

Ethiopia: Improving Health Service Delivery

Sameh El-Saharty, Sosena Kebede, Petros Olango Dubusho, Banafsheh Siadat

August 2009



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Health, Nutrition and Population (HNP) Discussion Paper

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Health, Nutrition and Population (HNP) Discussion Paper

Improving Health Services in Developing Countries: Improving Health Service Delivery in Ethiopia

Country Case Study

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Abstract: This case study aims to identify how Ethiopia has adopted and implemented strategies to improve health services, including the factors that enabled and inhibited success across a meaningful range of health services for the period 1996–2006. Particular emphasis has been given to the impact of utilized strategies on the poor. This case study reviewed one “primary strategy”—decentralization in the form of devolution of authority to the regional level in 1996 and to the district (*woreda*) level in 2002—and seven “corollary strategies” in the context of decentralization implemented at the subnational level. The study concludes that decentralization in the health sector is likely to be more effective when it is implemented as part of a broader government decentralization policy across sectors. Sequencing in implementing Ethiopia’s decentralization strategy made decentralization more manageable, although decentralization was rolled out prematurely. Moreover, the effectiveness of implementation was found to be driven largely by the institutional and management capacity at the subnational level.

At the subnational level, decentralization was found to be more effective in those regions that increasingly strengthened their management and institutional capacity and where regional governments set priorities and adapted the strategies to local needs. However, decentralization was often influenced by the “clientelistic” center–region power relationship—a problem compounded by the lack of community voice—making the available resources at risk of political capture by the local elite. Overall, the key lesson for implementing improvements in HSD is that the lack of any critical inputs (facilities, health workers, and drugs) inevitably limits the overall impact of the strategy, and that

the implementation of such key inputs should be carefully coordinated and properly synchronized.

Keywords: Health service delivery; implementation; decentralization; health facility rehabilitation and expansion; human resource development; pharmaceutical supply and management; information, education, and communication; health sector management and health management information systems; and health care financing.

Disclaimer: The findings, interpretations and conclusions expressed in this case study are entirely those of the authors, and do not represent the views of the World Bank, the Executive Directors, or the countries they represent.

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FOREWORD

This case study is one of seven country case studies on Afghanistan, Ethiopia, Ghana, Rwanda, Uganda, Vietnam, and Zambia that review the implementation of various health service delivery strategies and the factors that influenced their results.

These country cases were selected on the basis of their adoption and implementation of health service delivery strategies of significant scale, namely: (1) provider-based strategies with a particular focus on various types of decentralization including fiscal decentralization and devolution of authority to subnational levels; (2) public oversight strategies such as those to improve the performance of nonstate providers through compacts with government, and specific strategies such as performance-based payments; and (3) household and community empowerment strategies such as those to strengthen community involvement in the management and financing of local health service delivery.

The country case studies collectively highlight a set of systemic issues related to health service strengthening strategies, and potentially provide lessons that policy makers and development professionals may find useful in strengthening health services in ways that are applicable beyond the individual case studies.

The findings from the seven country case studies were summarized in chapter 8 of a separate World Bank publication, *Improving Health Service Delivery in Developing Countries: From Evidence to Action*, which came out in 2009.

ACKNOWLEDGMENTS

This Ethiopia country case study report was prepared by a team comprising Sameh El-Saharty, Sosena Kebede, Petros Olango Dubusho, and Banafsheh Siadat. The case study constitutes one of seven studies on strategies to improve health service delivery (HSD), reflecting part of a larger body of work on HSD conducted within the Health, Nutrition, and Population Unit of the World Bank's Human Development Network. Members of the HSD team leading this work include David Peters, Sameh El-Saharty, Banafsheh Siadat, Katja Janovsky, and Marko Vujicic. The case study team would like to extend its appreciation to the members of the HSD team and Dr. Gebreselassie Okubagzhi, then Senior Health Specialist at the World Bank Country Office in Addis Ababa, who contributed to the editing of this case study report, and who provided written comments as this work evolved.

The case study team would also like to thank the health management teams within the Ministry of Health, the four regional health bureaus, and their respective zonal health departments. The team is also grateful for the feedback and support provided by the participating district (*woreda*) hospitals, health centers, professional associations, and multilateral organizations that facilitated data collection for this study.

ACRONYMS AND ABBREVIATIONS

DOTS	Directly observed treatment, short course
DPT	Diphtheria, pertussis, and tetanus vaccine
EDHS	Ethiopian Demographic and Health Survey
HEW	Health extension worker
HMIS	Health management information system
HNP	Health, Nutrition, and Population
HSD	Health service delivery
HSDP	Health Sector Development Program
IEC	Information, Education, and Communication
MOH	Ministry of Health (federal)
NGO	Nongovernmental organization
PHC	Primary health care
SNNPR	Southern Nations, Nationalities and People's Region
WHO	World Health Organization

EXECUTIVE SUMMARY

This case study aims to identify how Ethiopia has adopted and implemented strategies to improve health services as well as the factors that enabled and inhibited their success across a meaningful range of health services for the period 1996–2006.

The case study reviewed one primary strategy—decentralization in the form of devolution of authority to the regional level in 1996 and to the district (*woreda*) level in 2002—as well as seven corollary strategies in the context of decentralization implemented at the subnational level, namely: health service delivery and quality of care; health facility rehabilitation and expansion; human resource development; pharmaceutical supply and management; information, education, and communication; health sector management and health management information systems; and health care financing.

In sum, all strategies highlighted in this study were implemented with varying degrees of success. Overall, decentralization to the regional level was associated with improvements in health outcomes and health service outputs although, notably, these results reflect gains from a very low baseline level. Improvements were observed, in particular, with respect to mortality, morbidity, coverage, and utilization indicators. However, despite the stated objective of targeting the poor (most of the poor reside in rural areas), most of the progress in health indicators was found in urban areas. Moreover, this study found that indicators were not designed to measure progress in benefiting the poor.

