



Public financial management perspectives on health sector financing and resource allocation in Ethiopia

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● ACRONYMS

CBHI	Community-Based Health Insurance
CDC	Center for Disease Control
CHE	Current Health Expenditure
CRS	Creditor Reporting System
DAH	Development Assistance for Health
DEA	Data Envelopment Analysis
EHIA	Ethiopian Health Insurance Agency
ERCA	Ethiopia Revenues and Customs Authority
ESDP	Economic Sector Development Program
ETB	Ethiopian Birr
FMOH	Federal Ministry of Health
GAVI	Global Alliance for Vaccine and Immunization
GDP	Gross Domestic Product
GHED	Global Health Expenditure Database
GTP	Growth and Transformation Plan
HCS	Health Centers
HEP	Health Extension Program
HEW	Health Extension Worker
HFA	Health Financial Accounts
HSDP	Health Sector Development Programme
HSTP	Health Sector Transformation Plan
IHP+	International Health Partnerships
IMF	International Monetary Fund
JFA	Joint Financing Arrangements
LICs	Low Income Countries
LIDCs	Low Income Developing Countries
MDG	Millennium Development Goals
MDGPF	Millennium Development Goal Performance Fund
MOFEC	Ministry of Finance and Economic Cooperation
MOFED	Ministry of Finance and Economic Development
MTEF	Mid-term Expenditure Framework
MTR	Mid-Term Review
NGO	Non-Government Organization
NHA	National Health Accounts
NPISH	Non-Profit Institutions Serving Households
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation Development
PEFA	Public Expenditure and Financial Accountability

PEPFAR	President's Emergency Plan for AIDS Relief
PER	Public Expenditure Review
PFM	Public Financial Management
PHC	Primary Health Care
PPP	Purchasing Power Parity
PV	Present Value
RHBs	Regional Health Boards
SDG	Sustainable Development Goal
SDGPF	Sustainable Development Goal Performance Fund
SHI	Social Health Insurance
SNNP	Southern Nations, Nationalities and Peoples
SSA	Sub-Saharan Africa
SSLICs	Sub-Saharan Low-Income African Countries
TB	Tuberculosis
UHC	Universal Health Coverage
USAID	United States Agency for International Development
VAT	Value Added Tax
WBCP	Woreda Based Core Plan
WDI	World Development Indicators
WHO	World Health Organization
WoHOs	Woreda Health Office

● EXECUTIVE SUMMARY

Background

Ethiopia is a low-income country in Sub-Saharan Africa, and is one of the most donor-dependent countries in the world. Ethiopia has made good progress with respect to some of the health indicators and was one of the early achievers of the health Millennium Development Goals targets. As Ethiopia continues to show great economic progress, the share of external financing will fall as the country progresses towards middle income status. This would require significant level of domestic resources to fulfill the financing needs of the country's health systems.

Aims and approach

In this paper, we discuss Ethiopia's approach to health delivery, trends in health financing trends, focusing on the financing arrangements and expenditure management systems through which health funding is allocated from various internal and external sources. The paper reviews Ethiopia's public financial management system to identify challenges and opportunities to improve domestic resource mobilization for health and resource allocation within the health sector. With the imminent transition away from external donor support that Ethiopia faces due to economic growth, the paper explores the sources of fiscal space for health in Ethiopia to sustain progress in the health sector through a deep dive of the sources of health financing through tax and non-tax revenues, additional borrowing, future aid prospects, and better fiscal discipline and expenditure efficiency.

Key highlights

- **Low public health spending in Ethiopia but favorable health outcomes**
At 7.8%, Ethiopia's government health spending is low. The country has not met the Abuja target of 15% of budget allocation to the health sector. However, Ethiopia's health sector performance is favorable compared to comparator low income and sub-Saharan African countries in terms of health outcomes and outputs.
- **Donors remain a critical stakeholder in Ethiopia's health financing landscape**
Being the largest recipient of official development assistance in the African region, donors play a significant role in Ethiopia's health system. Ethiopia received the highest share of total development assistance for health amounting to US\$ 828.3 million in 2015, with United States being the largest health donor. Donor financing, which has mostly focused on primary health care has been the main driver of improved health outcomes in Ethiopia.
- **Multiple health financing channels**
Given the critical role of donors in the health financing landscape of the country, aid management platforms are an integral part of the expenditure planning and public financial management system. There are three major channels of health financial flows – Channel 1, consisting of un-earmarked donor and government funds flowing from the Ministry of Finance and Economic Development; Channel 2 managed by the Ministry of Health, consisting of earmarked project funding including donor basket funds like the SDG Performance Fund (SDGPF); and Channel 3

through which off-budget funds flow in to the health sector from various development partners. In order to improve aid effectiveness and streamline health sector priorities and investments, the “One Plan, One Budget, One Report” initiative was introduced in 2007 to adopt a health sector wide strategic plan, pooling of financial resources from donors, governments and NGOs, which would be managed through an integrated supervisory system. However, the initiative has not fully achieved its goal, with reports that the use of Ethiopia’s public financial management and procurement systems has been declining with share of official development assistance routed through the country’s PFM and procurement systems being less than 50% in recent years.

- **Scope for improving fiscal space for health**

With global aid flat lining, Ethiopia would need to focus on identifying alternate domestic sources of fiscal space for health to maintain its health sector performance. This paper highlights the following main sources of fiscal space for health:

- **Domestic revenue mobilization through structural and tax reforms**

Ethiopia’s tax system has not been responsive to economic growth and Ethiopia’s tax and non-tax revenue to GDP ratio has remained relatively constant for over a decade at around 15%. Ethiopia’s tax revenue performance in Ethiopia is low relative to other low-income developing countries, and falls short of Ethiopia’s Growth and Transformation Plan targets. An improvement in Ethiopia’s tax effort from 0.48 to 0.63 in more recent years suggest that various administrative reforms have improved the country’s tax effort. To address the tax gap, structural changes through improved educational levels and coverage, urbanization, growing manufacturing and tourism sectors, coupled with tax policy and tax administration capacity improvements, and reducing inefficient tax expenditures would be necessary.

- **Limited scope of government borrowing**

Ethiopia’s fiscal performance has been good with single digit government deficits. However, debt ratios have been increasing in Ethiopia following the end of the debt reduction under highly-indebted poor countries and the Multilateral Debt Relief Initiative. While medium term debt forecasts are not concerning, International Monetary Fund’s debt sustainability analysis suggests that Ethiopia is exposed to heightened risk of external debt distress, fueled by revenue underperformance, rising public investments and weak public sector enterprises. A cautious approach towards additional borrowing given Ethiopia’s infrastructural needs, and focus should be on expanding fiscal space from other sources.

- **Improving drivers of expenditure efficiency**

Ethiopia has achieved a higher level of health care expenditure efficiency compared to other comparator countries, using fewer resources to achieve greater health outcomes. The main drivers of relatively higher efficiency in Ethiopia has been the prioritization of high impact intervention at the primary care level, task shifting, attempts to improve allocative efficiency through the One-Plan, One-Budget, One-Report system which allowed for improved integration and coordination of planning, budgeting and reporting. However, public expenditure reviews and efficiency analysis studies show that there is scope to address technical and operational inefficiencies within the health sector in Ethiopia. The

government would need to focus on improving demand side inefficiencies to increase health service user demand through better information dissemination and public outreach, and reduce the barriers to access through reducing direct and indirect costs borne by the users. On the supply side, efforts need to be focused on more open and accountable budgeting, planning and coordination, procurement and human resource management, and greater discretion at the local level to respond more effectively to health care needs.

- **Uncertain future aid prospects**

Development partners and external health financing has been key in improving Ethiopia's health sector performance, especially through targeted primary health care interventions. However, with global development assistance for health trends suggest an uncertain aid outlook, and domestic efforts should be focused on better aid coordination and effective use of development assistance and technical expertise to strengthen country health systems and institutions.

Conclusion

Ethiopia's health sector has shown marked improvements in recent years with increased health sector spending and improved health outcomes. However, slowdown in global donor funding and low government expenditures can threaten the progress and sustainability of health financing. Ethiopia has four major potential sources of fiscal space: development assistance; domestic revenue; borrowing; and efficiency savings. With donor funding stagnating, and taking into account, macroeconomic stability and debt sustainability concerns, the focus needs to be on domestic revenue mobilization and improvements in health expenditure efficiency. The recently adopted health care financing strategy recognizes some of these risks and the draft strategy aims to focus on domestic resource mobilization over the next 5- 10 years. Effective health care financing in Ethiopia would require complimentary efforts to increase domestic resource mobilization effort, as well as improvements in budgeting and public financial management systems.

1 Introduction

Background

Ethiopia is a federal country with a three-tier decentralized governance structure: federal, regional and woreda levels. The country has nine regions, which are based on ethnicity and two special status cities – Addis Ababa and Dire Dawa. Under the regions, there are zones, Woredas (districts), and Kebele (wards).^{1,2}

Ethiopia is classified as a low-income country and has a predominantly rural, agriculture-based economy. Due to the political turmoil and history of civil war, investment in and progress towards improving access to safe water, housing, sanitation and health services has been slow. As a consequence, health outcomes are poor compared to many other parts of Sub-Saharan Africa (SSA). While successful in meeting the Millennium Development Goals (MDGs) health goals³, the incidence of communicable diseases like HIV/AIDS, tuberculosis (TB), and malaria, respiratory infection, diarrhea and malnutrition continues to be high. And with rapid economic development and changing disease epidemiology, non-communicable diseases such as cancer, diabetes, and heart conditions are on the rise.⁴ Improving health outcomes is a development priority which will continue to require a significant increase in public health expenditure.

Donors play a major role in the health sector in Ethiopia. Aid contributes a significant share of the financing for public health programs, and especially primary health care (PHC), but its contribution is likely to diminish. Domestic resources need to fill the financing gap, and with only limited scope for the government to raise additional non-tax revenue and borrow more, increasing the revenue yield of the tax system through policy and administrative reform is key. Public health insurance schemes can also contribute but their potential is limited by low incomes and widespread informal employment. Expenditure management also needs to be strengthened, with a view to ensuring that domestic resources and aid are spent in a manner such that significant improvements in health outcomes are achieved. Since a major portion of aid-financed health expenditure is managed separately from the government budget, a uniform approach to expenditure management, independently of the source of finance, is essential. Management challenges posed by the decentralization of health spending also need to be addressed.

Approach

This paper takes a public financial management (PFM) perspective in addressing resource mobilization and expenditure issues. This means that it never loses sight of two key PFM objectives: fiscal discipline—this implies that public health expenditure should be financed in a manner consistent with maintaining macroeconomic stability; and expenditure efficiency—which requires cost effective delivery of highest priority health services. It also suggests an institutional focus, with emphasis on expenditure planning and budgeting processes, decentralization and intergovernmental transfer arrangements, and approaches to achieving effective governance and accountability.

Following an opening section that presents basic information on health expenditure, financing and service delivery in Ethiopia, the paper is organized to reflect four potential sources of “fiscal space” that could support additional public health expenditure and discusses the issues associated with each: donor support, aid management and future aid prospects; domestic revenue mobilization and tax reform; government borrowing and debt sustainability; and expenditure efficiency, planning and budgeting^{5,6,7} However, the discussion does not focus exclusively on sources of fiscal space. Equally important is the way in which fiscal space is used which depends on the policies and procedures that influence the choice and design of expenditure programs and the effectiveness of service delivery.

2 Health expenditure, financing, and service delivery

Broad expenditure comparisons and trends

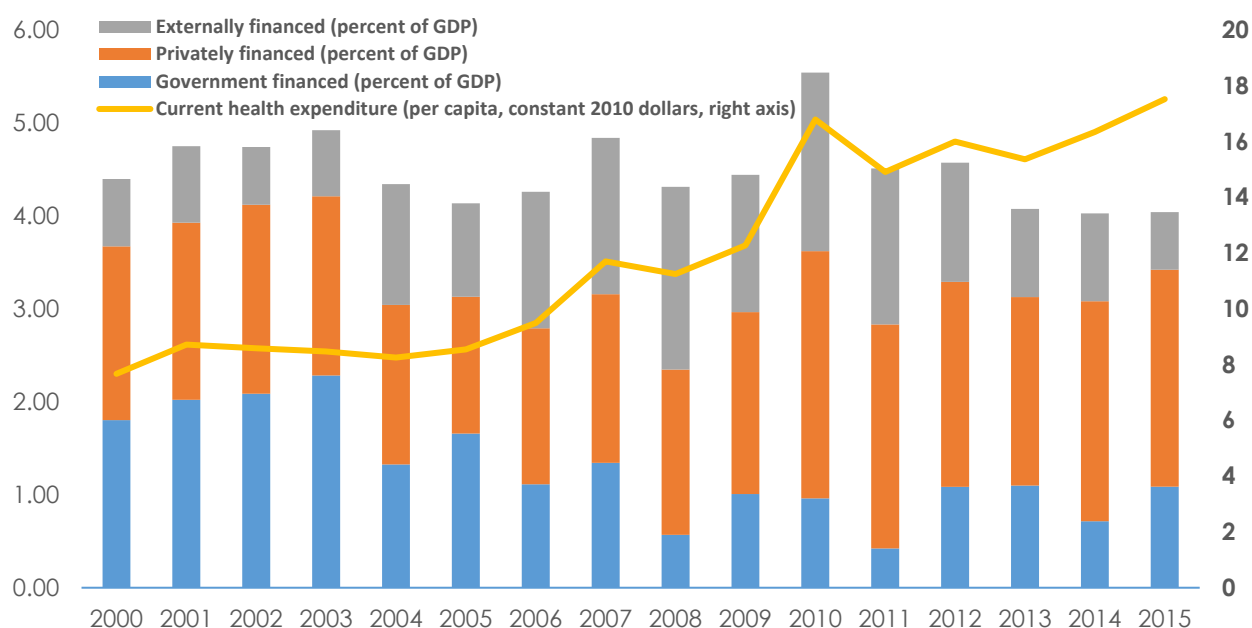
Measuring health expenditure in Ethiopia is not straightforward. The government has produced National Health Accounts (NHA) that are widely used in discussions of health expenditures in Ethiopia, but NHA data only cover current health expenditure for selected years (1999/00, 2004/05, 2007/08, 2010/11 and 2013/14). A longer series of health expenditure data is available from the WHO Global Health Expenditure Database (GHED)⁸, which facilitates comparisons over time and across countries.

As Box 1 explains, GHED data also focus on current health expenditures (CHE), but inconsistencies with NHA data imply that GHED data are not referred to in discussions of health expenditure by Ethiopian health officials and experts. That said, the discussion of health expenditure trends and comparisons that follow are unlikely to be compromised by reliance on GHED data.

Chart 1 shows that, based on GHED data, CHE has averaged about 4.5 percent of GDP over the 2000-2015 period, it has been erratic, and recent levels have been relatively low. However, CHE has risen in per capita terms, and in 2015, was more than double its 2000 value in constant dollar terms. Government financing has diminished over time, while external financing has increased but is now decreasing. Consequently, private financing has played an increasing role. With limited coverage of health insurance, private financing is mainly out-of-pocket.

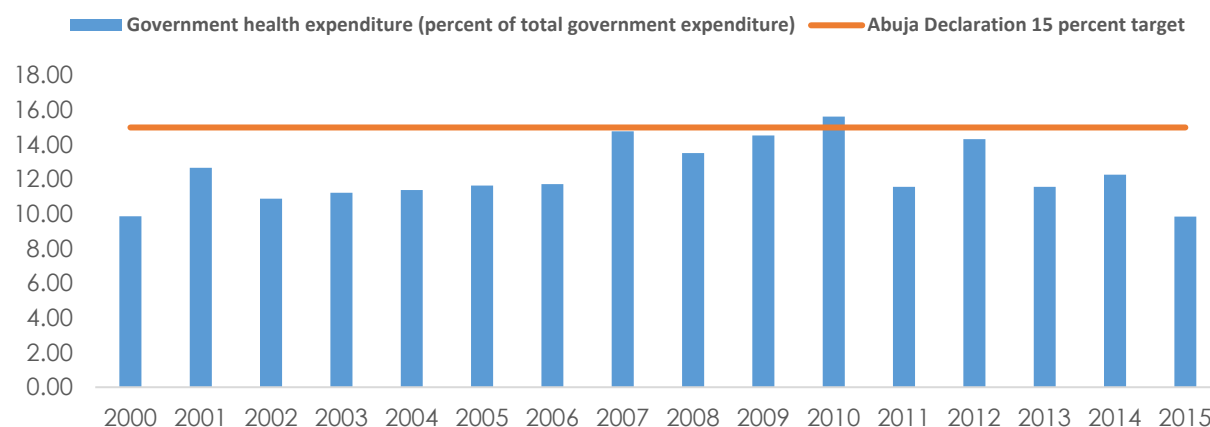
Chart 2 suggests that the ratio of government health expenditure to total government expenditure has been below the Abuja Declaration target that should be at least 15 percent for almost the entire period following the April 2001 declaration.⁹ However, there is some ambiguity as to how both health and total expenditure should be measured. The budget brief on Ethiopia's national health and nutrition sector prepared by UNICEF in 2017¹⁰ suggest that the ratio could be higher or lower than shown in Chart 2.

Chart 1. Current health expenditures, 2000-2015



Source: GHED, 2018

Chart 2: Government health expenditure and the Abuja Declaration target, 2000-2015



Source: GHED, 2018

Table 1 suggests that the share of government spending on health may be closer to 8 percent of total public expenditures in the country, with federal government health spending at about 5 percent but with the regional and Woreda level governments spending from 10-12 percent of their budgets on health.

Table 1: Share of health expenditures by different government levels

Levels	2012/13	2013/14	2014/15	2015/16	Average allocation
Federal	1%	9%	7%	4%	5%
Regional	11%	10%	9%	9%	10%
Woreda	8%	11%	15%	16%	12%
Total country	5%	9%	9%	8%	8%

Source: Ministry of Finance and Economic Development (MOFED), Ethiopia

Table 2 suggests that total health expenditure per capita and total health expenditure relative to GDP are lower in Ethiopia than in low-income and Sub-Saharan countries on average, and that Ethiopia relies more on public than private expenditure. However, Charts 3 and 4 present health expenditure indicators in a slightly more favorable light.

Chart 3 compares health expenditure indicators in Ethiopia with those in other Sub-Saharan low-income African countries (SSLICs), with countries sorted left to right by GNI per capita. Ethiopia is in the middle of the pack both in terms of GDP per capita and health expenditure indicators. Chart 4 suggests that total health expenditure per capita is slightly low given Ethiopia's GNI per capita, but not markedly so.

As documented in many reviews and evaluations, the health sector in Ethiopia receives a low allocation of resources from the public coffers (8%) which does not meet the set targets in the health sector as well as international standards. A 2018 MOFED report¹¹ shows that the sector received only 7.8% of the total government spending in the country. The recent Mid-Term Review (MTR) documented that this is partly due to weak capacities of all levels of sector managers (Federal Ministry of Health (MOH), Regional Health Boards (RHBs), and Woreda Health Offices (WoHOs)) to engage and advocate for additional resources from their respective finance and economic development offices. The resource mapping exercise that is

developed and implemented as part of evidence-based planning process is not as strong as before, compromising predictability of funds to lower levels. Although the SDG Performance Fund (SDGPF) Joint Financing Agreement¹² clearly spelt out the strong role of the Ministry of Finance and Economic Cooperation (MOFEC) in the management of the process, their engagement in the planning and budgeting process at all levels of the system are below what is desired.¹³ Addressing these three challenges would be essential to help to address resource constraints of the health system at all levels.

Table 2: Health indicators, 2014 (or latest available year)

	Ethiopia	Low-income countries (average)	sub-Saharan Africa (average*)
GNI per capita (purchasing power parity (PPP, 2011 dollars))	1,420.4	1,483.2	3,332.5
Total health expenditure per capita (PPP, 2011 dollars)	28.7 ⁺	37.7 ⁺	NA
Total health expenditure (percent of GDP)	4.9	5.7	5.5
Public health expenditure (percent of GDP)	2.9	2.4	2.3
Private health expenditure (percent of GDP)	2.0	3.3	3.2
Out-of-pocket health expenditure (percent of private health expenditure)	78.1	64.5	60.2
Life expectancy (years at birth)	64.5	61.6	59.4
Maternal mortality (per 100,000 live births)	378	513	560
Child mortality (per 1000 live births)	61.8	78.9	86.0
Incidence of malaria (per 1000 people)	58.6	193.7	234.3
Incidence of TB (per 100,000 people)	207	237	282
Births attended by skilled health staff (percent of births)	15.5	56.0	55.2
Measles immunization (percent of children aged 12-23 months)	70.0	76.0	71.7

* Excluding high-income countries.

+ Based on NHA 2014 data (<https://www.hfgproject.org/ethiopia-health-accounts-201314/>)

Source: WDI, 2017

Box 1: Health expenditure data

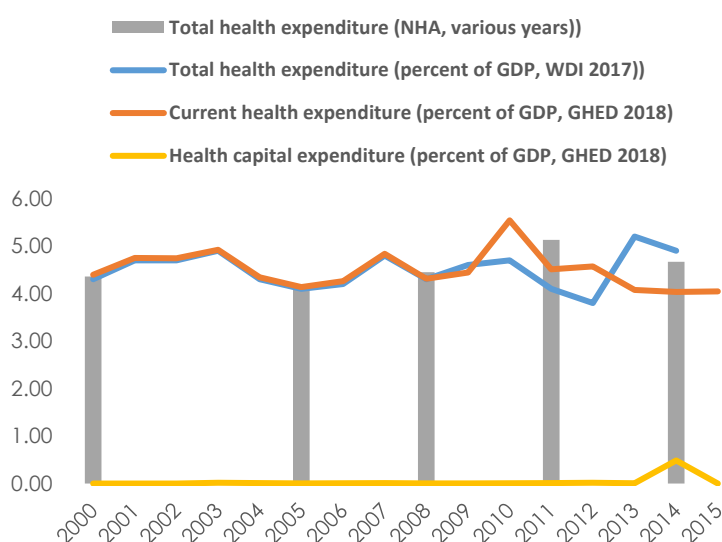
The WHO Global Health Expenditure Database (GHED), which has become available only recently, has the following features:

- The time period covered is 2000-2015 (fiscal years 1999/00-2014/15, July-June fiscal year);
- Statistics are compiled following System of Health Accounts 2011 standards;
- Emphasis is placed on financing sources and schemes; and
- Current expenditure is distinguished from capital expenditure, with financing data included only for the former.

