal space for health.

vi. Engage policy makers, especially, the Ministries of Health and Finance for potential dialogue on setting the road maps and implementation strategies for the realization of stated objectives and sustainability of the project.

vii. Disseminate the study findings to a relevant stakeholders and policy makers.

The rest of the report is organized as follows. Chapter 2 provides the country specific analysis for Ghana while chapter 3 provides evidence from Kenya. Each of the country case studies looks at the health sector financing, estimates of the funding gap (needs) and implications of the health funding gap. An analysis of fiscal space options for the government, which include (i) enhancing tax revenue collections (ii) enhancing efficiency of expenditures (iii) borrowing (debt) are also presented. Chapter 4 discusses general observation across the two countries and lessons that could be learnt by other developing countries in similar stages of economic transition.
Chapter two

Methods

2.1 Data

The study mostly relied on secondary data from various sources. Significant portions of the data were sourced from the Ministries of health and finance in both Ghana and Kenya. Reports from the two ministries were also resorted for relevant secondary information. Data for some objectives were also sourced from the database of World Development Indicators for various years.

2.2 Analysis

Different methods were employed in the analysis of the different objectives. The methods are therefore presented along the line of objectives as follows.

2.2.1 Assessing funding gap

This objective sought to access the funding gap in the health sector due to reduced donor funding. This section used data on budget and actual spending on the health sector. The idea here is to compare budget support from donor partners to what is actually recorded over the years. Simple trend analysis was conducted using line graphs and bar charts to achieve this objective.

2.2.2 Implications of funding gap for health

Here, the implication of reduced funding to the health sector was assessed. The idea again was to find out how various health sector outcomes and inputs are affected by insufficient funds. This section relied on previous estimates from the health sector reported in available documents. Estimates from the Ghana health sector Medium Term Expenditure Framework (MTEF) and Kenya Essential Package for Health (KEPH) were used in the analysis.
2.2.3 Grand convergence

This section estimated the grand convergence for Ghana and Kenya. The basic idea is to estimate the financial requirement for LMIC to achieve convergence in global health. The section follows closely the estimation approach used by the Lancet Commission on Investing in Health (CIH). The methodology simply uses indirect evidence on the value of small changes in mortality rates for three purposes; (i) define “full income” (ii) estimate value of life years (VLY) and (iii) estimate the benefits of the convergence agenda. A detailed description of the methodology is available in the grand convergence report (Jamison et al., 2013).

2.2.4 Alternative funding sources for health

This objective targeted potential sources of fiscal space in the health sector for the two countries. The focus was to identify possible ways that additional revenue can be created to improve investment in the health sector. Four broad channels were explored to achieve this objective. These channels and the methods of analysis are explained below.

2.2.4.1 Tax revenue:

This section explored the potential of increasing tax revenue to create additional fiscal space for the health sectors. This depends on how tax revenue are responsive to changes in tax rate and tax base. To better understand this, the elasticities and buoyancies of the tax system was explored using available estimates from existing literature. The responsiveness of the tax system to general economic growth was also examined. Trend and pattern analysis of time series data was used in this analysis. Data was from various sources including the IMF, World development indicators, Ministry of Finance.

2.2.4.3 Borrowing:

The possibility of increased borrowing was assessed to create additional avenue for the health sector. Debt sustainability as well as fiscal sustainability was assessed in this section. Time series data on government domestic and external debt as well as government revenues and expenditure
were used in the analysis. Trend and pattern analysis were conducted using line graphs and bar graphs.

2.2.5 Ensuring efficiency:

This part of the fiscal space assessment relied on estimates of health system efficiency to determine the level of wastage in the health system. Efficiency estimation techniques including the Stochastic Frontier Analysis (SFA) and Data Envelopment Analysis (DEA) were used. Data on health facilities in both the Kenyan and Ghana health system were used with appropriate references made in the respective sections.
Chapter Three

Ghana Country Case Study

3.1 Trends in health indicators, government expenditure and revenue

This section presents trends and pattern analysis of key health sector outcome indicators. Child and maternal health outcomes as well as some communicable and non-communicable diseases are analyzed. Government expenditure pattern in the health sector is also analyzed and compared to other sectors of the economy. Trend and pattern in government revenue is also presented.

3.1.1 Health outcome indicators

Ghana, like many developing countries, is saddled with significant public health challenges. The country continues to fight against both communicable and non-communicable diseases. Malaria, HIV/AIDS and Tuberculosis still account for a large portion of non-communicable disease burden in Ghana. At the macro level, indicators of health in the country suggest that while some progress has been made over the years, there still remain significant work to be done. The Millennium Development Goals (MDG) targets have expired and available statistics suggest that there is a significant gap in some target areas. The MDG target on child health was to reduce the under-five mortality rate by two-thirds, between 1990 and 2015, (UN, 2008).

Figure 3.1 shows the performance of under-five mortality rate (U5M) over the years relative to the set targets in the MDGs (indicated by red bars). The figure shows that while U5M has generally declined over the years, the target has not been met. The statistics for 2015 indicate that the MDG target on UFM mortality will likely not be achieved⁶.

⁶ Note that only mid-year statistics was available for 2015
Figure 3.1 Trend in under five mortality in Ghana
Source: Authors’ computation from WDI data

The target gap in Figure 3.2 shows the difference between the set MDG target and the actual rate of mortality among children under age five. The figure indicates that the gap has reduced over the years but this has been at a gradual pace.

Figure 3.2 Trend in under five mortality target gap
Source: Authors’ computation from WDI data
With regard to infant mortality, available statistics suggest consistent reduction over the years, even though the reduction has been gradual. There also remains a significant gap as at mid-year 2015 which marks the end of the target. The MDG terminal year recorded an infant mortality rate of over 50 per 10000 live births while the set target is pegged at about 20 per 10000 (Figure 3.3). This shows a difference of over 30 infant deaths per 10000 live births. The trend in this gap is shown in Figure 3.4.

![Figure 3.3 Trend in Infant Mortality Rate](source: Authors’ computation from WDI data)

![Figure 3.4 Trend in Infant Mortality Target Gap](source: Authors’ computation from WDI data)
Another indicator for performance of health service delivery over time is the number of births attended to by skilled professionals. Figure 3.5 shows trend in skilled births between 1993 and 2011. The trend analysis suggests that, in general, births attended to by skilled personnel have improved over the years. The proportion of births attended to by skilled professionals increased from about 40% in 1990 to over 60% in 2011. This represents a marginal difference of about 20%. This also shows the level of priority given to child and maternal health. A significant proportion of child and maternal deaths are attributed to difficulty in accessing health care, especially before during and after birth.

Figure 3.5 Trend in skilled births in Ghana
Source: Authors’ computation from WDI data

HIV prevalence remains one of the major public health concerns in Ghana. Available statistics suggest that HIV prevalence rate in Ghana is above 1% as at 2015. Figure 3.6 shows that HIV prevalence rate increased steadily between 1990 and 2001 and started to decline after 2001. HIV prevalence was about 0.8% in 1990 and this increased to 2.3% in 1999, 2000 and 2001, respectively. There was a reverse in the trend at the start of the early 2000s. This decline can be associated to the numerous policy efforts directed towards combating the epidemic in Ghana. Treatment of HIV has also improved over the years with antiretroviral therapy coverage increasing from 25% of the population living with HIV in 2013 to 34% in 2013 (Figure 3.7).
Figure 3.6 Trend in HIV prevalence rate (% of population age 15-49)
Source: Authors’ computation from WDI data

Figure 3.7 Trend in Antiretroviral therapy coverage (% of people living with HIV)
Source: Authors’ computation from WDI data

3.1.2 Government revenue trends and pattern

The trend and pattern in expenditure is matched with government revenue performance over the years. Similar to the trend in government expenditure, total government revenue also increased at a slower rate between 2003 and 2009 (Figure 3.12). Total revenue was about GHC500 million in 2003 and this increased gradually to about GHC2 billion in 2009. However, between 2009 and
2014, total government revenue increased sharply from about GHC2 billion to over GHC10 billion. This significant improvement in total government revenue in recent years could be attributed to various tax reforms undertaken by government. Some of these reforms include improving tax administration and efficiency, increasing tax rate and broadening tax base (Darko, 2005).

![Figure 3. 8Trend in total government revenue](image)

Source: Authors’ computation from MOFEP data

The increases in government revenue over the years have been driven by various tax reforms and specific tax handles. While tax returns on some tax handles have significantly increased over the years, others have not performed so well. It is therefore important to analyze the trend and pattern in revenue from specific tax handles. Figure 3.13 shows the main components of indirect tax and performance of these tax handles. It can be observed that, relative to Value Added Tax (VAT), excise tax has not performed so well with total excise tax revenue collection falling in 2013 and 2014. VAT revenue increased significantly between 2009 and 2014 from about GHC182 million in 2009 to about GHC568 million in 2014. Evaluating the performance of these tax handles mainly has to do with the trend in collection and not the actual amount collected. The NHIL for instance forms only 2.5% of VAT and therefore the gap is expected. Figure 3.13 shows that tax revenue from VAT contributed about 70% of the entire indirect tax revenue.
Direct tax revenue comprises more components than indirect tax revenue and also appears to contribute more to total tax revenue. Similar to the trend and pattern in indirect tax, direct tax revenue is driven mainly by two components; Corporate tax and Pay as You Earn (PAYE). PAYE increased from about GHC780 million in 2009 to over GHC3 billion in 2014 while corporate income recovered from a low of about GHC96 million in 2010 to a high of about GHC3.3 billion in 2014 (Figure 3.15). Corporate income tax revenue also contributed about 40% of total direct tax
revenue followed by revenue from PAYE (Figure 3.16). The analysis suggests that the significant increase in total government tax revenue between 2009 and 2014 was significantly due to performance in the three tax handles: Domestic VAT, Corporate tax and PAYE tax revenue.

Figure 3. 11 Trend in direct tax revenue components
Source: Authors’ computation from Ministry of Finance (MOF) data

Figure 3. 12 Trend and pattern in direct tax revenue components
Source: Authors’ computation from MOF data
3.1.3 Health Expenditure Trends and Pattern

Performance of health expenditure in Ghana has improved over the years. Consequent on the increasing demands of the health sector, there has been pressure on government to increase the level of health expenditure. This is evident from the global calls including the Abuja declaration in 2001. Figure 3.8 shows that while total government expenditure has increased between 2008 and 2014, significant increases in government expenditure was experienced between 2011 and 2014. While total government expenditure increased from about GHC8 billion in 2008 to about GHC13 billion in 2011, this sharply increased to about GHC31 billion in 2014 within the three-year interval.

![Figure 3.13 Trend in total government expenditure](image)

Source: Authors’ computation from MOF data

The components of government expenditure varied widely with different sectors of the economy receiving different commitments or levels of expenditure. Two important sectors that were expected to receive higher government commitments are the health and education sectors. Figure 3.9 shows that actual total government health expenditure increased from about GHC300 million in 2008 to over GHC1 billion in 2014. Actual total government expenditure in the education sector increased from about GHC1 billion in 2008 to about GHC5 billion in 2014 (Figure 3.10). It was also observed that actual total government expenditure on education was consistently higher than the budget for education across the years. This was not the same in the health sector. An interesting
observation was made in 2014 where actual health expenditure was significantly lower than what was budgeted.

Figure 3. 14 Trend in government health expenditure  
Source: Authors’ computation from MOF data

Figure 3. 15 Trend in government education expenditure  
Source: Authors’ computation from MOF data
Trend in health Expenditure by financing sources

Figure 3.16 presents the sources of revenue to finance the health sector. The financing sources of total health expenditure were disaggregated into public funds (comprising all government domestic resources including NHIF), private funds (including households and other private sources) and Donors. It is evident that public funds continue to dominate health expenditure in Ghana even though this has reduced between 2010 and 2013. It was interesting noting that, donor partners support significantly reduced from 2005 to 2013. While the decline may be attributed to the global economic downturn, the further decline in 2012 and 2013 may be due in part to Ghana’s transition from Low income to lower-middle income status in 2011.

![Figure 3.16: Actual health expenditure by financing source](image)

Source: Authors’ computation from NHA (various years)

3.2 Funding gap in the health sector

Assessing the funding gap of the health sector in Ghana encompasses an analysis of the sector needs in relation to resource availability and/or expectations. This section of the report relies on analysis from the Ministry of Health (MOH) Medium Term Development Plan (Ministry of Health, 2010). The health sector Medium Term Development Plan (2010-2013) focused on the needs of the health sector in a strategic plan. It estimates the funding gap of the health sector in
Ghana under some scenarios. The scenarios depend on assumptions about expectations of resource flow to finance the objectives of the sector. The three different scenarios that were considered are outlined as follows;

**Scenario one:** This scenario assumed that insufficient funding is received or political will and expertise are insufficient to make the numerous strategic shifts outlined in the Health Sector Medium Term Development Plan (HSMTDP). It was also assumed under this scenario that all pipeline projects are done at the current pace of progress. This scenario was called the “status quo”.

**Scenario two:** This scenario assumed that the health sector received a moderate amount of funding for the HSMTDP and priority elements of the plan are implemented. Priority areas under consideration were MDG-related services and community based non-MDG services as well as a limited number of new ambulances and most of the required new or renovated health facilities. The scenario also assumed that coverage of essential services is expanded to reach 75-80% of the stated 2013 targets. This scenario was called the “conservative HSMTDP”. The “conservative” label emerges from the limited activities to be covered in the implementation of the plan.

**Scenario three:** The third and final scenario assumes that more generous funds are devoted to the health sector and this will be sufficient to implement the full development plan. This include all prioritized capital investments and full expansion of MDG and non MDG health services to meet the 2013 targets at 90-100%. This scenario is called the “ambitious HSMTDP”. This was labeled “ambitious” because of its comprehensive nature in addressing challenges of the health sector.

The cost estimates suggest that a total amount of $5.9 billion (GHC8.5 billion) will be needed to implement the full HSMTDP. The status quo scenario will require $4.4 billion while the more conservative scenario will require $5 billion. The funding gaps under the various scenarios are presented in the following figures under the assumption of progressive financing and Abuja financing.
3.2.1 Funding gap under progressive financing

The progressive health financing assumes that government increases its expenditure by an additional percentage point each year between 2011 and 2013. In this case health expenditure was expected to increase from 12.5% in 2011, 13.5% in 2012 and 14.5% in 2013. The total funding gap required to implement the full HSMTDP under the “ambitious scenario” was projected to be about $1.3 billion (Figure 3.17C). The conservative scenario showed a total funding gap of about $387 million (Figure 3.17B). There was no expected funding gap for the “status quo scenario” (Figure 3.17A).