This study concludes that decentralization in the health sector is likely to be more effective when it is implemented as part of a broader government decentralization policy across sectors. Additionally, sequencing in implementing Ethiopia’s decentralization strategy made decentralization more manageable, although decentralization was rolled out prematurely. Moreover, the effectiveness of implementation was found to be driven largely by the institutional and management capacity at the subnational level.

At the subnational level, decentralization was more effective in those regions that increasingly strengthened their management and institutional capacity and where regional governments set priorities and adapted the corollary strategies to local needs. However, decentralization was often influenced by the “clientelistic” center–region power relationship—a problem compounded by the lack of community voice—making the available resources at risk of political capture by the local elite.

Notably, this study showed that resource availability (or lack thereof) was a major enabling and inhibiting factor in terms of strategy implementation and success. As an example, increasing the availability of nurses and midwives in the expanding primary health care network has been the driving force behind the improved performance of the health service delivery (HSD) system at the primary care level. However, the lack of qualified health service providers remains the main obstacle in the provision of basic

surgical services at the primary and secondary care levels. In fact, first-level surgical facilities were found to remain the weakest link in the HSD system. As well, the lack of drugs and medical supplies has limited the effectiveness of the HSD system. Overall, the key lesson for implementing improvements in HSD is that the lack of any critical inputs (facilities, health workers, and drugs) and the weak demand-generation activities inevitably limit the overall impact of the strategy, and that the balance between supply-increasing and demand-creation activities should be carefully coordinated and properly synchronized.

The lessons learned from this case study may be beneficial for other countries that seek to improve the performance of their HSD system. Moreover, this work may provide useful lessons in implementing the next phase of the Health Sector Development Program in Ethiopia.

1 INTRODUCTION AND BACKGROUND

Many low- and middle-income countries have developed ambitious health policies and strategies to improve health service delivery (HSD) and attain the health-related Millennium Development Goals, but have difficulty in matching implementation with their aspirations. This case study aims to identify how Ethiopia has adopted and implemented strategies to improve health services and the factors that enabled and inhibited their success across a meaningful range of health services. Particular emphasis will be given to the impact of these strategies on the poor. (Ethiopia's Millennium Development Goals are given in annex I.)

The target audience for this work includes policy makers in the federal Ministry of Health (MOH), as well as other key decision makers, civil society groups, and interested international organizations.

This case study reviewed one primary strategy and seven corollary strategies:

Primary strategy: Decentralization in the form of devolution of authority to the regional level in 1996 and to the district (*woreda*) level in 2002.

Corollary strategies: In the context of decentralization, the federal government adopted corollary strategies that would be implemented at the subnational level. These corollary strategies were:

- Health service delivery and quality of care
- Health facility rehabilitation and expansion
- Human resource development
- Pharmaceutical supply and management
- Information, education, and communication
- Health sector management and health management information systems
- Health care financing

Ethiopia is one of many low-income countries that have implemented several strategies of significant scale in recent years to improve HSD. The timeframe of this study covers the period 1996–2006.

Located in the Horn of Africa, Ethiopia is the second most populous Sub-Saharan African country, with an estimated population of 76 million. It is a culturally diverse and multi-ethnic nation with over 80 distinct local languages. It is also one of the poorest nations in the world, with significant social, economic, and political conditions that have historically made HSD a substantial challenge.

2 COUNTRY CONTEXT

2.1 POLITICAL ENVIRONMENT

The current government of Ethiopia was established in August of 1995.¹ A coalition of rebel forces under the Ethiopian Peoples' Revolutionary Democratic Front defeated the socialist government of Mengistu Haile Mariam in May 1991. In 1993, the Eritrean People's Liberation Front, an ally in the fight against Mengistu's regime, assumed control of the northern province of Ethiopia—Eritrea—and subsequently Eritrea achieved full independence on May 24, 1993. Ethiopia's first popularly chosen national parliament and regional legislatures were convened in May and June 1995, from which the current Prime Minister Meles Zenawi's government emerged victorious. Since it has been in power, the government has promoted a policy of ethnic federalism, devolving significant powers to regional, ethnically based authorities.

Ethiopia's government consists of the executive, legislative, and judiciary branches. The president is elected by both the House of People's Representatives and the House of Federation for a six-year term. The prime minister is elected by the House of Peoples' Representatives and on the recommendation of the majority-party members, whereas the Council of Ministers is selected by the prime minister. The federal parliamentary assembly of the legislative branch has two chambers: a legislative body, the Council of People's Representatives (Yehizb Tewekayoch Meker Bet), with 547 members elected in single-seat constituencies; and the Council of Federation (Yefedereshin Meker Bet), which has no legislative authority but is responsible for interpreting the federal constitution, with 110 members, one for each nationality and one additional member determined by population size. Many of the opposition parties are represented in parliament. Representatives from the state of Oromia hold the most positions in parliament followed by those from the state of Amhara, in accordance with their population size. Administratively, Ethiopia is divided into nine semi-autonomous ethnically based administrative regions (Afar, Amhara, Benishangul Gumuz, Gambela, Harar, Oromia, Somali, Southern Nations Nationalities and People's Region, and Tigray), and two chartered cities (Addis Ababa and Dire Dawa).

¹ This document was originally written in 2007, with some minor data updates made since then.