The World Bank World Development Indicators (WDI) now report GHED current health expenditure data, while previous WDI focused on total health expenditure data.

The following chart compares GHED, earlier WDI and NHA data. For the period 2000-2008, the headline data from each source coincide. However, GHED reported health capital expenditure is zero. While underinvestment in health is obvious, health capital spending has been significant; this suggests that GHED current health expenditure data may actually refer to total health expenditure. For 2009-2014 the data from different sources suggest that there are problems with one or more of the data sources.

Health expenditure data, 2000-2015

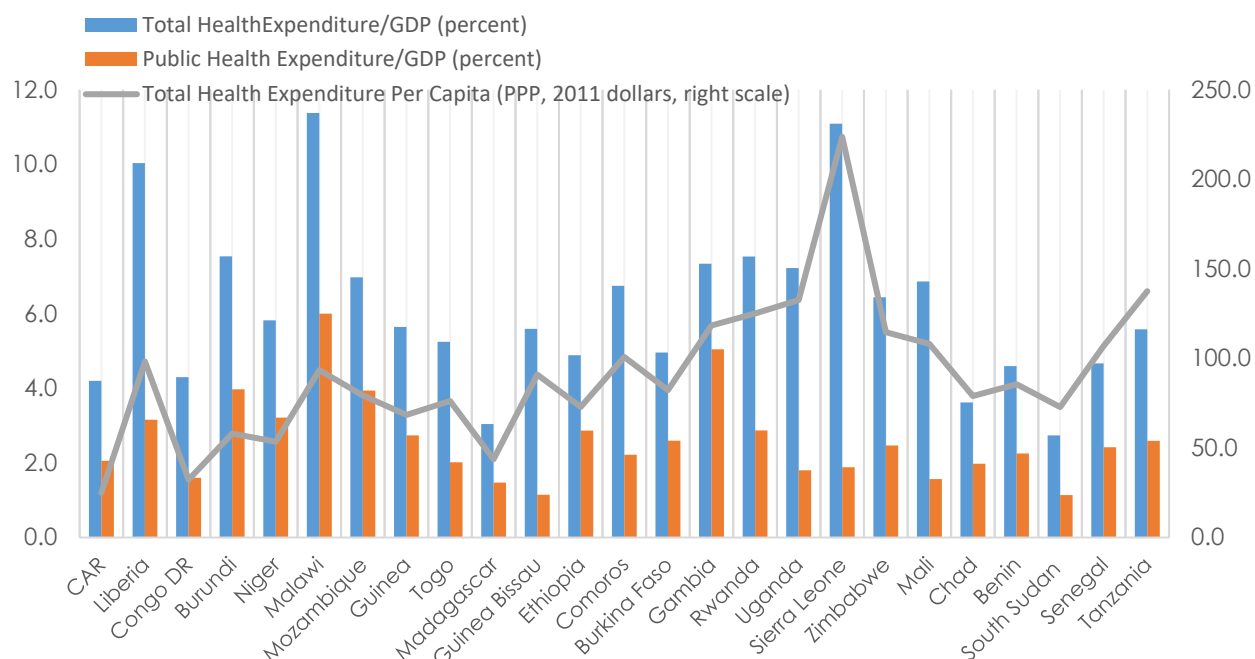


Sources: National Health Accounts (various years), World Development Indicators database 2017, Government Health Expenditure Database, 2018

Rather than try to resolve the inconsistencies between alternative data sources, for international comparisons this paper use previously available WDI data, which report total health expenditure for all countries. Elsewhere GHED and NHA data are referred to without qualification.

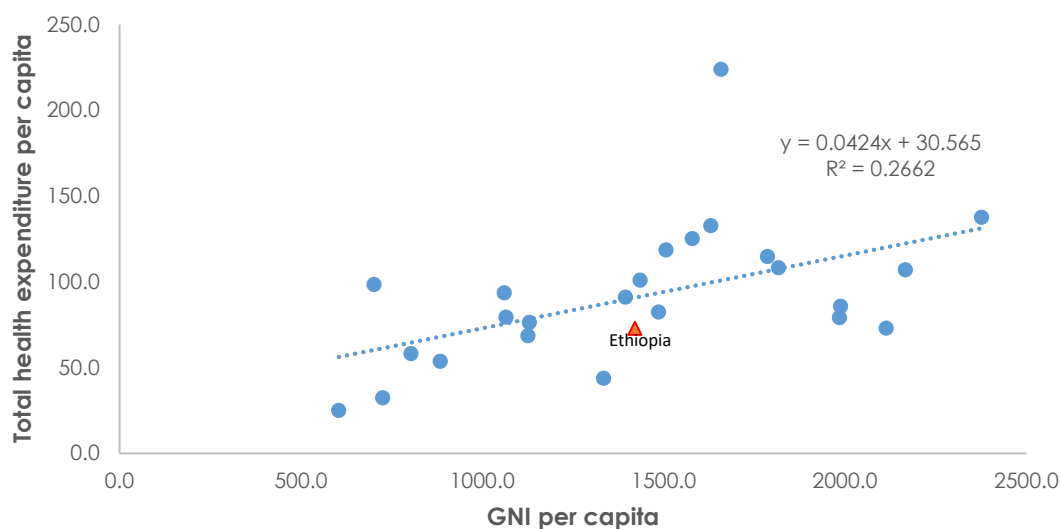
Note: In this paper, fiscal years are written either in 2015 or 2014/15 format, depending on the data/information source.

Chart 3: Health expenditure in sub-Saharan low-income African countries (SSLICs), 2014



Source: WDI database, 2017

Chart 4: Health expenditure and income in SSLICs, 2014



Source: WDI database, 2017

Table 2 also compares health outcomes and outputs in Ethiopia with those in low-income and Sub-Saharan countries on average and the results are favorable for Ethiopia. With the exception of one indicator, births attended by skilled health staff, health outcomes and outputs are better in Ethiopia than

in comparator countries.¹ Note in particular the relatively low incidence of malaria, which reflects Ethiopia's geography and climate, as well as the high priority that has been attached to malaria eradication. That said, malaria remains a significant public health problem.

While there is a relationship between health expenditure and health outcomes and outputs that can be analyzed at a fairly aggregate level to gauge the efficiency of health care delivery (this is done later in the paper), only so much can be gleaned without delving into the detailed mechanisms of the health care delivery system. These encompass¹⁴ health objectives, planning, and organization (2) financing arrangements and performance.

Ethiopia's approach to health care delivery

Health objectives, planning, and organization

Since 1992, Ethiopia has adopted a more liberalized market-based economic growth strategy to promote more rapid economic development. The initial emphasis was on stimulating agricultural output and rural incomes to generate broad based-growth and reduce poverty. Ethiopia adopted a number of successive development plans including: The Sustainable Development and Poverty Reduction Plan in 2002¹⁵; the Plan for Accelerated and Sustained Development to End Poverty in 2006¹⁶; the Growth and Transformation Plan (GTP) in 2010¹⁷ and the Growth and Transformation Plan II (GTPII) in 2015.¹⁸ These last two plans are designed to enable Ethiopia to achieve lower middle-income country status by 2025.

Ethiopia's health strategy and its components have been pursued through the Health Sector Development Programme (HSDP), adopted in 1997/98 and implemented in four distinct phases up until 2015, with well-documented success. Ethiopia met its MDG4 (reducing child mortality) three years ahead of target and also made progress in meeting key health indicators (e.g., neonatal, infant, child and under 5 mortality, weight for height and weight for age^{3,19,20}). During this time, Ethiopia's strategy was to prioritize and expand PHC with a focus on the Health Extension Programme (HEP). HEP was the primary vehicle for expanding health care to communities and its design was adopted to meet different contexts (agrarian, urban and pastoralist), especially for women and children. Under the HEP, more than 40,000 health extension workers (HEWs) were trained and deployed throughout the country, and roughly 3 million model families demonstrated and encouraged behavioral changes and broader acceptance of high impact health interventions (See Box 2). In addition, in its last phase, HSDP IV (2010/11-2014/15) a 'health development army' was established to enhance community engagement, encourage uptake of services and scale up best practice^{21,22}. The country was able to expand the PHC services by constructing more than 3,000 health centers and providing basic services in these facilities. By the end of 2017/18, 3,962 health centers were functional, and another 100 were under construction.

Building on the HSDP success, the government adopted the Health Sector Transformation Plan (HSTP) in 2016, closely linked to the adoption of the Growth to Transformation Plan II (GTP II) (2015/16-2019/20).²²

The 2016 HSTP was designed to be consistent with the Sustainable Development Goals (SDGs) and is aimed at improving citizen health outcomes through providing equitable, accessible and quality health services. The HSTP is considered the first phase of a 20-year health sector strategy, "Envisioning Ethiopia's Path to Universal Health Coverage through Strengthening of Primary Health Care".²⁴ Thus, one of its primary objectives is to move towards achieving Universal Health Coverage (UHC), as described in Box 3.

¹ The WDI figure for births attended by skilled staff is significantly lower than figures reported elsewhere.

Box 2: Ethiopia's Primary Health Care (PHC) policy

Prioritizing primary health care was adopted as part of the new health policy of 2001 which was fast tracked by the adoption of the Health Extension Programme (HEP) by the Federal Ministry of Health (FMOH) jointly with the Ministry of Education in 2003. In line with the Alma Ata principles, the HEP aimed to improve primary health care services in rural areas through community ownership and leadership. To this end, HEWs were trained to provide a defined package of health services and interventions. The key goals of the HEP expansion were:

- To educate and deploy 30,000 HEWs by 2009 to achieve a ratio of 1 HEW per 2,500 population
- To educate and deploy an additional 5,000 health officers by 2009
- To increase the annual enrolment of medical students from 250 to 1,000
- To increase the ratio of midwives per population of women of reproductive age from 1:13,388 to 1:6,759
- To expand physical health service infrastructure at the primary health care level by constructing or upgrading 15,000 health posts and 3,200 health centers by 2010.

FMOH statistics suggest that between 2002/03 and 2006/07, the HEP deployed more than 24,000 HEWs and achieved 82 percent of the target of 30,000 workers by 2009; this number increased to 38,000 in recent years, thus achieving the target²³. By 2007, more than 8,850 health posts were constructed, and there were improvements in health coverage in terms of immunization, contraception and hygiene.

The HEP, through the recruitment, training and deployment of the HEWs, substantially improved the efficiency in PHC delivery, especially in the rural areas. Deployment of HEWs, rather than community nurses, is estimated to have saved the government nearly US\$8 million per year in lower wage bills²⁰. After implementing HEP program for more than 15 years, the government of Ethiopia has now launched the optimization of HEP to make it more responsive to emerging needs and address evolving challenges.

Source: WHO (no date); Admasu and others (2016) and Alebachew and Waddington (2016)

Box 3: Implementing universal health coverage

The Government of Ethiopia is laying the foundation for implementing universal health coverage (UHC). This approach has three main agendas: increasing access, improving quality and enhancing financial protection. The strategy remains to expand priority PHC services. Improving quality of care is another priority with the FMOH implementing transformation of quality and equity as first priority agenda of transformation since 2016.

With respect to promoting financial risk protection, Ethiopia established the Ethiopia Health Insurance Agency (EHIA) in 2010 to implement a health insurance system. The EHIA is focusing on two health insurance schemes—the Community Based Health Insurance Scheme (CBHI) and the Social Health Insurance (SHI). The CBHI is a voluntary insurance scheme aimed at benefitting 80-85 percent of the Ethiopian population engaged in the informal sector (crop and pastoral farming) while the SHI is a mandatory program for formal sector employees.

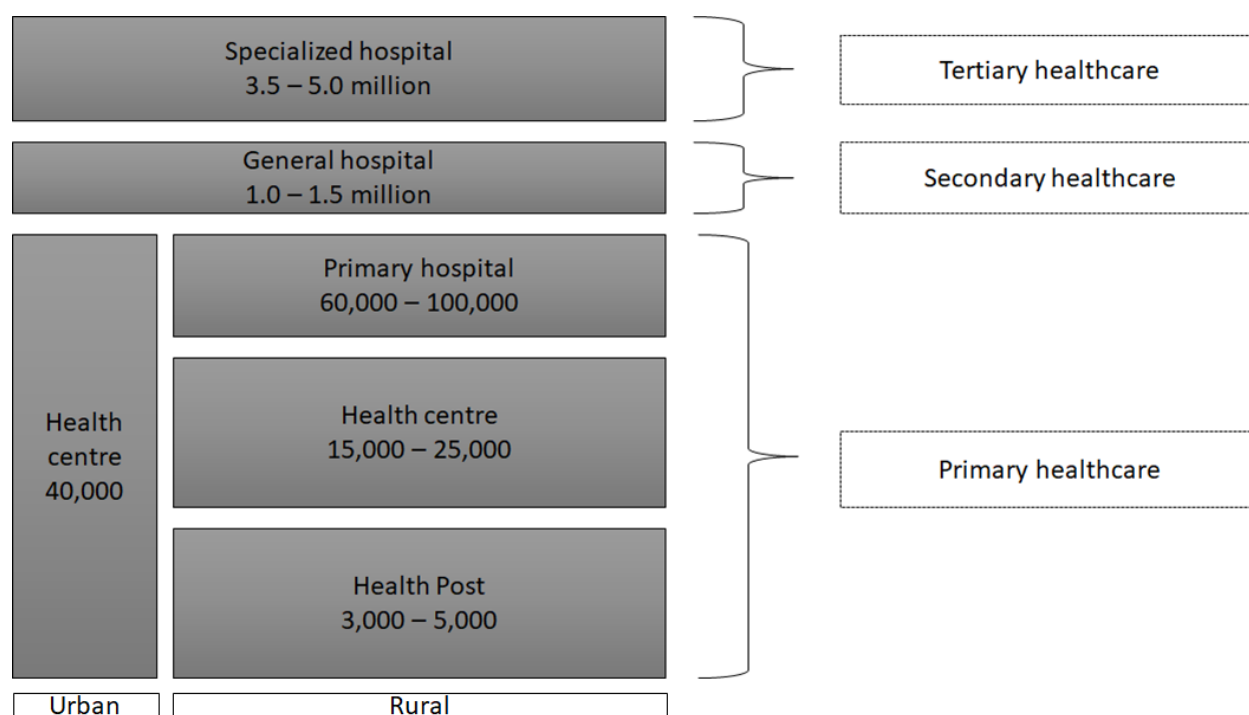
The CBHI was started in 2010/11 on a pilot basis in 13 Woredas in Tigray, Amhara, Oromia and SNNP. According to the HSTP targets, CBHI is to be expanded to 80 percent of Woredas and will enroll at least 80 percent of households by 2020. Scaling up CBHI is one of the core strategic initiatives under the Government's woreda transformation agenda. By 2017/18, the scheme was established in 522 woredas, of which 341 woreda schemes started providing services. CBHI has now reached about 4.7 million households (about 20 million people), 22.3% of those are the very poor whose premiums are paid by the local government. However, the enrollment rate of 38 percent is still very low.²⁵

The SHI was announced in 2014, and it is estimated that the eligible population for SHI is about 19 percent, however, the scheme has yet to be implemented²⁶. The EHIA is drafting a new CBHI proclamation which will shift enrolment from being voluntary to become mandatory for people engaged in the informal sector. SHI is yet to be implemented and its design is being revised to ensure buy in by the formal sector employees.

While the government has been adopting various reforms to align health sector strategies in the country with the MDGs/SDGs, including by encouraging the private and non-government sectors to play a role in improving coverage of health facilities in the country, reform efforts are complicated by the fact that Ethiopia's health care system is fairly decentralized. In particular, there is shared decision-making where the FMOH is responsible for policy and technical support issues, while regional, district and Woreda health officials are responsible for the management and operations of the health facilities under their jurisdictions. With the exception of federal level specialized hospitals, health service delivery is largely under the authority of the regions.

Ethiopia has a three-tier healthcare delivery system, as illustrated in Figure 1. Primary health care is provided at the district or Woreda level through a primary hospital, local health centers, and rural health posts where each health center coordinates 5 satellite health posts. These health centers and posts provide basic health services related to immunization, contraception, common illnesses and hygiene. The second tier consists of a general hospital serving a population of 1 million people. PHC workers and providers refer patients to the primary hospital or general hospital depending on the severity of the illness. Finally, a specialized hospital covering a population of 5 million is the highest level (tertiary) of healthcare provision. The FMOH, Regional Bureaus of Health and districts/Woredas health office are responsible for different levels of decision making and health care delivery.

Figure 1: Health service delivery in Ethiopia



Source: Ethiopia Health System; African Health Observatory, WHO (As of October 29, 2018)

The expenditure and functional responsibilities with the delivery of health care through this three-tier health care system are shown in Table 3.

Table 3: Assignment of health expenditure responsibilities by level of government

Level of government	Expenditure and functional responsibilities
Federal	<ul style="list-style-type: none">• Specialized/ referral hospitals• Development of policies, regulation and standards
Regional	<ul style="list-style-type: none">• Standard setting for regional health• Vocational and technical training• Hospitals and referral hospitals• Control and prevention of HIV/AIDS• Immunization• Coordination and execution of civil service reforms at regional level
Woredas	<ul style="list-style-type: none">• Coordination of primary preventive and curative health care activities• Implementation of health extension• Construction and administration of health stations, health posts, and clinics• Control and prevention of HIV/AIDS and malaria• Immunization

Source: Garcia and Rajkumar, 2008

Expenditure planning, budgeting and reporting

To ensure effective planning and delivery of health services across the tiers of government and the hierarchy of health delivery units, Ethiopia under the HSDP adopted the One Plan, One Budget and One Report system in 2007 (Box 4). As outlined in the HSDP Harmonization Manual²⁷, the One Plan process for the health sector has two cycles: The Health Sector Development program which is a five-year strategic planning exercise; and the annual planning exercise.

The health planning process involves three interrelated planning activities at the federal, regional and woreda level, linked into “one annual plan”. The annual plan at each level consists of two components: the Core Plan at that level is linked to the minimum targets set by the higher-level government core plan and other activities implemented by partners at that government level. For example, the regional level Core Plan would include the minimum targets set by the Federal Core Plan and also the numerical targets set by the Woreda level plans and, those activities funded by donor programs within the region. The Woreda level Core Plan would then include the minimum targets set by the regional core plan with the detailed annual plan would include all Woreda-level activities to be implemented by all relevant stakeholders, including donor-funded projects. At all levels, the detailed plans would include everything that is going to implemented, identifying who, what and when things will be done, as well as the source of financing.²⁷

Box 4: One plan, one budget, one report

The One Plan One Budget initiative emerged from the International and National Health Partnerships (IHP+) compacts which were signed to improve the aid effectiveness in the health sector in 2008 and 2009, respectively. The FMOH also developed and implemented a series of Joint Financing Agreements (JFAs)—the first signed in 2009 to cover the period from 2009/10 to 2014/15 and the second signed in 2015 to cover the period from 2015/16 to 2019/20. The MDG/SDG Performance Fund is the main pooled fund to which most development partners contribute in the health sector and supports the funding of key health system. As originally envisioned, the Performance Fund was to support four key areas in the health sector¹²:

- i. Health extension program: This includes provision of necessary supplies and equipment, training, and other priorities.
- ii. Service delivery: This includes healthcare expansion, upgrading health clinics and district hospitals, training of MNCH health personnel, training of emergency care health officers.
- iii. Public health commodity procurement: This includes commodities related to the health MDG under the Protection of Basic Services program
- iv. Health system strengthening: Key components include planning and budgeting, leadership and management, public financial management, program management and evaluation, procurement, technical assistance and other emerging priorities.²⁸

In recent years, utilization of the Performance Funds has been made less restrictive.

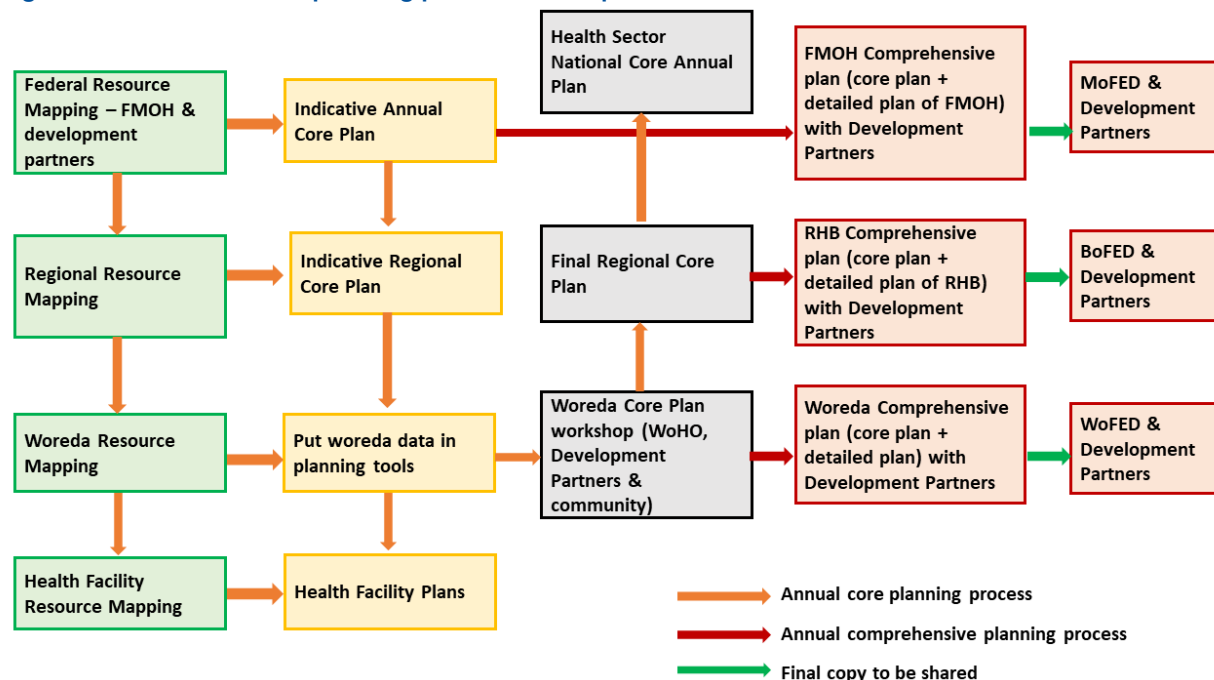
One plan: The health sector wide strategic plan (HSDP) is the product of substantial consultations between the FMOH and the health development partners. The HSDP aims to streamline the regional, zonal, Woreda and facility plans. One of the most important refinements in HSDP III was the inclusion of “Woreda-Based Health Sector Planning”; this planning system created a platform for joint planning by all stakeholders at all levels of the health system including health development partners.

