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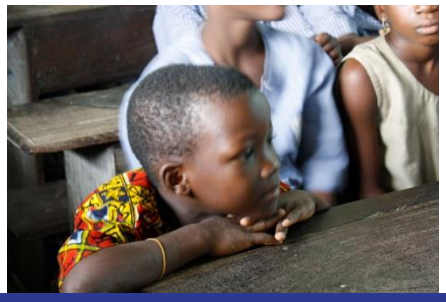

UNIVERSAL COVERAGE OF ESSENTIAL HEALTH SERVICES IN SUB-SAHARAN AFRICA: PROJECTIONS OF DOMESTIC RESOURCES

August 2013
This publication was produced for review by the United States Agency for International Development.
It was prepared by Carlos Avila, Catherine Connor and Peter Amico for the Health Finance and Governance Project.

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government.

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ACRONYMS

DHS	Demographic and Health Survey
DRC	Democratic Republic of Congo
G20	Group of twenty major economies
GDP	Gross domestic product
GGHE	General Government Health Expenditures
HI	High income
HLTF	High-level task force
IMF	International Monetary Fund
LI	Low income
LMI	Lower middle income
MDG	Millennium Development Goals
NHA	National Health Accounts
OOP	Out-of-pocket
SSA	sub-Saharan Africa
THE	Total health expenditure
UMI	Upper-middle income
USD	U.S. dollars
WHO	World Health Organization
USAID	United States Agency for International Development

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EXECUTIVE SUMMARY

Background

High-level advocacy to mobilize more funding for health dominated the first decade of the new millennium, from the Commission on Macroeconomics and Health in 2001 to the Task force on Innovative International Financing for Health Systems in 2009. During the same decade, some African countries experienced unprecedented economic growth as well as improvements in governance, trade, health status, and life expectancy. Given the region's healthy economic outlook, will resource mobilization for health still be the imperative in 2020? The purpose of this paper is to look ahead at the region's health financing priorities by projecting domestic health spending per capita to 2020 relative to an internationally accepted target for universal coverage of essential health services.

Methods: We established a baseline level of domestic health spending for 43 sub-Saharan African countries using data from National Health Accounts and the World Health Organization Global Health Observatory. We developed two policy-relevant assumptions to project domestic health spending to 2020: (1) domestic spending will increase with economic growth and, (2) along with economic growth, government expenditures allocated to health will increase by one percentage point per year until they reach the Abuja commitment of 15 percent of total government expenditures.[1] We used the cost of an internationally accepted essential package of health services, reported as $60 per capita[2] to determine when countries would reach the financing target and estimate health financing gaps.

Key Findings

- Currently, 12 of 43 African countries, including Angola, Gabon, Namibia, and South Africa, already spend at least $60 per capita on health from domestic sources.
- Assuming health expenditure continues to increase with economic growth, nine additional countries will reach the spending target by 2020, bringing the total to 21 countries.
- Assuming that African governments allocate more public funds to health by meeting the Abuja commitment in addition to increasing health expenditures based on economic growth, we find the following:
    - A total of 29 countries would reach the $60 per capita spending target by 2020.
    - Fourteen countries would still not meet the spending target, and an estimated health financing gap of $8.2 billion would remain.

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[1] In September 2000, 189 heads of state adopted the Millennium Declaration designed to improve social and economic conditions in the world's poorest countries by 2015. This drew attention to the shortage of resources necessary to improve health in low income settings that resulted in the Abuja Declaration. In April of 2001 heads of state of African Union countries met and pledged to set a target of allocating at least 15% of their annual budget to improve the health sector.

[2] Figure is in 2010 USD

- Five countries, including Central African Republic, Democratic Republic of the Congo, Ethiopia, Gambia, and Madagascar, require special attention as they would not be able to fund even $40 (U.S. dollars) per capita by 2020.
- Out-of-pocket expenditures as a share of total health expenditures are projected to fall over the same time period.
- Private spending from employers, insurance companies, and nongovernmental organizations is expected to reach $30 billion, representing 19 percent of total health sector expenditures in 2020.

- Assuming that external assistance grows at the same rate as the Group of Twenty major economies (G20),[3] it is projected to reach $9.6 billion by 2020, which would suffice to cover the estimated health financing gap of $8.2 billion under the Abuja assumption. However, under the economic growth assumption alone, the financing gap is estimated at $14.5 billion and would not be met by external assistance.

Implications

The analysis suggests that in less than a decade, more than half of sub-Saharan Africa countries (67 percent) would be able to spend over $60 per capita on health through both economic growth and by making health a public priority by fulfilling the Abuja commitment. However, some countries will still need external assistance to meet their population's basic needs. Moreover, the assumption that governments spending $60 per capita on health will ensure universal access to essential services is far from assured. Of the 12 countries that already spend more than the $60 target, none (with the possible exception of Seychelles) provides essential health services to all their citizens. The financing target is not an end on its own and requires complementary governance actions. Countries and their partners need to not only mobilize resources but also to emphasize other health financing priorities, namely efficient allocation to essential health services and underserved populations, improved risk pooling, and strategic purchasing for quality and efficiency.

[3] External funding from donor countries was projected to 2020 at the same rate of growth as G20 countries' economies using economic outlook, analysis and forecasts from the Organization for Economic Co-operation and Development (OECD).

1. INTRODUCTION

The World Health Organization (WHO) kicked off the first decade of the new millennium by making a strong case for mobilizing more resources for health. In 2001, the Commission on Macroeconomics and Health [1] concluded that "…extending the coverage of health services and a small number of critical interventions to the world's poor could save millions of lives, reduce poverty, spur economic development, and promote global security." The decade closed with another high-level push for "More and better resources…if the health Millennium Development Goals are to be reached in 2015 [2]." The first six of the 10 recommendations by the Taskforce on Innovative International Financing for Health Systems [3] aimed to raise an additional $10 billion per year for health to reach $60 per capita. Of this total, 60–80 percent of the additional funds were targeted to sub-Saharan Africa (SSA).

The first decade also witnessed economic growth rates near 5 percent and policy improvements in SSA that have led to greater political stability and poverty reduction [4, 5]. In many African countries, child mortality fell about twice as fast from 2005 to 2010, as during the early 2000s and 1990s [6].

As the second decade unfolds, it is useful for the region to look ahead at its health financing priorities. By 2020, will resource mobilization for health still be the imperative? Given the region's healthy economic outlook, the purpose of this paper is to explore the following questions:

- Can the region's continued economic growth lift some African countries' domestic health spending to the target of $60 per person per year by 2020?
- If in addition to economic growth, African governments fulfilled the Abuja commitment to allocate 15 percent of total public spending to health, which countries would reach the spending target of $60 per person per year by 2020?
- What is the projected impact of these developments on household out-of-pocket (OOP) expenditures on health, the major obstacle to equitable access to care?
- Under these optimistic assumptions, what financing gap remains in 2020 and what is the implication for foreign assistance?
- Overall, what are the implications for countries and donors?

The next section summarizes the methodology used for establishing the baseline health spending in 2010 and for the two assumptions to project domestic health spending through 2020. Section 3 presents the findings for domestic health spending for 2010 (baseline) and the projections to 2020 for the two assumptions. Findings are presented in terms of the number of countries that will reach the $60 per capita target, the level of household spending, and the financing gap. Section 3 also presents projections of external assistance to meet the remaining financing gap in 2020. Section 4 looks at the implications of these findings for countries and donors.

2. METHODS

This section presents the methods and assumptions used to project domestic health spending under two policy relevant assumptions and to estimate the gap to finance universal coverage of a set of essential health services by 2020. All dollar figures are reported in 2010 constant U.S. dollars (USD).

Baseline Estimates of Health Spending

To establish baseline health spending for countries in SSA, we analyzed health spending from 43 countries. We obtained estimates of total health spending per capita from the WHO Global Health Observatory from 33 countries [7]. Detailed information by funding source (government, private, and international) was available from National Health Accounts (NHA) data from 10 countries [8]. NHA data also provided information regarding spending by financing source. We used the in-depth data on domestic health spending from low- and lower middle-income countries with NHA to adjust government and non-OOP private spending figures for the remaining countries of comparable income level[4]. GGHE (with donor on-budget funds removed) and private expenditures, both OOP and non-OOP, were combined to comprise domestic expenditures. A series of assumptions, described below, were used to forecast domestic spending and to present financing trajectories by domestic source (GGHE, OOP, and non-OOP private expenditures) from 2010 to 2020. All 43 countries were included in the final analysis.[5]

Projection of Economic and Population Growth

We used International Monetary Fund (IMF) projections of gross domestic product (GDP) per capita, GGHE, and population growth through 2016 for low-income and lower middle-income countries in SSA [10]. We used each country's average projected growth rate between 2010 and 2016 to project GDP per capita for the remaining years of 2017–2020. Cote d'Ivoire was projected from 2010 using the growth rates from 2007–2010 due to the lack of IMF projections.

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[4] Specifically, we subtracted the on-budget donor funds from general government health expenditures (GGHE) in the 10 countries with NHA data. We then estimated the adjusting factor using the average relative difference in share of THE between NHA and Global Health Observatory. For GGHE, the average relative difference in share was 52%; and for private non-OOP 41%. We applied those factors to adjust the other countries' GGHE estimates commensurately [9] (see Annex A). The same method was used to adjust external support to non-OOP private expenditures.

[5] Angola, Benin, Botswana, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Equatorial Guinea, Eritrea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Mauritius, Mozambique, Niger, Nigeria, São Tomé and Principe, Senegal, Seychelles, Sierra Leone, South Africa, Swaziland, and Togo were in the WHO Global Health Observatory. NHA data from low- and lower-middle income countries were available for Burkina Faso, Democratic Republic of the Congo, Ethiopia, Kenya, Malawi, Mali, Rwanda, Tanzania, Uganda and Zambia. NHA data was used for Namibia, but it wasn't included in the correction factor calculation because Namibia is an upper middle-income country. Liberia's 2009-10 Institutional Spending Report listed detailed NHA figures for GGHE and Non-OOP private expenditures, the authors combined these detailed NHA figures with OOP figures from the GHO to obtain domestic spending. Djibouti, Mauritania, Sudan, Somalia, and Zimbabwe did not have adequate information from either source and, therefore, were not included in the analysis.

Projection of Domestic Health Spending Considering Economic Growth

A large body of evidence shows a strong and positive correlation between national income (GDP) and domestic expenditure on health care [11-14]. We used the following income elasticities (see Box 1) for each source of domestic health spending:

- **Government:** Most of the studies analyzing the determinants of government health expenditures report a consistent positive correlation with GDP. Xu and Murray found that government health expenditures increase at the same rate as GDP in low-income countries [15, 16]. Lu, et al. found that public financing for health doubled in low- and middle-income countries between 1995–2006 and attribute this increase to rising GDP and increases in the share of government spending on health [17]. Based on these published findings [18], we assumed that the ratio of the growth rate in general government health spending to the growth rate in GDP per capita will be 1.305, 0.557, 0.661, and 0.702 for low, lower middle, upper middle, and high-income countries, respectively. For example, for each 1% increase in GDP per capita, GGHE was assumed to increase by 1.305%.

Box 1: Income Elasticity

Income elasticity of demand measures the relationship between a change in the quantity of a good demanded versus the change in the income of the people demanding the good.