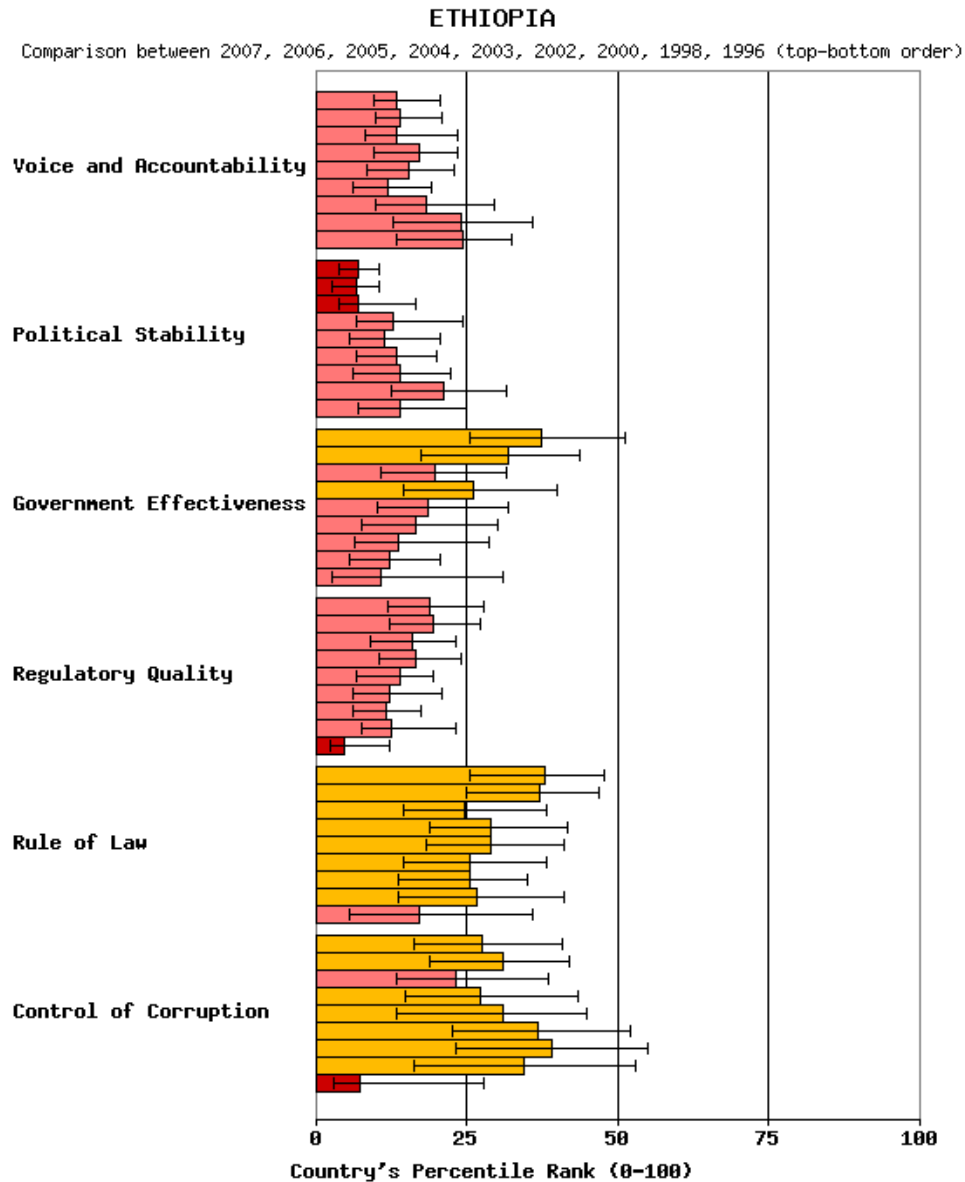
Table 2.1: World Bank Institute Governance Indicators, various countries, 2007

Worldwide Governance Indicators, 2007 (Range -2.5 to 2.5)						
	Voice and Accountability	Political Stability	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
Afghanistan	-1.17	-2.37	-1.33	-1.75	-2	-1.53
Bangladesh	-0.63	-1.44	-0.81	-0.86	-0.81	-1.05
Benin	0.32	0.38	-0.57	-0.44	-0.56	-0.49
Cameroon	-0.94	-0.39	-0.87	-0.71	-1.09	-0.93
Congo, DR	-1.46	-2.26	-1.68	-1.35	-1.67	-1.27
Ethiopia	-1.19	-1.72	-0.45	-0.9	-0.54	-0.7
Ghana	0.5	0.22	-0.04	0	-0.08	-0.17
Malawi	-0.26	-0.01	-0.59	-0.51	-0.39	-0.74
Mali	0.26	-0.13	-0.55	-0.33	-0.37	-0.43
Mozambique	-0.06	0.37	-0.41	-0.49	-0.68	-0.59
Nigeria	-0.54	-2.07	-0.93	-0.89	-1.2	-1.01
Rwanda	-1.24	-0.19	-0.37	-0.63	-0.65	-0.09
Tanzania	-0.15	-0.07	-0.42	-0.37	-0.45	-0.45
Uganda	-0.47	-1.15	-0.4	-0.2	-0.54	-0.76

Source: Kaufmann D., A. Kraay, and M. Mastruzzi, 2009. Governance Matters VII: Governance Indicators for 1996–2007, www.worldbank.org/wbi/governance/pubs/govmatters4.html.

Ethiopia exhibits poor performance in governance, with low scores on all six governance indicators (table 2.1; see also annex II). Notably, Ethiopia has experienced a marked decline in its percentile rank in several key governance indicators, namely rule of law and control of corruption (figure 2.1).