One budget: Financial resources from all different sources (donors, government, NGOs) would be incorporated in to ‘one budget’ for implementation of the HSDP. One outcome of the JFAs was the development of a pooled funding mechanism, initially known as the MDG performance fund (MDGPF) and now as the Sustainable Development Goals Performance Fund (SDGPF), which flow through the FMOH and allows flexible allocation through the government system. The FMOH has fairly independent powers to allocate resources from this fund as per national priorities.

One report/One M&E: Develop an integrated supervision, performance review, quality assurance and inspection mechanism to complement health sector M&E which in turn informs strategic planning in the sector. A set of key indicators were determined to monitor progress towards the HSDP targets through a standard reporting system without duplication in reporting.²⁹

The country-level core plan is compiled by aggregating the Woreda level and regional level planning into a health sector Federal Annual Core Plan. The comprehensive annual plan then constitutes the full core plan together with locally specific health issues prepared at all levels from facility to federal. The health sector planning process is illustrated in Figure 2.

Figure 2: The health sector planning process in Ethiopia



Source: The HSDP Harmonization Manual, First Edition (p. 29). 2007: FMOH

Ideally these One-Plans are the basis for strategically allocating the health-related financial resources coming from the government and development partners. In principle, Ethiopia, development and implementing partners are to share their commitments in the resource mapping exercise annually prior to onset of the planning process. Unfortunately, however, the information on development partner resources, which play a significant role in providing financial resources and support to the health sector, are not always shared with the government for inclusion in the annual health planning exercise. This inadequate information impedes development of a realistic health sector medium term expenditure framework (MTEF). Donors may also directly provide in-kind resources to support health-related activities mentioned in the Woreda plans making it difficult to capture the entire health resource envelope. Although Woredas are required to conduct resource mapping exercise for streamlining the planning and budgeting within their respective areas, this exercise is also seldom undertaken. These various challenges have made it difficult to fully operationalize health planning efficiency within realistic budget ceilings under the One Plan approach.²⁸

The MDGPF (now replaced by the SDGPF) resources are incorporated in the budget prepared by the MOFED as a single line item. The FMOH is involved and manages the detailed costing, budgeting, and resource projection exercises that guides the SDGPF allocation. The linkages between the core and comprehensive plan with the development partners and MDGPF (and now the SDGPF) is detailed in Table 4.

Table 4: Core and comprehensive planning

	Woreda based core plan (WBCP)	Core plan	Comprehensive plan
Origin	From top down targets and guidelines and bottom up need based Woreda- based planning process	Derived from targets of the Woreda-based Core Plan	Derived from core plan
Characteristics	Present Woreda service delivery targets and resource requirements. Some regional and federal level initiatives without their resource requirements are also shown	Presents major activities to be carried out by regions and FMOH to realize the set targets in the WBCP for each of the strategic objectives. It also presents how this will be measured	Shows detailed activities to be implemented by FMOH and its Directorates, resource requirements and sources of funding as well as funding gaps
Resource framework (linkages of plan and budget)	Very high resource gap, does not capture regional and federal level resource requirements and available budget. The retained fees mobilized from user fees in health facilities in Woredas is not included as part of the resource envelope for the annual plan, though it can only be used after declaring in the annual budget of Woredas.	Is not linked to any sort of resource framework	Shows only federal level resource requirement and map all available resource. There is significant gap, activities that are not funded clearly shown. Has a potential to evolve into Federal level MTEF process.
Inclusiveness	Very inclusive as it involves health sector stakeholders (government, development partners and NGOs) at all levels	Internal document for the FMOH	Internal document for the FMOH
Transparency for development partners	Published in English as one plan during the annual review meeting	Written in Amharic and not published	Written in Amharic and not published
Linkage with MDG PF	Shows the results for which the MDGPF contributes to	No clear link	Shows the activities MDG PF is funding

Source: Financial Management, Procurement and Supply Chain Management Assessment of the MDG Fund, June 2011

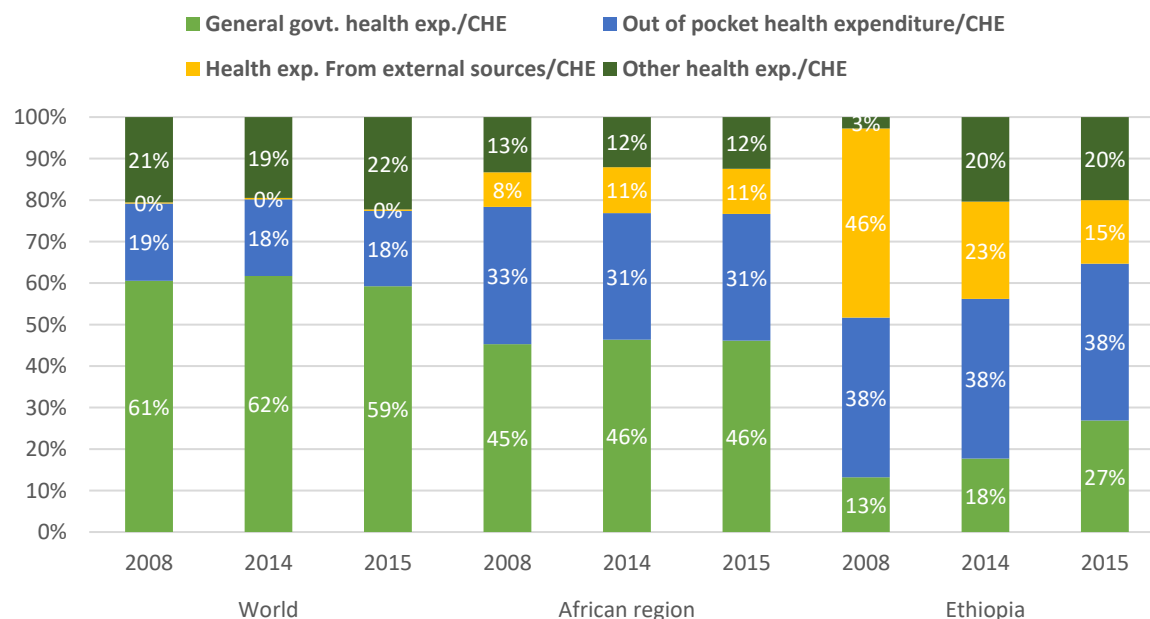
Linking the one plan approach to a one budget is being done outside of the government formal budgeting system because, as discussed below, this comprehensive health budget includes funding from different sources. Through the FMOH, these different funding sources are managed, to the extent possible, attempting to link the planning objectives with the available combined health resources. Linking the one

plan and one budget to the one report is also being done outside the government formal budgeting system by the FMOH through the maintenance of the Health Financial Accounts (HFA). A recent PFM assessment and discussion on the health sector identified continued PFM challenges: (i) poor financial recording and reporting practices using different financial softwares;³⁰ poor capacity for internal audit function; (iii) poor timely liquidation of donor funds.¹³

Financing arrangements and performance

There are three main types of funding sources for the health sector in Ethiopia: general government revenues, donor funding and funding from households through out of pocket expenditures. As Chart 5 shows, Ethiopia relies more heavily on donor funding and less on government financing of health expenditure than other countries, while the burden on households (out-of-pocket spending) is not out of line with other countries. It seems that donor contributions play a smaller role than in African countries as a whole, which seems inconsistent with Ethiopia's more general aid dependency. However, as Chart 6 shows, donor contributions declined between 2008 and 2014, and then fell sharply in 2015. This was offset by other financing, which was also high in 2014 when the share of government financing fell before recovering in 2015. This other financing has in the past mainly reflected health care funded by private employers but have lately reflected an increase in NGO funding. More specifically, NGOs—referred to Non-Profit Institutions Serving Households (NPISH)—ramped up their health financing in 2014 and 2015, substituting for government financing in 2014 and donor contributions in 2015. To the extent that NPISH derive their resources from the government and more likely donors, recent developments in government financing and especially donor contributions may be misrepresented.

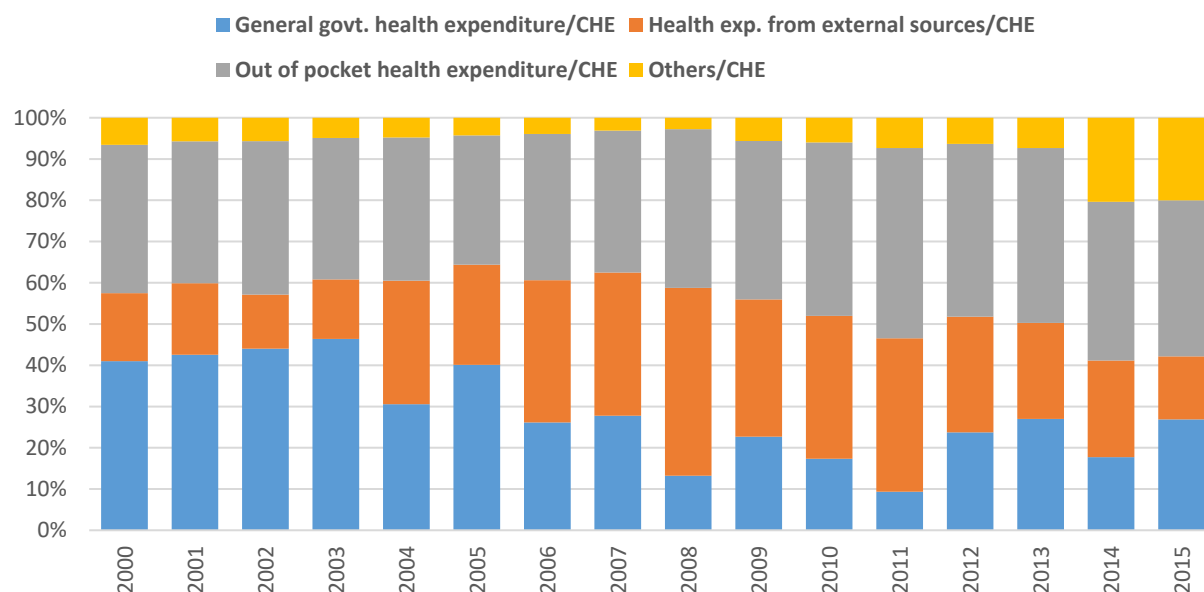
Chart 5: Composition of current health expenditure (CHE), 2015



Source: GHED, WHO, 2017, as quoted in WHO, 2018.

Note: Although we note the discrepancies between the WHO and Ethiopia NHA data in Box 1, the GHED has been used in this chart to maintain consistency for international comparisons.

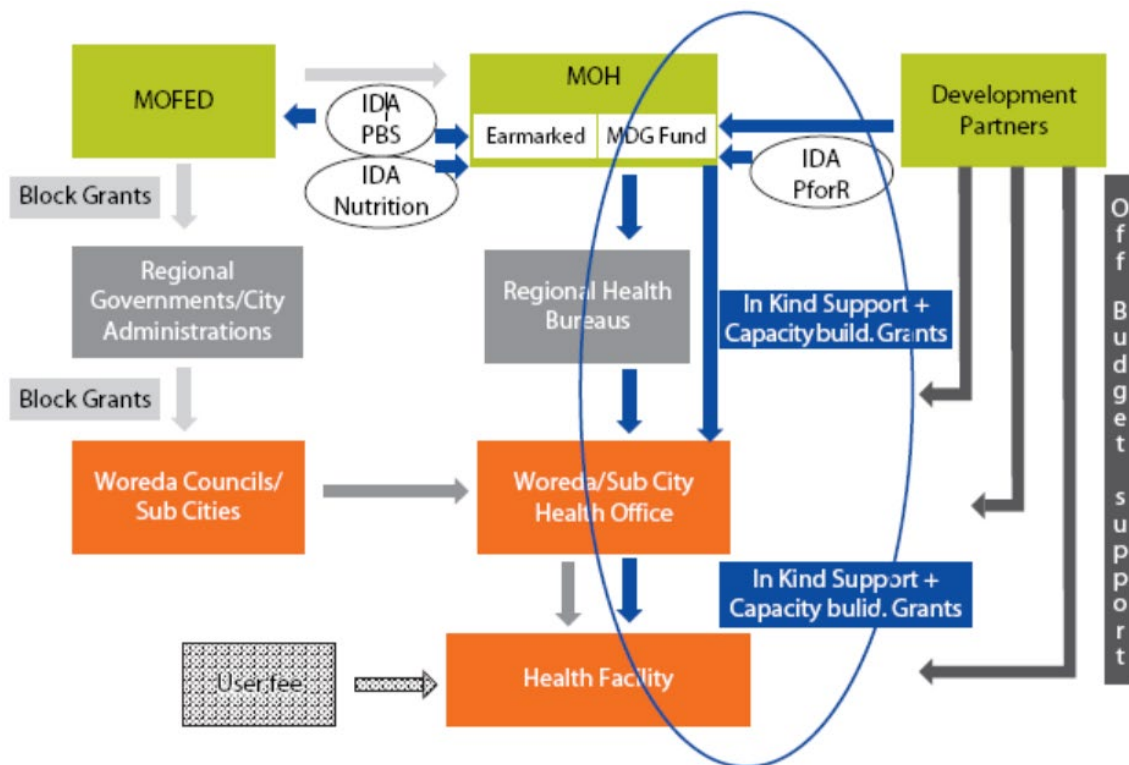
Chart 6: Composition of current health expenditure in Ethiopia, 2000-15



Source: GHED, WHO, 2017

As Figure 3 indicates, these various fund sources in Ethiopia flow through a variety of pathways to health facilities²¹. Government revenues for health flow through the treasury system as budget appropriation through the FMOH and/or are released as block grants to the regional or city administrations. In turn, the regional and city administrations allocate a portion of their funds to regional/city level agencies as line item health expenditures and/or transfer a portion of their funds as block grants to the Woreda council level. At the Woreda level, these health-related funds are used mainly to pay salaries. Block grants to the regional levels are allocated using a formula based on population, fiscal capacity and development status, while the block grants to the Woreda level are allocated using a formula based on current expenditures, fiscal capacity and development status.²¹

Figure 3: Health financing sources and fund flows



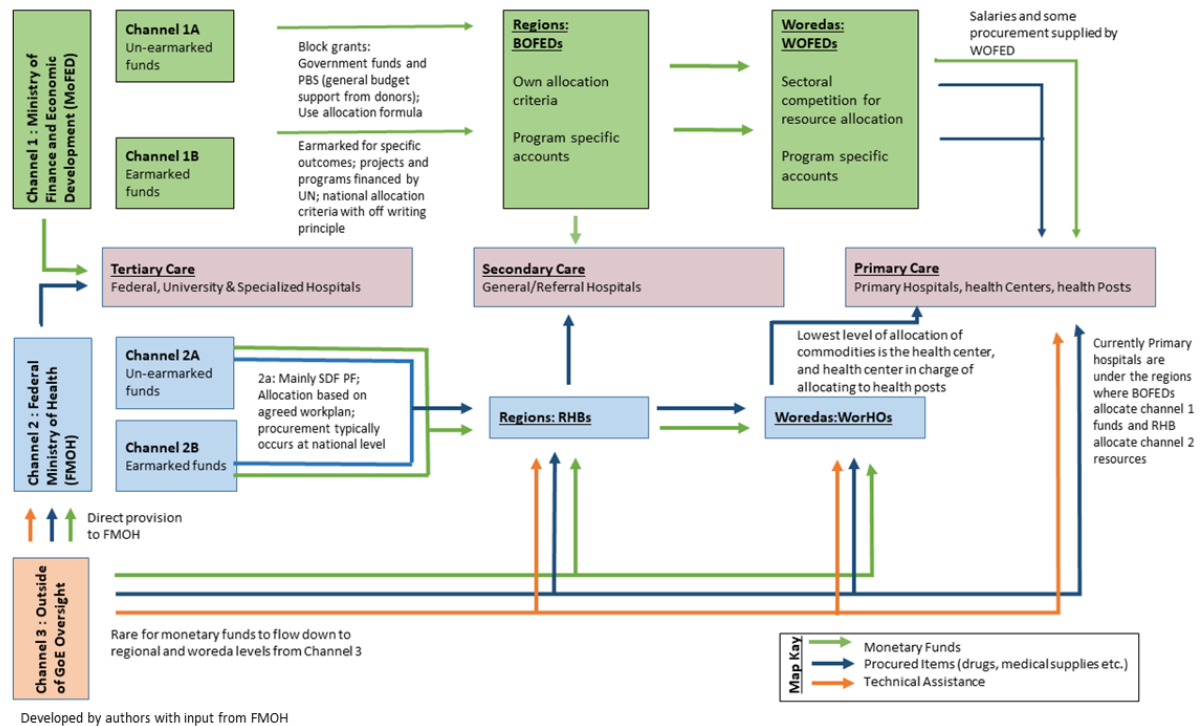
Note: MOFED = Ministry of Finance and Economic Development; MDG = Millennium Development Goal; IDA = International Development Association; PBS = Promotion of Basic Services; MOH = Ministry of Health.

Source: Adapted from Wang and others, 2016

Donor funds flow through multiple channels in Ethiopia. Some flow directly through the Ministry of Finance as budget support, then channeled through the intergovernmental block grant system and/or through the FMOH as earmarked program and project funds, which are agreed on between the donors and the government, or as non-earmarked funds through the MDGPF/SDGPF, which are then allocated to health facilities through in-kind transfers and capacity building grants. The third major channel is for those funds that flow as off-budget in-kind contributions and capacity building grants directly from the donors (e.g., USAID, PEPFAR and CDC funding).

Figure 4 illustrates how health funds a flow through these three basic channels to the various health facilities (tertiary care, secondary care and primary care)²⁰.

Figure 4: Health sector funding channels in Ethiopia



Source: Alebechew and others, 2015, p. 35

Channel 1: Ministry of Finance and Development (MOFED)

Channel 1 is for those funds that flow directly through the MOFED system; this covers both government and donor funds. The budget support received from donors is reflected in this channel. Channel 1A are those funds that flow to the regional governments as formula-based block grants with those formulae approved by the House of Federation. These funds flow through the treasury system, on budget, on treasury and on account. This Channel 1A is the government's preferred channel for donor funds.

Channel 1b are those funds that are earmarked for specific projects, outcomes and activities agreed between the government and donors. Funds flow from donor special accounts within MOFED to program-specific accounts to be used for clearly earmarked purposes. The flow of funds is on budget, on treasury and on account. Although these funds follow a harmonized system as articulated in a One Plan One Budget One Report system, donors using this channel also require a separate planning and reporting document with their own format, as agreed with the government.

Channel 2: Federal Ministry of Health

Channel 2 is for those funds managed by the FMOH. Channel 2a funds are un-earmarked resources largely managed through the MDG/SDG Performance Fund (MDG/SDG Pool). The MDG/SDG Performance Fund is a basket of donor funds allocated and released directly to the Woreda level based on agreed work plans determined during the Woreda planning process. The regional/district health bureau receives direct funding through this channel and maintains separate accounts with separate direct reporting to the donors. These funds are on plan but not on budget or on treasury.

Channel 2b is for those funds that are earmarked for program-specific activities, with allocations being released based on specific agreements between donors and the government. Although these resources

are managed by FMOH, accounting and reporting largely follow separate donor procedures. Some donors, including the Global Fund, GAVI and UN agencies, transfer resources through FMOH to the Woreda level which is responsible for managing and reporting on their use through government agreed procedures. The regional/district health bureau receives direct funding through this channel and maintains separate accounts with separate direct reporting to the donors. These funds are on plan and most of them on budget but not on treasury. They use mainly government systems of PFM and procurement. These resources are used to centrally procure commodities and supplies, or in-kind contributions, with minimal flow of actual funds. Channel 2a is the FMOH preferred channel for donor funds.

Channel 3: Limited Government Oversight (Off-Budget)

Channel 3 is for funds spent directly by the development partners or their implementing agencies. These include funds from USAID, U.S. President's Emergency Plan for AIDS Relief (PEPFAR), and the CDC. These funds may be reported on plan, through the Ethiopia resource mapping exercise, and are included as part of the FMOH's, not MOF's 'one budget', but they are planned, budgeted, reported independently of government procedures. They may be reported on plan, but are managed off budget, off treasury and off account.

This is direct funding received from the donors and NGOs and is not fully reflected in the comprehensive plan or budget and development partners make procurements and payments directly to contractors. The funding under this source has reduced considerably over the last 10 years.