Figure 3.17A Estimated funding gap under “status quo scenario”
Source: Programme of Work, MOH
3.2.2 Scenario two (conservative scenario)

![Conservative Scenario Graph](image1)

Figure 3. 17B Estimated funding gap under “conservative scenario”
Source: Programme of work, MOH

![Ambitious Scenario Graph](image2)

Figure 3. 17C Estimated funding gap under “ambitious scenario”
Source: Programme of work, MOH

3.2.3 Funding gap under Abuja declaration

The funding gap under the Abuja Declaration assumes that government is able to increase expenditure to the 15% of total government expenditure target starting in 2011. This was seen as a more optimistic financing scenario given that the share of the health sector in government
spending (excluding resources from developing partners) was slightly above 11% in 2010. The total funding gap under the “ambitious scenario” was $980 million (Figure 2.18C) while that of the conservative scenario” was about $83 million (Figure 3.18B).

![Figure 3.18A Estimated funding gap under “status quo scenario”, Abuja Financing Source: Programme of work, MOH](image)

![Figure 3.18B Estimated funding gap under “conservative scenario”, Abuja Financing Source: Programme of work, MOH](image)
In a more recent exercise, the MOH conducted a revised medium term expenditure framework which sought to highlight the comprehensive plans and target of the ministry from 2014 to 2016 (Ministry of Health, 2014). The exercise produced cost estimates of the needs of the ministry as well as expected outcomes from the expenditure. While a comprehensive analysis is available in the Medium Term Expenditure Framework document produced by the ministry, we provide a snapshot of the funding needs. In subsequent sections we will provide the implications of these resource need in terms of health sector outcomes that could be achieved with these resources.

The cost estimates show that the health sector will require a total budget of about GHC3,353 million in 2014 which is expected to rise to about GHC3,495 and GHC3,510 million in 2015 and 2016, respectively. These statistics are depicted in Figure 3.19 below.
Table 3.1 shows the various budget programs of the health sector and how much resources were estimated to achieve the set targets for the various programs. Health service delivery receives relatively higher proportion of the budget in 2014 with similar pattern projected for 2015 and 2016. Human resources for health development were projected to reduce marginally from 2014 to 2015 and further to 2016.

Table 3.1 Summary of health sector expenditure estimates by budget program

<table>
<thead>
<tr>
<th>Budget Program</th>
<th>2014 Budget (GHC)</th>
<th>2015 Indicative (GHC)</th>
<th>2016 Indicative (GHC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP1 Management and Administration</td>
<td>806,788,625</td>
<td>806,902,921</td>
<td>814,856,511</td>
</tr>
<tr>
<td>BP2. Health Service Delivery</td>
<td>1,963,752,734</td>
<td>2,139,135,672</td>
<td>2,144,655,872</td>
</tr>
<tr>
<td>BP3. Tertiary and Specialized Health Service</td>
<td>335,000,358</td>
<td>334,033,765</td>
<td>335,348,483</td>
</tr>
<tr>
<td>BP4. Human Resources for Health Dev’t and Management</td>
<td>183,354,909</td>
<td>149,835,966</td>
<td>149,395,069</td>
</tr>
<tr>
<td>BP5. Health Sector Regulation</td>
<td>64,811,189</td>
<td>64,957,207</td>
<td>65,459,301</td>
</tr>
<tr>
<td><strong>Total Expenditure</strong></td>
<td><strong>3,353,707,815</strong></td>
<td><strong>3,494,865,531</strong></td>
<td><strong>3,509,715,327</strong></td>
</tr>
</tbody>
</table>

Source: MoH (2014)

A breakdown of the health service delivery program into sub-programs shows that majority of the budget was expected to be spent on institutional-based services. This is also projected to increase marginally in 2015 and further in 2016. Another heavy budget sub-program is the regional and
district health services. The budget for this sub-program was projected to increase sharply in 2015 and a further marginal increase in 2016.

Table 3. 2 Health service delivery summary of expenditure by budget sub programs

<table>
<thead>
<tr>
<th>Expenditure by Budget Sub-Program</th>
<th>2014 Budget (GH₵)</th>
<th>2015 Indicative (GH₵)</th>
<th>2016 Indicative (GH₵)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSP1 Strategy Formulation and Operational Coordination</td>
<td>47,820,083</td>
<td>48,054,103</td>
<td>48,405,411</td>
</tr>
<tr>
<td>BSP2 Population-Based Services</td>
<td>52,212,523</td>
<td>52,713,310</td>
<td>52,734,649</td>
</tr>
<tr>
<td>BSP3 Institutional-Based Services</td>
<td>1,166,940,870</td>
<td>1,199,905,070</td>
<td>1,207,986,027</td>
</tr>
<tr>
<td>BSP4 Regional and District Health Services</td>
<td>696,779,257</td>
<td>838,463,190</td>
<td>835,529,785</td>
</tr>
<tr>
<td><strong>Total Expenditure</strong></td>
<td><strong>1,936,752,734</strong></td>
<td><strong>2,139,135,672</strong></td>
<td><strong>2,144,655,872</strong></td>
</tr>
</tbody>
</table>

Source: MoH (2014)

3.3 Implications of funding gap for population health

Following the cost estimates from the HSMTDP 2010-2013, estimates were also provided to show the impact of the funding gap on the country’s progress towards the MDGs and what the marginal per capita costs will be. Potential reductions in maternal and child mortality, HIV/AIDS incidence and access to treated water were estimated. The estimates suggest that, if the full HSMTDP or financing under the ambitious scenario was implemented, significant progress towards the MDGs would have been achieved. Specifically, about 31% and 44% reduction in maternal and under-five mortality, respectively, could be achieved under the ambitious scenario.
With regards to the MTEF to be implemented between 2014 and 2016, significant gains were projected over the period if the needed resources are committed to the health sector. For instance, in the area of health service delivery, institutional infant mortality rate is estimated to reduce from 0.8% in 2014 to 0.5% in 2016. Maternal mortality rate was estimated to also reduce in 2016 from 226 in 2012 to 181 deaths per 100,000 live births. Child immunization for all the different types of vaccines is estimated to be over 90%, on average, in 2016 (Ministry of Health, 2014). Filling the funding needs of the sector is also estimated to have significant impact on Malaria, which happens to be a major cause of mortality and morbidity among mothers and children. It is estimated that the proportion of OPD cases due to malaria will reduce from 28% in 2014 to 24% in 2016. Also the proportion of deaths (all ages) due to malaria will reduce from 8% in 2014 to 4% in 2016. Other specific disease areas that were expected to see significant improvement include HIV/AIDS, Tuberculosis, Hypertension, Diabetes and sickle cell disease (Ministry of Health, 2014).
Significant gains were also estimated in terms of access to primary health services. For instance, doctor population ratio was estimated to improve from 1:10500 in 2013 to 1:9500 in 2015 while nurse population ratio was to improve from 1:1000 in 2013 to 1:800 in 2015. HIV positive patients receiving ARVs was to increase from 51814 in 2013 to 80014 in 2015. Bed occupancy rate was to increase from 58.8% in 2012 to 64.8% in 2015 (Ministry of Health, 2014).

### 3.4 Achieving convergence in Ghana

The Lancet Commission on Investing in Health (CIH), a group of 25 health and economics experts chaired by Professor Lawrence Summers and Professor Dean Jamison, published the report Global Health 2035: A World Converging within a Generation in December 2013. This report outlined a new investment framework for donors, low-income countries (LICs), and lower-middle-income countries (LMICs) to achieve major global health transformations over the coming 20 years. The Global Health 2035 report showed that by increasing focused health sector investments to scale up new and existing health tools, LICs and LMICs could achieve a “grand convergence” in global health by 2035 – a reduction in the rates of infectious, child, and maternal deaths to the levels of the best performing middle-income countries (Jamison et al., 2013).

The CIH estimated that, at a global level, closing the health equity gap and achieving convergence in LICs and LMICs would cost an additional $US 70 billion annually from 2015 to 2035. The report showed that most of this incremental investment could be funded through domestic spending by LICs and LMICs, provided countries plan to allocate a proportion of their economic growth towards the health sector. LICs and LMICs are projected to add $US 10 trillion to their GDP from now through 2035. The cost of convergence represents 3% of anticipated GDP growth in LICs and just 1% of this anticipated growth in LMICs. Countries could also raise substantial additional revenue for health through the use of fiscal policies, in particular tobacco, alcohol, and sugar taxation, and diversion of fossil fuel subsidies to the health sector; these policies would also serve as a potentially powerful tool to reduce rates of non-communicable diseases and injuries.
The CIH showed that countries could experience impressive economic returns by making these investments in convergence; over the coming 20 years each dollar invested by LICs and LMICs to achieve convergence would bring returns of between $US 9 – 20.

3.4.1 Costs and benefits of reaching convergence in Ghana

Global Health 2035 showed that to reach convergence, LICs and LMICs would need to enhance investments to scale-up coverage levels of currently available health tools and interventions to very high levels, 90% or higher, as well as to strengthen the health system to enable effective delivery of these interventions. The CIH modeling projects that Ghana would need to invest additionally about $US 11.3 billion over the coming 20 years to achieve convergence; roughly an additional $US 566 million annually on top of current spending levels (Table 3.3). We estimate that the largest expenditure – 68% – should be targeted towards health systems strengthening.

At a programmatic level, the CIH report recommends that investments target the scale-up of six packages of interventions: family planning, maternal and newborn health, malaria, HIV, immunization, and child health (Stenberg et al., 2014). These packages include high impact interventions such as modern and long-acting contraceptive methods, malaria treatment for children and pregnant women, prevention of mother to child transmission of HIV, and essential childhood vaccines. In Ghana, two investment areas – malaria and HIV – are anticipated to require the greatest investments (Figure 3.21). These areas would require an average annual investment of around $US 83 million and $US 41 million, respectively, from now through 2035 in order to achieve the convergence targets. Malaria is the leading cause of death among children under five years of age in the country (World Health Organization, 2015). Coverage of essential malaria interventions, while rising, remains insufficient. In 2014, just under half of households had enough insecticide treated bed nets to cover all members of the household and 68% of pregnant women received intermittent preventive treatment of malaria (Ghana Statistical Service, 2015).
Table 3. Estimated incremental costs to reach convergence

<table>
<thead>
<tr>
<th>Category</th>
<th>Average annual incremental cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Estimated costs</strong></td>
<td></td>
</tr>
<tr>
<td>Family planning</td>
<td>5,309,000</td>
</tr>
<tr>
<td>Maternal and newborn</td>
<td>12,610,000</td>
</tr>
<tr>
<td>Childhood illness</td>
<td>16,405,000</td>
</tr>
<tr>
<td>Malaria</td>
<td>82,710,000</td>
</tr>
<tr>
<td>HIV</td>
<td>40,400,000</td>
</tr>
<tr>
<td>Health systems strengthening</td>
<td>466,000,000</td>
</tr>
<tr>
<td><strong>Estimated savings</strong></td>
<td></td>
</tr>
<tr>
<td>Immunization</td>
<td>14,625,000</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>42,900,000</td>
</tr>
<tr>
<td><strong>Total Incremental Expenditure</strong></td>
<td><strong>565,882,000</strong></td>
</tr>
</tbody>
</table>

To achieve convergence, the CIH called for countries to target health investments to high burden populations, such as the rural poor. Likewise, investments towards convergence in Ghana should target vulnerable regions and populations, for instance, the Northern region which has the highest prevalence of malaria, as well as children from poor and rural households who have significantly higher rates of malaria than their urban and wealthier counterparts (Ghana Statistical Service, 2015).

The CIH models project that in making targeted investments towards high priority and high impact interventions, Ghana could experience cost savings in two areas – immunization and TB – when comparing the cost of convergence to the projected cost of continuing under current coverage rates. These savings are likely due to the significant progress Ghana has already made in scaling up population coverage for these two areas. For example, Ghana’s vaccination program is a model for many countries in the region, with immunization coverage rates of over 90% for the majority of essential childhood vaccines, therefore there is minimal remaining scale-up required for vaccine
coverage (UNICEF, 2013). At the same time, Ghana’s fertility rates are projected to fall significantly, resulting in fewer births and thus a reduction in program costs over time to maintain scaled-up coverage rates. While Ghana would have to invest additional resources into scaling-up vaccination coverage in the early years, by 2025 the CIH projects cost savings in this area that continue through 2035, for overall savings in immunization.

By making these strategic investments in the convergence agenda, Ghana could experience significant reductions in mortality due to infections and maternal and child health conditions (Table 3.4). For example, the number of maternal deaths could fall by almost half from 2015 to 2035, and the under-five child mortality rate could fall from 61 per 1,000 live births in 2015 to 36 per 1,000 in 2035, resulting in 65% fewer under-5 child deaths in 2035 (Figures 3.22). Ghana could also experience a very dramatic reduction in TB deaths (Figure 3.23).

Table 3.4. Estimated reductions in mortality by investing in convergence

<table>
<thead>
<tr>
<th>Cause</th>
<th>2015 (# of deaths)</th>
<th>2035 (# of deaths)</th>
<th>% reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal deaths</td>
<td>4,170</td>
<td>2,650</td>
<td>42%</td>
</tr>
<tr>
<td>Under-5 child deaths</td>
<td>71,900</td>
<td>25,250</td>
<td>65%</td>
</tr>
<tr>
<td>TB deaths</td>
<td>14,750</td>
<td>980</td>
<td>93%</td>
</tr>
<tr>
<td>HIV deaths</td>
<td>13,000</td>
<td>12,000</td>
<td>8%</td>
</tr>
<tr>
<td>Births</td>
<td>807,700</td>
<td>705,000</td>
<td>13%</td>
</tr>
<tr>
<td>Total fertility rate (births per woman)</td>
<td>4</td>
<td>2</td>
<td>50%</td>
</tr>
<tr>
<td>Under-5 mortality rate (per 1,000 births)</td>
<td>61</td>
<td>36</td>
<td>41%</td>
</tr>
</tbody>
</table>
3.4.2 The economic returns of investing in convergence

Improvements in health outcomes contribute significantly to both household and national income. For example, better health is associated with higher levels of education and worker productivity,

---

7 The estimated benefit: cost ratio of achieving convergence in Ghana was calculated following the CIH methodology used in the *Global Health 2035* report. Deaths averted refer only to deaths averted in pregnancies that occurred and does not include deaths.
which in turn contribute to economic growth. Globally, the CIH estimated that improved health and reduced mortality accounted for about 11% of the recent economic growth experienced in LICs and LMICs, as measured by increases in GDP.

Measures of economic growth using GDP only account for the instrumental value of better health – the increases in economic productivity that result from improvements in health. These measures do not value the so-called “intrinsic” value of better health – the economic value of living longer in and of itself. To capture a more comprehensive measure of the returns to investing in health, the CIH used a “full income accounting” approach, which includes both income growth (i.e. GDP growth) and the intrinsic value of health improvements (i.e. the value of additional life years gained) (Figure 3.24).

Figure 3. 24: Full Income Accounting

Ghana could experience significant economic returns from its investments in the health sector. Using a full income approach, the CIH estimates that over the years 2016 – 2035, the country would experience a return of around $US 10 for each dollar invested in health to achieve convergence (Table 3.5).