Figure 2.1: Governance indicators, Ethiopia, 1996–2007



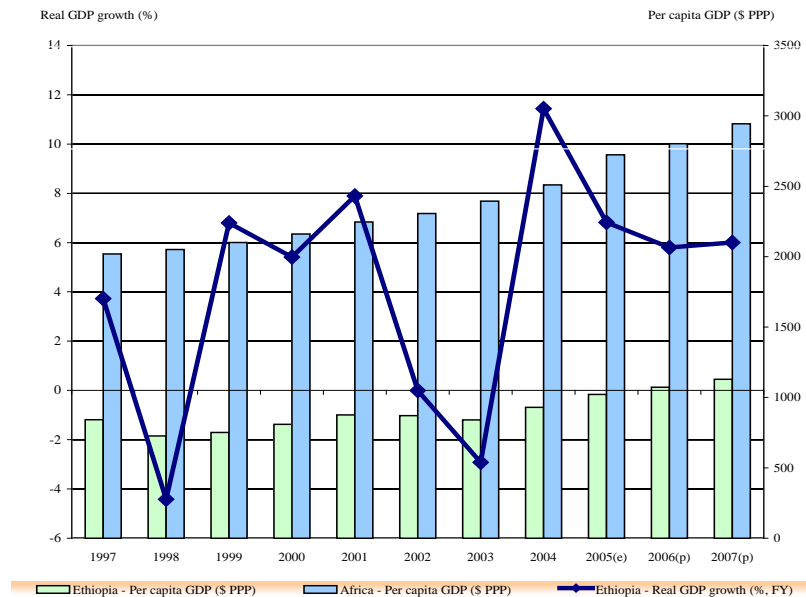
Source: Kaufmann D., A. Kraay, and M. Mastruzzi, 2009. *Governance Matters VII: Governance Indicators for 1996–2007*. www.worldbank.org/wbi/governance/pubs/govmatters4.html.

2.2 ECONOMIC ENVIRONMENT

In recent years, Ethiopia has recorded increases in gross domestic product (GDP). In 2004/05, it showed a GDP growth rate of 6.8 percent (figure 2.2), with the agricultural share of GDP remaining at about 42 percent and a growth estimation of 6.6 percent in real terms. However, even with favorable weather conditions, Ethiopia's chronic food

shortages are expected to remain problematic. During the same period, both the industrial output (the fastest growing subsector was construction) and services (the leading subsectors were education and health) grew by about 7 percent in real terms, giving industry and services an 11 percent and 47 percent share of GDP, respectively.

Figure 2.2: GDP growth, Ethiopia, 1997–2007



Source: OECD, *African Economic Outlook 2005/2006*.

Ethiopia’s monetary policy aims to stabilize prices and the exchange rate (the birr). Inflation declined from a peak of 15.1 percent during the drought of 2002/03 to 6.8 percent in 2004/05. Although balance sheet problems persist in the financial sector, the role of private banks has grown in recent years. Increased financing of agricultural cooperatives has been a particularly encouraging trend. Ethiopia’s official exchange rate continues to be determined through daily wholesale interbank foreign exchange auctions.

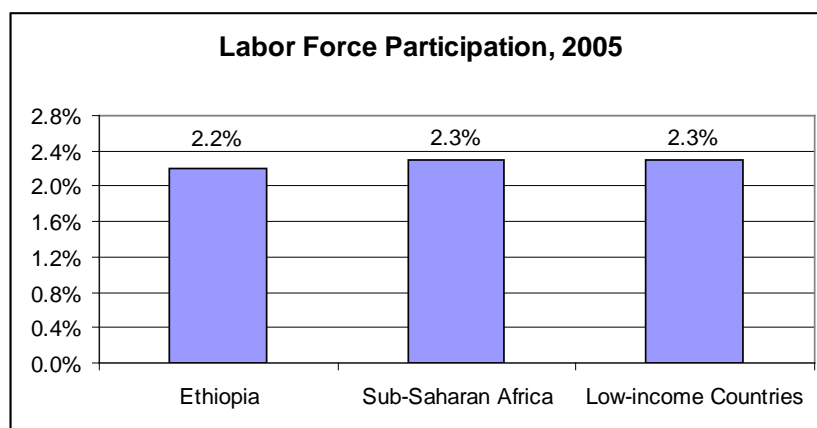
Ethiopia has a high account deficit and is highly aid dependent. In 2004/05, the trade deficit as a share of GDP increased to 21.8 percent from 20.4 percent in 2003/04, mainly due to increased import prices, particularly that of oil. In 2004/05, Ethiopia obtained debt relief under the enhanced Heavily Indebted Poor Countries Initiative, amounting to US\$84.3 million. However, despite such efforts, Ethiopia’s high degree of aid dependency remains a concern.

Recent years have seen encouraging structural and developmental trends in Ethiopia. Various legal and regulatory reforms in all sectors have been implemented to improve business transactions and domestic as well as foreign investment. With funding from donors, the government supports the development of small and medium enterprises through, for example, microfinancing initiatives. Although many enterprises still remain in the public sector, several privatized units have emerged, among which horticulture

private enterprise has emerged as a success. Even though Ethiopia still has many untapped hydro-, solar-, and wind-power resources, progress has been made in power generation, in access to clean water, and in telecommunications in recent years.

According to World Bank estimates, Ethiopia's labor force participation rate was estimated at 2.2 percent in 2005, comparable to the rest of Sub-Saharan Africa and other low-income countries (figure 2.3). However, according to the *World Development Indicators*, it is estimated that 41 percent of children ages 10–14 years are active in the labor force, concentrated in the agricultural and informal sectors in urban regions.