Funds through "Channel 3" are those disbursed directly by donors without involving any government agency; they are usually not captured in the budget and, disturbingly, are not reported at all in many cases. In some cases, they do report to the regional bureaus or to the sectoral ministry concerned but these parties may not report to MoFED. There seems to be no systematically organized and comprehensive data available on a regular and consistent basis regarding the trends of aid flows to the health sector—either by MoFED or FMOH. Data sourced from budget documents/MoFED therefore do not reflect the exact amount of aid used in the health sector. One simple example is that the PEPFAR data is not available from the budget document; it is disbursed partly through channel 2 and partly through Channel 3.³¹

As the HSDP Harmonization Manual identifies, the various channels have differential impacts on the predictability, flexibility and transaction costs of the budgeting process. As Table 5 indicates, the government's preference would be for Channel 1 (1a) as this provides the most predictability and flexibility at the lowest transaction costs for the government. Channel 3 is the least desirable, with Channel 2, being largely tied aid, having predictability but with less flexibility than Channel 1. The MOFED prefers Channel 1, while the MOH prefers Channel 2, with the various donors having different preferences across the three channels. There is general agreement that all donor funds should ideally flow either through Channel 1 or 2 to be naturally on plan, on budget and on report.

Table 5: Characteristics of budget channels in the health sector

Type of Budget	Predictability	Flexibility	Lowest transaction costs	Remark
Channel 1a	****	****	****	
Channel 1b	****	*	***	Earmarked and requires separate documentation at least for some donors
Channel 2A	****	***	***	Sector pooled fund and only applicable to health
Channel 2b	****	**	**	Different procedures and planning formats
Channel 3	*	*	N/A	Funds may not be known, plans and reports not shared.

**** Excellent; *** Good; ** Problematic; * Poor

Source: Adapted from MFOH, 2007, p. 43.

Recognizing the fragmentation of health-related funding, the government, in close cooperation with the development partners, have adopted a loose definition of “one budget” as being a consolidation of the various health funding, reflected in one health budget with recognition that the development partner funding is flowing through different channels. The HSDP Harmonization Manual outlines the minimum requirements for each stakeholder, emphasizing the need for keeping all government levels informed of the planned activities and resources either flowing through their plans and budget or those flowing in parallel to their plans and budgets. Better information on plans and resources being spent at each level of government will help encourage greater coordination, less duplication and possible wastage in health outcomes.

Linking One Plan and One Budget to One Report means all stakeholders will be using a similar, standard reporting and monitoring framework. The objective is to reduce the compliance costs caused by using different formats, calendars and systems in the health reporting process. The FMOH institutionalized the resource mapping and established the grant management unit to ensure that the all resources are known and use government calendar, report format and timelines. The success however is not encouraging. The sector is also producing annual reports and undertook annual sector reviews for almost two decades. The data for this is generated from the Health Management Information System, whose timeliness, interoperability and quality has been in question. Currently the FMOH is rolling out different interoperability exercises as part of the scale up of District Health Information System 2.

At overall government level, various PFM reform programs of system development and human capacity building were designed and implemented in the areas, among others, of auditing. Government accounting, program budgeting, cash management, and disbursement. This has resulted for raising the Public Expenditure and Financial Accountability (PEFA) ranking of Ethiopia from top half of African countries in 2007 to 10% of top ranked countries in 2014¹¹. But the report clearly shows there are still gaps in transparency and comprehensiveness of budget and effectiveness of tax administration.

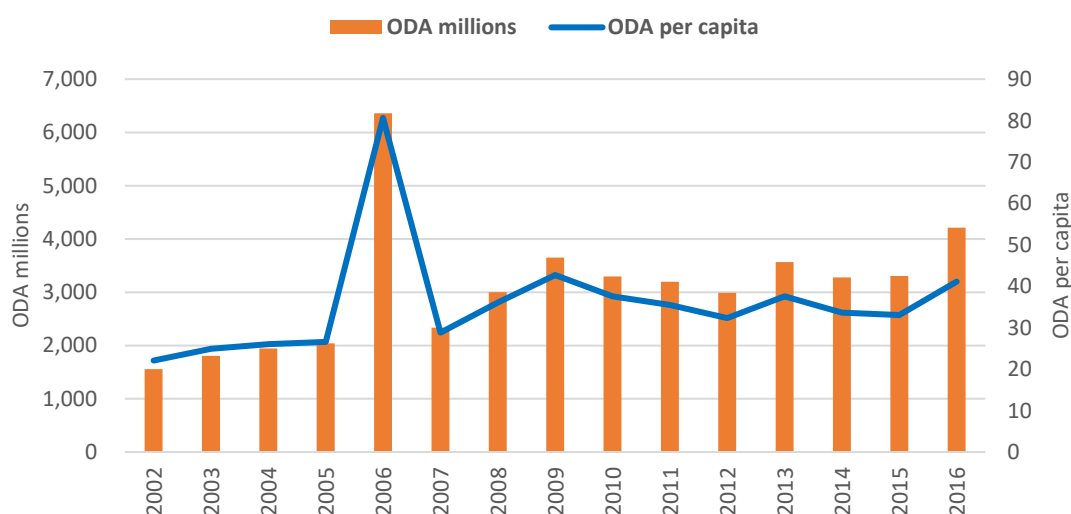
3 Donor support, aid management, and future aid prospects

Donor support

Ethiopia is one of the most foreign aid dependent countries in the world and a significant portion of health financing comes from external sources. Ethiopia is the largest recipient of official development assistance in the African region. Aid developments are shown in Chart 7. Between 2010-16, Ethiopia received 7 percent of total development assistance in the region, aid having increased 160 percent between the early 2000s and 2016.³² On a per capita basis, overseas development assistance (ODA) in Ethiopia fell after the financial crisis but subsequently recovered and in 2016 stood at USD 41 per capita. As shown in

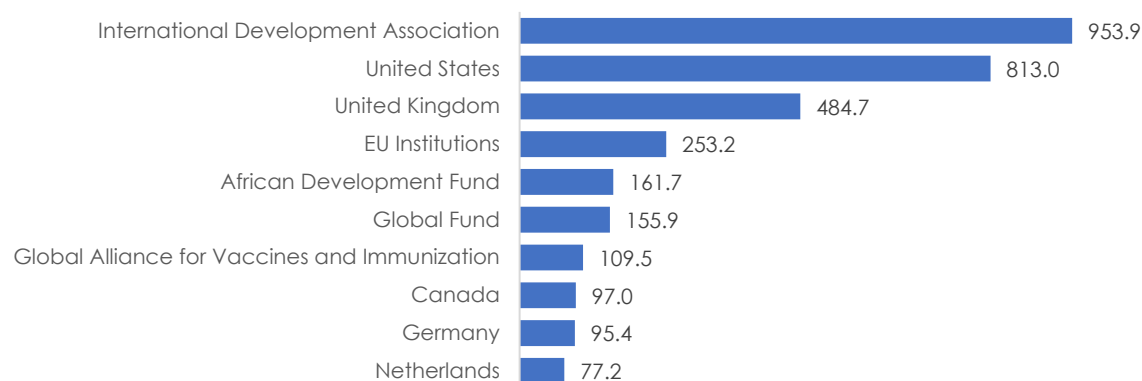
Chart 8, the top five ODA donors in Ethiopia are the World Bank IDA, US, UK, EU and the African Development Fund.³³ The largest multilateral and bilateral donors, IDA and the United States respectively, together account for more than 40 percent of total ODA in Ethiopia.

Chart 7: Overseas development assistance to Ethiopia, 2007-16



Source: OECD CRS database

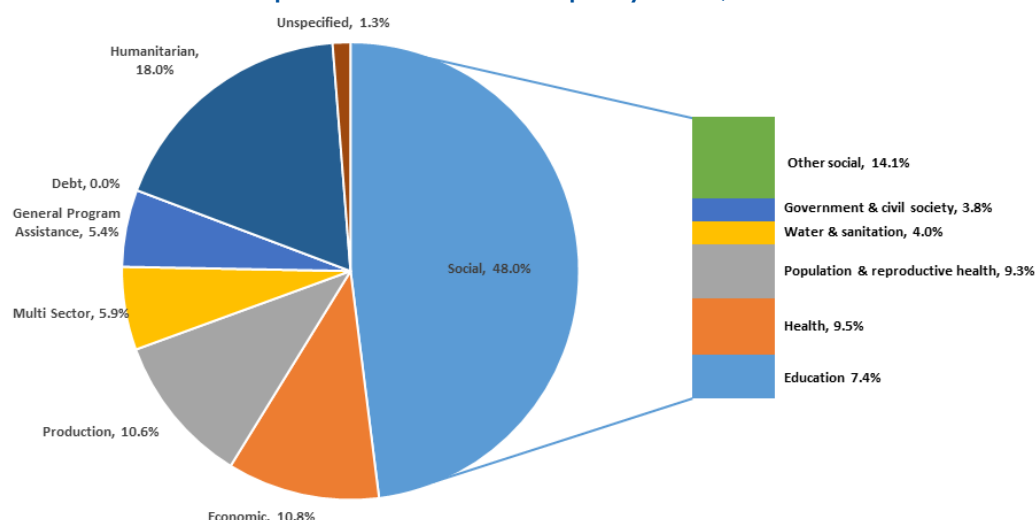
Chart 8: Top ten donors to Ethiopia, 2015-2016 average (US dollars, millions)



Source: <http://www.oecd.org/dac/financing-sustainable-development/development-finance-data/aid-at-a-glance.htm>

As Chart 9 shows, almost half of aid to Ethiopia went to the social sectors in 2016, development assistance for health (DAH) accounting for the largest share of social sector aid. In 2015, out of total DAH in the world of US\$ 3.7 billion, Ethiopia received US\$ 828.3 million, the highest among all least developed countries.

Chart 9: Official development assistance to Ethiopia by sector, 2016



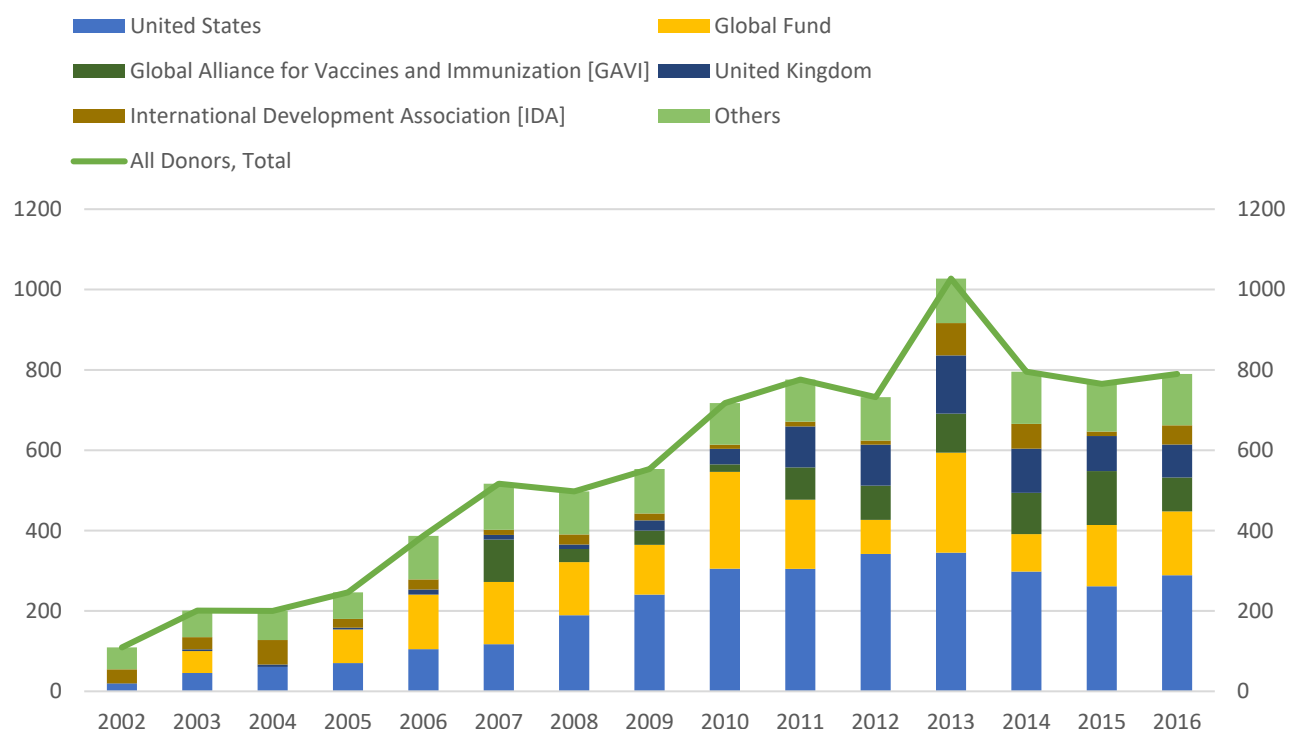
Source: OECD CRS database

Note: Development Assistance for Health includes ODA flows under purpose codes Health total (120), Population policies and reproductive health total (130), and social mitigation of HIV/AIDS (16064)

As shown in Chart 10, DAH flows to Ethiopia steadily increased until 2013 but have since plateaued. Total DAH from all sources fell from USD 1.03 billion to USD 789 million in 2016. The stagnation of DAH in recent years is evident from the above graph which is consistent with global concerns over plateauing of DAH³⁴. This coupled with a wave of policy changes leading to shrinking aid allocations by prominent bilateral donor countries, like the United States, are significant developments that affect the future of DAH in Ethiopia.

More than a third of DAH to Ethiopia comes from the United States. The other top health DAH donors are the Global Fund, GAVI, the United Kingdom and IDA³². As Chart 10 shows, while the United States continues to be the primary donor in health, its contribution has fallen in the last 5 years, while the share of Global Fund has almost doubled. On a per capita basis, DAH per capita increased from USD 1.5 per capita to USD 10 per capita between early 2000 and 2013, but has since fallen to USD 7.7 in 2016. The DAH per capita has been calculated using OECD Creditor Reporting System (CRS) purpose codes Health total (120), Population policies and reproductive health total (130), and social mitigation of HIV/AIDS (16064) and WDI population data.

**Chart 10: Total development assistance for health (DAH) to Ethiopia and contribution of major donors, 2016
(constant US dollars, millions)**

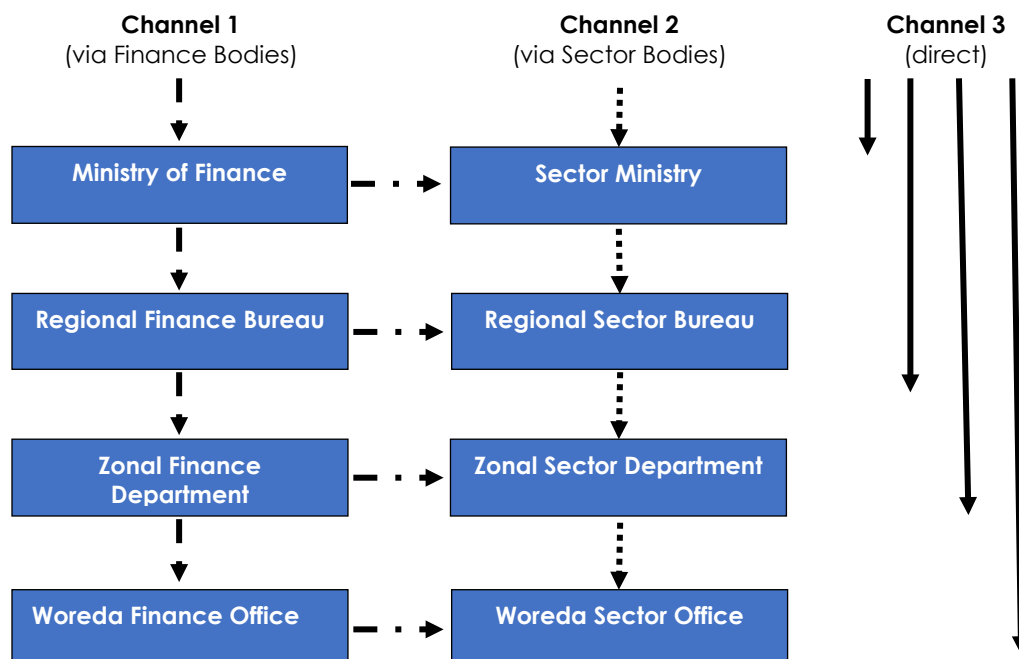


Source: OECD CRS database

Aid management

Ethiopia developed an Aid Management Platform under MOFED in 2001 which has helped in improving transparency, disbursement, and predictability of aid flows in the country. In 1998 a study called “Harmonising Requirements and Procedures among Potential Funding Agencies Supporting ESDP and HSDP in Ethiopia”,³⁵ was undertaken to contribute towards development of harmonized procedures to guide the monitoring, reporting and evaluation of the Economic Sector Development Program (ESDP) and the HSDP in Ethiopia. These recommendations were adopted into the MOFED “Implementation Plan for Donor Fund Reporting System” in 1998.³⁰ To harmonize the potential funding agencies, there was a decision to allow donor funds to flow into Ethiopia through three major channels (Figure 5 and described above).

Figure 5: Alternative donor funding channels



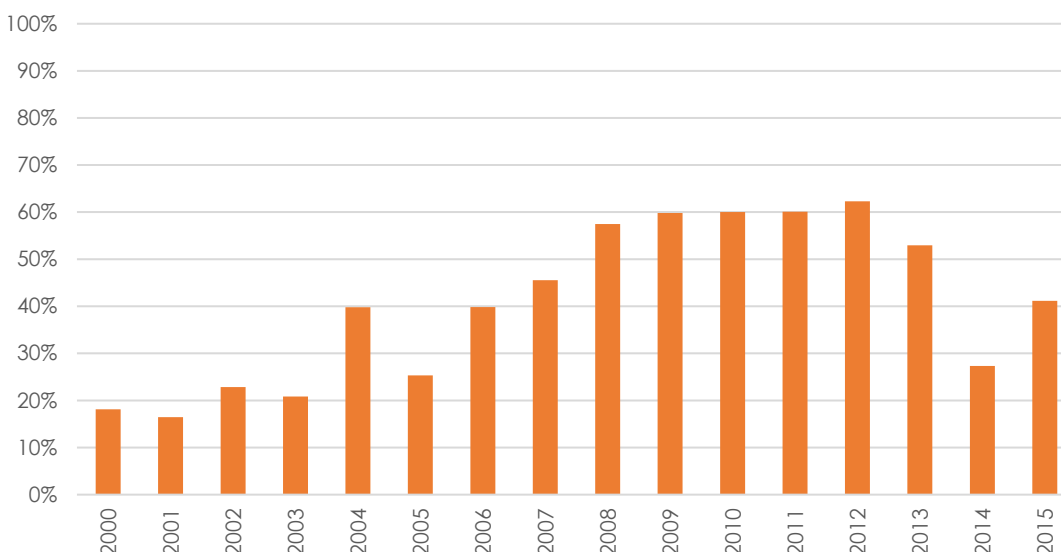
Source: Lister, Stephen. "Implementing Sector Development Programmes in Ethiopia" Mokoro Ltd, December, 1998 and Martin, J. and others, 2000, p. 13

To improve the allocative efficiency and effectiveness in health care spending, the government and the development partners in the health sector adopted the One Plan One Budget One Report initiative in 2007.³⁶ This was to ensure a more effective alignment of the scarce health resources from the government across all three levels, development partners to the right health priorities within the country. The allocative efficiency was to be achieved by more closely linking total health spending to health priorities by all parties.

Since development partners play a significant role in Ethiopia's health sector development, the "One Plan, one Budget, One Report" initiative was adopted in order to align the plans and budgets of all development partners and stakeholders with the priorities outlined in the one strategic health sector plan. The aim of the initiative was to encourage development partners to link their resources to the health development plan, channel their financial assistance through either Channels 1 or 2 and consolidate the reporting to simplify administration and compliance costs while enhancing transparency and accountability³⁶. The key aspects of the initiative are summarized in Box 2. Through resource mapping exercise carried out annually, the actual budgets/resources coming through Channel 3 are also mapped out and included in the health sector's 'one budget' concept, though it might not be complete.

As Chart 11 shows, the percentage of external health financing channeled through the government (Channels 1 and 2) increased steadily between 2000 and 2010, but has fallen since. The IHP+ had set a target to have 100 percent of DAH should be on plan by 2009/10. Although this target was not achieved, it appeared that about 76 percent of activities funded by 19 of the reporting development partners was on plan in 2009/10. Most of the 24 percent which was not on plan was funded by the US Government³⁶. The same study reports that only 39 percent of DAH funding was on budget (Channel 1) in 2010, while the target was 90 percent and reports that development partners requiring separate reports for their support declined from 75 percent to 58 percent by 2010. Based on these findings, a One Plan, One Budget, One Report Road Map was developed in 2012.

Chart 11: Development assistance channeled through Government, 2000-2015



Source: WHO GHED, 2017

A 2016 report by the Global Partnership for Effective Development Cooperation also talked about the low level of on-budget capture of foreign assistance in Ethiopia³⁷. The Global Partnership for Effective Development Cooperation has developed a set of indicators that evaluate countries on the basis of four key effective development cooperation principles that emerged from the Busan Partnership Agreement in 2011: country ownership; inclusive partnerships for development; transparency and accountability; and focus on results.³⁸ Based on these four principles, the 2016 Ethiopia report noted that only 66 percent of official development finance was captured on budget in the year 2013-14 and this further declined to 63 percent in year 2016. The report indicates that the use of country PFM and procurement systems in Ethiopia has declined over the years with share of ODA routed through the country's PFM and procurement systems falling from 66 percent in 2010 to 51 percent in 2013-14 and 45 percent in latest years³⁷. This is confirmed by the recent HSTP MTR report:

*"The once functional Harmonization and Alignment system seems to be somehow ineffective at the moment. The Health Harmonization Manual has not been updated and revised since 2006. The resource mapping exercise at all levels is weakened and there is poor engagement of DPs in the development of the comprehensive plan. The eight IHP+ effective development behaviors are not institutionalized to monitor the key behaviors of both DPs and government as part of the annual planning and review process."*¹³

Future aid prospects

It has been noted that increases in health expenditure, and especially spending on primary health care which has been the main driver of improving health indicators, have been supported by sustained increases in development assistance for health (DAH). However, while the health agenda remains large and the associated resource requirements are high, an uncertain outlook for development assistance suggests that alternatives to DAH must be sought.