Table 3. 5. Costs, benefits, and benefit cost ratio

<table>
<thead>
<tr>
<th>Population</th>
<th>25,900,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental expenditures (average annual)</td>
<td>565,882,000</td>
</tr>
<tr>
<td>Incremental expenditures per capita</td>
<td>22</td>
</tr>
</tbody>
</table>

averted from preventing pregnancies. Deaths in children under-5 are weighted at 50% and stillbirths are weighted at 8%, consistent with international literature. To calculate the value of deaths averted, the reduction in mortality is presented in standard mortality units (SMU), valued at 1.8% of GDP per capita. A more detailed description of the methodology can be found in Appendix 3 of the report, available at www.globalhealth2035.org/sites/default/files/2035/appendix-3.pdf
### Per capita income (2014)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths averted</td>
<td></td>
</tr>
<tr>
<td>Stillbirths (weighted)</td>
<td>190</td>
</tr>
<tr>
<td>Deaths age 0 – 4 (weighted)</td>
<td>1,370</td>
</tr>
<tr>
<td>Maternal deaths</td>
<td>1,670</td>
</tr>
<tr>
<td>TB deaths</td>
<td>11,200</td>
</tr>
<tr>
<td>HIV/AIDS deaths (over 5)</td>
<td>9,500</td>
</tr>
<tr>
<td>Total</td>
<td>23,930</td>
</tr>
<tr>
<td>Cost per death averted</td>
<td>23,647</td>
</tr>
</tbody>
</table>

### Benefit cost calculations

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in mortality (in SMU)</td>
<td>9.2</td>
</tr>
<tr>
<td>Per capita value of mortality reduction</td>
<td>238</td>
</tr>
<tr>
<td><strong>Benefit: cost ratio</strong></td>
<td><strong>10.91</strong></td>
</tr>
</tbody>
</table>

Source: Authors’ computation

### 3.5 Potential sources of additional fiscal space

The significantly high demand in the health sector has raised concerns about the need for alternative funding opportunities to be explored aside what currently exist. This section of the report explores areas for possible additional funding to the health sector. Three main areas are explored for potential revenue in this section. These include tax revenue performance, external source of revenue and health system efficiency. We also seek to identify potential fiscal space for the operation of the NHIS.

#### 3.5.1 Tax revenue performance

To better understand how additional fiscal space can be created through tax revenue, we first explore tax revenue performance over the years. We then assess the responsiveness of tax revenue to increased tax rate or broadened tax base as well as the level of effort in the tax system. Finally, we identify what specific strategies could help improve tax revenue performance. Ghana has been considered as one of the developing countries with significant potential to improve its tax system. The country’s tax system has been faced with several challenges over the years. Key among these challenges are the widespread tax evasion and inefficiencies in general tax administration (Bekoe,
These challenges facing the tax system are evident in the trend and pattern of the performance of tax revenue in the country, as shown earlier in this report.

Total tax revenue has largely fallen short of targets over the years. Figure 3.25 shows that while total tax revenue has increased over the years, performance in terms of meeting revenue targets have rather slowed in recent years. In 2013, the actual tax revenue collected significantly fell short of the year’s target. This shortage was however reduced in 2014 even though tax revenue targets were still not met.

![Pattern in total tax revenue](image)

Figure 3. 25 Pattern in total tax revenue
Source: Authors’ computation from MOFEP data

Performance of specific tax handles are analyzed in terms of revenue targets and actual revenue collected for each of the handles. A general observation of underperformance was observed across the majority of tax handles. That is, across most of the tax handles, government targets were not met as actual revenues collected were lower than expectations. With the exception of 2010 and 2011, actual excise duties collected fell short of what the revenue target was for each of the years. The largest gap between target and actual excise duty was recorded in the year 2013. The 2013 excise tax target was about GHC245 million but the actual revenue collected was about GHC169 million.
A different observation can be made about import duties over the years. In most of the years, very little gap existed between actual revenue collected and respective revenue targets. In 2011, actual import revenue was higher than the revenue target for the year. The negative gap between target and actual however increased in 2014. These patterns suggest that improving tax collection will reduce these gaps to provide opportunities to create extra fiscal space for government. These can be achieved through effective implementation of relevant reforms.

Figure 3. 26 Pattern in excise duties
Source: Authors’ construction from MOFEP data

Figure 3. 27 Pattern in import duties
Value Added Tax (VAT) is a major contributor of general government tax revenue and therefore plays an important role in financing government expenditure. Since its introduction, the VAT rate has been revised and is currently pegged at 17.5% (includes 15% actual VAT and 2.5% NHIL). In terms of performance in meeting set targets, there seem to be little difference between VAT revenue target and actual revenue collected (see Figure 3.28). This performance has been consistent over the years with the exception of the years 2009 and 2013.

Relative to import taxes, export taxes contribute less to total tax revenue and their performance in terms of meeting set targets have not been consistent over the years. Figure 3.29 shows that government’s actual revenue from export tax fell short of target between 2008 and 2012, with the exception of 2010. Significant improvements were however recorded in 2013 and 2014.

Figure 3.28 Pattern in VAT
Source: Authors’ construction from MOFEP data
To further appreciate tax revenue performance in Ghana, we compared revenue collection across selected countries in Sub-Saharan Africa (SSA). The comparative analysis suggests that Ghana is underperforming in terms of revenue collection. Table 3.6 provides 2010 figures of total tax revenue as percentage of GDP as well as revenue from various tax handles as percentage of GDP for Ghana, Kenya and South Africa. Total tax revenue as percent of GDP was about 13.03% relative to Kenya with 16.15% and South Africa (22.98%). Ghana has also performed relatively poorly across specific tax handles. For instance, total VAT revenue as percent of GDP was 4.10% for Ghana compared to 4.48% and 6.68% for Kenya and South Africa, respectively. These poor performances in tax revenue accumulation help to explain the country’s relatively higher dependence on grants. Total grants as percent of GDP was highest in Ghana (2.55%) compared to Kenya (0.65%) and South Africa (0.07%).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenue as a Percent of GDP</td>
<td>16.71</td>
<td>19.80</td>
<td>26.72</td>
</tr>
<tr>
<td>Tax Revenue as a Percent of GDP</td>
<td>13.03</td>
<td>16.15</td>
<td>22.98</td>
</tr>
<tr>
<td>Individual Income Tax Revenue as a Percent of GDP</td>
<td>2.42</td>
<td>3.83</td>
<td>8.30</td>
</tr>
<tr>
<td>Corporate Income Tax Revenue as a Percent of GDP</td>
<td>2.35</td>
<td>3.09</td>
<td>5.52</td>
</tr>
</tbody>
</table>

Figure 3. 29 Pattern in Export tax
Source: Authors’ construction from MOFEP data
General Goods and Services Tax Revenue as a Percent of GDP 4.10 4.48 6.68
VAT Revenue as a Percent of GDP 4.10 4.48 6.68
Excise Tax Revenue as a Percent of GDP 0.81 2.34 2.14
Social Contribution as a Percent of GDP 0.19 0.59
Total Grants as a Percent of GDP 2.55 0.65 0.07


While the above analysis suggest that Ghana still has room to improve tax revenue performance in terms of collection, it would be appropriate to also understand the productivity of the system in Ghana. A better understanding of tax productivity and efficiency in Ghana will help to explain the generally poor performance observed in the earlier discussion. Two common concepts have been widely used to measure the productivity of any tax system in terms of its capacity to mobilize additional revenue. These are (1) tax buoyancy: measures the responsiveness of tax revenue to changes in national income and discretionary changes in tax policy; (2) tax elasticity: measures tax revenue response to changes in national income without discretionary tax changes. In addition to these, tax effort and potential can also be used to access the efficiency of the tax system. Available evidence suggests that the country’s tax system is productive in terms of its buoyancy, elasticity and efficiency.

For instance, African Economic Research Consortium (AERC) in 1998 provided evidence to show that Ghana’s tax system improved significantly over the period 1983 - 1993. Tax buoyancy was estimated to be 1.29 over the period. This marked a significant increase of about 79.9% compared to previous periods (1970-1982) when the tax buoyancy was estimated to be less than unity (0.72). Similarly, tax elasticity was estimated to be 0.71 in 1970-1982, relative to an elasticity of about 1.22 in 1983-1993 period. This pattern was similar across all the individual tax handles. This significant transformation in the productivity of Ghana’s tax system was attributed to various tax policies implemented over the 1983-1993 period. These improvements, in terms of buoyancy and elasticity, were also relevant because it shows the potential for tax revenue to grow without resorting to increase in tax rates, which in most cases is considered a difficult political decision.
These conclusions about Ghana’s tax system productivity have been emphasized in more recent studies that used fairly recent data. For instance, Twerefour et. al, (2010) estimated overall tax system elasticity to be 1.03 between 1985 and 2007. Overall improvement in tax buoyancy and elasticity were observed in the post reform period (1985-2007). The study also found that tax-to-base elasticity was greater than base-to-income elasticity and this implied that there is greater potential for improvement in tax revenue (Twerefou, Fumey, Osei-Assibey, & EE, 2010). In other words, there is potential to broaden the base to include more people into the tax bracket. In a related study, Langford and Ohlenburg (2015) evaluated the tax potential and tax effort for several countries including Ghana. The objective was to compute the tax capacity for 27 years across 85 non-resource-rich economies. The study also used the stochastic frontier analysis to estimate actual tax effort exerted across these countries. Average estimated tax effort across all 85 countries was 0.63, with a range of 0.13 to 0.97. Ghana recorded an estimated tax effort score of 0.55. This was below the lower middle income country average of 0.59. Estimated tax capacity for Ghana as at 2010 was 24.2 and this was lower than the average of 26.4 for lower middle income countries. Similarly, the country’s tax effort as indicated by government revenue generation to GDP ratio, suggests that indeed Ghana’s tax effort has reduced in recent years (Figure 3.30). A generally inconsistent trend can also be observed over the years (Langford & Ohlenburg, 2015).

![Figure 3.30: Government revenue to GDP ratio](image-url)

The trend and pattern analysis above suggest that there still remains some fiscal space potential in Ghana across some important tax handles, but there is need for some reforms to achieve this potential, given that resources to the health sector relies significantly on government tax revenue. Exploring these fiscal space potentials could be beneficial to the health sector. It is worth noting that the GOG has undertaken several reforms to achieve the broad objective of improving tax revenue and creating additional fiscal space. These reforms have been made in three main components: the adoption of current payment system, introduction of VAT and giving the tax collection agency a degree of autonomy from political control. Performance based incentives were introduced to the tax agencies to encourage tax collection. These reforms were manifest in the modernization of the income tax legislation, amendment of the VAT and customs legislation and, in much recent years, the creation of the current tax administration (Ghana Revenue Authority) which sought to integrate all the areas of taxation for smooth operation (Adeyiga, 2013; Darko, 2005; Republic of Ghana, 2001).

Where these reforms were relevant and timely, their effectiveness in terms of raising more revenue are hindered by constraints in the tax structure. In this regard it will be prudent for government to consider tax structure reforms that will facilitate the effectiveness and efficiency of tax reforms. These structures include the increasing financial and technical support to upgrade human resources, continued compliance and acquisition of appropriate automation systems needed to enhance performance (Adeyiga, 2013; Darko, 2005). The GRA could also help the process by putting in efforts towards improved effective communication and positive corporate image.

In addition to the above, the empirical evidence on buoyancy and elasticity of the tax system presented above suggest that improving economic growth could be a fundamental effort in creating additional fiscal space. The evidence suggests that higher economic growth will likely result in higher tax revenue. Ghana’s fairly elastic and buoyant tax system gives government some latitude to expand the tax base and capacity through economic growth. Available statistics suggest that Ghana’s economy slowed to about 4.2% in 2014 from 7.3% recorded in 2013. It is also expected
that this will further slow to 3.9% in 2015 with a gloomy picture painted for 2016 (African Development Bank, 2015). This slow economic performance has largely been attributed to the severe energy crises, unsustainable domestic and external debt burdens as well as deteriorated macroeconomic and financial imbalances. The country’s macroeconomic woes were also reflected in an average inflation rate of 17.0% in 2014 with the domestic currency depreciating by over 30% in nominal terms in the same year (African Development Bank, 2015). An effective tax reform should therefore also address the macroeconomic fundamentals in Ghana. In Bangladesh, economic growth is explicitly stated in the constitution as an important health financing strategy (Government of Bangladesh, 2005).

In addition to the above, Ghana’s tax system faces major challenges in collecting revenue from the informal sector. The informal sector forms a major part of the economy and it is estimated that over 80% of the working-population are in this sector (Oduro, 2009). Even though it is difficult to capture, activities of this sector drive the economy significantly. While some efforts\(^8\) have been made to rope in the informal sector in the tax bracket, this has not been very successful over the years. Involving the informal sector will be a good way to broaden the tax base and hence improve tax revenue to the benefit of the health sector. The nature of informal sector operations poses significant identification challenge to tax agencies. The largely unstable income of the majority of the informal sector plus inherent problems of estimating revenues makes it difficult to determine appropriate tax base. Available evidence suggests that poor communication, accountability and corruption have been identified by some informal sector workers as reasons for poor tax compliance (Carroll, 2011).

### 3.5.2 External resources

Aside improvement in tax revenue, resources from external sources can also play an important role in creating additional fiscal space to any country. In general, Ghana has depended heavily on external resource flows in the administration of the country. Net Official Development Assistance

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\(^8\) Example is the associational tax system which eventually collapsed when the associations were accused of embezzlement (Joshi and Aryee, 2008)
(ODA) per capita in Ghana increased from $31.8 in 2000 to $50.9 in 2013. This was significantly higher than the average lower-middle income economies of $16.15 in 2013 (World Bank, 2015). Figure 3.27 shows that there have been recent downward trends in official development assistance to the country. Net ODA received per capita declined sharply from about $72.6 in 2011 to about $50.9 in 2013. This may be as a result of the country’s graduation from low income to lower-middle income status which occurred in 2011.

![Net ODA received per capita (current US$)](image)

Figure 3. 31: ODA received. Source: WDI (2015)

External resources to the health sector have also been very inconsistent over the years. There has been significant increase in some years while other years recorded significant declines. However, a general observation suggests that external resources for the health sector have declined over the years. A consistent decline was experience between 2006 and 2010 with a slight increase in 2011. The decline in external resources for the health sector in recent years have been attributed to the country’s migration to a lower-middle income status (Bonneau, 2013). Others have also mentioned donor fatigue as a possible explanation. Some studies have suggested that, globally, the volume of external resource flows are insufficient to achieve universal health coverage (Durairaj & Evans, 2010). It is therefore imperative to resort to alternative measures to create fiscal space.