Figure 2.3: Labor force participation, 2005



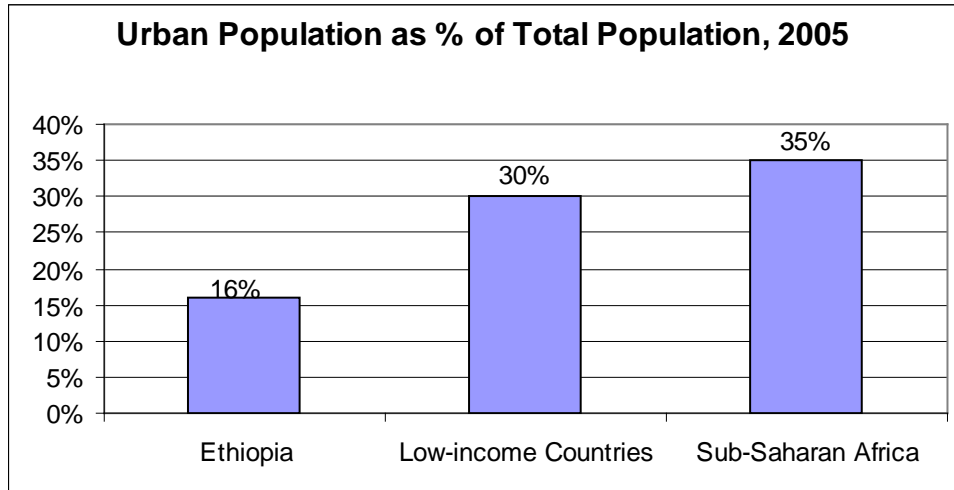
Source: World Bank, *Ethiopia at a Glance*, 2006. http://devdata.worldbank.org/AAG/eth_aag.pdf.

2.3 SOCIAL ENVIRONMENT

Ethiopia is a highly populous, mainly agrarian, patriarchal society with a high fertility rate. Whereas farming is the main occupation in the highland areas among the settled population, the lowlands' pastoral community has a nomadic lifestyle. Ethiopia is one of the least urbanized countries in the world with an urban population of only 16 percent (World Bank 2006), as noted in figure 2.4. Christianity and Islam are the two main religions. The first comprehensive population census was conducted in 1994, which estimated the population at 53.5 million. The total population counted in the Ethiopian Demographic and Health Survey (EDHS) 2005 was 67.6 million, with females slightly outnumbering males; currently the population is estimated to be close to 80 million. Ethiopia has a pyramidal age structure due to the large number of children under 15 years of age (figure 2.5), who constitute 48 percent of the population. The total fertility rate for Ethiopia was 5.4 births per woman in 2005 (the Sub-Saharan African average is 5.0), a value that has decreased from 6.9 seen in previous EDHS data from the past few decades. There are substantial differences in fertility among regions, and the value is inversely related to women's educational attainment and urbanization. The fertility decline is

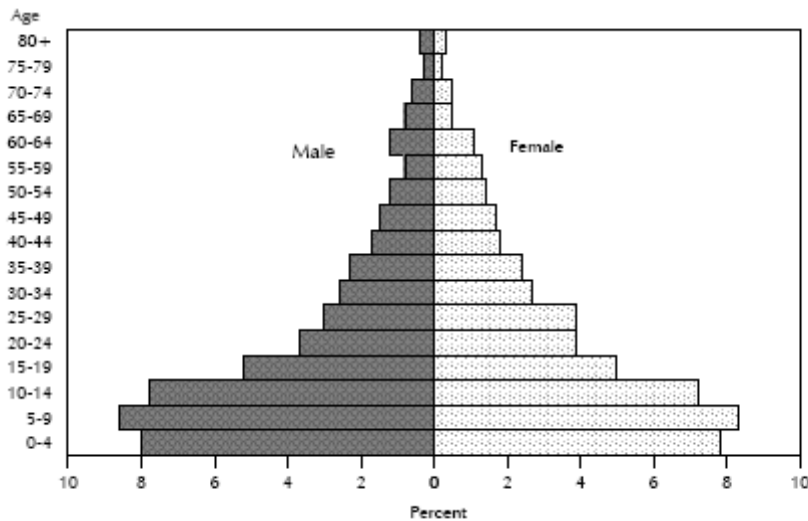
steepest among the youngest cohort which is due, in part, to increasing use of contraception among women.

Figure 2.4: Urban population as percentage of total population, 2005



Source: World Bank, *Ethiopia at a Glance*, 2006. http://devdata.worldbank.org/AAG/eth_aag.pdf.

Figure 2.5: Population pyramid



Source: Ethiopian Demographic and Health Survey 2005.

Households in Ethiopia are predominantly headed by males. Although there has been a marked improvement in the educational attainment of women in recent years, only 29 percent of women compared to 86 percent of men are employed and there is a correlation between women’s educational status and utilization of health services in general (EDHS 2005).

Approximately 90 percent of urban households have access to piped water, compared to 13 percent in rural areas. The major source of improved drinking water in rural areas is a

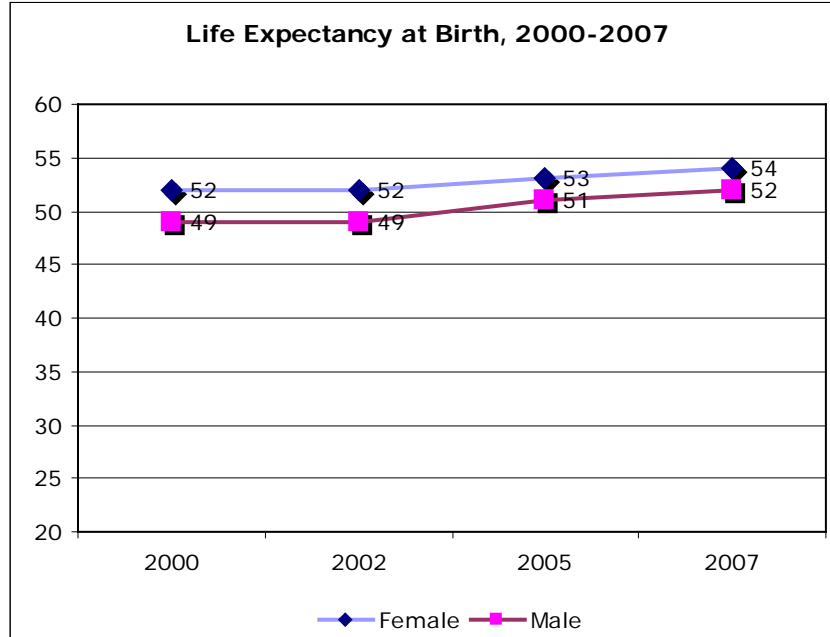
protected spring (39 percent). Approximately 62 percent of Ethiopian households do not have a toilet facility. In urban areas, a pit latrine with a slab (12 percent) is the major type of improved toilet facility. Approximately 2 percent of rural households and 86 percent of urban households have electricity.