Overall, as GDP increases, domestic spending on health increases. It is calculated as the ratio of the percentage change in demand to the percentage change in income. For example:

- If, in response to a 10% increase in income, the demand for health services increased by 13%, the income elasticity of demand would be 13%/10% = 1.3.
- If, in response to a 10% increase in income, the demand for health services increased by 6.5%, the income elasticity of demand would be 6.5%/10% = 0.65.

- **Private non-household:** These private sources include employers, insurance companies, and nongovernmental organizations. Most reports in the literature focus on public expenditures. Govindaraj reported disaggregated data for government and private expenditures. Income elasticities of private health expenditures for low-, middle- and high-income countries were 1.26, 0.95, and 0.66, respectively [19].
- **Private household:** This private source is household OOP spending on health goods and services, and co-payments. Based on published findings [18], we assumed that the ratio of the growth rate in OOP spending to the growth rate in GDP per capita will be 1.098, 0.869, 0.842, and 1.503 for low-lower middle, upper middle, and high-income countries, respectively.

Projection of Domestic Health Spending Considering Fulfilling the Abuja Commitment

In addition to economic growth, political commitments suggest the possibility of accelerating government spending on health. The Abuja Declaration is a signed commitment by 53 African Union member states to increase health spending by allocating at least 15 percent of their annual government expenditures to the health sector [20]. Therefore, under our second assumption, governments' overall expenditures allocated to health are assumed to increase by one percentage point per year until their share of health spending reaches the Abuja commitment of 15 percent of total government expenditures [21]. Given the diversity in national income and government expenditures, countries will reach the spending target of $60 per person per year in various years between now and 2020. While some countries already exceed the spending target, other countries will reach 2020 with a funding gap. The two assumptions are summarized in Table 1 below.

Table 1: Summary of assumptions used to project total domestic health spending to 2020

	Economic Growth Assumption	Economic Growth and Abuja Commitment Assumptions
Basic premise	GDP per capita increases each year from 2010–2016 as projected by the IMF [10]. 2017–2020 projections based on average growth during the prior five years.	
General government health expenditure (GGHE)	GGHE spending projected growth rate in relation to a 1% growth in GDP per capita based on published literature [18]: 1.305% for low-income countries 0.557% for lower middle income 0.661% for upper middle income 0.702% for high income	Same as the economic growth assumption plus GGHE, as a percentage of total government expenditures, increases by one percentage point per year until 15% of total government expenditures is reached.
Private non-household (employers, insurance)	Private non-household spending projected growth rate in relation a 1% growth in GDP per capita based on published literature [19]: 1.26% for low-income countries 0.95% for middle income 0.66% for high income	Same as the economic growth assumption
Private out-of-pocket household expenditures (OOP)	OOP spending projected growth rate in relation to a 1% growth in GDP per capita based on published literature [18]: 1.098% for low-income countries 0.869% for lower middle income 0.842% for upper middle income 1.503% for high income	Same as the economic growth assumption

Financing Targets and Gap Analysis

Several costing exercises for the delivery of high impact priority health services in resource-limited settings are available [22]. A recent and more detailed attempt was undertaken by a High-Level Task force (HLTF) on Innovative International Financing for Health Systems in 2007, and this was consistent with previous estimates [3]. The task force estimated the costs of the disease-specific and health system interventions required to meet the health Millennium Development Goals (MDGs) in 49 low-income countries. The cost estimate was broken down into capital expenditures, health workforce, drugs, and supplies [23]. This estimation targets a health system that has "a reasonable level of functionality to address a formidable burden of disease" with levels of health MDGs services reaching universal coverage.6 When it comes to HIV, the package of services includes mass media campaigns, testing, services addressing the needs of key populations (sex workers, intravenous-drug users, MSM) treatment of STIs, post-exposure prophylaxis for health workers, prevention of mother-to-child transmission and

[6] Note that for some services, coverage levels are country specific. Details on the package of services considered by this target can be found in Annex 3 of the report: "Constraints to Scaling Up Health Related MDGs: costing and Financial Gap analysis: Background to the Working Group 1 report to the Taskforce on Innovative International Financing for Health Systems". WHO 23 September 2009, pages 49-53. Available at: http://www.who.int/choice/publications/d_ScalingUp_MDGs_WHO_report.pdf

treatment and care including antiretroviral therapy, home based care and palliative support. All the low-income countries in Africa were included in the HLTF estimates. The task force estimated the overall cost of priority health services to be $54 per capita in constant 2005 US dollars. Because the timeframe for this analysis is 2010–2020, the $54 per capita figure was converted to $60 per capita in constant 2010 USD.

The financing gap was estimated for each country by comparing the per capita financing target of $60 to the current and projected per capita health spending from domestic sources of funding.[7] As presented above, total domestic health expenditures per capita is the sum of government domestic, OOP, and non-OOP private expenditures. We defined countries attaining the per capita expenditure level of $60 as reaching the financing target and having a zero gap.

In our analysis we removed external funds from domestic funding figures and analyzed them separately. We used the growth rate of the G20 countries to project the growth in external assistance.

Limitations

- The projections in this paper are modeled based on IMF projections of economic growth, which are not certain. While health spending on average has tended to increase with economic growth, individual country income elasticity varies.
- Similarly, the assumption that governments will choose to fulfill the Abuja commitment is optimistic given that very few countries have met the Abuja commitment since it was declared in 2001. In the future, countries will respond differently based on their priorities. For example, countries experiencing active conflict are less likely to increase their investments in social sectors.
- The WHO Global Health Observatory data on government health expenditures includes on-budget donor funding. The authors used the limited sample of 10 countries with detailed NHA data to adjust the estimate of GGHE and non-OOP private spending for the other countries. Estimates of government health spending would be significantly improved if all donor and government funding were reported separately at the source level in the WHO Global Health Observatory dataset.
- OOP data and projections are national averages. The analysis would be strengthened by using OOP expenditure data by income quintile because there is evidence that each quintile has different income elasticities for health spending [24].
- Limitations of the HLTF analysis to estimate the cost of a package of essential services are presented in their publications. For example, the rapid growth of noncommunicable diseases, resulting in a dual burden of disease in Africa, plus the introduction of new technologies, are very likely to require expansion of the package of services and its cost will rise above the $60 per capita. The cost maybe insufficient to cover innovations in HIV prevention and care. For example, the new WHO HIV guidelines recommend antiretroviral therapy to all children with HIV under 5 years of age and to all HIV-infected adults with a CD4 cell count below 500 cells/mm3. To prevent mother to child transmission, the use of single dose of ARV is not recommended and now HIV infected pregnant women or breastfeeding are recommended to start full ART irrespective of CD4 cell count.

[7] The term constant dollars refer to a metric for valuing the price of something over time, without that metric changing due to inflation. To ensure comparability, all dollar figures for both the financing target as well as the projected health spending in the paper are reported in 2010 constant U.S. dollars (USD).

3. FINDINGS

3.1 What is the current health spending outlook among the countries in SSA?

The year 2010 is the baseline year for the projections presented in the subsequent section. As of 2010, 12[8] of the 43 SSA countries already were spending at least $60 per capita on health. A review of the change in the level and mix of health financing over the last 10 years shows some encouraging trends (Table 2).

Total health expenditure (THE) in SSA equaled $9.7 billion in 2000 and increased to $68.7 billion in 2010. The SSA regional average of THE per capita increased 452 percent, from $16 in 2000 to $88 in 2010. Government funding, as a percentage of THE, remained constant at 37 percent during the same timeframe. OOP spending declined slightly as a share of THE, from 30 percent to 28 percent. Private spending increased five-fold, from $4 to $21 per capita. External assistance increased from $1 to $11 per capita.

Table 2: Health Spending in SSA by Source (USD Per Capita and as % of Total Health Expenditures) 2000-2010, Population Weighted

	2000		2010		2000-2010
Source of heath expenditure	USD per capita	As % of THE	USD per capita	As % of THE	% Change of USD
Total health expenditure (THE)	$16	100%	$88	100%	452%
Government	$6	37%	$32	37%	433%
Household out-of-pocket (OOP)	$5	30%	$24	28%	385%
External	$1	5%	$11	12%	1000%

The regional trends presented above disguise health financing patterns among groups of countries in SSA. For example, the majority of the private funding is concentrated in Botswana, Namibia, and South Africa.

The 12 SSA countries that already were spending at least $60 per capita on health from domestic sources in 2010 had varied income levels. Using the World Bank classification by income level, one country was high income, six were upper middle income, and five were lower middle income. For reference, Table 3 shows countries by income quartile in 2010 with the 12 countries already at the HLTF target listed in italics[9].

[8] Angola, Botswana, Cape Verde, Equatorial Guinea, Gabon, Lesotho, Mauritius, Namibia, Seychelles, South Africa, São Tomé and Principe, and Swaziland.

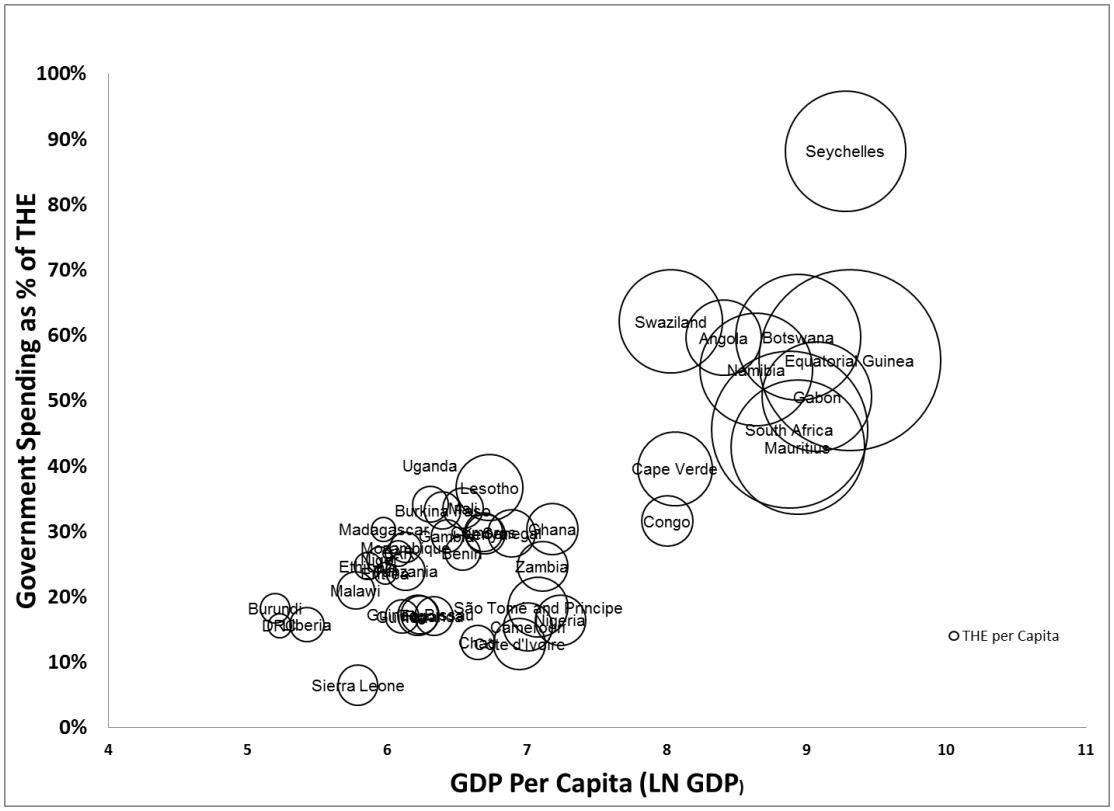
[9] Note that the divisions are different from the IMF/World Bank classification of lower, middle, and upper income countries. In order to make the graphical presentations less condensed and the visual analysis clearer, the authors divided the countries into quartiles using their 2010 GDP figures.