Many donor countries have withdrawn their commitment to the health sector after Ghana migrated to a new income status. Others have also shifted to earmark funding where specific projects are
identified and funds are made available for just these projects. This implies that other projects or health sector activities that depend on external resources but are not earmarked for funding may suffer. Available statistics suggest that about 16% of total resources to the health sector in 2015 (as at first half) is from earmarked funding. It is reported that, over the last three years, all key budget support partners (with the exception of JICA) have moved to earmark funding (Anemana, 2015). This trend suggests that very little opportunities exist for government to create fiscal space by resorting to external funds.

![Figure 3.32: Trend in external resources for health (% of total expenditure on health)](chart.png)

**Source:** WDI (2015)

There seem to be not much elasticity in creating additional fiscal space from external resources, particularly because Ghana has transited from low-income to lower-middle income country. However, other avenues that could be explored to raise extra external resource could be improving private-public partnership, especially for the health sector. This may include involving the private sector in various aspects of the sector such as infrastructure, pharmaceuticals among others. This strategy has been adopted in other countries and seen to be effective. For instance, in Pakistan, the private sector has been encouraged to invest in the pharmaceutical industry while Myanmar have encouraged the involvement of co-operatives, joint ventures and non-governmental organizations (NGOs) in the health sector (Durairaj & Evans, 2010). Once effective monitoring structures are put in place, these partnerships could be beneficial to developing countries such as Ghana.
3.5.3 Increased Borrowing

One of the ways government could create additional fiscal space is by borrowing from both domestic and external sources. The viability of this option, however, depends on whether the government’s present and previous debt positions have been sustainable. It is also important to assess the general fiscal sustainability of the economy. The section begins with an assessment of debt sustainability and followed by general fiscal sustainability assessment.

According to the international monetary fund (IMF) a country’s debt is considered sustainable when it is able to keep its level of indebtedness in line with the ability to repay loans borrowed (International Monetary Fund, 2003). To determine whether a country’s debt is sustainable or not, debt to GDP ratio is taken into account. Ghana’s debt to GDP ratio has been volatile over the past few decades, reaching a high of 113.08% in the year 2000. Figure 3.33 shows the debt to GDP ratio from 2000 to 2013. The trend suggests a general decline in total debt in Ghana. However, it is evident that total debt is significantly driven by external debt relative to domestic debt. An interesting observation from Figure 3.33 is that while debt to GDP ratio has increased steadily from 26.4% in 2004 to about 49% in 2013 (Kwakye, 2012; Asiama, Akosah, & Owusu-Afriyie, 2014). Recent figures suggest that as at 2015, Ghana’s debt stands at $25.6 billion which makes up about 72.9% of GDP. About 43.4% of this are external debts while 29.5% are domestic debts (Bank of Ghana, 2016). This implies that Ghana’s current debt burden is only 2.1% shy of the 75% IMF threshold. This suggests that raising additional revenue through borrowing may not be a viable option for Ghana.
A further assessment of debt sustainability was conducted by comparing the country’s total revenue against its debt stock. A significant variation raises concerns about government potential to pay back debt. It can be observed from Figure 3.34 that while the revenue-debt gap was significantly narrowed between 2000 and 2006, the gap has been widening slowly in recent years.
Further analysis was conducted to assess the general fiscal sustainability of the economy. This was done by plotting and observing the trend in government revenue and expenditure. A close association between the two suggests fiscal sustainability. Figure 3.35 Shows that expenditure generally lies above revenue over the years. While the country’s fiscal stance was effectively managed in the 2011 where expenditure equalized revenues, widening gap can be observed thereafter.

![Figure 3.35: Trend in revenue and expenditure](image)

Source: IMF and WDI data

The foregoing argument suggests that not much fiscal space exists for health financing by borrowing from both external and domestic sources. Recent economic challenges faced by the country coupled with fast growing debt levels limit the extent to which additional resources can be borrowed for the health sector.

### 3.5.3 Health Insurance funding

Like many other government agencies, the National Health Insurance Authority (NHIA) has not been spared of the lack of resources. In recent times, there has been growing concerns about increasing resources to the scheme and creating additional fiscal space. These concerns are justified considering that the scheme’s expenditure has increased over the years and is now above
its total annual revenues. This has threatened the sustainability of the scheme over the years. Figure 3.36 shows that since 2009, the Scheme has been operating on a deficit budget balance. In terms of revenue to the NHIA, Figure 3.37 shows that the scheme has largely been funded by 2.5% of VAT national health insurance levy (NHIL). Premium contributions are the lowest form of income to the NHIA.

![Revenue and Expenditure trend of the NHIA in million GHC](image)

**Figure 3.36 Revenue and Expenditure trend of the NHIA in million GHC**

Source: NHIA Annual Reports (various years)

![NHIA revenue by source](image)

**Figure 3.37: NHIA revenue by source.**

Source: NHIA
One possible sources of fiscal space include an upward revision of the annual premium rate paid by subscribers. Currently the beneficiaries are required to pay an annual amount ranging between $5 and $33 depending on the level of income. The premium levels are significantly low relative to the benefit package under the scheme. The need to relook at the premium in Ghana can be supported by evidence from other countries considered to be success stories in achieving Universal health coverage (UHC). For instance, the Republic of Korea has a health insurance scheme that covers over 90% of the population (Chun, Kim, Lee, & Lee, 2009). The scheme has been operational since the 1960s and only 17.3% of financial revenues come from government subsidies (including tax and surcharge on tobacco). About 82.7% of financial revenues to the scheme are from contributions from subscribers (NHISK, 2014). This is in sharp contrast to the case in Ghana. Another interesting observation from Figure 3.37 regarding premium collections is that between 2005 and 2007 when revenue from NHIL declined from 83.5% to 64.2%, premium contributions increased from 2.2% to 6.4%. However, between 2008 and 2012 when NHIL contributions increased from 60.5% to 73.1%, premium contributions declined from 5.8% to 3.6%. This may be evidence of overreliance on the NHIL and hence the need to pay attention to premium collection.

Another potential source of fiscal space to the scheme is to increase revenue contributions from the NHIL. While this may come as a difficult policy to implement it could be acceptable especially because the notion is to achieve universal health coverage. Comparing the current premium with what pertains in other countries suggests that there may be room for reforms to raise the rate. Relative to Ghana’s 2.5% NHIL rate, Kazakhstan has earmarked 3% of payroll tax to finance their Mandatory National Health Insurance Scheme (Kutzin, Cashin, & Jakab, 2010). A similar situation can be found in France where a significant proportion of funds for the health insurance scheme comes from earmarked revenue from taxes imposed on wage income, financial assets, investments, pensions, unemployment benefits, disability benefits and gambling.

Furthermore, there is need to improve efficiency in the operation of the scheme. A major source of resource leakages in most public institutions is inefficient use of resources. Improved efficiency in the operations of the scheme will also be a justification for claims in increases in premium and
levies. The NHIA has rolled out various reforms in recent years to improve efficiency in the operations of the scheme. The primary idea behind these reforms was to contain cost and ensure sustainability of the scheme. These reforms include the establishment of a consolidated Premium Account (CPA), strengthening clinical and internal auditing as well as the Capitation reimbursement method which was piloted in the Ashanti region. Relative to the “fee-for-service” and “Diagnostic Related Group” reimbursement methods, the capitation method is considered as an effective way of improving efficiency in claims management (Gingong, 2015). Currently the method is being piloted only in the Ashanti region with advanced preparations to extend this to three other regions (Volta, Upper East and Upper West). Extending this to cover the entire country will be a good way to create additional fiscal space. It is worth mentioning available studies have identified challenges with the pilot capitation in the Ashanti region (Community Partnership for Health and Development, 2013). It is therefore important to address these challenges in extending the capitation method.

In addition to the above a few other strategies could be considered to improve efficiency and reduce wastages in the operations of the scheme. The introduction of the gate-keeper system and co-payments helps in cost containment efforts. This helps to reduce moral hazard problems that are mostly inevitable in National insurance schemes of this nature. In Korea, it is reported that co-payments were introduced in the health insurance scheme not only to contain cost but to also reduce pressure on higher level facilities (NHISK, 2014). This is a major challenge in Ghana where individuals with minor health conditions report for initial treatment at tertiary facilities. In addition to the gate-keeper system and co-payments, improving the effectiveness of the referral system could help ameliorate this challenge. In this case, patients who demand treatment from the tertiary level are mandatorily required to produce referral slips from the primary and secondary levels.

It is argued that higher administrative costs are not always associated with improved performance. In some cases, higher costs of administration only reflect inefficiencies in the system. Figure 3.35 shows that, in general, administrative costs of the NHIA have increased in recent years. The total administrative cost in 2009 was about 6.2% (4.0% for operational costs and 1.95% for admin and
logistics) of total expenditure of the NHIA. This has increased over the years to a total of 8.5% in 2012. Cost containment efforts of the authority should keep administrative costs to the minimum. Best practices suggest that the current administrative cost of the scheme could be reduced. For instance, in Korea available statistics suggest that only 4.4% of total expenditure was directed to administration as at 2013 (NHISK, 2014). This could create additional fiscal space for the scheme. Limits may also be placed (either by law or by policy directive) on administrative expenditure by the NHIA.

Figure 3.38 Administrative cost of NHIA as percentage of total expenditure
Source: NHIA Annual Reports (various years)

### 3.5.4 Enhancing efficiency of expenditure

Another alternative source of funding to a country as a whole and the health sector in particular is improvement in efficiency of public institutions. Higher levels of efficiency imply lower levels of wastages in the use of available limited resources. A cross-country analysis of health system efficiency was undertaken by Novignon and Nonvignon (2015) at the macro level for sub-Saharan African countries. Using indicators such as infant and under five survival rates as health outcome and per capita health expenditure as inputs, the authors estimated an efficiency score of about 0.41 for Ghana. They also found that, if resources were used efficiently, Ghana could save up to 3.18% of GDP to create additional fiscal space in the health sector.
To understand the level of efficiency at the micro level in the Ghanaian health sector we estimated technical efficiency using cross section data from district hospitals. Facility level data was sourced from the IHME 2012 survey conducted for 63 district hospitals across Ghana. We used the Stochastic Frontier (SFA) approach to estimate technical efficiency. The SFA was preferred for its flexibility to allow for the control of variables that may influence health facility outputs but may not serve as direct inputs. Outpatient visits was used as health facility output while expenditure, labor and hospital beds were used as direct inputs. Other control variables include facility location, fee lists, examination rooms and age of facility. A score of 1.00 suggests perfect efficiency while a score less than 1.00 suggest the presence of inefficiency and hence wastage.

Average technical efficiency for the district hospitals was estimated to be 0.72. The average efficiency score of 0.72 suggests that district hospitals have an average wastage level of 0.28. The first and second panels in Figure 3.2 below show the distribution of technical efficiency estimates of district hospitals using Kernel densities and scatter plots.
An examination of the efficiency estimates across various facility characteristics suggest that facilities located in urban areas were more efficient, relative to rural facilities, with an average of 0.76 and a standard error of 0.03. A similar analysis across administrative regions suggest that district hospitals in the Ashanti region were, on average, the most efficient (with efficiency score of 0.92 and standard error of 0.01) while similar facilities in the Upper East region were the least efficient (with efficiency score of 0.44 and standard error of 0.04).

Table 3.7 Average Technical Efficiency of District hospitals in Ghana

<table>
<thead>
<tr>
<th>Location</th>
<th>Mean</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>0.41</td>
<td>0.05</td>
</tr>
<tr>
<td>Urban</td>
<td>0.76</td>
<td>0.03</td>
</tr>
<tr>
<td>Administrative region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashanti</td>
<td>0.92</td>
<td>0.01</td>
</tr>
<tr>
<td>Brong Ahafo</td>
<td>0.83</td>
<td>0.03</td>
</tr>
<tr>
<td>Central</td>
<td>0.78</td>
<td>0.07</td>
</tr>
<tr>
<td>Eastern</td>
<td>0.88</td>
<td>0.02</td>
</tr>
<tr>
<td>Greater Accra</td>
<td>0.64</td>
<td>0.08</td>
</tr>
<tr>
<td>Northern</td>
<td>0.62</td>
<td>0.15</td>
</tr>
<tr>
<td>Upper East</td>
<td>0.44</td>
<td>0.04</td>
</tr>
<tr>
<td>Volta</td>
<td>0.62</td>
<td>0.07</td>
</tr>
<tr>
<td>Western</td>
<td>0.70</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Figure 3. Distribution of district hospital efficiency scores. Source: Authors’ computation

Source: Authors’ construction
<table>
<thead>
<tr>
<th>Financing Scheme</th>
<th>0.68</th>
<th>0.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>0.82</td>
<td>0.04</td>
</tr>
</tbody>
</table>

Source: Authors’ computation

The above discussions suggest that additional fiscal space can be created through improvement in efficiency levels at various levels of the health system. Increases in efficiency increases fiscal space indirectly through creating space within the existing resource envelop. This does not add more resources to the envelop, such as expansion of revenues, external grants etc., as discussed earlier.

One way that inefficiencies could be checked to raise additional fiscal space in the health sector is to pay close attention to resource flows from the central government to local governments and lower level health facilities. Significant leakages in resource flows may cripple the effectiveness of the system. In countries like Bangladesh and Tajikistan, it is reported that better control over national policies and budgets resulted in better understanding of resource flows and effective tying up of the budget with the various line items (Durairaj & Evans, 2010). In Ghana intergovernmental transfers also exists in the health sector where amounts budgeted for health care interventions do not get to lower levels in full. In some cases, when these resources are received at the lower levels, their eventual use does not correspond to the intended purpose. Available evidence suggests that, in Ghana, political influence limits resource flow and use which results in inefficiencies (Banful, 2011).

In addition to the above discussions, inefficacies could also be checked by putting in place structures that ensure effective management of public resources. This may imply establishing a specialized unit or agency that deals only with public expenditure management. This could be established as a unit in the Ministry of Finance. This structure of public finance administration has been considered effective in other countries like Bangladesh where the public expenditure management unit is charged with the responsibility of improved budget preparation process, resource tracking, developing information technology applications, improvements in audit and internal controls, preparing central accounts, financial statements, disbursement of funds,
reimbursement claims and production of expenditure statements (Government of Bangladesh, 2005).