3 HEALTH SECTOR CONTEXT

3.1 HEALTH OUTCOMES

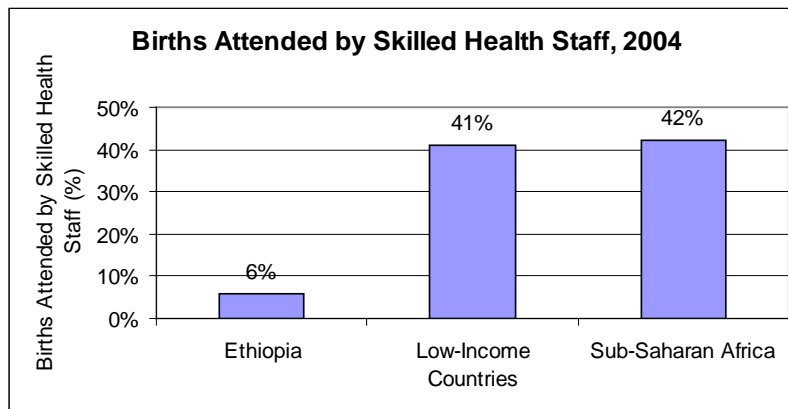
Despite the encouraging trends, Ethiopia still has several poor key health outcome indicators. Life expectancy at birth (43 years for females, 42 years for males) has been stable in recent years. It is lower than the Sub-Saharan African average of 47 years (females) and 46 years (males) (figure 3.1). According to the EDHS 2005, only 6 percent of births are delivered with the assistance of a trained health professional (physician, nurse, or midwife), as compared to the Sub-Saharan African average of 42 percent (figure 3.2). Deliveries by caesarean section are not common in Ethiopia. Infant mortality declined by 19 percent over the 15-year period preceding the survey from 95 to 77 deaths per 1,000 live births, whereas the under-five mortality rate fell by 25 percent from 165 to 123 deaths per 1,000 live births (EDHS 2005). Male children in general experience higher mortality than female children, which is relatively low compared to the Sub-Saharan African levels of 100 and 168 deaths per 1,000 live births for infant and under-five mortality rates, respectively (figure 3.3). The corresponding reductions in neonatal and post-neonatal mortality over the 15-year period were 15 percent and 22 percent, respectively. The maternal mortality ratio for the period 1998–2004 was estimated at 673 deaths per 100,000 live births, and some data suggest that this value is lower than previously recorded (EDHS 2005).

Figure 3.1: Life expectancy at birth, Ethiopia, 2000–2007



Note: World Development Indicators data unavailable for 2001, 2003, 2004, and 2006.
 Source: *World Development Indicators* database.

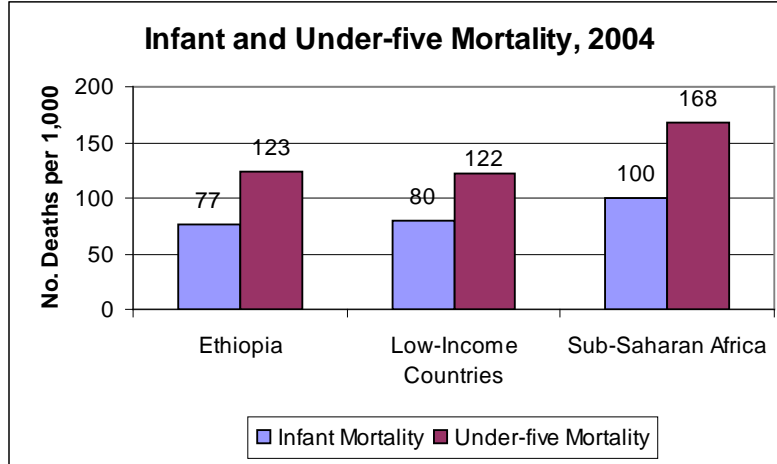
Figure 3.2: Births attended by skilled staff, 2004



Note: Data for low-income countries and Sub-Saharan Africa reflect 2004 estimates.
 Data for Ethiopia reflect information gathered in the five years preceding the Ethiopian Demographic and Health Survey 2005.

Source: Low-income countries and Sub-Saharan Africa = World Bank HNP Stats 2004; Ethiopia = Ethiopian Demographic and Health Survey 2005.

Figure 3.3: Infant and under-five mortality



Note: Infant mortality reflects number of deaths per 1,000 live births; under-five mortality calculated per 1,000 live births.

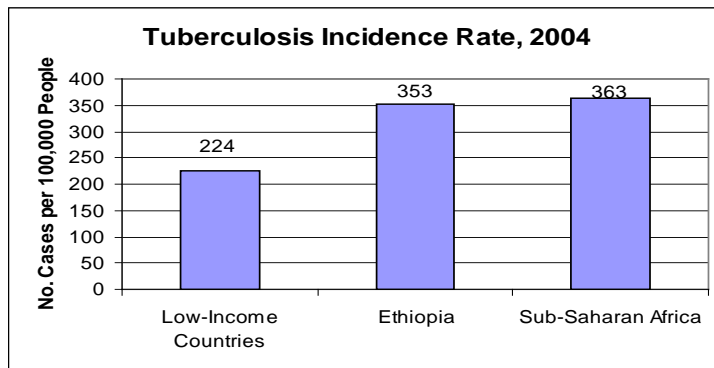
Ethiopia mortality rates reflect data collected in the five years preceding the Ethiopian Demographic and Health Survey 2005.