Chart 7 and Chart 10 revealed that both development assistance and DAH in Ethiopia experienced a recent peak in 2013, declined in 2014 and 2015, but then picked up in 2016. The pickup in development assistance was anticipated based on available information about donor plans and other relevant developments, indeed it was expected to continue into 2017. However, aid was projected to decline in 2018, as indicated in Table 6.

Table 6: Country programmable aid projections, 2015 (2013 US\$ per capita)

	Ethiopia	Sub-Saharan Africa	Africa	All Countries
2014	32.5	38.4	40.8	18.0
2015	31.2	38.9	40.8	18.2
2016	33.4	38.9	40.8	18.3
2017	34.1	37.5	39.6	18.1
2018	31.8	34.1	38.4	17.6

Source: OECD CRS Database

While informative, Table 6, and longer-term aid trends, provide little useful information about the future prospects for development assistance in general and DAH in particular. What is known about the policies of donors and the pressures they face suggests that the recent decline in aid may be the start of a longer-term trend. A combination of slow growth, fiscal pressures and rising nationalism/globalization backlash in major countries, combined with uncertainties about support available from the Global Fund etc., lend support to such a view. The Global Fund and GAVI, for example, have developed a financing transition and sustainability strategy to ensure that countries are increasing domestic financing for the programs they support.

At the very least, the likelihood that significantly more aid will be available in the future is very slim, and the 0.7 percent of GNI aid target will probably remain out of reach (aid is currently less than half this level). However, both development assistance and DAH in Ethiopia have not exactly mirrored broader aid trends, which points to the fact that it is difficult to project what will happen in any one country or sector based on anticipated general trends.

The usual response under such circumstances is to consider alternative aid scenarios. This is the approach taken in a recent study by Berman, Mann and Ricculi³⁹ which examines the future financing of primary health care in Ethiopia. The study utilizes two aid scenarios: in one aid remains at its constant 2011 real level; in the other it remains at this level until 2020 and is then halved by 2035. These are reasonable characterizations of the range of possible scenarios, and the important conclusion of the study is that choosing one or the other does not affect the fact that the main challenge facing Ethiopia is to identify alternative sources of fiscal space to pay for a significant share of future primary health expenditure.

This trend is well recognized in Ethiopia. The FMOH has drafted health finance strategy, submitted to be endorsed by the Council of Ministers soon, aims at increasingly replacing external funding by domestic health financing, including innovative earmarked taxes and other mechanisms. The challenge continues to be advocating for and ensuring buy-in to such mechanisms by higher government authorities for its endorsement and implementation. These conclusions illustrate very clearly the motivation for this paper.

4 Domestic revenue mobilization and tax reform

Revenue assignment structure

Ethiopia is characterized as a highly-centralized federation, with a concentration of fiscal decision-making power at the center which controls most revenue raising powers. The assigned revenue sources in Ethiopia are exclusively defined in the constitution and fall under three categories: federal, concurrent and regional (Table 7). With a majority of expenditures at the regional level and below, Ethiopia also has a complex system of formula-based intergovernmental transfers, with a system of block grants to the flowing regional governments, which in turn provides block grants to the district levels.

The constitution of Ethiopia outlines both the division of responsibilities as well as the sources of revenues for the federal and regional governments. Expenditures responsibilities are driven by the subsidiarity principle, with regional governments responsible for provision of most public services including maintaining law and order, while the Woredas are responsible for water provision and distribution, local roads construction and maintenance, primary school and primary health care services, as well as veterinary services, agricultural activities management and natural resources protection. The federal government is responsible for all powers that have not been delegated / devolved to the regional level, or for those services under shared responsibilities.

Article 96 identifies the federal revenue sources to include collection of customs duties, taxes and other charges on imports and exports, as well as taxes on federal-owned enterprises and on employees of the federal government, as well as on international organizations and corporations (other than entities owned by the regional states), federal stamp duties, monopoly tax, value added tax, national lottery, and fees from licenses issued by and services provided by organs of the federal government. The federal government also receives a share of royalties and taxes on natural resources.

Regional government revenues are defined under Article 97 as including income taxes from regional government employees; agricultural tax from farmers, tax on individual traders, houses and other property owned by private persons or regional government; employment, and sales tax from public enterprises owned by the state government; forest products, royalties and land lease fees from small mining undertakings.

Table 7: Revenues sources by level of government in Ethiopia

Level of government	Revenue sources
Federal	<ul style="list-style-type: none">Custom duties: export & import taxes or levies; income and enterprise taxes; taxes on the national lottery; stamp duties; income from federal monopolies; fees from transport
Regional	<ul style="list-style-type: none">Income taxes (personal, sales, corporate, profit, property)Fees on agricultural land, licensing, royalty, forest resources, water use)Fees of health servicesGrants from federal government (70-80 percent of revenues)
Woredas	<ul style="list-style-type: none">Personal income tax, agricultural income tax, rural land use tax, rental income tax, licenses and feesGrants from regional government (80-90 percent of revenues)

Source: Garcia and Rajkumar, 2008

The revenue raising powers in Ethiopia are structured according to the categories of taxpayers or by the source of the revenues, thus the taxation by one level of government does not tax the same income or

transaction base of another government level. Thus, the taxes collected are mutually exclusive, although the manner in which the taxpayer is registered, administered, or declared can affect the ability of different government levels to collect and own those payments (e.g., companies registered as national firms would pay their personal and corporate income taxes to the federal government, while those registered under the region would pay their taxes to the regional government).

Article 98 covers those shared revenues between the federal and regional governments. These shared revenues include those from profit, sales, exercise, and personal taxes on jointly-owned enterprises; taxes on corporation profits and shareholder dividends; and taxes on the incomes from large-scale mining and all petroleum and gas operations. These shared revenues are distributed based on decisions made by the House of Federations, the upper chamber of the federal legislature. The value-added tax (VAT), which was introduced in 2003, is also shared between the federal and regional governments. The VAT assessed on incorporated bodies with a head office in Addis Ababa is assigned to the federal government, VAT revenues assessed on incorporated bodies with head office in a region are split 70 percent Federal and 30 percent Regions, while VAT revenues assessed on sole traders are assigned to the region where the trade is physically based.⁴⁰

According to the VAT proclamation 286/2002, the implementation and enforcement of VAT is the duty of the Federal Inland Revenue Authority.¹ VAT implementation started in January 2003. Owing to the fact the revenue authority did not have offices in all the regions and the desire to reduce the cost of compliance on the part of VAT registrants, the Federal Inland Revenue Authority delegated regional and city administrations in September 2005 to administer VAT by registering taxpayers of their own.⁴¹

Some regions and cities are allowed to collect other revenues like administrative fees and charges, sales of public goods and services; government investment income; and miscellaneous revenues apart from the above. Addis Ababa, similar to regional governments, has powers to mobilize revenues from income (including rental income), business profits and VAT on certain products and services, market fees and user fees on water. In 2018, Addis Ababa was expected to collect a total of 34.8 billion ETB in tax revenues, of which 65.4 percent was to be from direct taxes, 32 percent from indirect taxes and 2.6 percent from municipal taxes which include revenues from water services, sanitation, housing rents and other miscellaneous municipal fees and charges.⁴² Addis Ababa is able to collect a city house tax, a city land rent and a residential house rent, which together constitute less than 1 percent of total revenues, and only about 5 percent of total Addis Ababa municipal revenues in 2013/14.⁴³

Table 8 summarizes the assignment of revenues between the Federal and regional state governments. Effectively the assignment of revenues has resulted in the federal government over 1996/97 through 2012/13 receiving an average of 80.3 percent of tax and non-tax revenues (with a standard deviation of only 2 percentage points). Out of the residual 19.7 percent going to the regional state and city governments, Addis Abba received an average share of 46.5 percent of this subnational total.² Per capita federal block grants increased from 588 ETB in EFY 2007 to 1,238 ETB in EFY 2010- an increase of 110% in four years.

While the assignment of taxing powers, administrative responsibilities and revenue sharing is an important element in sustaining political stability within the Ethiopian federal system, it is important to

¹ The Federal Inland Revenue Authority, the Ethiopian Customs Authority, and the Ministry of Revenue were merged and formed the Ethiopian Revenues and Customs Authority in July 2008 following a business process reengineering study.

² Based on revenue data of Ethiopian authorities for 1996/97– 2012/13.

note that the system poses some major tax administration challenges. Current tax policies have been implemented for the last 15 years without significant major overhauls. Outside of land, property and resource-based taxes, the legal tax structure of the major taxes (income tax, value added tax, and customs and excise duties) are largely under the federal government, but the administration of the major domestic taxes, especially the income tax and the VAT are divided across federal and regional levels. MOFEC established a new Tax Policy Directorate in 2017 to design new tax policies, follow up implementation and provide tax policy advice.

Table 8: Revenue assignment between federal and regional governments (national and sub-national governments)⁴⁴

Type of revenue	Distribution formula*	
	National level	Sub-national level
Fully federally owned enterprises		
Business profit tax	100 percent	Nil
Wages and salaries taxes	100 percent	Nil
VAT and excise taxes	100 percent	Nil
Unincorporated enterprises (individuals)		
Business and profit tax	Nil	100 percent
Wages and salaries taxes	Nil	100 percent
VAT and excise taxes	Nil	100 percent
Jointly owned enterprises		
Business profit tax	Based on capital contribution	Based on capital contribution
Wages and salaries taxes	50 percent	50 percent
VAT and excise taxes	70 percent	30 percent
Private companies		
Business profit tax	50 percent	50 percent
VAT and excise taxes	70 percent	30 percent
Dividend tax	50 percent	50 percent
Large scale joint ventures in petroleum and minerals		
Business profit tax	50 percent	50 percent
Royalties	60 percent	40 percent

Source: Ministry of Revenue

***Note:** The revenue sharing formula regarding direct and indirect taxes collected by Ethiopia Revenue and Customs Authority (ERCA) from incorporated businesses based in regions and large-scale joint ventures in petroleum and minerals is formulated by the House of Federation.

Where administration of a tax base is divided between jurisdictions, unless there is a high level of data sharing and cooperation between tax administrations, significant problems arise in the enforcement of the tax. Under the VAT, as noted above, the federal government has delegated the administration of the VAT to certain regional tax administrations. This poses a challenge to the regional administration where VATable businesses trade in inputs and outputs with other Ethiopian regions and/or internationally. Assessment of the VAT depends upon identifying and verifying the correct tax chargeable on outputs (exported or domestically supplied) and the correct tax actually paid on inputs imported or sourced from

other regions in Ethiopia. These transactions are not directly verifiable or auditable by regional government with the active cooperation of the Federal and other regional tax administrations. The income tax poses more of a problem given the income of one individual could be divided between two or more jurisdictions and no one jurisdiction has responsibility for reconciling the comprehensive income tax of business entity or of an individual and the businesses owned by that individual. This opens up numerous problems of transfer pricing between entities and jurisdictions.

- First, while the Ethiopian Revenue and Customs Authority (ERCA) administers the income tax of private corporations, the regional government is responsible for the PAYE and taxation of the individual employees. The auditing of the pay-as-you-earn of a corporation requires the auditing of the accounts of the overall corporation to check the amounts of employee compensation paid in cash and kind.
- Second, in the case of a closely-held corporation, the Federal government administers the tax on the corporate entity, but the regional government administers the tax on the personal income of the owners.
- Third, where an unincorporated business operates in a number of regional jurisdictions, the regional administrations are challenged to check whether the business is allocating all of its income and how it is allocating its sales and costs across jurisdictions to prevent transfer pricing and/or the simple failure to declare some revenues.
- Fourth, depending upon whether a region has an ERCA presence or not, businesses may select to conduct business as a corporation in a region where ERA has no office or as an unincorporated business where it does, to minimize its oversight and audit risks.

This allocation of tax administration responsibilities is doubly challenging in the case of Ethiopia. First, non-corporate business taxation is one of the challenging areas of tax administration in all countries and this challenge has been allocated to the weaker regional level of tax administration. Second, Ethiopia, as discussed below, has usually difficult-to-tax economy with a large informal sector of unincorporated rural and urban businesses.

A review of the funds allocated to tax administration raises further questions about the lack of appropriate administrative effort and capacity. Table 9 shows a high concentration of regional revenue collection in Addis Abba (44.2 percent) and the top four other regions (a further 48.2 percent) leaving the balance of 7.5 percent collected by the other 6 regions. In addition, the average administrative cost at the regional level is high at 3.1 percent and especially if Addis Abba is removed, then for the other regions the administrative cost rises to an average of 4.1 percent of revenues and with some regions over 6 percent.

Table 10 gives the budget expenditures for the Federal government tax administration (ERCA) and for Addis Abba. These estimates of the recurrent expenditure costs of Addis Abba are somewhat higher at an average of 2.2 percent compared to the 1.7 percent in Table 9. The ERCA total expenditures (including capital expenditures of about 5 percent of the total expenditures) average a modest 1.1 percent of revenues. Clearly, the costs of revenue collection by ERCA are significantly lower than those of the regions. Arguably, the funding of ERCA could be increased.

Table 9: Distribution of revenue collections and tax administration costs across regions in Ethiopia over 2011/12-2015/16

Region or city	Average share of regional revenue, 2011/12 - 15/16	Average administrative cost as share of revenues, 2011/12 - 15/16
Gambella	0.5%	8.2%
Harari	0.6%	2.5%
Benishangul-Gumuz	1.0%	5.4%
Afar	1.1%	1.1%
Dire Dawa	1.3%	2.7%
Somale	3.1%	5.7%
Tigray	7.4%	2.4%
SNNP	9.5%	6.4%
Amhara	11.9%	4.0%
Oromiya	19.5%	4.6%
Regions excluding Addis Abba		4.1%
Addis Ababa	44.2%	1.7%
Region total	100.0%	3.1%

Source: Ethiopian Revenues and Customs Authority (Regional Support and Cooperation Management Directorate)

Table 10: Cost of tax collection for the federal government and Addis Ababa City Administration, 2012/13-16/17

Fiscal year	Federal government					Addis Ababa City Government		
	Tax Revenue (In Millions Birr)	Recurrent Budget Expenditure (In Millions Birr)	Recurrent Cost of Collection (%)	Capital Budget Expenditure (In Millions Birr)	Total Cost of Collection (%)	Tax Revenue (In Millions Birr)	Recurrent Budget Expenditure (In Millions Birr)	Recurrent Cost of Collection (%)
2016/17	160,188	1,901	1.2	111	1.3	23,246	578	2.5
2015/16	144,347	1,585	1.1	142	1.2	21,109	494	2.3
2014/15	128,320	1,240	1.0	107	1.0	17,195	356	2.1
2013/14	106,798	848	0.8	70	0.9	14,306	258	1.8
2012/13	84,414	795	0.9	38	1.0	9,373	222	2.4
Average			1.0		1.1			2.2

Source: Ethiopian Revenues and Customs Authority (Planning and Monitoring Directorate) and author calculations

The funding of tax administrations internationally tends to fall in the range of about 0.5 percent to 3 percent of revenues with most developed economies falling below 1.5 percent. Typically, there are significant economies of scale in tax administration and the costs of tax administration tend to fall with the size of the economy, the number of taxpayers and the tax rates imposed (as long as these do not rise to the levels that encourage significant tax avoidance and evasion behavior.)

With more comprehensive use of electronic tax returns, filing and tax payments, the costs of tax administration in high-income countries has been falling and now tend to average at or below 1 percent. For low-income countries costs of tax administration tend to be higher given the relatively small and difficult to administer tax bases (even in large economies.) There are a number of reasons for expanding the funding of ERCA above its 1.3 percent of collections.

- First, ERCA should expand its administrative coverage to all regions and increase its level of cooperation and coordination with regional governments. This will allow the full nation-wide accounts for all types of income for all individuals and businesses under both the VAT and income tax to be available to the tax administration to prevent the obvious tax evasion opportunities available under the current divided tax administration regime. ERCA should play the key data aggregating and sharing role within the tax system.
- Second, the low tax elasticity experienced by Ethiopia despite rapid economic growth, as discussed below, in part likely arises from much of the economic growth occurring in the self-employed, largely informal sectors. This puts a major burden on the regional governments to administer taxation at the individual level. ERCA needs the resources to support the regional government tax administration efforts.
- Finally, ERCA is receiving significant assistance from the donor community to strengthen its tax administration capacity. To sustain the upgraded administrative systems, including enhanced information technology systems will require added budget support going forward.

Revenue structure and collections

Ethiopia collected 11.6 percent of GDP in tax revenues, and combined with non-tax revenues, the revenue / GDP ratio reached slightly over 15 percent in 2016/17 due to wide range of tax evasion and avoidance.¹¹ Despite tax revenues increasing in absolute terms, this tax to GDP ratio has remained relatively constant for a decade given the rapid growth in GDP. The tax revenue structure has not been responsive with respect to economic growth. As Table 11 indicates, the revenue performance is even estimated to have fallen to 11.8 percent in 2016/17 but is projected to recover to 12.4 percent in 2017/18, with some expected increases up to 14.5 percent of GDP by 2021/22.

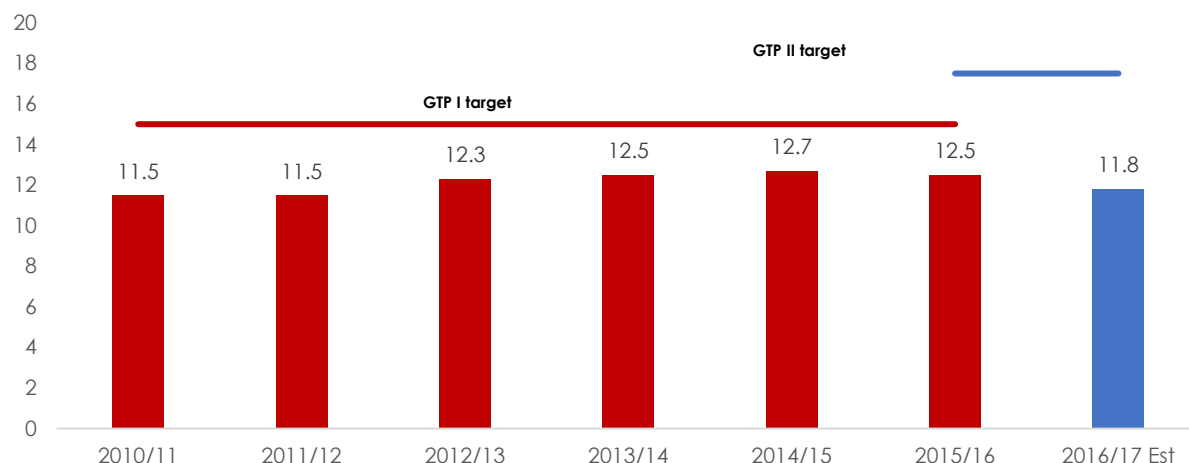
Table 11: Revenue performance, 2013/14- 2021/22 (percent of GDP)

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
	Actuals			Estimate	Projections				
Total revenue	13.8	14.4	15.2	14.4	14.7	15.1	15.5	15.8	16.3
Tax revenue	12.5	12.7	12.5	11.8	12.4	13	13.4	13.9	14.5
Nontax revenue	1.2	1.6	2.7	2.6	2.3	2.2	2.0	1.9	1.8

Source: IMF Article IV Consultation Report, 2017

This tax revenue performance to date and the projected tax revenue figures fall short of the revenue targets set in the GTP 1 and GTP II (Chart 12). Under GTP 1, the revenue target was set at 15 percent while the revenue target for GTP II is set at 17.5 percent. To meet these targets will require substantial tax policy and administration reforms over the coming years.

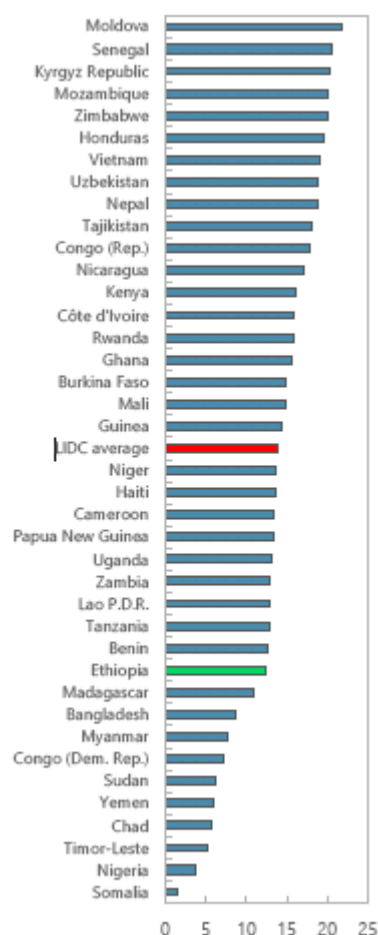
Chart 12: Tax revenue, 2010/11-2016/17 (percent of GDP)



Source: IMF, 2017, Article IV Consultation Report, p. 10

Chart 13: Tax revenue in LIDCs, 2016

(% GDP, general government)



Source: IMF Fiscal Monitor, 2017

The current tax revenue performance in Ethiopia is low relative to other low-income developing countries (LIDCs). As Chart 13 shows, Ethiopia falls below its neighboring countries, Tanzania, Zambia, Uganda, Rwanda, Kenya and Congo. Consistent with the SSA average rate of 16 percent, Ethiopia's target of 17.5 percent revenue to GDP ratio would be reasonable. However, reaching this target will mean substantially increasing the current growth rate of tax revenue, but this will require dedicated undertaking of policy and administrative reforms in Ethiopia. Prior to identifying a possible way forward, this paper will review the current tax structure at the federal and regional levels.

As Table 12: Tax revenue performance in Ethiopia (% of GDP, period average) Table 12 indicates, Ethiopia is highly and increasingly reliant on foreign trade duties and taxes. Prior to 1992, the revenue structure was dominated by direct taxes, which contributed 4 percent of GDP, followed by domestic indirect taxes at 3 percent and foreign trade taxes and duties of 2.2 percent for a total tax to GDP ratio of 9.1 percent. Since then, there has been a dramatic increase in the reliance on foreign trade-related duties and taxes which rose to 4.4 percent of GDP, while the direct taxes decline slightly to 3.7 percent and domestic indirect taxes fell from 3 percent to 2.5 percent over the period from 1993-2016.