Another widely recognized source of improved efficiency at the facility level is performance-based financing (PBF). In general, PBF refers to transfers that target health facilities and administrations (often with trickle-down to health workers) and dependent on some performance criteria being met (Witter et al., 2013). Meessen et al. (2011) provided evidence to show that performance-based financing (PBF) can catalyze comprehensive reforms and help address structural problems of public health services including low responsiveness, inefficiency and inequity. Where PBF is well implemented it may contribute significantly to transforming the public sector of low-income and lower-middle income countries (Meessen, Soucat, & Sekabaraga, 2011). The PBF scheme is currently being practiced in Ghana even though it has not yet been extended to all facilities in the country. Scaling up and ensuring effective implementation could help in reducing inefficiencies and hence creating fiscal space through potential savings from wastages. Evidence from Haiti suggests that PBF helped to improve efficiency and facility performance. This was particularly profound when incentives were adopted in synergy with technical assistance and training (Zeng, Cros, Wright, & Shepard, 2013).
Chapter Four

Kenya Country Case Study

4.1 Trends in health indicators, government revenue and expenditure

4.1.1 Trends in Health Indicators

*Child Health*

Kenya has made major improvements in child and other health indicators in the last ten years, although they are still below the 2015 targets. The under-five mortality and infant mortality rates declined from 115 to 52 and 62 to 39 per 1000 live births between 1993 and 2014 respectively. The MDGs targets were 32 and 22 respectively. However, there were worsening trends up to 2003 when under-five mortality and infant mortality rates reached 115 and 77 per 1000 live births. Deaths due to diseases that can be prevented through immunization have declined gradually, as the percentage of infants who have received all basic vaccines currently stand at 68% (KDHS, 2014). However, coverage is low in some counties. On the other hand, neonatal mortality took longer to show a similar trend as shown in the figure below:

![Graph showing trends in child health indicators from 1993 to 2014](image)

*Figure 4.1 Child Health Indicators in Kenya, 1993–2014*

*Source: Adopted from Kenya Health Policy, 2014-2030*
Ill-health among children in Kenya still remains a challenge. Child malnutrition remains rampant with stunting levels of 26% in under-fives. About 40,000 children die annually due to underweight, vitamin A deficiency and wasting especially in populations in the chronically food-insecure arid and semi-arid lands (ASAL). Infectious diseases including, but not limited to, HIV/AIDS, lower respiratory tract infections, tuberculosis, diarrhea and malaria account for over 50% of all deaths in Kenya.

Maternal Health

Maternal health indicators have varied widely over time. From an estimate of a maternal mortality rate of 670 in 1990, 590 in 1998 and 520 in 2008, it is currently estimated at 362 (KDHS 2014). The proportion of women having access to skilled birth attendants is still at 62% from 42% in 2003 (KDHS, 2014) while those delivering in a health facility increased from 40% to 61% in 2014. Most maternal deaths are due to causes directly related to pregnancy and childbirth unsafe abortion and obstetric complications such as severe bleeding, infection, hypertensive disorders, and obstructed labor while others are due to causes such as malaria, diabetes, hepatitis, and anemia, which are aggravated by pregnancy.\(^9\)

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\(^9\) Countdown to 2015 Maternal, Newborn & Child survival: Kenya
Finally, although some gains have been achieved in use of modern contraceptives, the rate of contraceptive use is only 54% in 2014 (Government of Kenya, KDHS, 2014). Consequently, Kenya’s population growth and fertility rates remain high at 2.7% and 3.9 per woman of reproductive age respectively.

HIV and AIDS

About 1.6 million people are living with HIV in Kenya out of whom 750,000 are on life saving antiretroviral drugs or just about 50% of the demand. In the 1994-2010 period, HIV/AIDS control showed progress with the prevalence reducing, though the rate of reduction has slowed. HIV prevalence declined from 6.3% by 2008 to stand at 5.6% in 2012. Coverage with critical HIV interventions such as use of ART, Elimination of Mother to Child Transmission (eMTCT) and condom use also improved.

4.1.2 Revenue and Expenditure Performance

Revenue Performance

A look at revenue performance reveals that, tax revenue collections have increased over time, from KES 408.4 billion in 2007/08 to KES 763.8 billion in 2012/13 and KES 1,130.1 billion in 2014/15.
(Figure 4.3). The increase in total tax revenue can largely be attributed to significant increases in income tax revenue, which increased from KES. 165.1 billion in 2007/08 to KES. 542.2 billion in 2014/15 (Figure 4.3).

![Figure 4.3 Total Tax Revenue (KES. Million) – 2007/08 – 2012/13](source)

This represents an increase of about 228% over the eight-year period. There have also been steady increases in tax effort (as measured by total tax revenue to Gross Domestic Product) between 2005 and 2010, from 19.5% in 2005 to 22.5% in 2010. The tax effort declined in 2012 and 2013 to 18.3% and 18.6% respectively, before increasing to 21.2 in 2014 (Figure 4.4). The decline in tax effort between 2011 and 2013 is mainly attributed to the rebasing of national accounts which significantly increased the level of GDP.
Value Added Tax revenue also significantly increased from KES. 111.9 billion in 2007/08 to KES. 292.8 billion in 2014/15, which represents an increase of about 162% over the eight-year period (Figure 4.5). Trade tax revenue also increased from KES. 45.9 billion in 2007/08 to KES. 131.9 billion in 2014/15, which represents an increase of about 188% over the eight-year period. Excise tax revenue recorded the slowest growth of about 97% over the eight-year period from KES. 61.9 billion in 2007/08 to KES. 122.2 billion in 2014/15. These increases in taxes were largely as a result of the tax amnesty that was offered by the Kenya Revenue Authority on waiver of interest on all tax arrears in 2004 and also after implementation of the principle of self-assessment.
Looking at the structure of taxes, we can see that income taxes have continued to play a dominant role in tax revenue, increasing from an about 40% in 2007/08 to 48% in 2014/15 (Figure 4.6). The performance of income taxes has been attributed to higher tax compliance through self-assessments and the use of the personal identification number (PIN) for purposes of tax assessment.

The VAT, despite being seen as a tax for the future, marginally declined from 27% of total tax revenue in 2007/08 to 26% in 2014/15. Earlier analysis by Karingi and Wanjala (2005) revealed that VAT productivity had significantly declined since inception. It was argued that the low VAT productivity seemed to indicate existence of possible structural problems, which tax reforms may have failed to address. It was also an indication that VAT was yet to find its position in Kenya’s tax system as the tax of the future. In recent times, the poor performance of VAT can be attributed to lower tax compliance, especially in the use of the Electronic Tax Registers (ETR). After introduction of the ETR system, a compliance rate of 90% was targeted (KRA, 2012). A survey done by KRA in 2009/10 found that whereas installation rates were high at 98%, the utilization (compliance) rate was in the range of 60%–65%. There are also many small and medium sized
entities that do not file for VAT because they fall below the VAT threshold. Thus, attempts to impose a turnover tax on smaller entities will greatly complement VAT revenue collections.

Figure 4. 6 Taxes as a percentage of total tax revenue  
Source: Government of Kenya, Economic Survey (various issues)

The proportion of excise tax revenue has significantly declined from 15% of total tax revenue in 2007/08 to 11% in 2014/15. This can largely be attributed to a shift from ad valorem\(^\text{10}\) to specific taxation regime in 2003/04, especially for beer and spirits which account for the largest share of excise tax revenue. This provides evidence on the superiority of ad valorem rates over specific rates in relation to their tax buoyancy. In order to maximize excise tax revenue collections, there is need to consider reverting back to the ad valorem taxation regime.

The share of trade tax revenue slightly increased from 11% of total tax revenue in 2007/08 to 11% in 2014/15, which is in line with the regional integration efforts which are aimed at reducing tax rates on imports. Looking at the overall structure of tax revenue, the over reliance on income

\(^{10}\) Taxation of major excisable products in Kenya has mainly been shifting between an ad valorem regime (an optimal excise tax rate as a percentage of the price of the commodity) and a specific regime (specific value per unit of excisable commodity). Experience has shown that ad valorem taxes are more buoyant than specific taxes and would therefore lead to higher tax revenues. In addition, ad valorem rates adjust automatically to inflation, as compared to specific taxes which have to be adjusted periodically to keep up with inflation.
taxes is against the government’s policy, since the advent of the Tax Modernization Programme in the 1980s, of relying more on indirect taxes as a major source of development finance so that savings and investment could be increased with less reliance on direct taxes (Karingi and Wanjala, 2005).

*Trends in Central Government Expenditure*

A look at expenditure trends reveals that there have been significant increases in government expenditure over time. For instance, total government expenditure increased from KES. 432.6 billion in 2005/06 to KES. 789.4 billion in 2009/10 and KES. 1,924.9 billion in 2014/15, which indicates that total expenditure quadrupled between 2005/06 and 2014/15 (Figure 4.7).

While there are significant increases in both recurrent and development expenditure, the proportion of recurrent expenditure in total expenditure has declined over time. Recurrent expenditure increased from KES. 370.2 billion in 2005/06 to KES. 603.8 billion in 2009/10 and KES. 1,069.2 billion in 2014/15 while development expenditure increased from KES. 62.4 billion in 2005/06 to KES. 185.5 billion in 2009/10 and KES. 855.7 billion in 2014/15. As a result, the proportion of development expenditure in total expenditure has over time increased from 14 % in 2005/06 to 24 % in 2009/10 and 44 % in 2014/15 (Figure 4.8).

![Graph showing trends in government expenditure](image)

*Figure 4.7 Government Expenditure (KES. Billion)*
*Source: Government of Kenya, Economic Survey (various issues)*
In terms of spending on government functions, the central government has increasingly spent more on economic affairs, general public services and debt repayments while reducing the proportion of spending on social services. Figure 4.9 shows the proportion of spending by functions of government over the past four years. The proportion of spending on economic affairs was 20% in 2011/12 as compared to 26% in 2014/15. On the contrary, the proportion of spending on general public services declined from 11% in 2011/12 to 8% in 2014/15. Spending on education also declined from 20% of total spending in 2011/12 to 16% in 2014/15, while health sector spending declined from 6% in 2011/12 to 2.5% of total spending in 2014/15. The declining share of public spending on health is mainly attributed to the fact that the health function was devolved in 2013/14 and is currently a county government function. The government is far from achieving the health spending threshold of at least 15% of total expenditure under the Abuja declaration.

Figure 4.8 Proportion of Recurrent and Development Expenditure in Total Expenditure
Source: Government of Kenya, Economic Survey (various issues)

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Figure 4. 9 Classification of expenditures by functions of government
Source: Government of Kenya, Economic Survey (various issues)

Spending on health by county governments

In line with the Constitution of Kenya (2010), some of the health sectors’ functions were transferred to county governments. Table 4.1 shows the amount of health sector budget that was devolved. It was estimated that about KShs. 150.4 billion of the health sector budget would be transferred to counties over the 2013/14 to 2015/16 MTEF period, which represented about 52% of the total health sector budget.

Table 4.1 Devolved health sector budget

<table>
<thead>
<tr>
<th></th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
<th>Total MTEF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>33.1</td>
<td>45.5</td>
<td>47.1</td>
<td>46.7</td>
<td>139.2</td>
</tr>
<tr>
<td>Of which transfer to public entities</td>
<td>15.7</td>
<td>17.3</td>
<td>18.7</td>
<td>19.2</td>
<td>55.1</td>
</tr>
<tr>
<td>Counties</td>
<td>53.9</td>
<td>47.7</td>
<td>50.2</td>
<td>52.5</td>
<td>150.4</td>
</tr>
<tr>
<td>Total</td>
<td>87.0</td>
<td>93.2</td>
<td>97.3</td>
<td>99.2</td>
<td>289.6</td>
</tr>
</tbody>
</table>

However, this allocation was lumped together with other devolved sectoral allocations. County governments were mandated with the budgeting role and they therefore set their own sectoral priorities. It is therefore not guaranteed that the essential social services such as health would receive adequate funding to ensure efficient health service delivery at county level. While costing of devolved functions followed the sectoral approach, this is not put into consideration while setting county budgetary priorities.

For instance, while the cost of devolved health sector functions was estimated to be about 31% of the total cost of devolved functions in 2012/13, it is clear that most county governments allocated smaller proportions of their budgetary spending towards the health sector. Figure 4.10 shows spending by counties on health. It is shown that spending on health varies widely by county given that there were no guidelines on budgetary requirements for health.

Figure 4.10 Health Sector financing by County governments (KShs. Billion)
Source: Authors’ compilation from Kenyan County budget data
Further, average actual expenditure on health by counties was estimated at 23% as compared to the cost of devolved health functions as a proportion of total expenditure of 31%. Only 8 counties spent more than 20% of their expenditure on health while 22 counties spent less than 10% of their expenditure on health. Cumulatively, national and county governments spent an average of 4% of their expenditure on health, compared to 6% before devolution.

Another key question is whether counties allocated funds according to the performance of health sector indicators. For instance, would counties with lower immunization rates and higher overall morbidity necessarily allocate more resources to the health sector as compared to those with lower overall morbidity and higher immunization levels? A quick review in Table 4.2 shows that the results are mixed. About 7 counties with morbidity rates of 31-50% allocated less than 10% of their expenditure to health. In general, most counties allocated less than 20% of their total expenditure to health regardless of the performance of the health indicators.

Table 4.2 Health needs vis-à-vis health sector budgetary allocations by County (2013/14).

<table>
<thead>
<tr>
<th>Overall Morbidity</th>
<th>Fully immunized population</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Avg.  Actual Health Exp to total Exp = 23%</td>
<td></td>
</tr>
</tbody>
</table>

Figure 4.11 Proportion of health spending in total county expenditure (%) in 2013/14
Source: Authors’ compilation from Kenyan County budget data
4.1.3 Health sector financing

The Health sector is one of the key sectors under the country’s Vision 2030 agenda. It is aimed at achieving equity and socio-economic goals as emphasized under the Social Pillar. The Vision of the health sector is mainly aimed at reversing the downward trends in health indicators. It is also aimed at restructuring the health delivery system to shift its emphasis from curative to promotive and preventive health care. The Government recognizes health as one of the priority sectors that contribute to the wellbeing of the nation and therefore remains committed to providing quality health services to all of its citizens. Further, the Bill of Rights in the Constitution of Kenya (2010) stipulates that access to equitable healthcare is a right for every Kenyan, irrespective of his or her income status\(^\text{12}\).

Table 4.3 Heath sector financing by source

<table>
<thead>
<tr>
<th>Source</th>
<th>2001/02</th>
<th>2005/06</th>
<th>2009/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>24,340,676,962</td>
<td>29,879,442,868</td>
<td>35,381,825,223</td>
</tr>
<tr>
<td>Private</td>
<td>44,405,289,053</td>
<td>40,077,204,939</td>
<td>45,087,256,448</td>
</tr>
<tr>
<td>Donors</td>
<td>13,486,050,749</td>
<td>31,613,062,420</td>
<td>42,384,478,132</td>
</tr>
<tr>
<td>Others</td>
<td>82,232,017</td>
<td>407,910,483</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>82,314,248,781</td>
<td>101,977,620,710</td>
<td>122,853,559,803</td>
</tr>
</tbody>
</table>

The health sector is financed by three main sources i.e. the government, private entities such as households and the donors. There are also considerable off budget resources, which mainly include user fees and financing from some development partners e.g. funding from the US government for health are generally off budget. Statistics from the Kenya National Accounts 2009/10 (NHA) indicate that Kenya spent approximately KShs. 122.9 billion on health in 2009/10, which represents an increase of about 20% over total health spending in 2005/06 (Table 4.3). In addition, per capita spending was estimated at KShs. 3,203 in 2009/10, which increased from KShs. 2,636 in 2001/02 and KShs. 2,681 in 2005/06. The total health spending was also approximated at 5.1%, 4.8% and 5.4% of nominal GDP in 2001/02, 2005/06 and 2009/10 respectively.