Source: Sub-Saharan Africa and low-income countries = World Bank HNP Stats 2004; Ethiopia = Ethiopian Demographic and Health Survey 2005.

Communicable diseases constitute the main burden of disease in terms of morbidity and mortality. Tuberculosis incidence increased from 128 cases per 100,000 population (1990) to 353 (2004), a value that is higher than other low-income countries but similar to Sub-Saharan African countries (figure 3.4). An estimated 68 percent of the population is living in high-risk malaria areas. In 2004/05, about 17 percent of outpatient visits, 15 percent of hospital admissions, and 29 percent of inpatient deaths were attributable to malaria. EDHS 2005 indicated that only 6 percent of households in Ethiopia own a mosquito net, predominantly in urban areas.

Between 2001 and 2004, Ethiopia was polio free and making good progress toward polio eradication. However, the poliovirus type I was reintroduced, mainly from neighboring Somalia. Since December 2004, Ethiopia has reported 37 polio cases with four out of 11 regions infected. The high-risk areas remain the cross-border region of Somali. EDHS 2005 estimated the HIV prevalence in adults 15–49 years of age to be 1.4 percent, lower than both the average for other low-income countries (2 percent) and Sub-Saharan Africa (6 percent). HIV prevalence among females was found to be double that among males. Moreover, the HIV infection rate was much higher in urban (5.5 percent) than rural areas (0.7 percent).

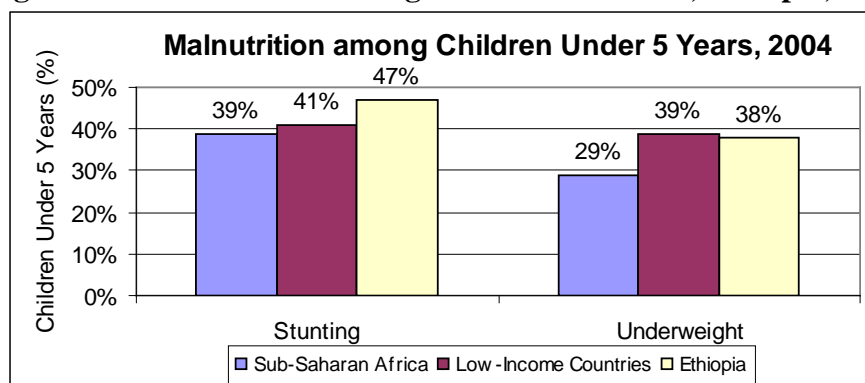
Figure 3.4: Tuberculosis incidence, Ethiopia, 2004



Source: WHO *Global TB Control Report*, 2006, http://www.who.int/tb/country/tb_burden/en/index.html.

Nutritional status is another major challenge in Ethiopia. Nearly 47 percent of Ethiopian children under the age of 5 are stunted (representing a decline from 52 percent in 2000), 24 percent are severely stunted, 11 percent are wasted, and 2 percent are severely wasted. The weight-for-age indicator shows that 38 percent (representing a 19 percent decline from 47 percent in 2000) of children under five years of age are underweight and 11 percent are severely underweight. The highest proportion of underweight children is found in the 12–23 month age bracket, suggesting inappropriate and/or inadequate feeding practices at a time when normal complementary feeding begins. Stunting increases with child age, child birth order, and mothers' age, but decreases with increasing birth intervals and increasing levels of mothers' education. Ethiopia has a greater percentage of children stunted than the average for low-income countries (41 percent) and Sub-Saharan Africa (39 percent), illustrated in figure 3.5. However, Ethiopia exhibits a comparable percentage of underweight children to the low-income country average of 39 percent, although this remains higher than the Sub-Saharan Africa average of 29 percent.

Figure 3.5: Malnutrition among children under five, Ethiopia, 2004



Note: Data for Ethiopia reflect estimates for 2005. International statistics for the percentage of children wasting were unavailable.

Source: Sub-Saharan Africa and Low-Income countries = *World Development Indicators 2005*; Ethiopia = Ethiopian Demographic and Health Survey 2005.

3.2 GOVERNANCE AND REGULATORY ENVIRONMENT

Health decentralization started in the late 1990s, resulting in a four-tier system of national referral “specialized hospitals,” regional referral “zonal hospitals,” district (*woreda*) hospitals, and primary health care (PHC) units (i.e. health centers with health posts). Since July 2002, *woreda* health offices have borne the primary responsibility for health service delivery and management. They receive block grants from regional governments and set their own priorities, deliver services, and determine budget allocations on the basis of local needs. *Woreda* health offices are typically responsible for managing personnel issues, health facility reconstruction, and procurement, although central and regional health departments often lead these efforts.

Traditional health insurance schemes (*eders*) in rural and urban areas are growing and increasingly attaining legal status. *Eders* were originally established as informal community organizations to which members paid a small monthly fee and, in return, the *eder* was responsible for funeral and bereavement arrangements and costs. Currently, *eders* are developing into legal entities that undertake community projects such as sanitation programs and that provide health care coverage to sick members.

Community involvement in governance is typically limited. The implementation manual for the first phase of the 20-year Health Sector Development Program (HSDP)—HSDP I, 1997/98–2001/02—has guidelines for integrating community and *woreda* health staff in planning, monitoring and other governance activities. However, according to a World Bank and MOH report (2004), knowledge about HSDP I itself is limited below regional levels. Variations exist across regions and *woredas* on the implementation of block grants, which are allocated on the basis of population size rather than need. The key factors that influence these variations include local management capacity, alignment of *woreda* needs with national goals, ability to communicate or integrate nongovernmental organizations (NGOs) and private sector interventions, financial reporting systems, and clarity of responsibilities.