Over the last 25 years, the tax revenue composition has shifted away from direct taxes and domestic sales/VAT and excises to its heavy reliance on foreign-related duties and taxes. As Table 13 shows, the direct taxes fell from 42 percent to 34.6 percent of total tax revenues, while

domestic sales/VAT and excises fell from 31.8 to 22 percent of total tax revenues. In contrast, the duties and taxes collected on imports dramatically increased, originally contributing 25 percent of total tax revenue prior to 1992 to over 40 percent by 2016. While the customs duty contribution to total revenue have remained flat, the Sales/VAT and excise collected from foreign-traded goods has doubled from less than 10 percent prior to 1992 to now contributing almost 21 percent of total tax revenues. Ethiopia has been able to effectively capture over 50 percent of their VAT and excises at the point of international trade at the border.

Table 12: Tax revenue performance in Ethiopia (% of GDP, period average)

	Post reform period			
	1975-1991	1993-2003	2004-2016	1993-2016
Direct taxes	4.0	3.6	3.6	3.7
Personal income	1.1	0.9	1.1	1
Business profits	2.1	2.1	1.7	1.9
Domestic indirect taxes	3	2.3	2.6	2.5
Sales/VAT and excise	2.9	2.0	2.5	2.4
Foreign trade duty & taxes	2.2	3.9	4.8	4.4
Custom duty	1.3	1.9	1.9	1.9
Sales/VAT and excise	0.9	1.9	2.4	2.2
Total tax revenue	9.1	9.7	11.4	10.5

Source: Eshetu, 2016, Table 2.2

Table 13: Tax revenue performance in Ethiopia by major categories (% of total)

	Post reform period			
	1975-1991	1993-2003	2004-2016	1993-2016
Direct taxes	42	36.7	32.6	34.6
Personal income	12	8.9	10.3	9.7
Business profits	22.1	21.8	15.1	18.3
Domestic indirect taxes	32.9	23.5	24	24.9
Sales/VAT and excise	31.8	21.3	22.6	22
Foreign trade duty and taxes	25.1	39.5	41.1	40.4
Custom duty	15.2	19.3	15.2	18
Sales/VAT and excise	9.9	19.7	20.4	20.9

Source: Eshetu, 2016, Table 2.2

A further disaggregation by federal and regional governments confirms the domination of the federal government in terms of tax revenue mobilization. The federal government has collected between 75-80

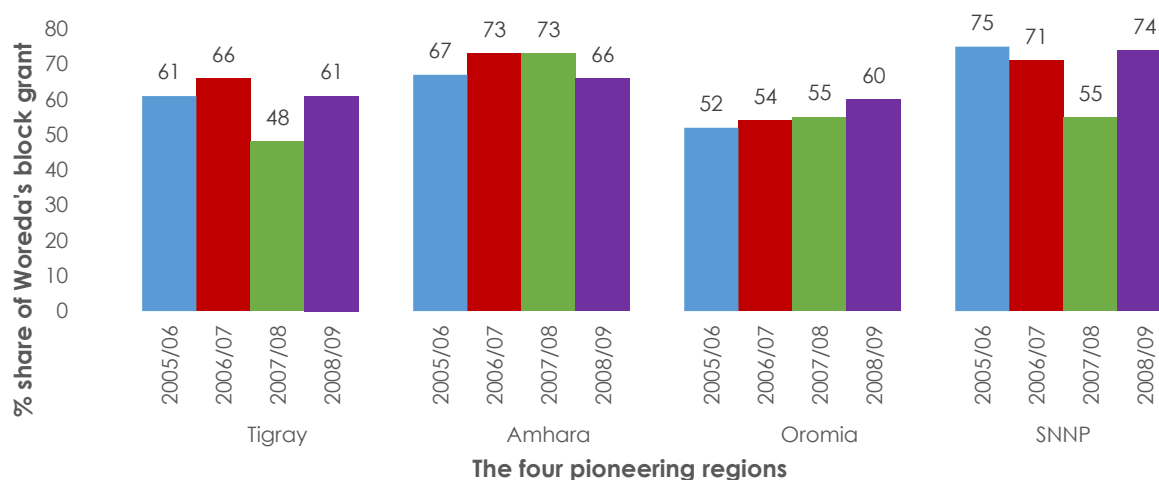
percent of all taxes over the period from 1993-2015. A similar analysis of the nontax revenues also shows that the federal government dominates, collecting over 78 percent with regional governments collecting about 12 percent of the total non-tax revenues in the country.

The majority of taxes (75-80 percent) are collected by the federal government, with the remaining 20-25 percent of total tax revenues highly concentrated in Addis Ababa City³, Oromiya, Amhara, SNNP and Tigray. The remaining regions contributing insignificant amounts. Regional governments are heavily dependent on transfers from the Federal Government, where federal transfers provide for between 74 - 58 percent of total regional funding from 2004/05 - 2009/2010⁴⁵. Regions collect only an average of 18 percent of the total consolidated government revenue (including federal government revenue) while spending about 38 percent of total consolidated expenditures, with the difference coming from the federal government level transfers⁴⁶.

The Woreda level is also highly dependent on the transfers from the regional governments. Woreda level revenues cover between 19-20 percent of total Woreda expenditures, with these limited revenues coming from land, agricultural, business and income taxes, as well as license fees and fines for minor crimes.⁴⁶ The Woreda are heavily dependent on block grant transfers from the regions. Each region follows a formula-based approach to transferring funds to the Woreda level but there is variation in the design and implementation of their specific block grant transfers. As Chart 14 indicates, the regions transfer a substantial amount through the block grant system. The amounts flowing to the Woredas varies inconsistently by region and over time. The exception is Oromia which, although smaller than the other 3 regions, had consistently increased its block grant allocation to the Woredas over the 3-year period.

Woreda governments are also discouraged from mobilizing local revenues due to the tax revenue target system⁴⁶. A higher level of revenue mobilization this year will lead to a higher revenue target in the following year. With weak revenue administrative capacity and administrative systems (incomplete and out of date revenue base information, inefficient collection and enforcement procedures and a lack of taxpayer service culture) place major short-term obstacles to expanding the Woreda level revenue collections.

Chart 14: Share of Woreda block grants in total regional expenditures, 2005/06-2008/09



Source: MOFED, 2013, as quoted in Asefa 2015, p. 36

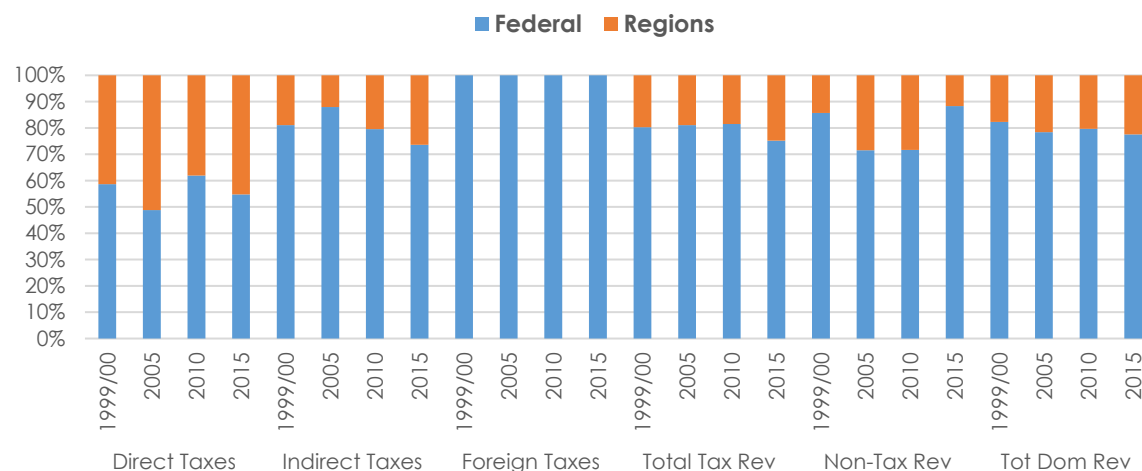
³ The city governments collect revenues from about 20 taxes, including property taxes, market transaction taxes and service-related charges (e.g., water, garbage collection).

As Chart 15 indicates, the regional governments collect 70 percent of their tax revenues from direct taxes, with the remaining 30 percent coming from indirect taxes. However, over the last 15 years, the indirect taxes have been increasing in relative proportion of total revenues. Between 1993-1997 Indirect taxes made up about 18 percent of total regional tax revenue, while from 2005-2015, they made up 32 percent.

This relative tax revenue balance between the federal and regional governments can be explained by the revenue assignment decisions outlined in the Constitution. Although the majority of the tax revenue is collected by the federal government, the majority of budget expenditures are spent at the regional and sub-regional level. This difference results in a structural vertical imbalance in the allocation of revenue and resources, explaining why Ethiopia has a well-developed intergovernmental transfer system of block grants from the federal to the regional levels, and subsequently from the regional to the Woreda levels. To address both the vertical and the horizontal imbalances in Ethiopia, these intergovernmental transfer systems are based on a complex formula-based system using indicators of fiscal need and fiscal capacity.^{14,46}

The tax revenue composition in the country, and across the federal and regional government levels, can largely be explained by the structure of the Ethiopian economy. Ethiopia is a difficult to tax country. It has a large rural population mostly involved in small scale farming, which is hard to reach, assess and collect in all countries. Ethiopia also has a small corporate and formal employment share and no major mining sector which also affect the tax revenue levels and revenue composition. The only favorable “tax handle” is a relatively high share of imported goods, but this is expected to change as the economic and institutional structure evolves in Ethiopia.

Chart 15: Distribution of tax revenues across federal and regional governments, 1999-2015



Source: MOFED

Revenue elasticity and buoyancy

In general, the Ethiopian tax system is not considered responsive with respect to its GDP growth⁴⁷. Overall tax elasticity is estimated at 0.44, while the buoyancy is estimated at 1.05. This means that the overall tax system, without the various ad hoc changes to the tax policy and administration is not at all responsive to economic growth. An elasticity of 0.44 means that every 1 percent growth in GDP will only generate 0.44 percent growth in tax revenues. On the other hand, the buoyancy is estimated at 1.05, implying that for

every 1 percent growth in GDP, the total tax revenues would increase by about 1.05 as a result of both the natural economic growth as well as the various undertaken tax reform and administration reforms.

As shown in Table 14, a further disaggregation of the coefficients indicates variations in responsiveness across revenue sources. The elasticity of trade taxes is highest at 0.58, VAT at 0.44 with income taxes the lowest at 0.37. In terms of buoyancy the VAT is highest at 1.09, followed by trade duties and income taxes. The higher tax buoyancy compared to tax elasticity suggests the importance of ad hoc changes to tax policy and administration to improving the tax revenues in Ethiopia. Subtracting the elasticity from the buoyancy identifies the contribution of the reform measures on each revenue source (column 4). As indicated the policy changes have the least impact on trade duties and the most impact on VAT.

Table 14: Tax elasticity and buoyancy in Ethiopia, 1981-2016

	Elasticity	Buoyancy	Difference due to tax changes
Total tax revenue	0.44	1.05	0.61
Income taxation	0.37	0.97	0.61
VAT	0.442	1.09	0.65
Trade duties	0.58	1.01	0.44

Source: Eshetu, 2016

Other estimates of the tax elasticity and buoyancy also highlight the lack of tax revenue responsiveness with Ethiopia's economic growth. A recent study for MOFEC on domestic resource mobilization shows that tax buoyancy is less than one for most of the years with the exception of 2009/10, which was significantly higher than the normal trend.⁴⁸ As Table 14 indicates, the estimates for tax elasticity and buoyancy for the agricultural income tax and land use fees are very low, implying that a 1 percent growth in agricultural component of GDP will lead to a decrease of over 1 percent in the agricultural income tax, and a decrease of slightly less than 1 percent for the land use fee. On the other hand, a 1 percent growth in the non-agricultural GDP will lead to about a 0.12-0.13 percent income in the total direct tax. The slightly higher figure of 0.13 percent under tax buoyancy captures a level of the various policy and administrative reforms in Ethiopia, but the relative similarities between the elasticity and the buoyancy implies that the policy and administration discretionary changes have not significantly affected the overall revenues.

These estimated elasticities and buoyancies for the agricultural taxes are expected as these are very difficult to tax in most countries but direct taxes seem very low and should be closer to or exceed 1 assuming these taxes are defined to have a broad base and that base is being captured in the tax net and that tax rates are progressive. Thus, as the economy transforms from one based on agriculture to one more based on manufacturing and services, and if the tax policy and administration is adjusted to capture those changes, the elasticity and buoyancies for direct taxes should increase.

Table 15: Tax buoyancy and elasticity for specific taxes

	Elasticity	Buoyancy
Agricultural income tax	-1.15	-1.12
Land use fee	-0.91	-0.71
Total agricultural tax	-0.83	-0.64
Personal income tax	0.07	0.08
Business profit income tax	0.11	0.12
Total direct tax	0.12	0.13

Source: Hassen, 2016

The inelastic nature of the tax system implies challenges in the definition of the tax bases and the various exemptions and incentives being grants for various political, equity and investment reasons, low levels of compliance and weak tax administration. Thus, to improve the responsiveness of the Ethiopian tax system, it will be important to review and rationalize tax policy to ensure a broad and comprehensive tax base, systematically reviewing the tax expenditures/tax incentives to evaluate the lost revenue to possible incentive linkages, and to review the tax rate structure, all within a comprehensive evaluation of the revenue, efficiency, equity and administrative feasibility of the tax system. In addition, there is need to improve tax administration in the broadening of the tax base, improving the identification, assessment, collection and enforcement mechanisms and improving citizen and taxpayer education and services to improve widespread voluntary compliance with the legal requirements.

In 2009, the tax revenue per GDP in Ethiopia was 8.6 percent, with the tax capacity for Ethiopia estimated at between 17.9-19.8 percent of GDP, with a tax effort estimated between 0.44-0.48⁴⁹. Ethiopia's tax effort has been more recently estimated to be 0.77 using basic capacity estimates, and at 0.63 when using capacity estimates including tax rate indicators⁵⁰. This suggests that the various administrative reforms have improved the country's tax effort but that there remains a tax gap.⁴

Looking forward, tax capacity and performance should improve given the rapid structural changes in the Ethiopian economy. These structural changes would include improved educational levels and coverage, urbanization and growing manufacturing and modern tourism sector. These structural changes, in combination with refinement of tax policy and improvements in tax administration capacity, will help enable Ethiopia to improve its tax revenue performance necessary to reach its GTPII tax revenue target of 17 percent of GDP.

Tax and revenue capacity and effort

As discussed above, Ethiopia has had a poor tax and domestic revenue performance over recent years despite rapid economic growth. As Table 11 shows Ethiopia has struggled to get its tax revenue above 12.5% of GDP and its domestic revenues above 15%. The average low-income country collected tax revenues of 12.7% in 2000-2009 and 13.8% of GDP in 2010-13 and domestic revenues of 16% of GDP over 2000-16. The average Sub-Saharan African country collected tax revenues of 14.9% in 2000-2009 and 16.9% of GDP in 2010-13 and domestic revenues of 18.8% in 2000-2009 and 20.9% of GDP in 2010-13⁵⁰ (Table 5.6)

Low-income countries (LICs) such as Ethiopia face a range of constraints on their domestic revenue mobilization (DRM) efforts. These include structural constraints such as large informal sectors and weak taxpayer compliance capacity. These put limits on their DRM efforts, but LICs also make policy choices in the structure of their tax and non-tax revenue policies such as choices of tax bases, tax rates, revenue administration strategy and tax expenditures that affect their revenue outcomes.

⁴ The tax gap measures the difference between the country's tax capacity minus the current revenue collections. This tax gap can result from the level of informal/underground economy (e.g., the tax base not captured by the tax system), inappropriate tax policy (e.g., tax thresholds, tax rates, and expenditures), and weak tax administration (poor tax base coverage, assessments, audits, collections, enforcement and taxpayer service).

The major challenges identified by MOFEC include: (i) lack of well-organized data management system;³⁰ low levels of domestic tax audit and post clearance audit; (iii) limited skill in tax assessment, collection, intelligence, auditing, etc., (iv) poor customer care and service delivery; and (iv) corruption practices amongst some ERCA officers.¹¹

Table 16 shows that Ethiopia generally has had a more difficult-to-tax economy over 2000-13 than the average LIC. Table 16 gives the values of the same key structural features to emphasize the enormous difference between high-income economies and Ethiopia and other LICs. Structural features of an economy can either be a negative barrier to tax collection or provide a positive tax handle.

In terms of negative constraints, Ethiopia is worse off than the average LIC. It has a lower GDP per capita (\$342 versus \$745), larger rural population share (82.9 percent versus 68.3 percent), larger share of the value added in agriculture (44.4 percent versus 31.0 percent), a smaller share of its adult population working as paid employees (8 percent versus 17.6 percent) and lower share of GDP formed by formal employment compensation (25.0 percent versus 30.4 percent). In terms of positive tax handles, Ethiopia is also worse off. It has lower share of imported goods as a share of GDP (23.1 percent versus 31 percent), which reduces the tractable customs tax base, and a lower share of natural resource exports over GDP (0.6 percent versus 6.8 percent).

The taxpayer capacity in Ethiopia has also been lower than the average LIC. Indicators are the educational attainment of the adult (over 25-year-old) population. For example, the following indicators are worse than the average LIC: literacy rate (39.4 percent versus 54.8 percent), primary school completion rate (25.0 percent versus 58.4 percent), share with no schooling (75.2 percent versus 43.6 percent) and the share with post-secondary education (1.1 percent versus 4 percent).

Fortunately, these indicators are expected to change going forward as a major effort is underway to increase the education level of the children in Ethiopia, which will eventually grow into the adult population. For example, over 2000-13, the share of children attending primary school was 62.5 percent compared to 70.6 percent, but by 2015 Ethiopia's share had risen to 86.2 percent which was above that of the average LIC of 79.7 percent.

While these key features of the Ethiopia economy indicate that collecting taxes and non-tax revenues in Ethiopia is very difficult, they do not show whether Ethiopia is underperforming relative to this difficult situation. Ethiopia still has to make choices about its tax administration effort and tax policy choices concerning tax rates and tax expenditures. These choices effect the actual tax performance compared to some potential tax performance. One approach is to estimate the tax and domestic revenue capacity of Ethiopia based on its structural features and tax rate choices and compare the estimated tax and domestic revenue capacity with its actual performance to judge its tax and domestic revenue effort.

Table 16: Average values of some key structural features affecting tax capacity of Ethiopia, low-income and high-income countries during 2000-13

Variable	Ethiopia	Low Income Country	High Income Country
Economic structures			
GDP per capita (2010 US \$)	342	745	40,034
Rural population share (%)	82.9	68.3	22.5
Agricultural VA share of GDP (%)	44.4	31.0	2.2
Imports of goods over GDP (%)	23.1	33.0	40.1
Natural resource exports over GDP (%)	0.6	6.8	4.7
Paid labor force out of working age population (%)	8.0	17.6	48.2
Employment compensation share of GDP (%)	25.0	30.4	64.0
Taxpayer capacity			
Adult (25+) literacy rate (%)	39.4	54.8	97.9
Adult (25+) primary completion rate (%)	25.0	50.8	93.4
Adult (25+) with no schooling (latest year) (%)	75.2	43.6	2.2
Adult (25+) with post-secondary education (latest year) (%)	1.1	4.7	25.3
Adult (25+) with post-secondary education excluding short cycle tertiary (latest year) (%)	1.1	4.0	19.6
Adjusted net enrollment rate, primary (% of primary school age children)	62.5	70.6	96.3
Adjusted net enrollment rate, primary (% of primary school age children), 2015	86.2	79.7	96.6

Source: Derived from Glenday and others, 2018

Two sets of estimations have been made of the tax and domestic revenue capacity for Ethiopia based on a broader cross-country study of tax and domestic revenue capacity and effort⁵⁰ (section 7). First is the “basic” set, which focuses on the economic structures, regional and general economic characteristics as determinants of tax and revenue capacity of countries grouped by income class and region. In a second set, tax rate indicators are added that significantly increase the explanatory power of the estimations, but also significantly reduce the number of countries and years of data that can be used in the estimations, mainly to higher income countries and to more recent decades for which data are available.

Similar data availability problems arise with other key determinants such as labor force, educational attainment, size of shadow economy, etc. For a particular country, the tax or domestic revenue capacity is the estimate of the performance based on its structural and tax policy features that it should be able to achieve given the actual performances of all the comparator countries in its income and regional groups. This estimated capacity is then compared with its actual performance. Its tax or domestic revenue effort is its actual performance divided by its estimated capacity. If this effort is below unity, then the country should be able to improve its performance through policy and administrative reforms.

Table 17 shows the results of the estimated tax and domestic revenue capacities and efforts for Ethiopia over 2006-2012 (years for which data availability was highest). Unfortunately, Ethiopia has tax and domestic revenue efforts significantly below unity over this period. Based on the basic models of tax and domestic revenue capacities, its tax and domestic revenue efforts were 0.72 and 0.71, respectively, and

on the model including tax rate indicators, they dropped to 0.63 and 0.61, respectively. One encouraging sign is that the tax and domestic revenue efforts rose by 2012 compared to the 2006-12 average.