The household share of total health spending has declined over time while the share of expenditures from donors has increased over time. While households accounted for about 54% of
total health expenditure in 2001/02, their share declined to 39.3% in 2005/06 and eventually to 36.7% in 2009/10. On the contrary, the share of expenditures from donors increased from 16.4% in 2001/02 to 31% in 2005/06 and eventually to 34.5% in 2009/10. It is further estimated that off budget expenditures from donors accounted for about 56% of all public sector health spending in 2009/10.

Resource Envelope

The total health expenditure (THE) in Kenya was US$ 2,743 million in 2012/13, up from US$ 2,155 million in 2009/10. Total health spending in 2012/13 accounted for 6.8% of gross domestic product (GDP) up from 5.4% in 2009/10. The government expenditure on health as a percent of total government expenditure increased from 4.6% in 2009/10 to 6.1% in 2012/13 which is still far below the 15% requirement of the Abuja declaration. Of the total health expenditure in 2012/13, current health expenditure accounted for 93%, compared to 96% in 2009/10. Capital expenditures increased from 4% of the THE in 2009/10 to 7% in 2012/13. The per capita expenditure has increased from US$ 56 in 2009/10 to KShs 5,680 (US$ 67) in 2012/13.

HIV and AIDS Expenditures

The total health expenditure for HIV and AIDS was US$ 532.1 million in 2012/13 up from US$ 511.9 million in 2009/10 period, representing about 1.3% of the GDP. However, the total health expenditure for HIV and AIDS constituted about 19% of the total health expenditure. Further, about 73% of the funding came from donors while government contributed 20% in 2012/13, a slight decline from 21% in 2009/10. There was a significant decline for private financing for HIV at 7.4% in 2012/13 down from 28% in 2009/10.

Reproductive Health Expenditures

The total health expenditure on reproductive health increased from US$ 200 million in 2005/06 to US$ 268 in 2009/10 and US$ 352.9 million in 2012/13. The proportion as a percent of THE, dropped slightly from 14% in 2009/10 to 13% in 2012/13. As a percent of GDP, expenditures on RH, although increasing, remain constant at about 1%. Private and Public sectors contributed 42
% and 40% of total reproductive expenditure respectively in 2012/13 compared to 38% and 41% in 2009/10. Donor contributions to reproductive health reduced to 18% in 2012/13 from 22% in 2009/10. In 2012/13, 38% of THE on reproductive health funds were mobilized through Government schemes down from 57% in 2009/10. Out of pocket excluding cost sharing schemes mobilized 32% of the total RH in 2012/13 compared to 19% in 2009/10. The private (including households) and public sectors continues to be the major financing agents of reproductive health, managing 42% and 40% of THE on RH respectively in 2012/13 compared to 32% and 57% in 2009/10.

Tuberculosis Expenditures

The overall health spending on TB almost doubled from US$ 23.7 million in 2009/10 to US$ 36.1 million in 2012/13. The spending on Tuberculosis accounted for 1.3% of THE in 2012/13 up from 1.1% in 2009/10. About 50% of THE on TB in 2012/13 came from public sector up from 21% in 2009/10, followed by private financing sources at 27% down from 30% in 2009/10. Donors financed 23% of THE on TB in 2012/13 compared to 42% in 2009/10.

The government and non-profit institutions serving household financing schemes mobilized 49% and 23% of THE on TB in 2012/13 respectively compared to 39% and 34% in 2009/10. Out of pocket excluding cost sharing schemes mobilized far much lower of THE on TB at 8% than 21% in 2009/10. Almost 36% of the funds were spent on prevention.

Malaria Expenditures

In 2012/13, the total health expenditure for malaria was US$ 269 million, a decrease from US$ 541 million reported in 2009/10. Malaria health spending as a percent of GDP also showed a significant drop from 1.4% in 2009/10 to 0.7% in 2012/13. The THE on malaria accounted for 10% of THE in 2012/13. The revenues to finance malaria in 2012/2013 came from private sources (including households) at 48% but down from 52% in 2009/10. Public sector contributions also increased from 31% in 2009/10 to 43% in 2012/13, while donor financing to malaria declined from 17% in 2009/10 to 9% in 2012/13. The two dominant health financing schemes for malaria
were government and out of pocket excluding cost sharing schemes which mobilized 41 % and 37 % of funds spent on malaria respectively in 2012/13 compared to 42 % and 37 % in 2009/10. In 2012/13, 14 % of malaria funds were channelled through voluntary health care payment schemes up from 11 % in 2009/10.

*Non-Communicable Diseases (NCDs)*

The total health expenditures for non-communicable diseases was US$ 170 Million in 2012/13, which accounted for 6.2 % of THE and was equal to 0.4 % of the GDP. Most funding for NCDs in the 2012/13 came from the public sector at 63 % followed by private sources (including households) at 28 %. Central government scheme mobilized 59 % of NCDs funds in 2012/13. Voluntary health insurances and households out-of-pocket (excluding cost sharing) schemes mobilized 19 % and 12 % of the funding respectively in 2012/13. Of the total health spending on NCDs in 2012/13, 32 % was spent on outpatient curative care, while inpatient curative care accounted for 30 %.

*Other Health Expenditures Related to Child Health*

The other expenditures related to child health include those on nutritional deficiency, vaccine preventable diseases, diarrhoeal diseases and respiratory infections.

Nutrition: The overall spending on nutritional deficiency was US$ 10.5 million in 2012/13 which accounted for 0.4 % of overall Total Health Expenditure (THE) and 0.09 % of the GDP. The main sources of financing in 2012/13 were from Donors at 52 % while the public sector contributed 48 %.

Vaccines: The overall spending on vaccine preventable diseases was US$ 171.7 million in 2012/13, accounting for 6.3 % of overall THE and 0.43 % of GDP. The public sector contributed 39 % of funding on vaccines in 2012/13 followed by donors and private sources (including households) at 38 % and 23 % respectively.
Diarrhoeal Diseases: Diarrhoeal diseases were one of the top 10 conditions in terms of spending in the 2012/13 national health accounts. Total spending on diarrhoeal disease was US$ 65.8 million in 2012/13, representing 2.4 % of THE. It accounted for 0.2 % of the GDP in 2012/13. Most funding for Diarrhoea in the 2012/13 came from private schemes (including households at 58 % followed by public sources at 34 %.

Respiratory infections: Total Health Expenditure for Respiratory infections was US$ 177 million in 2012/13. The Total Health Expenditures on Respiratory infections was 6.5 % of THE and 0.45 % of GDP in 2012/13. Revenues of financing schemes for respiratory infections in 2012/2013 were mainly from private sources at 49 % followed by public at 41 %.

4.2 Analysis of Funding gap and financing

The financing gap is derived by looking at what Kenya currently requires to achieve universal health coverage. The Kenya Essential Package for Health (KEPH) is an integrated and comprehensive package of services and interventions that all service providers in health aim at offering during the health sector strategic plan period. KEPH reflects the obligation of the health sector to progressively realize the right-to-health of residents of Kenya as outlined in the 2010 Constitution, which introduces a rights-based approach to provision of services and calls for clarity on service provided to the public. To move towards universal coverage, the current health sector strategic plan (GoK, KHSSIP, 2013 – 2017) aims at introducing and scaling up interventions as and where needed.

The costing and financing requirements for the implementation of the strategic plan were estimated by the Ministry of Health using the One Health model. A shadow budget was prepared, which provided comprehensive available donor resources for the first two years and extrapolation was done for the remaining three years to cover the plan period. Government financial commitments were obtained from the MTEF Health Sector Report and Medium Term Expenditure Framework 2012/13, and calibrated with the Budget Outlook Paper (BOPA, 2012/13-2014/2015 – Government of Kenya, 2012) to establish available funding for the first three years.
National Health Accounts report provided expenditure estimates for households and private firms which, were adjusted for inflation and population growth to provide estimates from these sources for the plan period. The estimated cost of implementing the sector plan (by program area) is given in Table 4.4. Expenditure on service delivery (excluding human resource) accounts for about two-thirds of total spending. Further, Malaria and HIV/AIDS account for a third of total service delivery costs (excluding human resource).

Table 4.4 Total costs of the National Health Sector Strategic Plan III (2013-2017) by disease programmes and health system investment areas (KSh Millions)

<table>
<thead>
<tr>
<th>Disease Program Areas (all costs of service delivery except human resources)</th>
<th>2012-13</th>
<th>2013-14</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal/new born &amp; reproductive health</td>
<td>12,571</td>
<td>14,005</td>
<td>15,531</td>
<td>17,015</td>
<td>18,428</td>
<td>77,550</td>
</tr>
<tr>
<td>Child health</td>
<td>6,746</td>
<td>7,237</td>
<td>7,720</td>
<td>8,238</td>
<td>8,651</td>
<td>38,592</td>
</tr>
<tr>
<td>Immunization</td>
<td>5,723</td>
<td>5,045</td>
<td>5,913</td>
<td>5,016</td>
<td>6,281</td>
<td>27,978</td>
</tr>
<tr>
<td>Malaria</td>
<td>33,561</td>
<td>34,355</td>
<td>37,047</td>
<td>40,374</td>
<td>44,524</td>
<td>189,861</td>
</tr>
<tr>
<td>TB</td>
<td>17,170</td>
<td>17,233</td>
<td>17,106</td>
<td>17,043</td>
<td>17,035</td>
<td>85,588</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>54,049</td>
<td>57,616</td>
<td>62,651</td>
<td>68,028</td>
<td>73,817</td>
<td>316,160</td>
</tr>
<tr>
<td>Nutrition</td>
<td>4,217</td>
<td>4,386</td>
<td>4,607</td>
<td>4,849</td>
<td>5,070</td>
<td>23,129</td>
</tr>
<tr>
<td>WASH</td>
<td>13,002</td>
<td>13,100</td>
<td>13,158</td>
<td>13,521</td>
<td>13,548</td>
<td>66,329</td>
</tr>
<tr>
<td>Non-communicable diseases</td>
<td>6,770</td>
<td>9,750</td>
<td>12,843</td>
<td>16,048</td>
<td>19,363</td>
<td>64,773</td>
</tr>
<tr>
<td>Basic services, emergency, trauma care</td>
<td>7,761</td>
<td>10,650</td>
<td>15,962</td>
<td>21,190</td>
<td>26,885</td>
<td>82,447</td>
</tr>
<tr>
<td><strong>Sub-Total, Disease Program Areas</strong></td>
<td><strong>161,569</strong></td>
<td><strong>173,376</strong></td>
<td><strong>192,538</strong></td>
<td><strong>211,32</strong></td>
<td><strong>233,603</strong></td>
<td><strong>972,407</strong></td>
</tr>
</tbody>
</table>

**Health Systems Investment Areas**

| Human Resources | 25,828 | 30,608 | 35,794 | 41,413 | 47,112 | 180,756 |
| Infrastructure and Equipment | 47,421 | 50,485 | 49,543 | 38,125 | 38,320 | 223,894 |
| Health products and technologies | 2,998 | 26,162 | 8,840 | 9,523 | 10,103 | 57,627 |
| Health financing | 1,890 | 335 | 335 | 335 | 335 | 3,228 |
| Health information systems | 2,231 | 2,382 | 1,971 | 1,971 | 1,971 | 10,525 |
| Leadership & Governance | 2,613 | 2,695 | 2,835 | 2,925 | 3,046 | 14,114 |
| **Sub-Total, Health Systems Areas** | **80,368** | **109,973** | **96,482** | **91,366** | **97,840** | **476,029** |
| **Total** | **244,550** | **286,044** | **291,855** | **305,612** | **334,489** | **1,462,550** |
The estimated financial requirements (assuming donor assistance will be maintained) are given in Table 4.5. It is estimated that the government would finance 45% of the required expenditure while households and development partners would finance 31% and 18% of the total health sector spending respectively. The financing by development partners is assumed to remain stable over the plan period.

### Table 4.5 Estimated and projected financial requirements

<table>
<thead>
<tr>
<th>Sources</th>
<th>Government of Kenya</th>
<th>Development Partners</th>
<th>Households</th>
<th>Private companies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>104,465</td>
<td>45,446</td>
<td>60,864</td>
<td>12,748</td>
<td>223,523</td>
</tr>
<tr>
<td>Year 2</td>
<td>108,891</td>
<td>44,315</td>
<td>68,762</td>
<td>14,067</td>
<td>236,035</td>
</tr>
<tr>
<td>Year 3</td>
<td>111,318</td>
<td>44,302</td>
<td>77,618</td>
<td>15,386</td>
<td>248,624</td>
</tr>
<tr>
<td>Year 4</td>
<td>116,670</td>
<td>43,673</td>
<td>87,549</td>
<td>16,705</td>
<td>264,597</td>
</tr>
<tr>
<td>Year 5</td>
<td>122,271</td>
<td>43,043</td>
<td>98,686</td>
<td>18,208</td>
<td>282,208</td>
</tr>
<tr>
<td>Total</td>
<td>563,615</td>
<td>220,779</td>
<td>393,479</td>
<td>77,114</td>
<td>1,254,987</td>
</tr>
<tr>
<td>Share (%)</td>
<td>45%</td>
<td>18%</td>
<td>31%</td>
<td>6%</td>
<td>100%</td>
</tr>
</tbody>
</table>

A look at the projected financial resources by source and investment area (Table 4.6) reveals that human resources account for 45% of the total projected financing requirements, while efficient service delivery accounts for 29%. About 63% of government financing is toward human resources, while service delivery accounts for about 50% of financing by development partners.

With a financing requirement of KShs. 1,462,550 million against estimated available resources of KShs. 1,254,988 million, the financial gap is estimated at KShs. 207,561 million. This gap is wider when considering that financing by development partners is expected to decline following the country’s graduation into the middle income status. The decline in funding by development partners will have a significant impact on service delivery given that they spend about 50% of their resources on service delivery areas especially malaria, TB and HIV AIDS. This implies that, for the government to meet its medium term targets, of for example increasing the percentage of eligible HIV/AIDS patients on ARVs from 60% to 90%, it will be expected to increase its funding...
to HIV/AIDS significantly. Avila et al (2013) also demonstrates that increased domestic resource mobilization as provided for by some regional agreements such as the Abuja Declaration would lower the role of development partners in health sector financing.