Table 3: African countries by income quartile (GDP per capita in 2010)
(italicized countries are already spending at the HLTF target from domestic sources)

Quartile	1st Quartile	2nd Quartile	3rd Quartile	4th Quartile
GDP Range	GDP per capita < $450	GDP per capita between $450 and $800	GDP per capita $801–$3,000	GDP per capita > $3,000
Countries	Burundi, Democratic Republic of Congo, Liberia, Malawi, Sierra Leone, Ethiopia, Niger, Madagascar, Eritrea, Central African Republic, Guinea	Mozambique, Uganda, United Republic of Tanzania, Guinea-Bissau, Togo, Rwanda, Burkina Faso, Gambia, Benin, Mali, Chad	Comoros, Kenya, ***Lesotho,*** Senegal, Cote d'Ivoire, Cameroon, ***São Tomé and Príncipe,*** Zambia, Ghana, Nigeria, Congo	***Swaziland, Cape Verde, Angola, Namibia, South Africa, Mauritius, Botswana, Gabon, Seychelles, Equatorial Guinea***

Figure 1 shows two positive correlations. First, the upward slope of all the bubbles shows the positive correlation between GDP per capita and the share of government expenditures for health, which is in line with existing theory and historical patterns in other regions [25]. Although there is a clear positive correlation between national income and government share of health spending, the efficient allocation of health resources may vary across level of income, health expenditure and even burden off disease. Second, total domestic health spending per capita (represented by the size of the bubble) is greater among the 12 countries listed as having already achieved the HLTF target based on government spending alone.

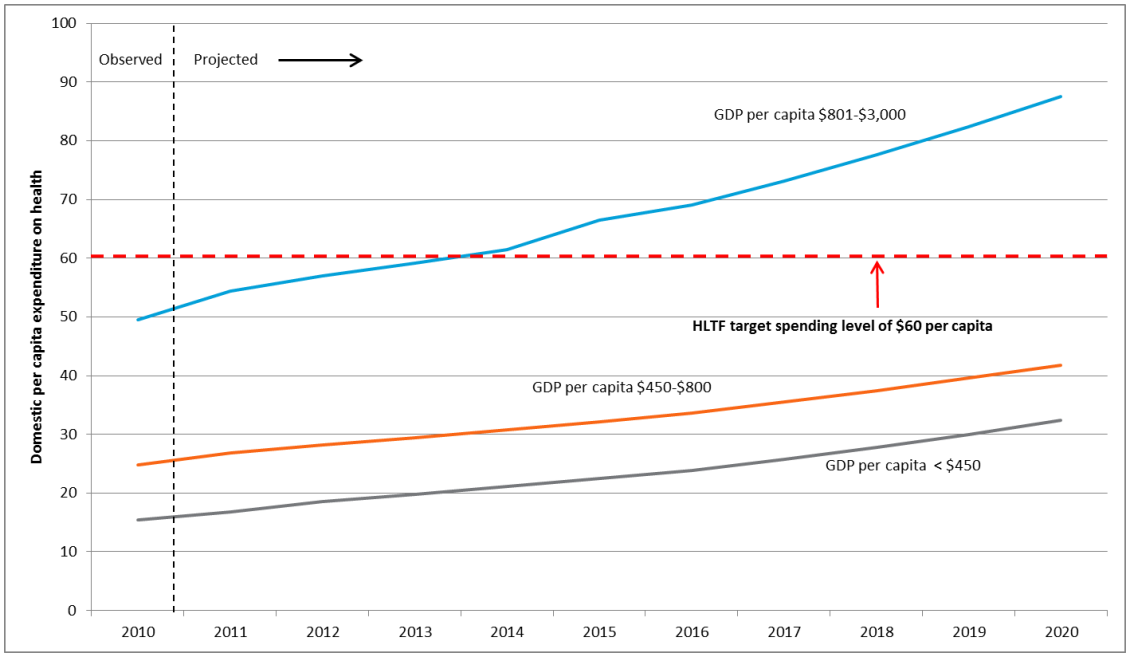
Figure 1: Total domestic health spending per capita (bubble size) is greater in countries with higher GDP per capita and higher government spending as a share of THE (2010)



3.2 Can the region's continued economic growth lift some African countries' domestic health spending to the target of $60 per person per year by 2020?

If SSA countries' domestic health spending is projected to grow as a function of GDP growth, nine additional countries – Ghana, Nigeria, Cameroon, Congo, Côte d'Ivoire, Zambia, Kenya, Mali, and Sierra Leone – are expected to achieve the HLTF target, for a total of 21 countries by 2020 (see Annexes B and D). Figure 2 shows the average domestic health spending per capita for countries grouped by income quartile, excluding the high-income group because all of these countries already reached the HLTF target. Clearly economic growth alone will not lift health spending to desired minimal levels among the bottom two quartiles of GDP per capita (GDP <$1,500 per capita). Only two countries in the third income quartile will show a financing gap: Senegal and Comoros. The countries with the largest financing gaps in 2020 under this assumption are the Democratic Republic of the Congo (DRC) ($3.9 billion), Ethiopia ($3.2 billion), and Uganda ($1.2 billion) (see Annex C). See Annex F for projections of THE per capita based on economic growth.

Figure 2: Growth in domestic health spending (public, private, and households) based on economic growth 2010–2020 for SSA countries: country averages for the first three income quartiles



3.3 If in addition to economic growth, African governments met their commitments to allocate 15 percent of total public spending to health, which countries would reach the target by 2020?

Under this assumption an additional eight countries – Benin, Mozambique, Mali, Chad, Burkina Faso, Comoros, Eritrea, and Tanzania – are projected to reach the HLTF target, for a total of 29 countries by 2020 (see Annexes B and E). Table 4 shows the year in which each country will reach the spending target if they work toward meeting the Abuja commitment by increasing the share of government allocations to health by one percentage point per year. See Annex G for projections of THE per capita based on economic growth and fulfillment of the Abuja commitment.

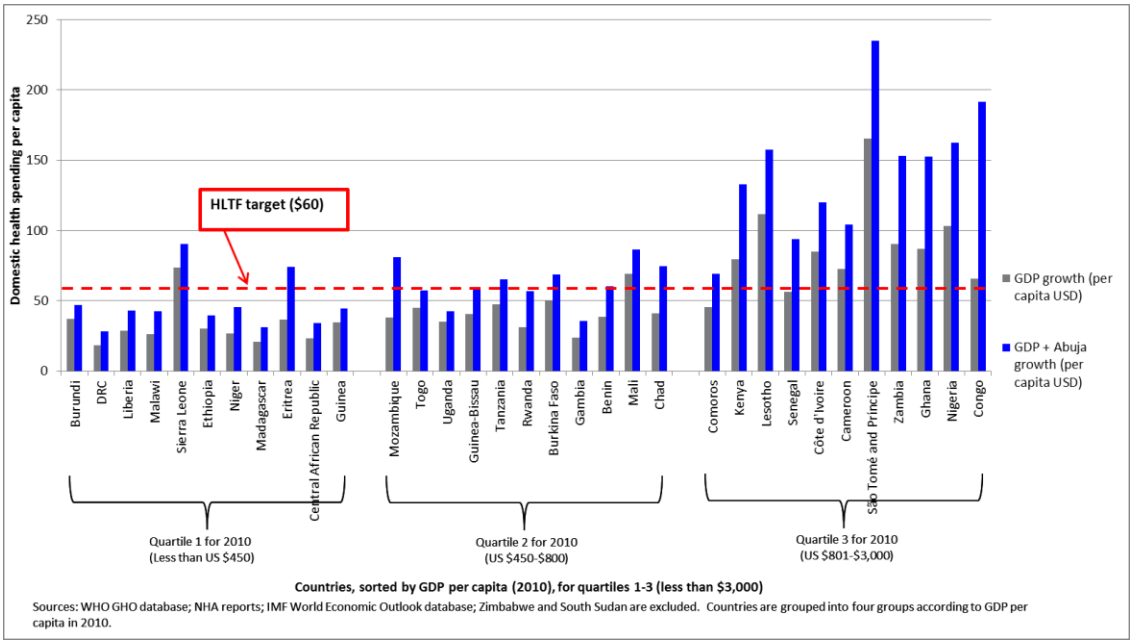
Table 4: Countries reaching the $60 per capita spending target through health financing from domestic sources (public, private, and households)

Year	Based on Economic Growth Assumption		Economic Growth + Abuja Commitment Assumptions	
	Countries	Count	Countries	Count
2010	Angola, Botswana, Cape Verde, Equatorial Guinea, Gabon, Lesotho, Mauritius, Namibia, São Tomé and Príncipe, Seychelles, South Africa, Swaziland	12	Angola, Botswana, Cape Verde, Equatorial Guinea, Gabon, Lesotho, Mauritius, Namibia, São Tomé and Príncipe, Seychelles, South Africa, Swaziland	12
2011	Congo, Côte d'Ivoire, Nigeria	15	Congo, Côte d'Ivoire, Nigeria	15
2012			Cameroon, Ghana, Zambia,	18
2013				
2014	Cameroon, Ghana, Zambia	18		
2015			Kenya, Mali, Senegal	21
2016			Sierra Leone	22
2017				
2018	Kenya, Mali, Sierra Leone	21	Burkina Faso, Chad, Comoros,	25
2019			Eritrea, Mozambique, Tanzania	28
2020			Benín	29

Figure 3 shows the total domestic resources that will be available to countries if health financing grows at a pace equal to economic growth (see grey bar on the left for assumption 1) and the additional increase in domestic health spending if countries also fulfill the Abuja commitment (see blue bar on the right for assumption 2). While not all of the 11 lower quartile countries will be able to reach the HLTF target of $60 per capita, these countries will be able to reduce their financing gap by about 40 percent. Figure 4 includes high-income countries, though they have already met the HLTF target as of 2010.

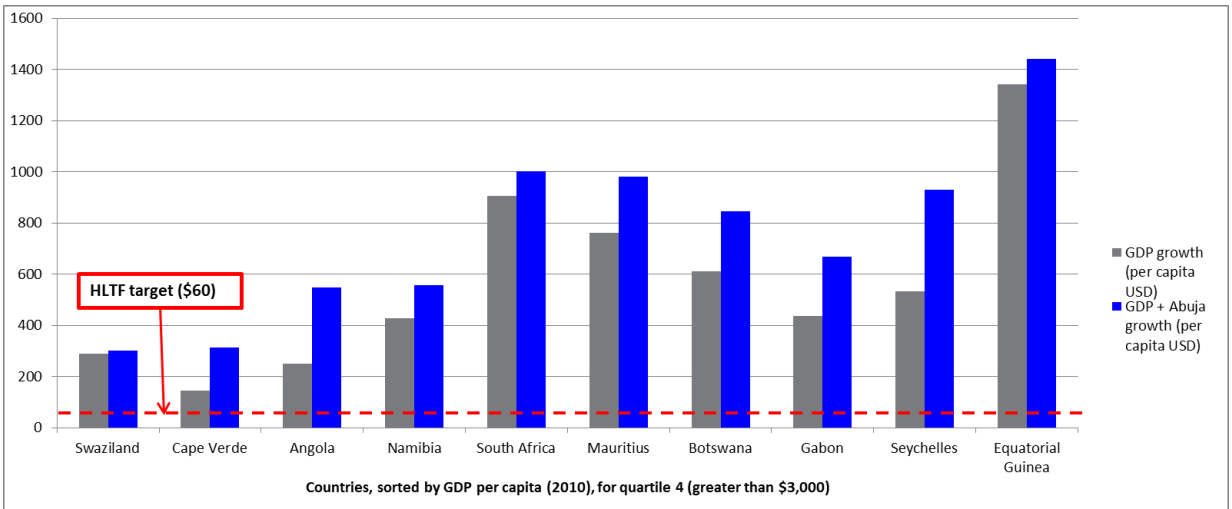
The assumption that countries will increase the proportion of government spending on health to 15 percent to fulfill the Abuja commitment should be taken with caution. The Abuja declaration has drawn more political attention than it has budgetary action. Ministers of finance do not feel compelled to comply with the Abuja commitment. In 2011 WHO publication, findings showed that only Tanzania had reached the target. Overall, 26 countries had increased the proportion of government expenditures allocated to health and 11 had reduced such expenditures since 2001. In the other nine, there was no obvious trend up or down maintaining health funding essentially flat [26].