Table 17: Ethiopia tax and domestic revenue capacity and effort, 2006-2012

(Tax and domestic revenue expressed as share of GDP (%))

Years	2006-12	2012
Actual tax	10.4	11.5
Estimated tax capacity (basic model)	14.4	14.7
Tax effort (basic)	0.72	0.78
Estimated tax capacity (tax rate model)	16.5	16.6
Tax effort (tax rates)	0.63	0.69
Actual domestic revenues	13.2	13.8
Estimated domestic revenue capacity (basic model)	18.7	18.9
Domestic revenue effort (basic)	0.71	0.73
Estimated domestic revenue capacity (tax rate model)	21.8	21.7
Domestic revenue effort (tax rates)	0.61	0.63

Source: Derived from Glenday and others, 2018

An unfortunate feature of these tax and domestic capacity estimates for Ethiopia is that, as noted above, there is poor availability of data for some key economic features such as the shares of the formal paid labor force and employment compensation and for adult attained education for many countries and years such that these explanatory variables could not be included in the estimated models. Given Ethiopia is below average on all these explanatory variables, if these could have been included, it is likely that the tax and domestic revenue capacity estimates would be lower (and efforts correspondingly higher), but given the expected high correlation of the excluded variables with many of the determinants that were included in the models, it is still expected that tax and domestic efforts would remain significantly below unity. It is also important to note that the actual tax and domestic revenue performance of Ethiopia has not yet shown much improvement over recent years despite favorable trends in the structural features of the economy. This indicates that Ethiopia still has significant scope to enhance its tax and domestic revenue efforts through tax policy and administration reforms.

Way forward on domestic revenue mobilization and tax reform

Ethiopia has made substantial progress in its revenue mobilization, quadrupling its revenue in real terms from 1999/00 to 2015/16. During this same time, the GDP has increased even faster, thus the elasticity of the tax system is very low, meaning that the overall tax revenues are not able to keep up with the rapid increases in the GDP. Despite this low elasticity, Ethiopia has been able to increase its tax revenues in absolute terms since the buoyancy of the overall tax system appears to be slightly higher than 1 meaning that Ethiopia due to the changes in tax policy and administration has been able to grow its revenues quite well over time.

In line with the low tax elasticity, Ethiopia also has shown tax effort estimates significantly below unity. Both tax elasticity and effort estimates point to a need to improve the tax base coverage and compliance to keep the tax revenues growing at or above the economic growth rate.

Ethiopia's tax buoyancy has been made possible through some major tax reforms, beginning with the introduction of the VAT in 2003, and subsequent improvements in its administration including the

establishment of ERCA in 2008 and introduction of a unique taxpayer identification number (TIN), an integrated revenue management system, electronic filing and call center deployment, sales register machines, and tax education initiatives, among others. As recent as 2016, Ethiopia introduced major changes to the income tax and tax administration laws aimed at improving revenue collection, broadening the tax base and improving administration efficiency⁵¹.

Moving forward, there is recognition of the need to review tax policy and tax administration in an effort to increase the elasticity of the overall tax system. Tax administration reviews by TADAT, DFID, and others have revealed weaknesses in the tax administration and staffing. Various tax reform efforts have been recently initiated by the Government, with broad-based donor assistance. There was a tax policy directorate established under the MOFED, and the ERCA started to implement reforms in human resource management, data management large-taxpayer compliance, tax auditing, arrears, automation and public outreach.

There was a tax expenditure study initiated to identify, quantify and assess tax expenditures and incentives, with the possibility of using a cost-benefit analysis on the tax incentive structure to identify a possible rationalization strategy⁵¹. Past reviews of import-based tax expenditures have reported significant revenue losses (as high as 4 percent of GDP), but to date no formal tax expenditure methodology or accounts have been published in order to be able to assess the true extent of revenue losses across all tax types. Reducing inefficient tax expenditures in the formal tax system should be a readily achievable form of added revenue mobilization. It is important to recognize, however, that tax expenditure accounting is a demanding exercise requiring systematic tax data collection and data bases based on tax return information and a dedicated tax analysis capacity in ERCA and MoFEC to implement and sustain tax expenditure analysis and reporting⁵⁰ (See section 8).

A study by World Bank/DFID is underway with expected recommendations to reduce this area of fiscal gap in Ethiopia. In line with other countries, it is expected that these tax expenditure estimates will be compiled and included in the budgeting process. Aside from a review of the tax incentives and related tax expenditures, the need to reform the excise tax policy and administration has been identified as a problem area and potential source of incremental revenues. In addition, the need to review potential presumptive tax opportunities has been identified. This is consistent with the major structural constraints faced by the tax system in Ethiopia largely arising from the large rural and urban informal sectors. Presumptive tax systems should be seen both as a way of obtaining added sub-national revenues, but also as a way of identifying the economic activities that are escaping the formal tax system. To successfully effect a presumptive tax system and identify missing business activity that should fall under the income tax and VAT, as emphasized above, careful consideration is needed of enhancing the funding of ERCA to improve its regional coverage and importantly to strengthen significantly the cooperation and coordination of tax collection between the regional and federal tax administrations.

Overall there is need for an ongoing review the tax system—its policies and administration—to systematically identify the fine tuning needed to broaden the tax base, improve assessments, collections and enforcement across both the direct and indirect taxes, improve compliance risk management, and using an integrated tax administration system software to improve the revenue yield, efficiency and equity of the tax system.

In addition to these specific tax policy and administration reforms, Ethiopia should continue to facilitate the economic structural transformation from a dominance on the agriculture sector to one which increasingly incorporates the manufacturing and service sectors. Consistent with international

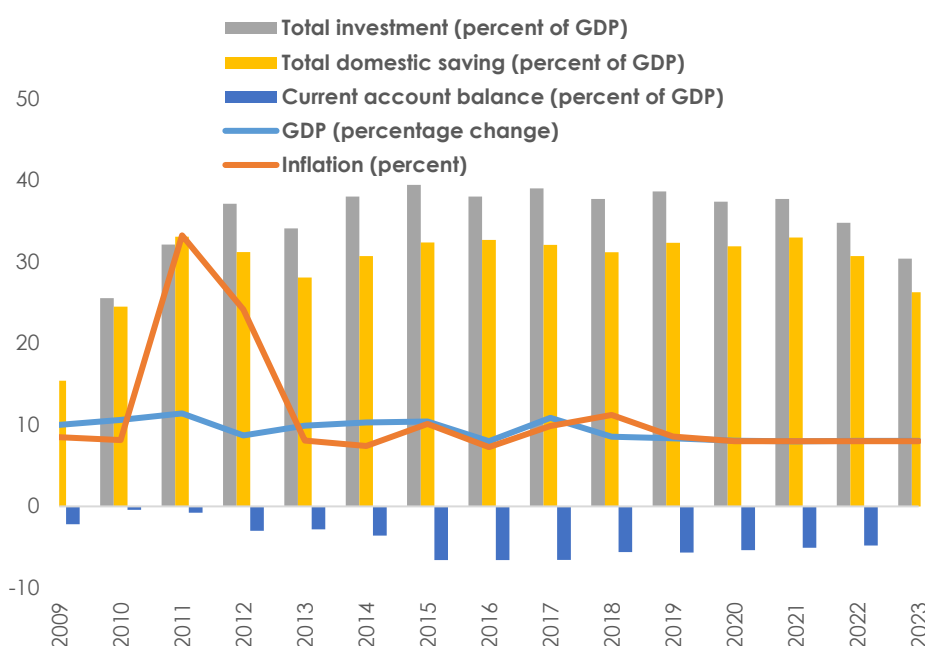
experience, tax revenues will naturally tend to increase along with the increasing share of the economy in the manufacturing and formal service sectors.

At the regional level, there has been some growth in tax revenues, where regional tax revenues contributed about 20 percent in 1999/00 to now contributing 24.8 percent in 2015/16. And, given its small base, the rate of growth in regional revenues has been faster than those in federal revenues. These regional revenues however are not keeping up with regional expenditures, the difference being made up by intergovernmental transfers. This dependency on transfers may be adversely affecting regional revenue mobilization which inhibits the overall contribution of tax revenues to Ethiopia's fiscal space. A review of the intergovernmental fiscal revenue sharing and intergovernmental transfers will be important to identify areas for improving the efficiency and equity of the transfer system, especially with those incentives affecting subnational revenue mobilization.

5 Government borrowing

Ethiopia's recent economic performance has been among the most impressive in Africa: growth has been high, recently averaging around 10 percent, driven by public investment; inflation has been brought under control; and, because domestic saving has not kept up with investment, the current account deficit has recently increased but balance of payments problems are not a threat (Chart 16). While these favorable trends are projected to continue over the medium-term, macroeconomic risks are present. Growth, inflation, and the balance of payments are heavily influenced by drought and commodity prices, public investment and other structural policies need to better support export and private sector led growth, and possibly adverse global financial conditions place a premium on continued sound macroeconomic management.

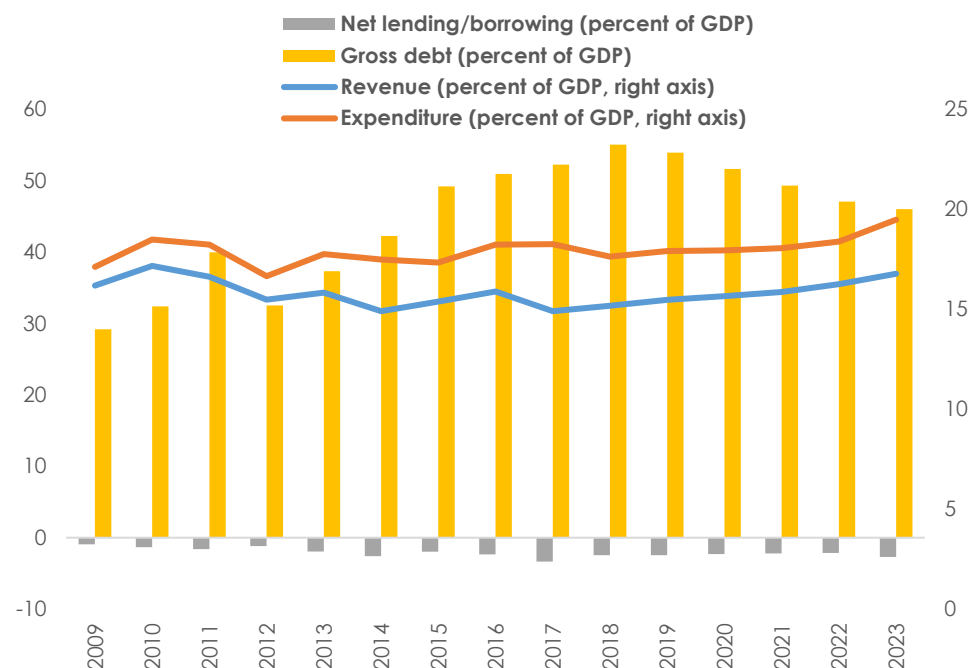
Chart 16: Macroeconomic developments and prospects, 2009-2023



Source: IMF World Economic Outlook Database (April 2018)

Ethiopia's fiscal performance has also been good. Government deficits have been in the low single digits, although they are somewhat higher if grants are not counted as revenue. However, stubbornly low tax revenue has required expenditure restraint to keep deficits under control (Chart 17). Nevertheless, following significant debt reduction under the Highly-Indebted Poor Countries (HIPC) and the Multilateral Debt Relief Initiative, the debt ratio has been rising in recent years in the face of rising public investment, revenue underperformance and weak state-owned enterprise finances. A broad measure of public debt, public and publicly-guaranteed debt (including state-owned enterprise debt and foreign debt of the National Bank of Ethiopia) was 57 percent of GDP at the end of 2016/17, with domestic and external components of 26.4 and 30.6 percent of GDP respectively. In present value (PV) terms the debt ratio (excluding foreign debt of the National Bank of Ethiopia) was 46 percent, which is well within the IMF's 56 percent indicative threshold.

Chart 17: Fiscal developments and prospects, 2009-2023



Source: IMF World Economic Outlook Database, April 2018

IMF debt sustainability analysis suggests that, in a baseline scenario, the nominal debt ratio increases in 2017/18 and then declines over the medium term; there is also a modest medium-term shift from external to domestic debt (Table 18). In present value terms, the debt ratio and both debt and debt service relative to total government revenue also fall over the medium term. These indicators are not a source of concern, even when the baseline is subjected to specific and combined shocks. Projected developments in the ratios of public external debt and external debt service to exports are more of a concern. While these ratios also decline over the medium-term, they remain above or close to the IMF's indicative thresholds of 150 and 20 percent respectively. For this reason, the IMF concludes that Ethiopia is exposed to heightened risk of external debt distress, a risk which is greater if efforts to promote exports, which are projected to increase from 15.2 to 17.7 percent of GDP in the IMF baseline, are not successful. Similarly, the possibility that slow progress with tax reform limits the mobilization of revenue, which is projected to increase from 7.8 to 10.8 percent of GDP in the IMF baseline, could materially affect public debt sustainability.

The implications of projected debt developments for future borrowing are fairly clear, at least in qualitative terms. Under the IMF baseline, an increase in domestic debt can be combined with a partially offsetting reduction in external debt so that total debt increases, external debt sustainability improves but overall debt sustainability is not compromised. This does not preclude additional concessional external borrowing, which is possible if higher cost external debt is rolled off and replaced by lower cost domestic and concessional external debt. In this connection, the government's Medium-Term Debt Management Strategy is especially significant. Of course, if policy reversal and/or reform inertia push aggregate debt indicators into the danger zone, the room to borrow more disappears.

Table 18: Public debt indicators 2016/17 – 2017/18 with 2018/19-2022/23 estimates (in percent)

	2016/17	2017/18	2018/19-2022/23 (Average)
Public debt/GDP	54	56	52
Domestic	24	24	25
External	29	31	27
PV of public debt/GDP	46	47	43
PV of public debt /revenue	272	269	234
Public debt service/revenue	19	19	18
PV of public external debt/exports		272	186
Public external debt service/exports		21	19

Source: Ethiopia Staff Report, IMF, 2018

Note: Public debt indicators in the table refer to public and publicly-guaranteed debt (including state-owned enterprise debt but excluding foreign debt of the National Bank of Ethiopia); this is also referred to nonfinancial public sector debt

It is difficult to say quantitatively how much additional borrowing can be undertaken over the medium term since an appropriately cautious approach would be to tailor borrowing plans carefully to the impact of revenue, export and other economic developments on public debt indicators. However, it is difficult to foresee a situation where fiscal space created through borrowing would not be needed to finance increases in public investment given Ethiopia's pressing infrastructure needs. For other areas, including health, the resources required to increase spending must come from elsewhere.

4 Expenditure efficiency, planning, and budgeting

Assessing overall efficiency

Expenditure efficiency is concerned with using financial and physical inputs to generate outputs and outcomes. Table 19 describes health inputs, outputs and outcomes. In assessing efficiency, it is common to compare health expenditure and life expectancy. Focusing on this relationship is justified because health expenditure measures the priority attached to improving a country's health status while life expectancy is an indicator of the health of a population and the achievements of the health system.

In comparing health expenditure and life expectancy (or another final outcome) it has to be remembered that: ¹⁴ life expectancy is difficult to influence directly because a wide range of non-health factors affects it and it tends to change slowly in response to the cumulative effect of its many determinants; and (2) the incidence of illness and disease, an intermediate outcome, is influenced more directly and quickly by health policies and interventions, and the key to doing this is the use of physical inputs to create health care capacity, which is then used to produce outputs in the form of health services.

Table 19: Health inputs, outputs and outcomes

Inputs	Outputs	Outcomes
Creating health care capacity Financial inputs <ul style="list-style-type: none">Total and public health expenditure per capitaTotal and public health expenditure /GDP Physical inputs <ul style="list-style-type: none">Hospitals and health centers and health postsHealth workersEquipment and medicine	Delivering health services <ul style="list-style-type: none">Diagnoses, preventive and curative treatmentConsultations, treatments, prescriptions, immunizations, surgeries	Improving health status Intermediate outcomes <ul style="list-style-type: none">Reduction in Incidence of illness and disease Final outcomes <ul style="list-style-type: none">Life expectancyMaternal mortalityChild mortality

Source: Authors

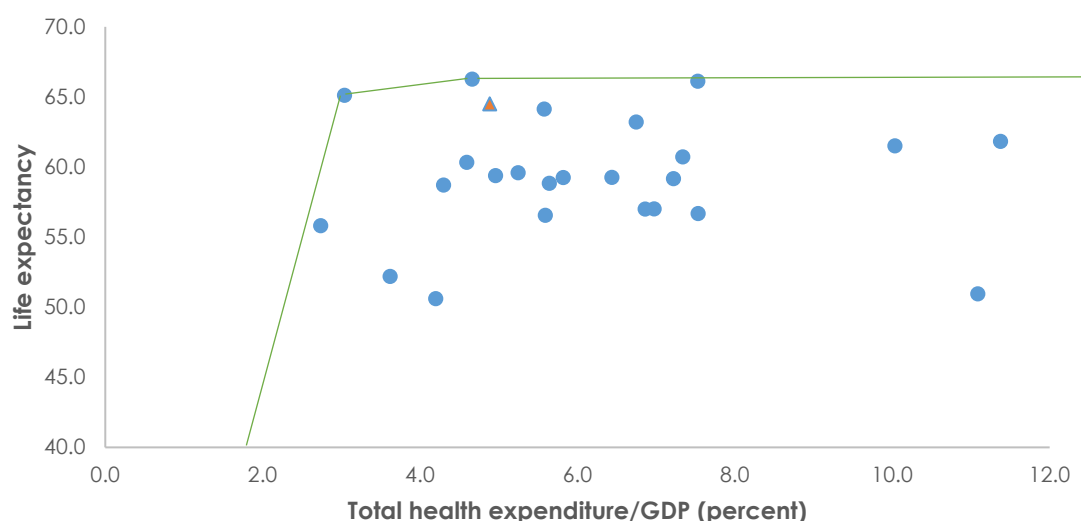
Data envelopment analysis³⁴ is used to identify an efficiency frontier linking specific combinations of health expenditure and life expectancy that are the most efficient of all country observations included in a data set, usually under assumption of decreasing returns to scale in health spending (e.g., due to management inefficiencies).

Chart 18 presents an efficiency frontier for SSLIACs, with separate panels for total health expenditures and public health expenditures. Ethiopia is the observation marked by a triangle, and in both panels, it is slightly inside the frontier. Consistent with the idea that the aim is to identify the scope to create additional room to spend through efficiency savings, a useful question to ask is "if Ethiopia was on the efficiency frontier, how much could it potentially save by eliminating inefficiency while achieving the same life expectancy?" Based on panel 1, the answer is 38.3 percent of its 2014 total health expenditure level; put another way, the 2014 total health expenditure of 4.9 percent of GDP could be reduced to 3 percent of GDP, freeing up 1.9 percent of GDP for other uses. However, only part of this is a saving of public health expenditure. Based on panel 2, public health expenditures could reduce from 2.9 to 1.5 percent of GDP.

Chart 19 suggests that Ethiopia is no more inefficient than countries with similar levels of health expenditure. It is also clear that inefficiency tends to increase as total health expenditure increases, which needs to be borne in mind when there are plans to increase health spending. Table 20 reports inefficiency estimates for other outcome measures. The potential expenditure savings are similar across these measures (except for malaria incidence, which reflects how low this is in Ethiopia), and are smaller than in comparator countries.

Chart 18: Life expectancy and health expenditure in SSLIACs, 2014

Panel 1



Panel 2

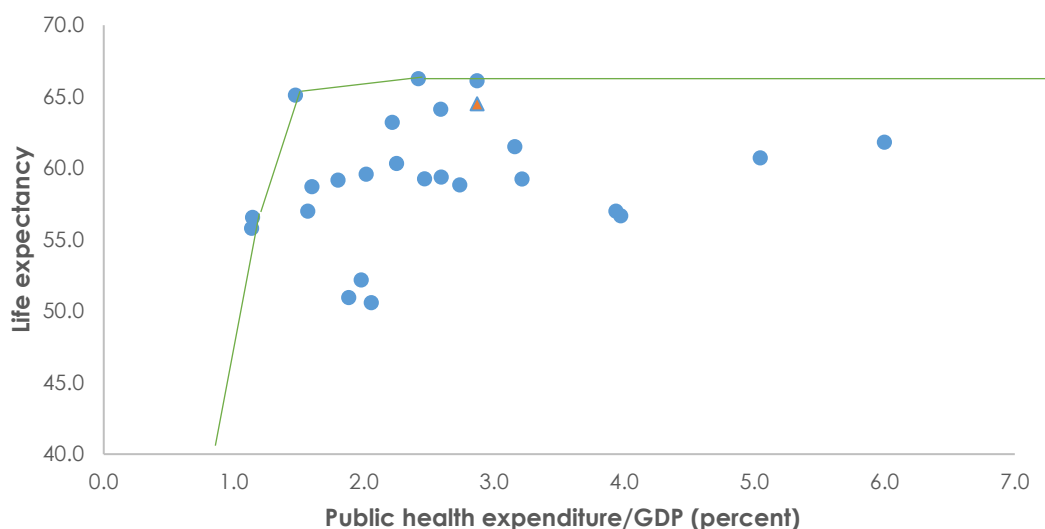


Chart 19: Health expenditure efficiency and total health expenditure, 2014

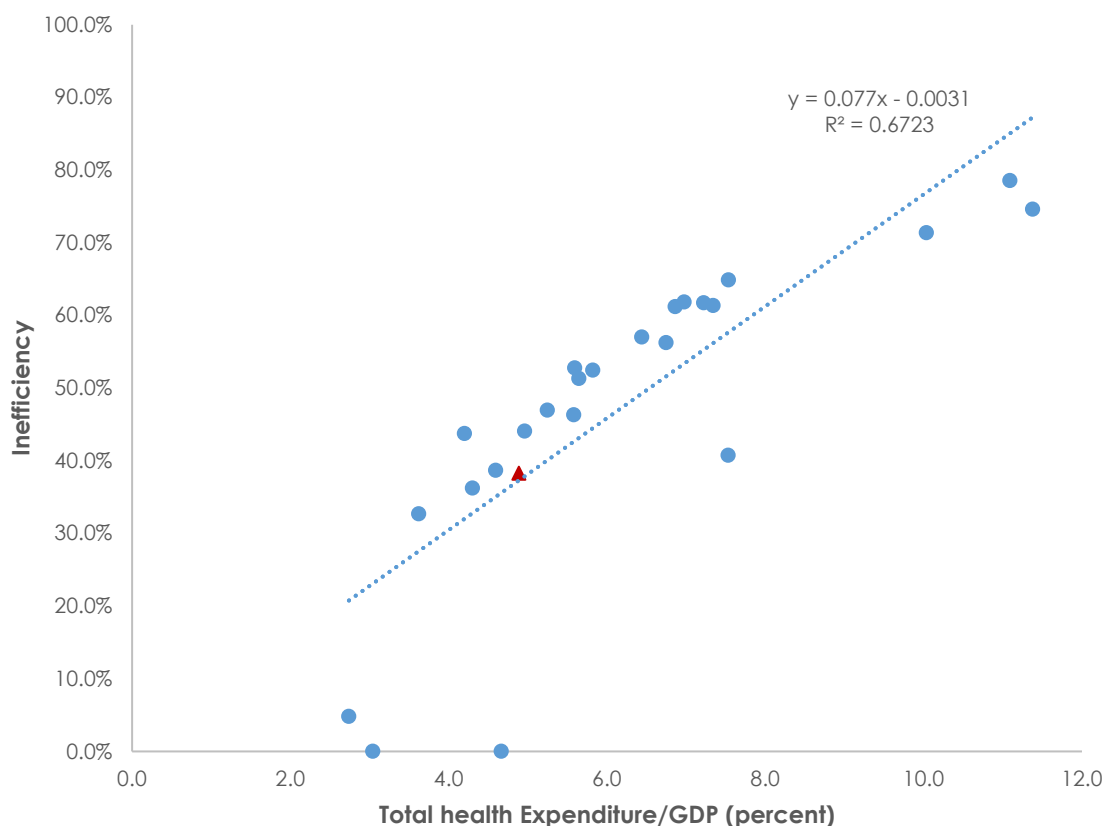


Table 20: Health expenditure inefficiency by outcomes, 2014 (or latest available year)

Final outcomes			Intermediate outcomes		
	Life expectancy	Maternal mortality	Child mortality	Incidence of malaria	Incidence of tuberculosis
	<i>Inefficiency = potential expenditure saving (percent)</i> <i>Input = total health expenditure/GDP</i>				
Ethiopia	38.3	43.7	39.2	2.9	44.0
SSLIAC average	47.5	49.9	44.0	43.3	36.6

The relative efficiency of health care expenditure is confirmed by others. The 2016 PER shows that Ethiopia has achieved a higher level of health care expenditure efficiency than other comparator countries. The evidence indicates that Ethiopia has been able to obtain better health outcomes than other countries using fewer resources. For example, Ethiopia was able to reduce child mortality by about 80 deaths per 1,000 live births with an increase of US\$5 in health expenditures per capita. Only 6 countries did better in terms of reducing child mortality, but this required larger increases in public health expenditure. The 2016 PER also points to the fact more than 60 percent of total health expenditure is on public hospitals, primary health care units and public health programs, a focus on HIV/AIDs, malaria, TB and reproductive, and success of the HEP as evidence of allocative efficiency.