Table 4.6 Projected financial resources by Sources and Investment Areas (Kshs Millions)

<table>
<thead>
<tr>
<th>Investment Areas</th>
<th>GoK</th>
<th>DP</th>
<th>Households</th>
<th>Private Companies</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>OOP</td>
<td>Prepayment schemes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate human resources for health</td>
<td>356,205</td>
<td>272</td>
<td>92,729</td>
<td>80,829</td>
<td>38,557</td>
<td>568,592</td>
</tr>
<tr>
<td>Efficient service delivery system</td>
<td>80,033</td>
<td>108,416</td>
<td>106,638</td>
<td>48,498</td>
<td>23,134</td>
<td>366,719</td>
</tr>
<tr>
<td>Adequate Health Infrastructure</td>
<td>59,180</td>
<td>7,960</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>67,140</td>
</tr>
<tr>
<td>Access to essential health products</td>
<td>68,197</td>
<td>62,955</td>
<td>32,455</td>
<td>32,332</td>
<td>15,423</td>
<td>211,362</td>
</tr>
<tr>
<td>Adequate Health information</td>
<td>0</td>
<td>4,972</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4,972</td>
</tr>
<tr>
<td>Adequate health financing</td>
<td>0</td>
<td>23,384</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>23,384</td>
</tr>
<tr>
<td>Comprehensive Health leadership</td>
<td>0</td>
<td>12,820</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>12,820</td>
</tr>
<tr>
<td>Total</td>
<td>563,615</td>
<td>220,779</td>
<td>231,822</td>
<td>161,659</td>
<td>77,114.19</td>
<td>1,254,989</td>
</tr>
</tbody>
</table>


4.3 Implications of funding gap for population health

To assess the implications of the funding gap, we review the health sector targets of key communicable diseases and trends in expected sources of financing. The government of Kenya envisages an improvement in all the indicators of the key communicable diseases. For instance, the percentage of fully immunized children is expected to increase from 79% in 2013/14 to 90% in 2017/18 (Table 4.7). Similarly, the percentage of patients completing treatment of tuberculosis is expected to increase from 85% in 2013/14 to 90% in 2017/18. Similarly, the proportion of eligible patients on anti-retroviral treatment is expected to increase from 60% in 2013/14 to 90% in 2017/18. The proportion of infants and pregnant women using treated mosquito nets is also
expected to increase to 85% by 2017/18. Given that the three communicable diseases (HIV AIDS, malaria and tuberculosis) have a high proportion of donor funding, then a significant reduction in donor financing would jeopardize the realization of the set targets.

Table 4. 7: Five-year health sector targets

<table>
<thead>
<tr>
<th></th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
<th>2016/17</th>
<th>2017/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of fully immunized children</td>
<td>79</td>
<td>85</td>
<td>88</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>% of TB patients completing treatment</td>
<td>85</td>
<td>85</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>% of HIV + pregnant mothers receiving preventive ARVs</td>
<td>63</td>
<td>80</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>% eligible HIV patients on ARVs</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>% of targeted under 1’s provided with treated mosquito nets</td>
<td>44</td>
<td>60</td>
<td>85</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>% of targeted pregnant women provided with treated mosquito nets</td>
<td>30</td>
<td>45</td>
<td>58</td>
<td>70</td>
<td>85</td>
</tr>
</tbody>
</table>


However, a look at the health sector financing targets reveals that the government of Kenya proposes to significantly increase the central government expenditure on health, from 4.5% in 2012 to 12% in 2016 (Table 4.8). The government further envisages a significant reduction in off-budget resources (which have largely been from donors) from 60% in 2012 to 5% in 2017. Out of pocket expenses are also expected to decline from 33% in 2012 to 15% in 2017. Thus, creation of fiscal space for health is important both at sector level (through efficiency gains) or at national level (through mobilization of additional resources) to ensure that the set targets are adequately financed and the goals are achieved.

Table 4. 8: Health sector financing targets

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Government expenditure on health as % of the total government Expenditure</td>
<td>4.5</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Total Health expenditure as a percentage of GDP</td>
<td>1.5</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Off budget resources for health as % of total public sector resources</td>
<td>60</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>% of health expenditure reaching the end users</td>
<td>65</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>% of Total Health Expenditure from out of pocket</td>
<td>33</td>
<td>25</td>
<td>15</td>
</tr>
</tbody>
</table>


### 4.4 Achieving Grand Convergence in Kenya

#### 4.4.1 Costs and Health Benefits of Investing in Health to Achieve Convergence in Kenya

Using the Commission on Investing in Health models, we project that Kenya would need to invest an additional about $US 18.6 billion over the coming 20 years in order to achieve convergence. The majority of this investment would need to be allocated towards health systems strengthening, in order to develop the capacity of the system to effectively deliver priority health interventions (Table 4.9).

<table>
<thead>
<tr>
<th>Table 4.9. Estimated incremental costs to achieve convergence.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category</strong></td>
</tr>
<tr>
<td><strong>Estimated Costs</strong></td>
</tr>
<tr>
<td>Family planning</td>
</tr>
<tr>
<td>Maternal and newborn</td>
</tr>
<tr>
<td>Childhood illness</td>
</tr>
<tr>
<td>Malaria</td>
</tr>
<tr>
<td>TB</td>
</tr>
<tr>
<td>HIV</td>
</tr>
<tr>
<td>Health systems strengthening</td>
</tr>
<tr>
<td><strong>Estimated savings</strong></td>
</tr>
<tr>
<td>Immunization</td>
</tr>
<tr>
<td><strong>Total incremental expenditure</strong></td>
</tr>
</tbody>
</table>

Programmatically, health investments would need to be allocated towards priority interventions in the areas of family planning, maternal and newborn health, childhood illness, malaria, TB, and HIV. Across the 20 years from 2016 – 2035, programmatic investments would grow from an
estimated about $US 400 million in 2020 to $US 975 million in 2035. The largest programmatic investments would need to be made in the areas of malaria, and TB, with significant and growing investments in HIV over the 20-year period (Figures 4.12).

Kenya could experience significant declines in mortality from child, maternal, and infectious conditions by making these targeted health investments. The maternal mortality rate could fall from about 360 per 100,000 births in 2015 to an estimated about 144 deaths per 100,000 births in 2035, averting an estimated 8,600 maternal deaths in the year 2035. The under-five child mortality rate could fall from 83 deaths per 1,000 live births in 2015 to 36 deaths per 1,000 live births in 2035, resulting in an approximate 64% reduction in child mortality over the 20 years (Table 4.10).

Table 4.10. Estimated mortality reductions from investing in convergence

<table>
<thead>
<tr>
<th>Cause</th>
<th>2011 (# of deaths)</th>
<th>2035 (# of deaths)</th>
<th>% reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal deaths</td>
<td>5,700</td>
<td>1,860</td>
<td>67%</td>
</tr>
<tr>
<td></td>
<td>35,000</td>
<td>17,560</td>
<td>50%</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------</td>
<td>--------</td>
<td>-----</td>
</tr>
<tr>
<td>Stillbirths</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under-5 child deaths</td>
<td>131,100</td>
<td>46,800</td>
<td>64%</td>
</tr>
<tr>
<td>TB deaths</td>
<td>12,500</td>
<td>4,130</td>
<td>67%</td>
</tr>
<tr>
<td>HIV deaths</td>
<td>71,000</td>
<td>11,100</td>
<td>84%</td>
</tr>
<tr>
<td>Births</td>
<td>1,584,000</td>
<td>1,298,000</td>
<td>18%</td>
</tr>
<tr>
<td>Total fertility rate</td>
<td>4.7</td>
<td>2.2</td>
<td>53%</td>
</tr>
<tr>
<td>(births per woman)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under-5 mortality</td>
<td>83</td>
<td>36</td>
<td>57%</td>
</tr>
<tr>
<td>rate (per 1,000 live</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>births)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ computation

The returns to investing in health to achieve convergence would be high. Using the CIH’s full income approach to measure the benefit-cost ratio, it is estimated that for every dollar Kenya invested in the convergence agenda over the years 2016 – 2035, they would see a return of about $US 14 (Table 4.11).

The Commission on Investing in Health outlines a set of high-impact priority health sector investments Kenya can pursue, that could result in significant health improvements over the coming 20 years and bring Kenya in line with the rates of mortality from maternal, child, and infectious conditions seen in the best-performing middle-income countries. Investing in health to achieve convergence can also bring significant economic return; each dollar Kenya invests in health could return about $US 14 over the years from 2016 to 2035.

<table>
<thead>
<tr>
<th>Population</th>
<th>44,863,583</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental expenditures</td>
<td>932,339,300</td>
</tr>
<tr>
<td>(average annual)</td>
<td></td>
</tr>
<tr>
<td>Incremental expenditures per</td>
<td>21</td>
</tr>
<tr>
<td>capita</td>
<td></td>
</tr>
<tr>
<td>Per capita income (2014)</td>
<td>1,358</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deaths averted (average annual)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stillbirths (weighted)</td>
</tr>
<tr>
<td>Deaths 0 – 4 (weighted)</td>
</tr>
<tr>
<td>Maternal deaths</td>
</tr>
<tr>
<td>TB deaths</td>
</tr>
<tr>
<td>HIV/AIDS deaths (over 5)</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Costs per death averted</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Benefit cost calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in mortality (in SMU)</td>
</tr>
<tr>
<td>Per capita value of mortality</td>
</tr>
<tr>
<td>reduction</td>
</tr>
<tr>
<td>Benefit: cost ratio</td>
</tr>
</tbody>
</table>
Table 4.11. Costs, benefits, and benefit cost ratio  
Source: Authors’ computation

4.5 Analysis of potential sources of additional fiscal space

3.5.1 Enhancing tax revenue collection

A look at the performance of Kenya’s fiscal indicators shows that the country needs to mobilize additional resources to be able to meet the increasing expenditure needs which have mainly been due to implementation of the Kenya Constitution (2010) and financing of infrastructure projects. Revenue collection has also been below target over time, especially for Value Added Tax and Excise tax revenue. For VAT, the below target performance has mainly been attributed to lower tax compliance, especially in the use of the Electronic Tax Registers. In addition to lower tax compliance, there are also many small and medium sized entities, which are also largely informal, that do not file for VAT because they fall below the VAT threshold. There have been attempts to impose a turnover tax on smaller entities which will greatly complement VAT revenue collections. The VAT Act was also revised in 2013, with specific provisions that sought to minimize the level of exemptions and zero rating.

We assessed the relationship between actual local VAT revenue and the VAT revenue potential, which is derived by multiplying total private consumption with the VAT standard rate (gives maximum VAT revenue that can be collected at the prevailing rate). The ratio of actual to potential VAT revenue is shown in Figure 4.13. Even though the VAT Act was reviewed in 2013, we can see that the ratio of actual VAT revenue to potential VAT revenue has declined over time. This can partly be attributed to rebasing of GDP which significantly increased the level of private consumption. However, the ratios are also indications that there is room to increase revenue collections from VAT as only about an average of 17% of the potential revenue is currently being collected.
Excise tax revenues have also not grown in line with growth in consumption of excisable commodities. Figure 4.14 and 4.15 show the relationship between the growth in consumption of beer and cigarettes and their respective tax revenues. We see considerable increases in consumption of beer and cigarettes in 2003/04 which was not matched with an increase in excise tax revenue.

Figure 4. 14 Ratio of actual to potential VAT revenue
Source: Authors’ construction using Government of Kenya data (from Economic Surveys)

Figure 4. 15 Growth in Beer Consumption Beer Consumption and Excise Tax Revenue
This gap can largely be explained by the shift in taxation of excisable commodities from ad valorem to specific taxes in 2003/04. Efforts to maximize excise tax revenue should consider shifting the excise taxation regime back to ad valorem taxes, which have largely been found to be more buoyant. Further, the government of Kenya is in the process of revising the Excise Tax Act, which proposes higher tax rates on excisable commodities. The excisable commodities are petroleum products, fruit juices, cigarettes, beer, wines & spirits, plastic bags, imports of second hand cars etc. Such increases in excise tax revenue collections could be earmarked for spending on health.

The government of Kenya has also made efforts to raise additional revenue through taxation of the informal and the small, micro and medium sectors mainly by revamping the turnover tax and review of the VAT law. The tax base is also expected to be increased through taxation of properties, especially the real estate sector. Property owners are to be identified through Geographical Information System (GIS) maps and also using information from utility companies and tenants (Kenya Revenue Authority, 2015). Consequently, to simplify the computation of the tax liability for rental income, the government proposed in the 2015/16 budget speech (Government of Kenya, 2015) to levy a flat tax rate of 12% on gross rental income not exceeding KShs. 10 million per year as opposed to imposing a 30% income tax on net rental income.
There is also room for increasing tax revenue through capital gains tax. The capital gains tax was abolished in mid 1980s to encourage investments in property and securities market. However, there has been tremendous growth in the property market and securities held at the Nairobi Stock Exchange. The government re-introduced the capital gains tax in its 2014/15 budget, with a rate of 5% on shares. This was found to be complex with regard to its administration. In order to reduce the complexities and challenges of collecting capital gains on the sale of shares, the Cabinet Secretary scrapped the capital gains tax rate of 5% on shares and introduced a 0.3% withholding tax on the transactional value of the shares in the 2015/16 budget speech. There is still potential of raising more revenue by imposing a capital gains tax on capital gains from sale of properties and other marketable assets. The capital gains tax should also be harmonized with other countries, especially across the EAC states.

In addition to the above measures, the Kenya Revenue authority planned to put in place several measures that were aimed at enhancing revenue collection during the 2015/16 - 2017/18 plan period (KRA, 2015), which included:

i. Broaden the tax base through:
   a. Proposing legislation on expansion of advance tax and withholding tax regimes to target specific sectors.
   b. Development and implementation of a partnership framework on taxation of the SME sector through: revamping the turnover tax strategy to focus on recruitment; twinning of PIN to business licensing at the Counties; expanding the scope of services and activities for which PIN is a requirement and; adopting a business classification, structure and tax rates similar to those being applied by the Counties.

ii. Enhance compliance through: fully rolling out of the automated tax system (iTax); enhance audit through development of audit centres and use of automated audit selection and risk profiling through iTax Taxpayer Audit and Compliance & Monitoring.

iii. Enhance VAT collections by undertaking interventions to enhance efficiency of VAT operations including use of information management systems, third party information,
strict enforcement of electronic filing, reporting and payment and cleaning up VAT ledgers. They also sought to improve VAT data management to ensure accuracy in input, output and credit VAT information and reconciliation between filed returns and payments. iv. Enhance collection of property taxes through closer collaboration with county governments.

4.5.2 Enhancing efficiency of expenditure

For the Kenyan government, making a choice between competing objectives under tight fiscal position is necessary to ensure that scarce resources are directed towards priority areas and also to ensure more efficient service delivery. To enhance efficiency of expenditure, the government has over time undertaken rationalization of expenditure through curtailing of less productive expenditures in a bid to create additional fiscal space. Some of the targeted expenditures for scrutiny to create fiscal space include: telephone & related expenses; domestic and foreign travel; contracted professional and technical services; purchase of vehicles; refurbishment of buildings; hospitality supplies and; training expenses, among others (Government of Kenya, 2013).

Another way of creating additional fiscal space is through a reduction in the wage bill, which is currently high for Kenya. Compensation of employees as a proportion of GDP in Kenya is higher (estimated at an average of 9 % of GDP) than in the comparator countries (Egypt 7 %; Mauritius 6 %; Malaysia 5 %). Efforts to lower further the average expenditure on compensation of employees would result in efficiency gains.