Figure 3: Per capita domestic health spending in 2020 under economic growth only (left-hand columns) and economic growth with the Abuja commitment (right-hand columns)



Sources: WHO GHO database; NHA reports; IMF World Economic Outlook database; Zimbabwe and South Sudan are excluded. Countries are grouped into four groups according to GDP per capita in 2010.

Figure 4: Per capita domestic health spending in 2020 under economic growth only and economic growth with the Abuja target, for countries in quartile 4 in 2010

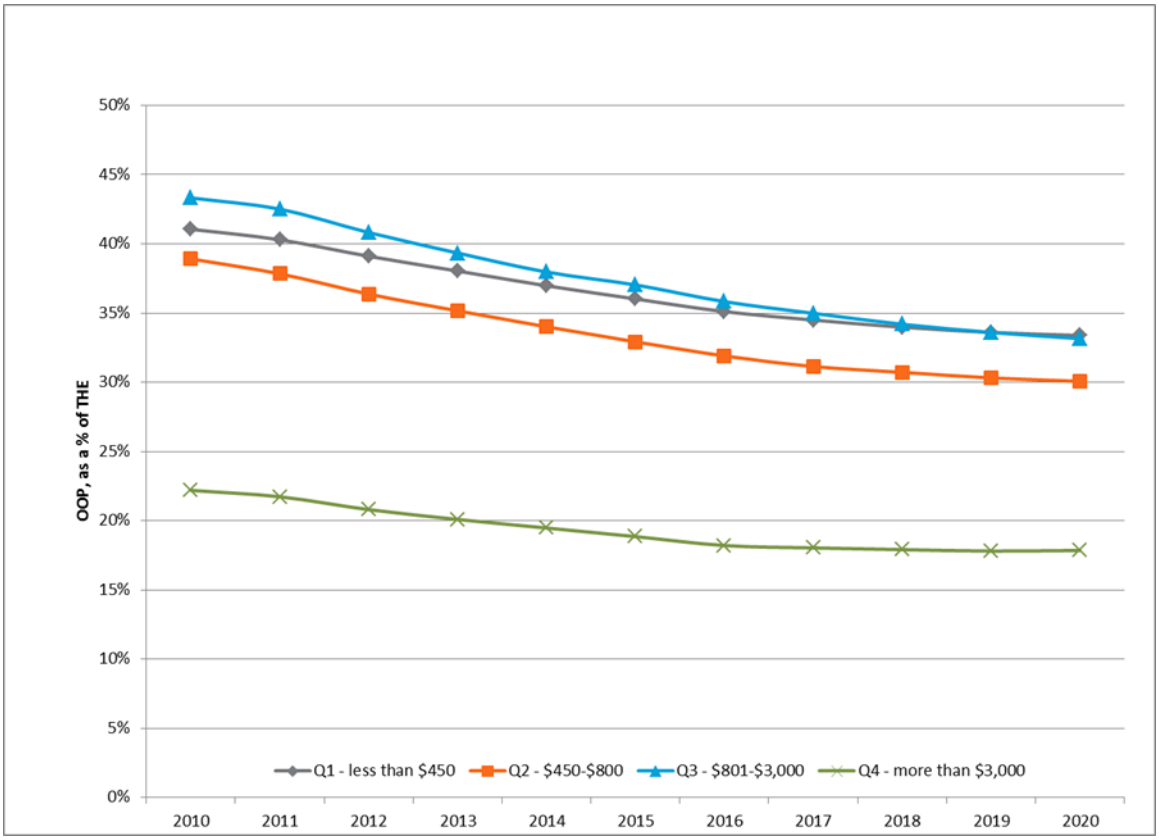


Sources: WHO GHO database; NHA reports; IMF World Economic Outlook database; Zimbabwe and South Sudan are excluded. Countries are grouped into four groups according to GDP

3.4 What is the projected impact of these developments on household out-of-pocket expenditures on health?

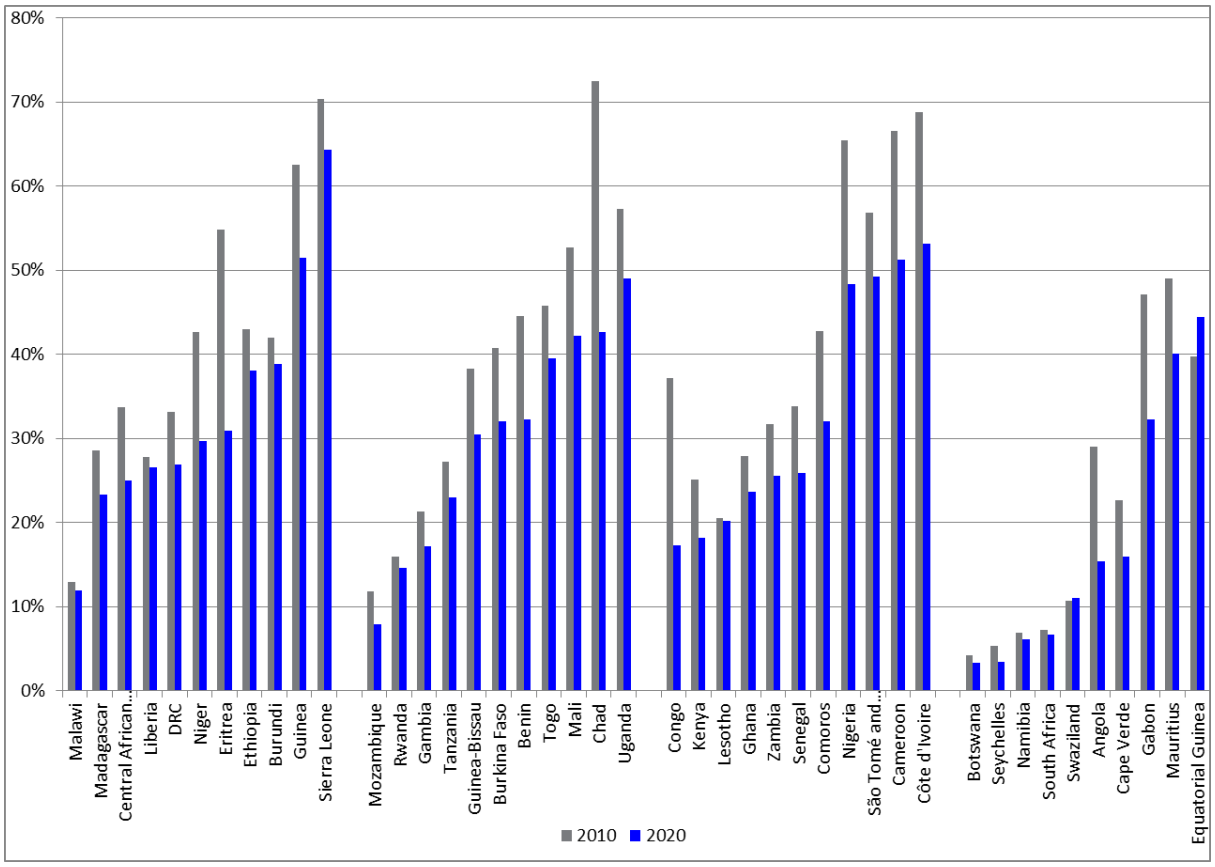
The regressive nature of OOP spending is of particular interest to policymakers. As noted earlier, nearly 30 percent of health spending in SSA is from OOP spending [27]. What is the impact of economic growth and rising government health spending on OOP as a share of THE? Under both assumptions, OOP expenditures grow at a slower rate than government expenditures and, therefore, OOP spending, as a share of THE, is projected to fall over time (Figure 5). The relative contribution of OOP expenditures to THE among the first three quartiles of countries is projected to decrease by almost 10 percentage points from its 2010 share and by less than 5 percent among countries in the upper income quartile.

Figure 5: Projected OOP spending as a percentage of THE by country income quartile assuming economic growth and Abuja commitment is met (2010–2020)



However, the 13 countries[10] in which household contributions still represent more than 40 percent of THE are projected to continue to rely heavily on OOP spending. Even among the upper middle and high-income countries, Mauritius, Gabon, and Equatorial Guinea will continue to rely on high levels of OOP spending by the population. Figure 6 compares OOP payments as a percentage of THE for 2010 and 2020 for each country grouped by income quartile.

Figure 6: Projected OOP spending as a share of THE by country grouped by income quartile in 2010 and 2020 (assuming economic growth and Abuja commitment are met)



3.5 Assuming continued economic growth and that the Abuja commitment is met, what financing gap will remain in 2020?

When we assume that all domestic sources of health spending will grow with GDP and government health spending will reach the Abuja commitment, Mozambique, Kenya, Sierra Leone, Benin, Chad, Tanzania, Eritrea, Burkina Faso, Comoros, and Mali are all low-income countries projected to be able to reach the $60 per capita target by 2020. However, 14 African countries would still show a significant

[10] Central African Republic, Guinea, Sierra Leone, Togo, Mali, Chad, Guinea-Bissau, Uganda, São Tomé and Príncipe, Nigeria, Cameroon, Côte d'Ivoire, and Mauritius.

financing gap in 2020 and not be able to reach $60 per capita from domestic sources alone. The collective gap is estimated to total $8.2 billion or 5 percent of total health financing in the region. Table 5 shows the funding gap by country under the two assumptions. Eight countries under the economic growth assumption and four countries under the optimistic assumption still have a funding gap of more than $500 million. DRC, Ethiopia, Uganda, and Madagascar will have the highest projected gaps in 2020. DRC will not be able to fund even $30 per capita in domestic health expenditure by 2020 under the Abuja commitment assumption. Relying only on economic growth, seven low-income countries will not be able to fund $30 per capita. This is less than half of the required funding.