The main driver of relatively higher efficiency in Ethiopia has been the prioritization of high impact intervention at the primary care level. More than 80% of outpatient services are being provided by government facilities at PHC level. There has been a strategy of task shifting from higher level professionals to HEWs for provision of services. At the country level, allocative efficiency was encouraged through the adoption of the One-Plan, One-Budget, One-Report system which allowed for improved integration and coordination of planning, budgeting and reporting and the Health Finance Accounts which allowed for more effective monitoring of the various health resource flows and expenditures through the various levels of government and to the various levels of health facilities.

However, the 2016 PER also suggests that Ethiopia may be facing some technical/operating efficiency challenges within the health sector. It reports that health facility bed occupancy rates were only 51 percent in 2009 and that health workers only see between 2-9 outpatients and manage 1 inpatient case a day. One major cause for this under-utilization is the community's perception of the lack of readiness of PHC facilities (e.g., power, water and sometimes HR skill mix). The report suggests that one reason for the low productivity on the demand side is because the average travel time for an outpatient is 2 hours and for an inpatient 4 hours, with substantial variation across regions. The 2016 PER identified the need for further analysis.

Improving operating efficiency

At the overall government level, the MOFEC issues government wide guidance on enhancing efficiency. It issued in 2017, for instance, guidance for all government institutions to promote efficiency in allocation and execution of government resources through: (i) securing approval from Ministry of Public Services and Human Resource for over time payment;³⁰ move towards paperless system and use of technology; and (iii) reduce costs associated with workshops, seminar and meetings.¹¹

To improve operating efficiency in health care, the HSTP identified the need to address three key inefficiencies: procurement, supply chain management and human resources for health. Streamlining the procurement system and improving the entire supply chain would ensure the cost-efficient purchase, storage, deliver and utilization of the right medicines and medical equipment improving overall operational efficiency in a timely, transparent and accountable manner. Further, improving the recruitment, deployment, training and retention of health professional throughout the system would also improve operational efficiency.

Efforts to improve efficiency need to be synchronized with the overall public financial management system, across all levels of government and between the public and private sectors. This requires alignment of the planning and budgeting systems, the specific revenue and expenditure systems as well as with the intersection of the administration and fiscal reforms needed to ensure efficiency and accountability. These health financing reforms must be linked to the MTEF, to the shifts from line item to program-based budgeting and ultimately to performance-based budgeting.

Ethiopia is still using input-based funding for allocating government funding and user fees from patients and CBHI schemes, which is well known for not being efficient. Ultimately moving towards more performance-oriented budgets, which can incorporate measurable performance evidence on results, will be important to mobilize and prioritize the funding needed for health improvements in Ethiopia. Moving toward a performance-based health budgeting system faces a number of challenges such as the need to enhance the quality of the information system, improve independent verification and accountability.

Bringing this approach to the health care system will require enhanced capacity in public financial management linked to the management, administrative and delivery across the federal, region, Woreda and health care facility levels.

In 2016, there was a more detailed study identifying areas for improving the technical efficiency of health centers, based on a sample of 40 health centers across 2 regions (Amhara and Oromia), 1 special support region (Benishangul-Gumuz) and 2 city administrations (Addis Ababa and Dire Dawa)³⁹. The study found that certain health services such as maternal child care could be delivered more cost effectively at health centers compared to primary hospitals, and suggests that certain services in outpatient department and inpatient department could also be delivered at the health centers more efficiently than at the primary hospitals. However, the study also found that the output production by skilled professionals in health centers was very low on average—at 3.7 outpatient visits per clinical staff per day as compared to Kenya with an average of 7 and Ghana with an average of 4 outpatient equivalents visits per medical staff per day in 2011.

Further, the 2016 study showed that only 35 percent of the 40 health centers (HCs) examined were purely efficient in 2006, while the average efficiency score among inefficient health centers was 79 percent, implying that these inefficient health centers could reduce their inputs by 21 percent without reducing their outputs. Based on this analysis, the study suggests that Ethiopia could save up to 26 percent of the total annual expenditures amount within the studied health centers, if the 26 inefficient HCs could become as efficient as the technically efficient HCs. In concrete terms, this would break down into an input savings of 328 medical and 446 non-medical staff³⁹.

Similar studies focusing on public hospitals in Ethiopia^{52,39} have suggested that operational efficiency at the hospital level could be improved by focusing on a combination of demand and supply side factors. On the demand side, there is need to address the low utilization of patients accessing care from primary hospitals, which could be due to consumer preferences for health care, perceived health care quality, health care service out of pocket costs and health care accessibility. On the supply side, there is need to improve the productivity in delivering health services at lower costs, through improving the mix of medical and non-medical staff, more cost-effective procurement of drugs and supplies and better management and organization of the medical services.

DEA for 24 primary hospitals in Amhara, Oromia, Tigray and SNNPR found that only 7 (29 percent) of the hospitals were purely technically efficient, with an average of pure technical efficiency among the inefficient hospitals of 55 percent, implying that those hospitals could reduce their inputs by 45 percent within compromising their outputs. Only 4 of the 24 hospitals were scale efficient, with the average scale efficiency score for those inefficient hospitals at 65 percent, suggesting that total outputs could be increased by 35 percent within the existing capacity and size³⁹.

But as the 2017 study indicates, this efficiency improvement depends largely on enhancing the demand for services, factors which are largely outside the control of the individual hospital. The study estimates that there could be a savings of 31 million ETB in human resource expenditures, 60 million ETB for drugs and supplies and 96 million ETB for indirect expenditures if all primary hospitals were as efficient as those hospitals on the efficiency frontier³⁹.

These various efficiency studies show that the health worker productivity is very low, especially for primary hospitals. There was an average of 2.54 outpatient equivalent visits per clinical staff per day in the primary hospitals, compared to 3.7 visits per day in the health centers. For the primary hospitals, this

low productivity is largely attributed to low demand and a high supply of clinical staff. These low levels of productivity are similar to those in Kenya and Ghana.³⁹

Although these DEA-based efficiency studies suggest technical and scale inefficiencies in health care provision in Ethiopia, these same studies caution on drawing strong policy and administrative conclusions, pending further analysis of individual health care facilities. These studies do not identify the specific factors that are causing these operating efficiencies / inefficiencies, and suggest that the need for further analysis of individual health facilities, improving the quality of available data, and using such as the Service Provision Assessment Plus (SPA+) survey data. In addition, further analysis of the internal and external factors and the enabling reform environment would be essential in designing and implementing effective reforms aimed at improving health care efficiency.

A more recent study⁵³ measuring the technical and scale efficiencies of 16 public health centers in three Woreda in Jimma zone found that 8 (50 percent) were technically inefficient and would have been able to reduce their inputs by about 10 percent without reducing outputs. The study also found that 8 were scale inefficient and could have increased total outputs by about 11 percent using the existing capacity/size. As inputs needs for health centers are standardized, the key to increasing the efficiency would be to increase the number of patients (both in and outpatients). The study suggests that to become efficient, these inefficient health centers would need to increase their outpatient department visits by 23,177 (77 percent,) family planning by 4,390 (14.5 percent), immunizations by 1,010 (3.3 percent), ANC4+ by 970 (3.2 percent) and delivery care by 694 (2.3 percent). The study found that catchment population and number of clinical staff were positively associated with efficiency, while the number of nonclinical staff was found to be negatively associated with efficiency.

These operational inefficiencies can result from both supply and demand side factors. On the supply side, these inefficiencies can be caused by ineffective planning and delivery of the health care services. Such supply factors could include the impact of the block grant fiscal transfers based on a defined formula and the lack of Woreda level own source revenues, the allocative effects from the negotiation powers of the local government vis-a-vis health spending priorities, and the use of standards and norms for HR allocations rather than the HR allocation based on workload or outputs. In addition, the lack of effective coordination between the capital and recurrent budgets can lead to supply side inefficiencies, when, for example, there can be a proliferation of health care facilities built through the capital budget, without the commensurate allocation of the recurrent budget for medical doctors and staff, medical equipment and supplies, and operations and maintenance expenses.^{39,53, 54}

On the demand side, operational inefficiencies can be caused by the lack of individuals accessing the health care services due to such factors as their health care preferences, ability to pay, lack of understanding and information on service delivery options, physical inaccessibility due to distance, terrain and lack of available transport, especially in rural areas, and other demand-side constraints to service use.³⁹

To improve the efficiency in health centers, the government should encourage greater health service user demand through better information dissemination and public outreach on public health, public health facilities, available health services, and reduce the barriers to access through reducing direct and indirect costs borne by the users. On the supply side, the Government should continue to encourage more open and accountable budgeting and provide greater discretion at the local level to be able to better respond to delivering health care needs in a responsive, efficient and accountable manner. Overall efficiency in

health care delivery can also be influenced by a systematic planning, budgeting and delivery of health care, cognizant of both those services delivered by government and the private sector^{55,56}.

The HFA 2014 report argues for the need for evidence-based feedback on use of health sector resources, identifying the possible need for public expenditure tracking studies. These studies undertaken at the health facilities, Woreda, regional and federal levels could help identify possible blockages, leakages and wastage in the flow and use of health-related resources which, if addressed, could improve operational efficiency.

To improve the efficiency and effectiveness of health care delivery, the Ethiopian Government, in partnership with the major development partners in health launched the One Plan, One Budget, One Report initiative in 2007. The effort was to improve allocative efficiency by better linking health funding resources to the country health priorities across all levels of government and to improve the technical efficiency by better linking those allocated funds to the operational management of specific health interventions to maximize the intended results at least cost, while accounting and reporting for those expenditures in a consolidated manner. Harmonizing the planning, budgeting and reporting frameworks, to the extent possible, was a primary objective^{27,36}.

The starting point for improving the allocative and technical efficiency was to rationalize, integrate and harmonize the health planning process across the 3 levels of government (federal, regional and Woreda), across multiple stakeholders (government, development partners, health facilities, households and the private sector) on both a strategic medium-term perspective and on an annual basis.

Getting more health from a limited budget is the essence of improving health efficiency. The WHO identifies ten leading causes of inefficiencies (shown in appendix 1) and suggests possible interventions to improve health expenditure productivity.⁵⁷ Some of these causes have been suggested as perhaps equally applicable to Ethiopia, such as the need to improve procurement of drugs and medical supplies, strengthen controls on pharmaceutical supply-chains, improve availability and quality of medical professionals and technical staff, ensuring appropriate size of medical facilities and an efficient mix / appropriate level of health interventions and enhancing transparency, accountability and governance throughout the health system.^{39,29,22} Further analysis is needed on those health centers and hospitals identified as inefficient to identify the underlying causes and design and implement possible interventions to enhance their efficiencies.

● CONCLUDING COMMENTS AND WAY FORWARD

Ethiopia is clearly making progress in the provision of health care. Health care spending has increased as a share of GDP and, in real per capita terms. As a consequence, health indicators have improved. That said, Ethiopia has a lot to do if it is going to catch up with the better performing low-income countries and push on and meet its own ambitious health targets, which include achieving UHC.

Development assistance has been an important source of health care financing but a recent slowdown in donor funding suggests that the government will likely have to step in and finance a larger share of health expenditure. Since the government's contribution is currently quite low relative to comparator countries, there should be room to increase fiscal space for health, but the challenge is to identify where fiscal space can be created.

For a low-income country like Ethiopia there are typically four potential sources of fiscal space: development assistance; domestic revenue; borrowing; and efficiency savings. If donor funding is set to stagnate or decline, which is the consensus view, while macroeconomic stability and debt sustainability concerns limit the scope for additional borrowing, the focus needs to be on domestic revenue mobilization and improvements in health expenditure efficiency. This has been recognized with FMOH recently revising its health care financing strategy to identify increasing domestic resource mobilization as the major strategic objective for the next 5-10 years. The draft strategy is being reviewed by the Council of Ministers.

Two aspects of efficiency have been emphasized—efficiency in the management of available financial resources and efficiency in service delivery. The one plan, one budget, one report initiative is an attempt to better coordinate the use of funds from different sources in pursuit of country priorities. In practice, this mainly involves combining the management of donor and government resources under the one plan, one budget, one report system, and the evidence suggests that this has resulted in improved coordination, transparency and accountability. However, the one plan, one budget, one report system has been developed and operated largely parallel to the government's existing planning, budgeting and reporting system, implying that there are coordination, transparency and accountability benefits to be gained from moving all revenues, and the expenditures they pay for, into a fully integrated public financial management system.

A number of changes have been implemented which should contribute to improved service delivery. These have included:

- Increasing the autonomy of health facilities in procurement, staffing, and the retention of user fees, including by opening of private wings in the public health facilities which have generated additional resources and provided incentives to train and retain doctors and other staff.
- Enhancing the supply and quality of health care by training and deploying PHC human resources (e.g., health officers, nurses, midwives, health extension workers) to rural areas, by expanding primary health care facilities and by increasing the medical school enrolment.
- Expanding the role of the private sector by outsourcing various non-clinical services within public hospitals and exploring options for public-private partnerships.
- Initiating the transition to universal health coverage by scaling up the community-based health insurance (CBHI) scheme in rural areas

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- Strengthening the governance of health care facilities to improve responsiveness by incorporating representatives from the woreda government, health facility and community.
 - Encouraging better informed health care demand through targeted outreach, education and information dissemination to health care users.

The roll-out and further deepening of these efficiency-oriented reforms should continue to be a high priority of the government. In addition, further steps need to be taken to improve the clarity, coordination and capacity across the federal, region and woreda level governments so as to improve the efficiency and accountability in the delivery of health and other public services. The government's strategy to introduce strategic purchasing need to be rolled out as soon as possible to ensure that more gains from efficiency are exploited. But there is common understanding that improved efficiency alone will not be sufficient to meet the ever-growing health care financing needs in Ethiopia.

Enhancing domestic resource mobilization has been a high priority of the government. Ethiopia has set a target in its most recent GTP II which requires a 50 percent increase in the tax to GDP ratio. However, there is recognition that meeting such an ambitious revenue target will require a combination of challenging policy and administration reforms. Because Ethiopia's economy is largely dependent on agriculture, there are relatively few tax handles. Moreover, the tax structure and administrative constraints mean that Ethiopia has an inelastic tax system, making it difficult to generate an increasing level of tax revenue as the economy grows. To address this, a number of tax reforms have been and/or are in process of design and implementation in order to increase the elasticity of the tax system and improve revenue mobilization. These have included:

- The introduction of the VAT in 2003, and subsequent improvements in its administration.
- The establishment of the ERCA in 2008.
- The introduction of a unique taxpayer identification number and an integrated revenue management system, including electronic filing and call center deployment.
- The introduction of human resource management reforms.
- The introduction of automation, including data management of large-taxpayer compliance and the dissemination of sales register machines.
- Strengthening of tax auditing and arrears management.
- Adoption of tax payer education initiatives.

Areas for potential include broadening the tax base, including a rationalization and reduction of tax expenditures, restructuring the tax rate regime, introduction of presumptive tax structures, improving collection and enforcement policy and administration, enhancing taxpayer education and taxpayer service in order to increase taxpayer awareness and reduce tax administration and compliance costs. In addition, further support is needed to strengthen and enable the ERCA to expand its overall coverage to all regions, increasing its level of cooperation and coordination with regional governments to prevent tax evasion, and to support the regional government administration efforts.

Although these tax reforms may increase revenues overall, they do not necessarily translate directly into increased allocations for health purposes. The FMOH and Regional Health Boards (RHBs) need to improve their advocacy and engagement for increasing the share of health from the increased general tax revenue

collected and the approval and implementation of the possible “innovative financing” for health needs. Consequently, the prospects for increased health care financing depends not only on the country’s overall resource mobilization effort, but also on improvements in budgeting and public financial management systems.

● APPENDIX 1: LEADING SOURCES OF HEALTH INEFFICIENCIES

Sources of inefficiency	Common reasons for inefficiency	Ways to address inefficiency
1. Medicines: underuse of generics and higher than necessary prices for medicines	Inadequate controls on supply-chain agents, prescribers and dispensers; lower perceived efficacy/safety of generic medicines; historical prescribing patterns and inefficient procurement/distribution systems; taxes and duties on medicines; excessive mark-ups.	Improve prescribing guidance, information, training and practice. Require, permit or offer incentives for generic substitution. Develop active purchasing based on assessment of costs and benefits of alternatives. Ensure transparency in purchasing and tenders. Remove taxes and duties. Control excessive mark-ups. Monitor and publicize medicine prices.
2. Medicines: use of substandard and counterfeit medicines	Inadequate pharmaceutical regulatory structures/mechanisms; weak procurement systems.	Strengthen enforcement of quality standards in the manufacture of medicines; carry out product testing; enhance procurement systems with pre-qualification of suppliers.
3. Medicines: inappropriate and ineffective use	Inappropriate prescriber incentives and unethical promotion practices; consumer demand/expectations; limited knowledge about therapeutic effects; inadequate regulatory frameworks.	Separate prescribing and dispensing functions; regulate promotional activities; improve prescribing guidance, information, training and practice; disseminate public information.
4. Health-care products and services: overuse or supply of equipment, investigations and procedures	Supplier-induced demand; fee-for-service payment mechanisms; fear of litigation (defensive medicine).	Reform incentive and payment structures (e.g. capitation or diagnosis-related group); develop and implement clinical guidelines.
5. Health workers: inappropriate or costly staff mix, unmotivated workers	Conformity with pre-determined human resource policies and procedures; resistance by medical profession; fixed/inflexible contracts; inadequate salaries; recruitment based on favoritism.	Undertake needs-based assessment and training; revise remuneration policies; introduce flexible contracts and/or performance-related pay; implement task-shifting and other ways of matching skills to needs.
6. Health-care services: inappropriate hospital admissions and length of stay	Lack of alternative care arrangements; insufficient incentives to discharge; limited knowledge of best practice.	Provide alternative care (e.g. day care); alter incentives to hospital providers; raise knowledge about efficient admission practice.
7. Health-care services: inappropriate hospital size (low use of infrastructure)	Inappropriate level of managerial resources for coordination and control; too many hospitals and inpatient beds in some areas, not enough in others. Often this reflects a lack of planning for health service infrastructure development.	Incorporate inputs and output estimation into hospital planning; match managerial capacity to size; reduce excess capacity to raise occupancy rate to 80–90% (while controlling length of stay).
8. Health-care services: medical errors and suboptimal quality of care	Insufficient knowledge or application of clinical-care standards and protocols; lack of guidelines; inadequate supervision.	Improve hygiene standards in hospitals; provide more continuity of care; undertake more clinical audits; monitor hospital performance.
9. Health system leakages: waste, corruption and fraud	Unclear resource allocation guidance; lack of transparency; poor accountability and governance mechanisms; low salaries.	Improve regulation/governance, including strong sanction mechanisms; assess transparency/vulnerability to corruption; undertake public spending tracking surveys; promote codes of conduct.
10. Health interventions: inefficient mix/ inappropriate level of strategies	Funding high-cost, low-effect interventions when low-cost, high-impact options are unfunded. Inappropriate balance between levels of care, and/or between prevention, promotion and treatment.	Regular evaluation and incorporation into policy of evidence on the costs and impact of interventions, technologies, medicines, and policy options.

Source: World Health Report: Health Systems Financing: the path to Universal Coverage. World Health Organization; 2010, Table 4.1

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