At sectoral level, reallocation of expenditure priorities both within and across sectors can also result in additional fiscal space for financing unmet budgetary needs. This requires thorough efficiency studies of sectoral expenditure to identify more efficient expenditure priorities. Earlier findings on efficiency of spending in the health sector indicate that the comprehensive public resource envelope for health is predominantly allocated to preventative care which is likely to be more efficient than curative care. However, the budgeted central government expenditure on health is more skewed towards hospitals rather than primary health care and public health programmes
It is argued that it is more efficient to provide health care through primary care facilities rather than hospitals given that the cost of health care provision in hospitals is much higher than in primary health care facilities. Further, it was noted that the hiring freeze that has been aimed at limiting the public sector wage bill has been a major disadvantage to the health sector which is a labour intensive sector.

Previous efficiency studies\(^\text{13}\) (Kioko, 2013) revealed that significant technical inefficiencies exist in the use of health system resources among selected Kenyan hospitals, health centers and dispensaries. The study found that the average technical efficiency score was 72.6 \%, 50.7 \% and 43 \% for hospitals, health centers and dispensaries respectively. This shows that these facilities were technically inefficient given that they could have used fewer inputs to produce their current levels of outputs. Thus, reforms that are aimed at enhancing efficiency in the health sector could result in additional fiscal space (Kioko, 2013). Irungu (2012) also found an average technical efficiency score of 95.75\% for level 5 hospitals and 97.72\% for level 4 hospitals in Kenya. The study concluded that there is potential for productivity growth in health sector in Kenya by considering efficiency use and increased investments in technological innovations.

4.5.3 Increased borrowing

The government can increase fiscal space through increased borrowing. The viability of this option depends on whether government debt is sustainable. As noted in the Budget Policy statement (2013), the government of Kenya acknowledges that pursuance of a sustainable debt level is important given the effect of the stability of key macroeconomic variables (stability of inflation, interest rates and exchange rates) on private sector participation in the economy through increased investment and employment creation. Statistics on central government’s debt show that total debt more than quadrupled between 2000 and 2014, increasing from KES 508.7 billion in 2000 to about

\(^{13}\) Kenya has very recent studies on efficiency of health spending. Redoing the analysis would not have much value added. We therefore opted to get insights from the existing studies.
KES 2,217.3 billion in 2014 (Figure 4.16). The level of total debt is expected to be higher in 2015 following the successful issue of the Eurobond of US$ 2 billion in 2014.

Figure 4. 17 Central Government Outstanding Debt
Source: Government of Kenya, Economic Survey, various issues

A look at the external and domestic debt statistics indicates that the government has made deliberate efforts to reduce reliance on external debt. The proportion of external debt in total debt increased from 59% in 2000 to 64% in 2004 before declining to 51% in 2014 (Figure 4.17). On the contrary, the proportion of domestic debt declined from 41% in 2000 to 36% in 2004 before increasing to 51% in 2014.
One of the ways of assessing whether debt is sustainable is through the analysis of the relationship between central government revenue and expenditure. The analysis of growth in total revenue and total expenditure shows that the growth in expenditure has over time mirrored the growth in revenue, except for increased expenditure during election years and also after 2012 (Figure 4.18). The trends after 2012 show that total expenditure has increased at a higher rate compared total revenue. Also, total revenues have grown at a declining rate, which could have implications for the economy’s fiscal sustainability position.
Further analysis of the relationship between revenue and expenditure reveals that there exists a long run relationship between revenue and expenditure, which implies that public debt is sustainable. This implies that the government is in a position to increase borrowing as a means of creating additional fiscal space. This is in line with the findings by the International Monetary Fund (International Monetary Fund, 2012) that showed that Kenya faced a low risk of external debt distress as all external public debt indicators were found to be below the relevant country-specific debt burden thresholds (for Kenya, a threshold of 40 % of GDP and 150 % of exports). The government can therefore mobilize additional resources through borrowing.
Chapter Five

Synthesis of findings and conclusion

5.0 Introduction

In this chapter, we provide a synthesis of the findings and general conclusions that can be drawn from the two-country analysis. We also draw on the findings and make recommendations as well as lessons for other countries at similar level of economic transition. This study sought to assess whether there is an opportunity for increasing fiscal space to generate additional funding for unmet expenditure priorities. The study also sought to provide estimates of financial resource requirements for achieving grand convergence and health sector financing gap. A general observation of the countries’ fiscal position reveals that there has been rising expenditures which have not been matched with increases in revenue generation. It was also evident that both Ghana and Kenya require significant effort to improve outcome indicators of the health sector. Both countries have not been able to achieve the MDG targets on maternal and child health outcomes. Mortality and morbidity from communicable diseases are also high. The countries’ recent transition from low income to lower-middle income status is also expected to jeopardize the financial position of the health sector in the near future. It therefore becomes very important to secure investments to the health sector to help ameliorate the situation given that the scarce resources across these countries have competing needs. We provide our observations and conclusions in the following sub-sections.

5.1 Lower-middle income status and health financing

It was observed that after Ghana graduated from low income status to lower-middle income status in 2011, general external resources to support government expenditure activities reduced significantly. Net ODA received per capita declined from $72.6 in 2011 to $50.9 in 2013, representing about 30% decrease. A similar pattern was observed in donor partners' budgetary support after migrating to lower-middle income status in 2011. The proportion of donor support to the health sector declined from 22.2% in 2011 to 5.5% in 2013. Ghana's financial requirement for
the health sector is estimated to be about GH₵3,494 million in 2015 and is expected to increase to GH₵3,509 million in 2016. While Kenya was only certified by the World Bank as a lower-middle income country in 2015, it is generally expected that external funding to the country as a whole and the health sector, in particular, will decline in the coming years. Like Ghana, Kenya also faces significant funding gap for the health sector that require scaling up resource commitment if important health targets are to be met. A financing gap of about Ksh. 207,561 million was estimated for the Kenyan health sector. It follows from these that transition to higher income status comes with a responsibility that emerging economies should be prepared to shoulder. While this may be positive news for investments and the economy as a whole some priority sectors like education and health will likely suffer, at least, in the short term. It is, therefore, important to explore appropriate alternative funding sources that will create additional revenue for these sectors.

5.2 Implications of funding gap for population health

It is expected that the funding gap will have implications for health service delivery and general health status in Kenya and Ghana. The discussions earlier in the report suggest that both preventive and curative care will be affected as a result of the funding gap in the health sector. Priority targets such as maternal and child health as well as some communicable diseases were expected to suffer. In Ghana, filling the funding gap was expected to translate into a reduction in institutional infant mortality rate from 0.8% in 2014 to 0.5% in 2015. Child immunization was expected to generally rise above 90% coverage in 2016. The population of OPD cases due to malaria was expected to reduce from 28% in 2014 to 24% in 2016. Health service delivery was also expected to improve especially at the primary level. These potential gains in the health sector were not achieved due to the financing gap. In the case of Kenya, it is estimated that the funding gap will have implications for health outcomes. In addition to child and maternal health, HIV/AIDS and TB treatment and prevention were expected to be affected by the financing gap. Specifically, medium term health targets such as increasing the proportion of people living with HIV/AIDS on ARVs from 60% to 90% will be affected by the funding gap.
5.3 Achieving grand convergence

The convergence estimates highlight the substantial health improvements that are possible for Ghana and Kenya to achieve in the coming years. These require that the countries must prioritize health sector investments that build the capacity of the health system and expand delivery of high impact and cost-effective health interventions for maternal, child, and infectious conditions. In the case of Ghana, public health expenditures, which were increasing for much of the past two decades, have declined recently. In 2013, public health expenditure made up 10.5% of general government expenditure, below the Abuja Declaration target of 15% (World Bank, 2016). While the country has experienced significant health improvements in recent years, maternal and child health outcomes remain worse than other lower-middle-income countries with similar levels of health spending (Schieber, Cashin, Saleh, & Lavado, 2012). Increased strategic health investments could result in rapid health improvements. By increasing public spending on health by about US$ 566 million annually, Ghana could avert an average of over 55,000 deaths from now through 2035, with sustained reductions in the future. These investments would also positively impact the country’s economic growth. For every dollar invested in convergence, about US$ 10 would be returned. In the case of Kenya, the estimates suggest that a US$ 18.6 billion annual investments in the health sector could avert an average of over 80,000 deaths from now through 2035. Also, each dollar Kenya invests in health could return about US$ 14 over the years from 2016 to 2035, indicating significant economic returns on health investment. These very high returns to investment make a powerful case for increasing domestic resource allocation to health.

5.4 Potential sources of additional financial space for the health sector

For both Kenya and Ghana, three main areas were identified as potential sources of additional fiscal space for the health sector. These are: i) Improved tax revenue ii) Enhanced efficiency iii) Public-private partnerships for health (iv) Increased borrowing. In addition, potential sources of financial space for financing through the NHIS were also explored. We synthesize the findings below.
5.4.1 Improved tax revenue

A general observation from both countries is that, the tax systems are buoyant and elastic with relative low tax efforts. This suggests that, there is space for tax rates to be increased and the tax base broadened. While the former usually pose political challenge, the latter can be explained with appropriate tax reforms. Aside broadening the tax base for specific tax handles, tackling the informal sector was identified to be particularly important in broadening the general tax base. In both Kenya and Ghana, the informal sector forms a large portion of the economy and will likely make sufficient contribution to government tax revenue. The health sector can then benefit from the increased government revenue. It was also observed that, generally, actual tax revenue fell short of budget or potential in both countries. In this regard, reforms to address inefficiencies in the tax collection process and improved compliance will be a step in the right direction.

5.4.2 Enhanced health sector efficiency

Improving efficiency is widely considered as an important potential source of fiscal space for the health sector. In both Ghana and Kenya, there was some evidence of wastage in the health sector. At the micro level, it was found that a significant proportion of primary health facilities could use fewer resources to achieve their current levels of output. Some evidence was also found at the macro level about inefficiencies in government health expenditure. Addressing these inefficiencies will require scrutinizing government expenditure and ensuring that spending is directed to priority areas. For instance, it will be efficient to spend more on preventive care than curative care. Also, leakages in inter-governmental transfers could help save significant amount of resources for the health sector. At the facility level, there was evidence that performance-based financing could be an effective way to reduce inefficiency and improve facility performance. Scaling up this type of health financing scheme in both Ghana and Kenya will be important in saving resources that could be re-invested in the health sector. In addition to these, it was observed that, best practices support the establishment of special units to deal with public sector finances. This will be a good way to scrutinize public finances and ensure efficiency in allocations and usage.
5.4.3 Public-private partnerships for health

Ghana and Kenya have depended on external resources to finance expenditure in the health sector and the economy at large, as in other developing countries. Also, there was evidence to suggest that the transition from lower income to lower-middle income has resulted in a reduction in external resource flow in the case of Ghana. Even though Kenya has just been confirmed as lower-middle income economy, it is expected that external resource flow to the country will also slow, consistent with other countries that graduated earlier. The above pattern and trend in external resource flow suggest that not enough potential fiscal space exists to create additional resources for the health sector in this regard. However, it was observed that there are other avenues that can be explored to improve revenue from external sources. These include the possibility of establishing effective public-private partnerships that increase investment in the health sector. Specific aspects of the health sector can be identified, handed over to interested and qualified private partners to develop. While this idea is not popular in Ghana and Kenya, it is widely explored in other developing countries such as Pakistan and Myanmar.

5.4.4 Increased Borrowing

Government borrowing is considered one of the sources of resource generation in the public sector. A country’s current debt levels determines its ability to generate further revenue by borrowing in the future. The health sector could benefit from such revenue sources if the possibility exists. In this section we explored debt and fiscal sustainability for both Kenya and Ghana. This helped to determine whether or not some fiscal space could be identified by increasing borrowing. It was observed that while borrowing could be a viable option for Kenya, the same conclusion cannot be drawn for Ghana. Compared to Kenya, Ghana’s debt levels have increased rapidly in recent years and this has not been matched by increment in tax revenues. Further, Ghana’s fiscal position raises concerns about sustainability and hence its ability to repay existing and future debts. Therefore, while Kenya could explore additional fiscal space for the health sector from increased borrowing, this will not be a viable option for Ghana.
5.4.5 Exploring potential fiscal space from National Health Insurance Scheme in Ghana

In addition to the above fiscal space potentials, some observations were also made about creating additional fiscal space in the NHIS in Ghana. It was observed that the scheme has been faced with sustainability challenges in recent times owing to the fact that expenditure has been higher than revenue generated by the scheme. This has necessitated recent calls to improve resources directed to the scheme to guarantee its sustainability. A few recommendations have been made to improve resources committed to the scheme. One clear way is the possibility of raising revenue to the scheme by raising the earmarked tax rate or broadening the base of the tax. As discussed earlier in this report the current rate of 2.5% is lower than other countries. Also, the tax base could be broadened beyond VAT. This could be done by considering emerging sectors like the real estate and including goods and services that are not covered by VAT without compromising equity. Alternatively, it was observed that improving efficiency in the operations will be crucial to the financial sustainability of the scheme. This will not only reduce wastages in the use of resources but also increase public confidence in raising premiums and to justify the need for the tax rate and base to be reviewed.

It is worth mention at this point that the options discussed above could be effective sources of fiscal space for the health sector in the respective countries. However, it is even more important to ensure that these resources when generated are invested in the health sector. Efficiency also requires that the additional resources are invested effectively in the health sector with focus on priority areas. This will require commitment from health policy makers and government as a whole. The temptation of diverting additional resources created to the health sector to other sectors should be avoided as much as possible.
5.5 Conclusion

The discussions above point to the fact that the transition from low to lower-middle income status for Ghana and Kenya has had (in the case of Ghana) and will likely have (in the case of Kenya) some negative implications for health financing. There was evidence of significant reductions in budgetary support from donor partners to these countries. Coupled with the numerous challenges faced by the health sector, there is need for governments to increase their resource commitments to the health sector. Estimates for achieving the grand convergence also suggest that significant financial commitment from domestic and external sources is crucial if lower-middle income countries like Ghana and Kenya are to achieve major global health transformations over the coming 20 years. The estimates also point to the fact that these countries stand to reap significant economic gains from health investment. The discussions so far point to a safe conclusion that creating additional fiscal space for health is inevitable for lower-middle income countries. In this report, a number of options were explored as potential avenues to raise additional resources to support the activities of the health sector. The avenues through which this can be done include: (i) improved tax revenue (ii) enhanced efficiency (ii) external sources of revenue (iv) increased borrowing. Some potential sources of additional resources were also identified for the National health insurance scheme. These include (i) improvement in premium rate and collection (ii) increasing the 2.5% tax rate for the NHIL or broadening the tax base (iii) improved efficiency in the operations of the scheme could also help raise additional resources.
References