Table 5: Funding gap under the two assumptions for total domestic health financing growth by 2020 (million US$)

	Economic Growth Assumption	Economic Growth plus Abuja Commitment Assumptions
Democratic Republic of the Congo	3,948.66	2,995.03
Ethiopia	3,173.63	2,196.60
Uganda	1,196.98	845.40
Madagascar	1,061.57	782.33
Malawi	695.92	360.00
Niger	658.08	287.76
United Republic of Tanzania	638.05	-
Mozambique	571.58	-
Rwanda	357.08	36.70
Guinea	337.87	204.00
Benin	274.83	-
Chad	249.85	-
Burundi	229.25	131.29
Central African Republic	216.75	154.04
Burkina Faso	186.76	-
Liberia	184.48	98.45
Eritrea	166.51	-
Togo	135.63	23.95
Gambia	87.51	59.15
Senegal	61.45	-
Guinea-Bissau	40.56	0.91
Comoros	11.85	-
Total Funding Gap	14,484.84	8,175.62

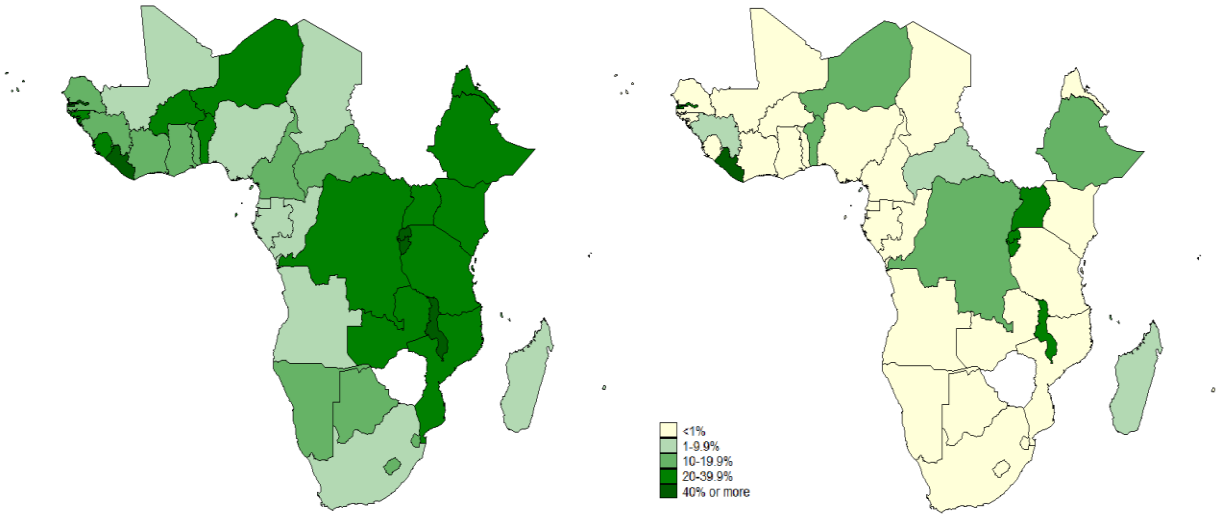
3.6 What is the implication for foreign assistance?

The optimistic assumption projects that in 2020, SSA's population of 1 billion will collectively spend nearly $162 billion on health, more than double the $69 billion spent in 2010. This total is estimated to be composed of $89 billion (55 percent) from public sources, $30 billion (19 percent) from private sources, and $43 billion (27 percent) from households. This level of household spending represents a 4-percent reduction in OOP expenditures across all the countries and income levels. However, as presented above, 14 countries will still not be able to reach $60 per capita in domestic health expenditure by 2020 and will face a gap of up to 56 percent of THE in order to reach $60 per capita. For those 14 low-income countries, external assistance will be critical to meet their health needs.

The projections of external funding from donors are based on assumptions about the G20 countries' economies between 2010 and 2020. Two basic assumptions are used to project external assistance: (1) external funding from donor countries will grow at the same rate of growth as G20 countries' economies and (2) recipient countries reaching or exceeding the financing target will be able to pay for essential services and therefore will receive zero external funding.

Figure 7 shows the projected change in reliance upon external assistance between 2010 and 2020 using the projected average G20 growth rates. External assistance as a share of THE is projected to decrease for all the countries that continue to receive assistance and to reach zero for countries attaining the HLTF target. The remaining 14 countries would rely on external funding for more than 35 percent of their required THE. This is a significant decline from the 67 percent observed in 2010.

Figure 7: Changes in external assistance as percentage of THE between 2010 and 2020

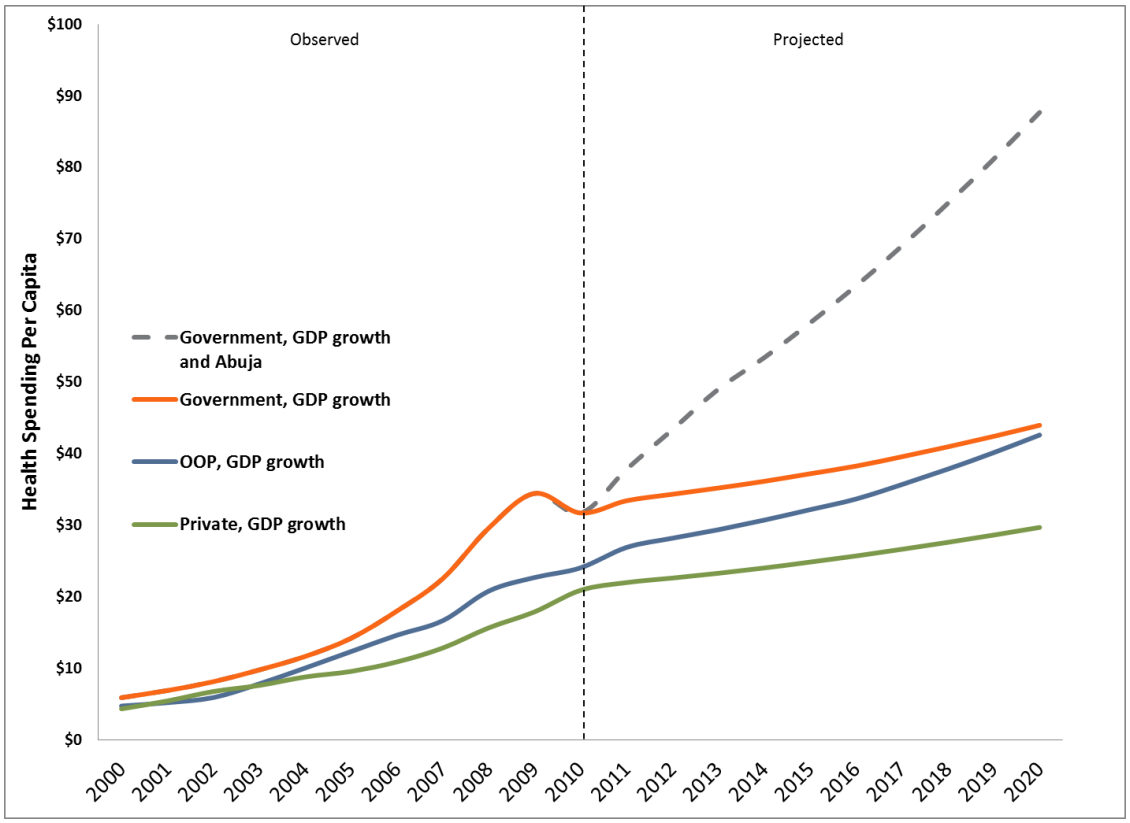


When current external assistance was projected to 2020 at a growth rate equal to the G20 growth, it reached $9.6 billion, which would sufficiently cover the projected $8.2 billion funding gap under the optimistic assumption. Under the economic growth assumption alone, the projected external assistance represents 69 percent of the $14.5 billion projected funding gap.

Figure 8 shows the overall growth in total health spending by source between 2000 and 2020. In summary, the assumed growth of GGHE is driven by the growth of GDP and fulfillment of the Abuja commitment. The growth of OOP and private spending is driven by GDP growth. External assistance is projected to grow at the same rate as G20 GDP. The figure shows that GGHE could be the most significant funding source for lifting THE per capita, should countries fulfill the Abuja commitment. If

governments do not increase their spending to the Abuja commitment level of 15 percent, their funding gap will reach $14.5 billion by 2020, as previously mentioned. Domestic political commitment to fund the health sector emerges as the key predictor of growth in total health spending. Governments and international donors need to put in place mechanisms that will reduce inequities and monitor future expenditures closely.

Figure 8: Growth in total health spending per capita by source assuming economic growth and Abuja commitment 2000–2020



4. WHAT ARE THE IMPLICATIONS FOR COUNTRIES AND DONORS?

We began by observing that the first decade of the new millennium focused on resource mobilization for health. Looking at the future, is this still the long-term imperative for countries and donors?

The analysis has shown that 12 countries in the region already spend more than $60 per capita from domestic sources. Under the optimistic assumption of economic growth and the Abuja commitment, an additional 17 countries could be spending $60 per capita to finance essential health services by 2020. Assuming these 29 countries meet their commitment to Abuja and allocate funds to health and the essential health services, especially for the poor, this would allow external assistance to be targeted to the 14 countries that face a longer term gap (Table 6).

Table 6: Summary of Findings

Current Spending (2010)	Projections Based on Economic Growth Assumption (2020)	Projections Based on Economic Growth and Abuja Commitment Assumptions (2020)
12 countries already meet the HLTF target of spending at least $60 per capita on health from domestic sources	9 additional countries meet the target for a total of 21 22 countries need additional support to close an estimated funding gap of $14.5 billion	17 additional countries meet the target for a total of 29 14 countries need additional support, $8.2 billion funding gap

One overarching implication of the projections, while admittedly very optimistic, is that resource allocation and efficient health spending are at least as important as resource mobilization. The importance of resource allocation is illustrated by the 12 countries that already spend more than the $60 target. None of these countries (with the possible exception of Seychelles) provides essential health services to all their citizens. As evidence for this observation, we used unmet need for family planning as a tracer indicator for access to essential health services (family planning is included in the HLTF package). Six of the 13 countries with data on unmet need for family planning show a considerable gap in the most recent year for which Demographic and Health Survey (DHS) data [28] are available (Table 7).

Table 7: Does spending more than $60 per capita on health ensure coverage of essential services?

Country	Total Health Expenditures per Capita (Constant 2010 USD)	% of Women of Reproductive Age with Unmet Need for Family Planning	Year of DHS and Expenditure Data
Congo (Brazzaville)	$51.69	19.5	2005
Gabon	$121.34	27.9	2000
Lesotho	$77.88	23.3	2009
Namibia	$355.30	20.7	2006-07
São Tomé and Príncipe	$106.31	37.6	2008-09
Swaziland	$197.76	24.7	2006-07

In other words, the assumption that countries spending $60 per capita on health leads to universal access to essential services is far from assured. Most government funding for health is spent on salaries, hospital operating costs, tertiary care, and ministry overheads, not on purchasing essential services. Public spending patterns need to change if reaching the $60 per capita target is to impact population health. Because allocation and spending decisions have political as well as technical and operational dimensions, countries and donors must attend to governance issues as well.

What can countries do now to increase the probability of the desired outcomes and how can donors help? Policy options are available that will enable countries to reach the per capita spending target and ensure that essential services are prioritized to meet the needs of their populations. Each country should lead its own strategic actions, which reflect its specific needs, circumstances, challenges, and constraints.

Countries such as Burundi, Ethiopia, Ghana, and Rwanda are implementing health policy reforms that are reducing OOP expenditures and improving access to services. Burundi has implemented results-based financing nationally [29, 30]. Ethiopia rationalized user fees along with targeted free care and a significant expansion of community health workers [31-33]. Ghana's national health insurance system increased domestic health financing and reduced OOP spending [34, 35]. Rwanda introduced both community health insurance schemes and results-based financing [36-38].

The projections include a growing private sector as a source of health financing. This sector includes employers paying for employee health benefits and private insurance. A regulatory environment with the right incentives is required to encourage private sector financing to grow and contribute positively to public health. Another opportunity to increase health financing from the private sector is through more effective revenue collection from extractive industries. Many countries in Africa are rich in natural resources and are witnessing expansion of extractive industries (oil drilling, mining), often through foreign direct investment. Unfortunately, the revenues generated by these industries do not all flow to the government for public investment. This is a lost opportunity to expand fiscal space. Donors can advocate for transparent accounting of payments made to host governments and how those revenues are spent. International collaboration among countries and donors to improve policy and practice in this area include the Extractive Industries Transparency Initiative and the International Budget Partnership.

The projected decline in OOP spending will only occur if households have access to free (or low cost) services and/or can participate in an insurance system. Low-income households and workers in the informal sector need public subsidies, which mean increased government allocation to health, as the Abuja Declaration calls for.

Meeting the Abuja commitment is a policy choice each country government must face every year. The choice depends on many factors including the credibility of the health sector with the Ministry of Finance and political leaders. Credibility is enhanced when the Ministry of Health fully executes its budget and can demonstrate efficiencies and results.

Allocation to health is also affected by the ability of civil society to advocate for reducing the burden on households and the degree of government accountability to the population. Donors can encourage that accountability and continue to advocate for prioritizing health in terms of poverty reduction, social protection, and economic growth.

Another policy issue is the absorptive capacity of the health system. Without deliberate attention to prioritize investment in rural areas and urban slums, additional resources have a tendency to be captured by established service providers concentrated in urban areas.

Another implication of the model is sustainable population growth. If population growth exceeds the IMF projections, the financing gap will widen accordingly. The population of SSA was 853 million in 2010 with an annual population growth of 2.5 percent. The fertility rate in SSA is higher than any other region in the world, at 4.9 births per woman, and the population is very young; more than 40 percent of the population is under the age of 15 [39]. Support for family planning, women's education, and other factors will be critical to enable governments to meet the health needs of the population.

African governments have the potential to sustainably finance essential health services, which will reduce the burden of spending on households. This requires elevating country and donor attention on resource allocation and efficient health spending. It is clear that improving countries' chances of experiencing a future akin to the optimistic projections presented here requires complementary health financing and governance actions. However, even under an optimistic assumption, 14 countries will continue to show health financing gaps and, therefore, donor support will remain critical to ensuring these countries' ability to provide the basic package of health services to their populations in the coming years. The analysis reiterates that, Africa could provide universal health care coverage of essential services to its populations in the coming decade.

ANNEX A: DIFFERENCE IN EXPENDITURES BETWEEN DETAILED NHA REPORTS AND THE WHO GLOBAL OBSERVATORY DATA

			NHA data (constant 2010 USD per capita)		WHO Global Observatory Data (2010 USD per capita)	
Country	Income Level	Year of NHA	GGHE	Private (non-OOP)	GGHE	Private (non-OOP)
Burkina Faso	LI	2006	$11.85	$1.56	$21.66	$4.17
Democratic Republic of the Congo	LI	2008/09	$2.33	$1.97	$4.23	$3.74
Ethiopia	LI	2007/8	$4.74	$0.65	$8.20	$1.80
Kenya	LI	2009/10	$12.25	$5.22	$14.03	$5.79
Malawi	LI	2009	$7.68	$2.27	$21.15	$4.40
Mali	LI	2004	$14.59	$2.22	$17.18	$0.10
Rwanda	LI	2006	$6.66	$1.82	$30.25	$8.92
Uganda	LI	2006/7	$7.47	$0.71	$10.16	$11.75
United Republic of Tanzania	LI	2009/10	$11.82	$2.03	$14.43	$11.34
Zambia	LMI	2006	$16.45	$8.00	$44.87	$8.70

ANNEX B: GOVERNMENT SPENDING PER CAPITA IN 2020, GROWTH POSSIBILITIES

		Economic Growth Assumption	Economic Growth + Abuja Commitment Assumptions
		GGHE	GGHE
Angola	LMI	$138.24	$435.86
Benin	LI	$14.77	$36.72
Botswana	UMI	$371.47	$605.94
Burkina Faso	LI	$22.24	$41.01
Burundi	LI	$10.67	$20.39
Cameroon	LMI	$12.07	$43.66
Cape Verde	LMI	$84.12	$252.44
Central African Republic	LI	$9.13	$19.71
Chad	LI	$6.57	$40.49
Comoros	LI	$19.62	$43.15
Congo	LMI	$27.70	$153.69
Côte d'Ivoire	LMI	$11.50	$46.73
Democratic Republic of Congo	LI	$4.92	$14.99
Equatorial Guinea	HI	$669.38	$769.45
Eritrea	LI	$12.73	$50.13
Ethiopia	LI	$11.41	$20.56

		Economic Growth Assumption	Economic Growth + Abuja Commitment Assumptions
Gabon	UMI	$217.11	$451.30
Gambia	LI	$12.01	$23.69
Ghana	LMI	$35.09	$100.54
Guinea	LI	$7.53	$17.65
Guinea-Bissau	LI	$10.95	$29.80
Kenya	LI	$37.49	$90.46
Lesotho	LMI	$61.44	$107.35
Liberia	LI	$10.41	$25.09
Madagascar	LI	$10.47	$20.72
Malawi	LI	$14.27	$30.49
Mali	LI	$26.86	$44.20
Mauritius	UMI	$310.79	$530.74
Mozambique	LI	$20.41	$63.01
Namibia	UMI	$270.66	$398.64
Niger	LI	$10.38	$29.03
Nigeria	LMI	$16.90	$76.13
Rwanda	LI	$14.81	$40.84
São Tomé and Príncipe	LMI	$30.60	$100.17
Senegal	LMI	$22.87	$60.60
Seychelles	UMI	$485.69	$881.88
Sierra Leone	LI	$6.88	$23.75

		Economic Growth Assumption	Economic Growth + Abuja Commitment Assumptions
South Africa	UMI	$395.25	$493.13
Swaziland	LMI	$200.57	$213.06
Togo	LI	$15.41	$27.91
Uganda	LI	$8.04	$15.30
United Republic of Tanzania	LI	$25.22	$43.27
Zambia	LMI	$26.99	$89.48

ANNEX C: ESTIMATED PERCENT RELIANCE ON EXTERNAL FUNDING SOURCES IN 2020

Country	Economic Growth Assumption	Economic Growth + Abuja Assumptions
Democratic Republic of Congo	70%	53%
Madagascar	65%	48%
Central African Republic	61%	43%
Gambia	60%	41%
Malawi	56%	29%
Niger	55%	24%
Liberia	52%	28%
Ethiopia	50%	34%
Rwanda	48%	5%
Guinea	43%	26%
Uganda	41%	29%
Eritrea	39%	0%
Burundi	38%	22%
Mozambique	36%	0%
Benin	36%	0%
Guinea-Bissau	32%	1%

Country	Economic Growth Assumption	Economic Growth + Abuja Assumptions
Chad	32%	0%
Togo	25%	4%
Comoros	24%	0%
United Republic of Tanzania	21%	0%
Burkina Faso	17%	0%
Senegal	6%	0%
Angola	0%	0%
Botswana	0%	0%
Cameroon	0%	0%
Cape Verde	0%	0%
Congo	0%	0%
Côte d'Ivoire	0%	0%
Equatorial Guinea	0%	0%
Gabon	0%	0%
Ghana	0%	0%
Kenya	0%	0%
Lesotho	0%	0%
Mali	0%	0%
Mauritius	0%	0%
Namibia	0%	0%
Nigeria	0%	0%

Country	Economic Growth Assumption	Economic Growth + Abuja Assumptions
São Tomé and Príncipe	0%	0%
Seychelles	0%	0%
Sierra Leone	0%	0%
South Africa	0%	0%
Swaziland	0%	0%
Zambia	0%	0%

ANNEX D: HEALTH SPENDING BY SOURCE (AS % OF THE), 2010 AND 2020, BASED ON ECONOMIC GROWTH ASSUMPTION

		2010						2020					
Country	Income Level	GGHE	OOP	Private	External	THE	GDP per cap	GGHE	OOP	Private	External	THE	GDP per cap
Angola	LMI	61.0%	29.6%	9.4%	2.3%	$146.1	$4,477.7	53.6%	32.9%	11.0%	2.4%	$257.9	$9,658.6
Benin	LI	26.8%	44.5%	1.8%	27.0%	$32.7	$689.5	33.3%	51.1%	2.2%	13.5%	$44.3	$1,032.2
Botswana	UMI	64.5%	4.5%	31.0%	8.0%	$382.0	$7,627.5	60.1%	4.7%	34.4%	0.8%	$618.1	$14,102.0
Burkina Faso	LI	33.2%	40.8%	4.4%	21.6%	$35.7	$597.5	36.0%	40.1%	4.6%	19.3%	$61.8	$971.7
Burundi	LI	18.3%	42.0%	9.5%	30.2%	$22.6	$180.1	17.3%	34.4%	8.8%	39.5%	$61.6	$375.5
Cameroon	LMI	15.5%	66.5%	1.6%	16.4%	$61.3	$1,100.6	15.4%	75.7%	1.9%	7.0%	$78.2	$1,688.8
Cape Verde	LMI	39.6%	22.7%	0.6%	37.1%	$144.7	$3,156.6	51.5%	36.3%	1.1%	11.1%	$163.3	$6,219.0
Central African Republic	LI	26.7%	44.2%	2.0%	27.1%	$17.2	$436.0	30.8%	46.1%	2.2%	20.9%	$29.6	$742.1
Chad	LI	13.1%	72.5%	1.0%	13.4%	$30.6	$767.7	9.7%	49.8%	0.7%	39.8%	$68.0	$1,129.2
Comoros	LI	29.9%	42.8%	0.0%	27.3%	$39.1	$802.5	38.1%	50.3%	0.0%	11.7%	$51.6	$1,196.1
Congo	LMI	31.6%	37.2%	0.9%	30.2%	$68.1	$2,983.5	35.9%	47.9%	1.3%	14.9%	$77.1	$4,575.1
Côte d'Ivoire	LMI	12.8%	68.8%	2.8%	15.6%	$70.8	$1,036.2	13.1%	80.1%	3.4%	3.5%	$87.8	$1,580.6
Democratic Republic of Congo	LI	15.6%	33.2%	13.2%	38.0%	$14.9	$186.3	19.0%	36.0%	15.7%	29.3%	$25.9	$332.1
Equatorial Guinea	HI	57.4%	40.6%	2.0%	2.1%	$846.5	$11,033.3	49.4%	48.0%	1.7%	0.9%	$1,355.1	$17,194.6
Eritrea	LI	23.6%	54.8%	0.0%	21.6%	$12.7	$397.7	27.5%	51.4%	0.0%	21.2%	$46.3	$1,226.6
Ethiopia	LI	24.7%	42.9%	3.4%	29.0%	$19.2	$350.4	25.9%	39.3%	3.4%	31.4%	$44.1	$693.0
Gabon	UMI	51.8%	48.2%	0.0%	2.3%	$308.7	$8,724.2	49.3%	49.6%	0.0%	1.0%	$440.2	$13,706.1
Gambia	LI	29.3%	21.2%	9.4%	40.0%	$26.8	$616.6	33.7%	22.9%	10.6%	32.7%	$35.6	$854.6
Ghana	LMI	30.4%	27.9%	5.8%	35.9%	$68.5	$1,311.6	35.5%	43.0%	9.5%	12.0%	$98.9	$3,273.8
Guinea	LI	17.0%	62.6%	2.0%	18.4%	$29.4	$448.5	16.0%	55.4%	1.9%	26.7%	$47.0	$615.6
Guinea-Bissau	LI	17.3%	38.3%	11.9%	32.6%	$38.2	$508.7	22.2%	45.4%	15.0%	17.4%	$49.3	$750.5
Kenya	LI	29.6%	25.1%	12.6%	32.7%	$41.4	$809.3	37.0%	26.5%	15.2%	21.3%	$101.3	$1,928.0
Lesotho	LMI	36.7%	20.5%	3.8%	38.9%	$115.7	$836.9	55.1%	37.5%	7.4%	0.0%	$111.5	$1,603.6
Liberia	LI	11.9%	20.9%	2.1%	40.2%	$40.6	$226.0	36.5%	57.2%	6.3%	0.0%	$28.5	$411.2
Madagascar	LI	30.4%	28.6%	5.5%	35.5%	$15.1	$391.8	49.8%	41.4%	8.8%	0.0%	$21.0	$742.7
Malawi	LI	21.0%	13.0%	6.2%	59.8%	$36.6	$321.9	54.0%	30.3%	15.6%	0.0%	$26.4	$519.5
Mali	LI	33.6%	52.7%	5.1%	8.6%	$43.4	$691.6	38.8%	55.4%	5.8%	0.0%	$69.2	$1,108.5
Mauritius	UMI	43.7%	50.0%	6.3%	1.9%	$464.8	$7,593.3	40.7%	52.2%	7.0%	0.0%	$762.7	$14,350.6
Mozambique	LI	27.6%	11.8%	14.7%	45.9%	$24.7	$458.3	53.3%	19.3%	27.3%	0.0%	$38.3	$1,074.1
Namibia	UMI	54.8%	6.9%	20.5%	17.9%	$333.7	$5,651.7	63.2%	8.9%	27.9%	0.0%	$428.1	$10,172.4
Niger	LI	25.7%	42.7%	3.4%	28.2%	$17.4	$381.2	38.6%	56.4%	4.9%	0.0%	$26.9	$731.7
Nigeria	LMI	16.5%	65.5%	1.2%	16.8%	$67.1	$1,389.3	16.4%	82.0%	1.7%	0.0%	$103.1	$2,935.4
Rwanda	LI	17.1%	15.9%	4.7%	62.3%	$39.0	$562.3	47.8%	39.5%	12.7%	0.0%	$31.0	$1,043.3
São Tomé and Príncipe	LMI	18.5%	56.8%	3.3%	21.5%	$94.1	$1,183.3	18.5%	76.7%	4.8%	0.0%	$165.3	$3,168.9
Senegal	LMI	29.7%	33.8%	3.8%	32.6%	$59.6	$980.9	40.6%	53.1%	6.3%	0.0%	$56.3	$1,542.7
Seychelles	UMI	91.9%	5.5%	2.6%	4.2%	$368.1	$10,681.9	91.0%	6.0%	3.0%	0.0%	$533.7	$18,366.9
Sierra Leone	LI	4.1%	44.0%	1.3%	13.2%	$67.7	$325.8	9.4%	87.8%	2.8%	0.0%	$73.6	$661.5
South Africa	UMI	46.6%	7.4%	46.0%	2.2%	$630.9	$7,157.8	43.6%	7.5%	48.9%	0.0%	$906.0	$11,162.2
Swaziland	LMI	71.1%	12.2%	16.7%	14.4%	$242.7	$3,061.1	69.1%	12.9%	18.0%	0.0%	$290.3	$4,001.7
Togo	LI	24.0%	45.8%	3.5%	26.8%	$39.1	$458.8	34.4%	60.7%	4.9%	0.0%	$44.8	$673.0
Uganda	LI	17.2%	57.3%	1.6%	23.9%	$43.4	$500.7	22.8%	75.1%	2.1%	0.0%	$35.3	$530.3
United Republic of Tanzania	LI	30.2%	24.0%	5.2%	28.8%	$39.2	$548.3	53.3%	37.8%	8.9%	0.0%	$47.3	$985.4
Zambia	LMI	24.7%	31.7%	12.0%	31.7%	$66.7	$1,221.4	29.8%	49.9%	20.3%	0.0%	$90.5	$2,918.5

ANNEX E: HEALTH SPENDING BY SOURCE (AS % OF THE), 2010 AND 2020, BASED ON ECONOMIC GROWTH AND THE ABUJA COMMITMENT ASSUMPTIONS

		2010					2020				
Country	Income Level	GGHE	OOP	Private	THE	GDP per cap	GGHE	OOP	Private	THE	GDP per cap
Angola	LMI	61.0%	29.6%	9.4%	$146.1	$4,477.7	78.5%	15.3%	5.1%	$555.5	$9,658.6
Benin	LI	26.8%	44.5%	1.8%	$32.7	$689.5	55.4%	34.2%	1.5%	$66.3	$1,032.2
Botswana	UMI	64.5%	4.5%	31.0%	$382.0	$7,627.5	71.1%	3.4%	24.9%	$852.5	$14,102.0
Burkina Faso	LI	33.2%	40.8%	4.4%	$35.7	$597.5	50.9%	30.7%	3.6%	$80.6	$971.7
Burundi	LI	18.3%	42.0%	9.5%	$22.6	$180.1	28.6%	29.7%	7.6%	$71.3	$375.5
Cameroon	LMI	15.5%	66.5%	1.6%	$61.3	$1,100.6	39.8%	53.9%	1.3%	$109.8	$1,688.8
Cape Verde	LMI	39.6%	22.7%	0.6%	$144.7	$3,156.6	76.1%	17.9%	0.5%	$331.6	$6,219.0
Central African Republic	LI	26.7%	44.2%	2.0%	$17.2	$436.0	49.1%	33.9%	1.6%	$40.2	$742.1
Chad	LI	13.1%	72.5%	1.0%	$30.6	$767.7	39.7%	33.2%	0.5%	$101.9	$1,129.2
Comoros	LI	29.9%	42.8%	0.0%	$39.1	$802.5	57.5%	34.5%	0.0%	$75.1	$1,196.1
Congo	LMI	31.6%	37.2%	0.9%	$68.1	$2,983.5	75.7%	18.2%	0.5%	$203.1	$4,575.1
Côte d'Ivoire	LMI	12.8%	68.8%	2.8%	$70.8	$1,036.2	38.9%	58.6%	2.5%	$120.0	$1,580.6
Democratic Republic of Congo	LI	15.6%	33.2%	13.2%	$14.9	$186.3	41.7%	25.9%	11.3%	$36.0	$332.1
Equatorial Guinea	HI	57.4%	40.6%	2.0%	$846.5	$11,033.3	53.3%	45.1%	1.6%	$1,442.5	$17,194.6
Eritrea	LI	23.6%	54.8%	0.0%	$12.7	$397.7	67.8%	32.2%	0.0%	$73.9	$1,226.6
Ethiopia	LI	24.7%	42.9%	3.4%	$19.2	$350.4	38.6%	32.6%	2.9%	$53.3	$693.0
Gabon	UMI	51.8%	48.2%	0.0%	$308.7	$8,724.2	67.4%	32.6%	0.0%	$669.9	$13,706.1
Gambia	LI	29.3%	21.2%	9.4%	$26.8	$616.6	50.1%	17.2%	8.0%	$47.3	$854.6
Ghana	LMI	30.4%	27.9%	5.8%	$68.5	$1,311.6	65.9%	27.9%	6.2%	$152.5	$3,273.8
Guinea	LI	17.0%	62.6%	2.0%	$29.4	$448.5	39.6%	58.4%	2.0%	$44.6	$615.6
Guinea-Bissau	LI	17.3%	38.3%	11.9%	$38.2	$508.7	50.0%	37.6%	12.4%	$59.6	$750.5
Kenya	LI	29.6%	25.1%	12.6%	$41.4	$809.3	68.2%	20.2%	11.6%	$132.7	$1,928.0
Lesotho	LMI	36.7%	20.5%	3.8%	$115.7	$836.9	68.2%	26.6%	5.2%	$157.4	$1,603.6
Liberia	LI	11.9%	20.9%	2.1%	$40.6	$226.0	58.1%	37.8%	4.2%	$43.2	$411.2
Madagascar	LI	30.4%	28.6%	5.5%	$15.1	$391.8	66.3%	27.8%	5.9%	$31.3	$742.7
Malawi	LI	21.0%	13.0%	6.2%	$36.6	$321.9	71.5%	18.8%	9.7%	$42.6	$519.5
Mali	LI	33.6%	52.7%	5.1%	$43.4	$691.6	51.1%	44.3%	4.6%	$86.5	$1,108.5
Mauritius	UMI	43.7%	50.0%	6.3%	$464.8	$7,593.3	54.0%	40.5%	5.5%	$982.7	$14,350.6
Mozambique	LI	27.6%	11.8%	14.7%	$24.7	$458.3	77.9%	9.1%	12.9%	$80.9	$1,074.1
Namibia	UMI	54.8%	6.9%	20.5%	$333.7	$5,651.7	71.7%	6.8%	21.5%	$556.1	$10,172.4
Niger	LI	25.7%	42.7%	3.4%	$17.4	$381.2	63.8%	33.3%	2.9%	$45.5	$731.7
Nigeria	LMI	16.5%	65.5%	1.2%	$67.1	$1,389.3	46.9%	52.1%	1.1%	$162.3	$2,935.4
Rwanda	LI	17.1%	15.9%	4.7%	$39.0	$562.3	71.6%	21.5%	6.9%	$57.0	$1,043.3
São Tomé and Príncipe	LMI	18.5%	56.8%	3.3%	$94.1	$1,183.3	42.6%	54.0%	3.4%	$234.9	$3,168.9
Senegal	LMI	29.7%	33.8%	3.8%	$59.6	$980.9	64.4%	31.8%	3.7%	$94.0	$1,542.7
Seychelles	UMI	91.9%	5.5%	2.6%	$368.1	$10,681.9	94.8%	3.5%	1.7%	$929.9	$18,366.9
Sierra Leone	LI	4.1%	44.0%	1.3%	$67.7	$325.8	26.3%	71.5%	2.3%	$90.4	$661.5
South Africa	UMI	46.6%	7.4%	46.0%	$630.9	$7,157.8	49.1%	6.8%	44.1%	$1,003.9	$11,162.2
Swaziland	LMI	71.1%	12.2%	16.7%	$242.7	$3,061.1	70.4%	12.4%	17.2%	$302.7	$4,001.7
Togo	LI	24.0%	45.8%	3.5%	$39.1	$458.8	48.7%	47.5%	3.8%	$57.3	$673.0
Uganda	LI	17.2%	57.3%	1.6%	$43.4	$500.7	36.0%	62.2%	1.8%	$42.5	$530.3
United Republic of Tanzania	LI	30.2%	24.0%	5.2%	$39.2	$548.3	66.2%	27.4%	6.5%	$65.4	$985.4
Zambia	LMI	24.7%	31.7%	12.0%	$66.7	$1,221.4	58.5%	29.5%	12.0%	$153.0	$2,918.5

ANNEX F: TOTAL HEALTH EXPENDITURE PER CAPITA PROJECTIONS BASED ON ECONOMIC GROWTH ASSUMPTION

Country	Quartile	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Angola	4	149.46	174.75	184.45	187.96	190.01	197.74	204.99	216.49	228.68	241.59	255.29
Benin	2	32.70	34.65	36.02	37.34	38.78	40.32	41.20	42.83	44.53	46.32	48.19
Botswana	4	412.56	433.24	455.79	483.15	504.25	525.90	539.65	564.54	590.67	618.10	646.89
Burkina Faso	2	35.66	37.92	39.87	41.88	44.14	46.56	47.83	50.26	52.84	55.57	58.45
Burundi	1	22.60	24.20	26.88	28.97	30.89	32.53	33.71	36.15	38.81	41.70	44.85
Cameroon	3	61.30	64.82	66.92	68.75	70.73	72.17	74.02	76.37	78.81	81.34	83.96
Cape Verde	4	144.70	150.27	155.86	160.89	166.67	172.53	177.95	184.22	190.78	197.66	204.86
Central African Republic	1	17.20	18.32	19.30	20.21	21.19	22.07	23.24	24.46	25.76	27.14	28.60
Chad	2	30.60	36.12	38.71	38.45	38.24	38.35	38.56	40.18	41.86	43.62	45.46
Comoros	3	39.10	39.59	41.24	42.96	44.88	46.91	49.17	51.09	53.10	55.21	57.41
Congo	3	68.10	80.68	81.39	79.67	78.65	79.23	79.10	81.33	83.65	86.04	88.52
Côte d'Ivoire	3	70.80	72.82	75.34	77.72	80.23	82.84	85.58	88.32	91.15	94.08	97.11
Democratic Republic of Cong	1	14.91	16.14	16.80	17.55	18.35	19.24	19.99	21.03	22.14	23.33	24.60
Equatorial Guinea	4	864.28	1124.65	1176.15	1216.20	1238.53	1208.51	1112.95	1169.99	1230.40	1294.41	1362.26
Eritrea	1	12.70	14.83	16.90	18.69	20.78	22.45	24.61	27.65	31.12	35.08	39.58
Ethiopia	1	19.17	18.74	19.89	21.61	23.46	25.56	27.89	29.78	31.83	34.05	36.46
Gabon	4	315.80	377.20	384.14	378.25	377.97	379.85	385.00	398.86	413.23	428.13	443.58
Gambia	2	26.80	27.41	28.22	28.98	29.82	30.77	31.94	32.87	33.84	34.84	35.88
Ghana	3	68.50	73.88	79.55	83.32	86.58	90.07	92.38	97.33	102.63	108.32	114.42
Guinea	1	29.40	28.82	30.11	30.95	32.17	33.76	35.59	36.75	37.95	39.19	40.47
Guinea-Bissau	2	38.20	39.79	41.46	42.70	44.11	45.63	47.26	48.97	50.75	52.61	54.55
Kenya	3	41.35	43.97	48.19	52.02	56.36	61.18	66.80	72.73	79.31	86.61	94.71
Lesotho	3	115.70	120.77	124.13	127.31	130.77	138.58	141.12	145.90	150.91	156.14	161.62
Liberia	1	30.48	32.80	35.39	36.47	36.71	38.80	39.00	40.73	42.59	44.57	46.69
Madagascar	1	15.10	14.90	16.19	17.31	18.46	19.74	21.17	22.46	23.86	25.36	26.98
Malawi	1	36.55	37.88	39.42	40.52	41.73	42.98	44.37	45.84	47.38	49.01	50.73
Mali	2	43.39	49.16	50.94	52.79	54.77	56.94	59.27	62.49	65.90	69.50	73.31
Mauritius	4	473.63	492.23	514.93	538.39	565.09	593.72	634.79	666.67	700.20	735.46	772.55
Mozambique	2	24.70	27.19	29.26	31.28	33.23	35.10	37.26	40.17	43.38	46.95	50.90
Namibia	4	333.74	359.00	367.30	378.57	391.99	406.50	421.81	438.77	456.50	475.04	494.44
Niger	1	17.40	18.73	21.14	21.70	22.55	23.27	25.00	26.63	28.38	30.28	32.33
Nigeria	3	67.10	76.11	79.05	81.55	84.84	88.50	92.54	97.79	103.38	109.33	115.66
Rwanda	2	39.02	39.77	41.69	43.32	45.08	47.00	49.12	51.13	53.28	55.58	58.05
São Tomé and Príncipe	3	94.10	98.82	103.05	106.63	110.60	136.07	140.40	150.80	162.12	174.41	187.78
Senegal	3	59.60	60.93	62.78	64.30	66.03	67.85	70.04	71.91	73.85	75.85	77.92
Seychelles	4	383.56	390.16	401.23	417.72	436.60	456.32	476.52	494.09	512.34	531.27	550.93
Sierra Leone	1	42.32	46.98	51.40	54.85	57.81	60.42	63.16	67.66	72.54	77.80	83.50
South Africa	4	644.78	675.04	695.81	718.22	743.15	770.11	798.45	827.52	857.68	888.98	921.47
Swaziland	4	277.65	279.81	284.50	286.02	290.52	294.93	307.64	312.87	318.19	323.61	329.14
Togo	2	39.10	42.06	43.44	44.46	45.64	47.06	48.69	50.51	52.41	54.40	56.48
Uganda	2	43.40	40.63	40.25	41.05	42.28	43.41	45.40	45.74	46.09	46.44	46.79
United Republic of Tanzania	2	34.56	34.66	36.99	39.35	41.97	44.83	47.72	50.45	53.39	56.53	59.90
Zambia	3	66.67	71.74	76.17	79.50	83.05	87.10	91.28	96.38	101.85	107.71	114.00

ANNEX G: TOTAL HEALTH EXPENDITURE PER CAPITA PROJECTIONS BASED ON ECONOMIC GROWTH PLUS ABUJA ASSUMPTIONS

Country	Quartile	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Angola	4	149.46	192.29	222.81	247.58	271.41	305.37	341.17	386.51	436.61	491.90	552.91
Benin	2	32.70	36.32	39.48	42.79	46.35	50.16	53.23	57.53	62.16	67.15	70.14
Botswana	4	412.56	462.67	516.25	577.27	633.10	691.46	738.58	771.82	806.64	843.13	881.36
Burkina Faso	2	35.66	39.61	43.31	47.31	51.81	56.74	60.39	65.80	69.38	73.19	77.22
Burundi	1	22.60	25.06	28.78	32.01	35.14	38.02	40.35	43.46	46.84	50.54	54.57
Cameroon	3	61.30	67.14	71.74	76.24	81.06	85.40	90.34	96.10	102.22	108.69	115.56
Cape Verde	4	144.70	164.30	183.91	202.42	222.67	244.16	266.21	290.73	316.68	344.13	373.17
Central African Republic	1	17.20	19.05	20.89	22.75	24.80	26.82	29.33	32.04	34.98	37.02	39.19
Chad	2	30.60	38.40	43.91	46.40	49.01	52.02	55.20	60.68	66.52	72.75	79.39
Comoros	3	39.10	41.48	45.15	49.13	53.57	58.37	63.71	68.84	74.32	77.56	80.95
Congo	3	68.10	88.74	98.24	105.47	114.01	125.32	136.25	152.72	171.10	191.62	214.52
Côte d'Ivoire	3	70.80	75.11	80.17	85.32	90.85	96.78	103.15	109.81	116.88	124.38	132.35
Democratic Republic of Cong	1	14.91	16.90	18.34	19.95	21.66	23.54	25.28	27.53	29.99	32.67	34.67
Equatorial Guinea	4	864.28	1169.51	1266.75	1308.85	1332.30	1300.76	1200.34	1260.38	1323.91	1391.14	1462.32
Eritrea	1	12.70	16.42	20.45	24.51	29.35	33.94	39.70	47.50	56.67	67.43	76.99
Ethiopia	1	19.17	19.43	21.37	24.05	27.00	30.43	34.30	36.79	39.49	42.43	45.61
Gabon	4	315.80	401.93	434.67	454.20	479.58	507.53	539.84	585.21	633.03	655.01	677.77
Gambia	2	26.80	28.56	30.62	32.73	35.04	37.55	40.47	43.16	44.57	46.04	47.57
Ghana	3	68.50	77.53	87.39	95.88	104.27	113.61	121.87	134.31	148.05	163.19	179.88
Guinea	1	29.40	29.76	32.00	33.84	36.17	39.03	42.29	44.75	47.26	48.90	50.59
Guinea-Bissau	2	38.20	40.96	43.97	46.67	49.68	52.92	56.42	60.21	64.30	68.69	73.41
Kenya	3	41.35	46.75	54.34	62.09	71.09	81.28	93.28	106.55	121.66	133.98	147.69
Lesotho	3	115.70	127.09	137.08	146.73	156.39	171.82	180.72	186.99	193.54	200.38	207.52
Liberia	1	30.48	33.68	37.31	39.56	40.99	44.77	46.18	49.81	53.79	58.14	61.37
Madagascar	1	15.10	15.38	17.40	19.38	21.50	23.91	26.66	29.41	31.41	33.56	37.23
Malawi	1	36.55	39.11	42.10	44.76	47.65	50.72	54.06	57.75	61.70	64.25	66.95
Mali	2	43.39	51.07	54.86	58.87	63.18	67.89	72.83	76.91	81.23	85.81	90.65
Mauritius	4	473.63	512.74	557.51	604.88	658.26	716.14	791.71	830.42	871.07	946.25	992.49
Mozambique	2	24.70	29.08	33.41	38.11	43.07	48.24	54.24	62.07	71.11	81.51	93.50
Namibia	4	333.74	378.07	405.31	437.23	473.16	511.99	531.14	552.49	574.78	598.08	622.43
Niger	1	17.40	19.62	23.25	24.98	27.17	29.33	33.02	36.82	41.05	45.75	50.98
Nigeria	3	67.10	80.88	88.51	95.84	104.40	113.46	123.40	135.15	147.61	160.84	174.88
Rwanda	2	39.02	41.31	44.99	48.63	52.66	57.15	62.17	67.42	73.22	79.61	84.08
São Tomé and Príncipe	3	94.10	105.31	114.99	124.19	134.09	169.52	180.05	198.43	218.40	240.09	257.35
Senegal	3	59.60	63.83	68.74	73.36	78.41	83.80	89.87	95.82	102.09	108.69	115.65
Seychelles	4	383.56	432.68	484.70	545.77	614.09	688.74	769.13	849.51	880.86	913.38	947.12
Sierra Leone	1	42.32	47.90	53.43	58.08	62.33	66.33	70.60	77.06	84.13	91.88	100.37
South Africa	4	644.78	700.33	747.58	797.88	825.10	854.51	885.41	917.08	949.93	984.01	1019.36
Swaziland	4	277.65	290.65	295.48	297.04	301.70	306.24	319.40	324.81	330.31	335.92	341.63
Togo	2	39.10	43.29	46.01	48.42	51.09	54.11	57.48	61.26	63.72	66.29	68.97
Uganda	2	43.40	41.70	42.14	43.85	46.06	48.21	51.47	52.83	53.23	53.64	54.05
United Republic of Tanzania	2	34.56	36.26	40.43	44.87	49.79	55.26	61.04	64.82	68.89	73.26	77.95
Zambia	3	66.67	75.11	83.90	91.72	100.11	109.53	119.65	131.75	145.16	160.02	176.49

ANNEX H: BIBLIOGRAPHY

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