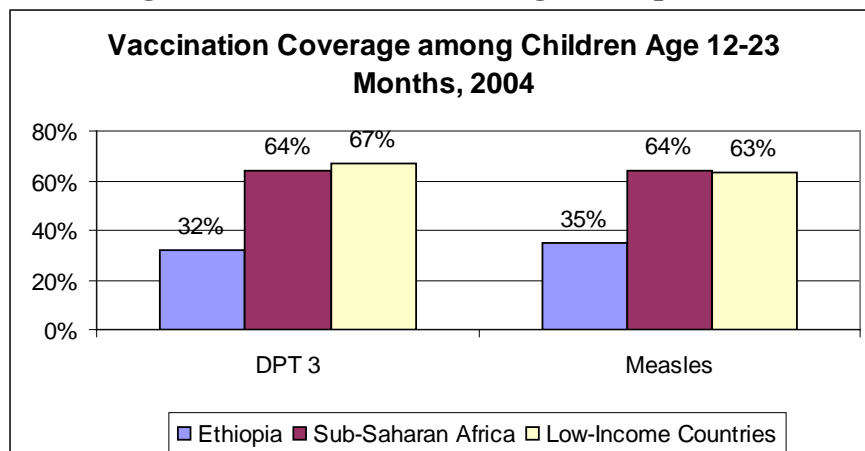
Accreditation processes are inconsistent across regions; they are lengthy as well. The MOH serves as the largest provider of health services, but health services are also administered by the private sector as well as an increasing number of NGOs. Although the federal Ministry of Justice and regional bureaus are responsible for registration and monitoring of NGOs, such actions are usually not timely due to lack of capacity in monitoring, evaluation, and project renewal. Health facility certificates for private hospitals and clinics are issued by regional health bureaus. Licensing and legal procedures are lengthy and highly variable across regions.

3.3 HSD SYSTEM

Wide variations in key health service indicators have been observed between urban and rural regions in Ethiopia. Despite improvements in vaccination coverage, coverage rates remain low (32 percent for DPT3 and 35 percent for measles), particularly when

compared to the average for low-income countries (67 percent for DPT3 and 63 percent for measles) and Sub-Saharan Africa (64 percent for both DPT3 and measles), as shown in figure 3.6. Ethiopia's DOTS treatment success rate declined from 80 percent in 2000 to 70 percent in 2003, whereas its tuberculosis case detection rate remained relatively constant at 33–36 percent over 2000–2005 (WHO 2006). In addition, there was little improvement in the proportion of mothers who received antenatal care from a health professional, from 27 percent in 2000 to 28 percent in 2005 (figure 3.7). Use of contraceptive methods (the most widely used modern methods being injectables) tripled from 5 percent in 1990 (Central Statistical Authority 1993) to 15 percent in 2005 (EDHS). However, this value is below the average rates of low-income countries (40 percent) and Sub-Saharan Africa (22 percent).

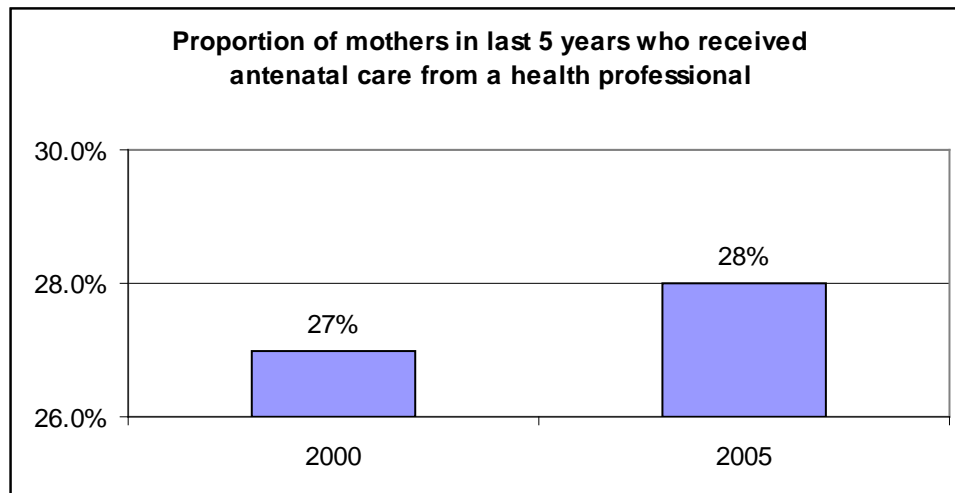
Figure 3.6: Vaccination coverage, Ethiopia, 2004



Note: Sub-Saharan Africa and low-income statistics are not available for BCG and polio vaccination coverage.

Source: World Bank HNP Stats, 2004; Ethiopia = Ethiopian Demographic and Health Survey 2005.

Figure 3.7: Antenatal care coverage, Ethiopia, 2000 and 2005



Note: Data for Sub-Saharan Africa and low-income country averages are not available to allow for international comparisons.

Source: Ethiopian Demographic and Health Survey 2005.

Ethiopia suffers from a severe shortage of both health personnel and accessible facilities. Approximately 30 percent of households were estimated to live more than 10 kilometers from the nearest hospital, health center, or health station. Urban areas with 4–6 percent of the total population have 44 percent of all health facilities. Moreover, most facilities have inadequate supplies of drugs and equipment, poor equipment maintenance, and a deteriorating infrastructure. A physician-to-population ratio of 1:29,777 remains among the lowest in the world. The nurse-to-population ratio improved, however, from 1:14,821 in 1998 to 1:4,222 in 2005.

Providers trained in the public sector are required to work for a certain number of years in the public sphere, but providers' distribution remains highly uneven across regions. Regional health bureaus have the authority to establish duty or "hardship" allowances and provide for staff housing for health care workers who work in remote *woredas*. Such provisions are, though, highly variable among regions, and are considered by many health care workers (especially physicians) to be unsatisfactory, particularly as physician salaries are considered to be one of the lowest even by other Sub-Saharan African standards. To alleviate some of the worker shortages in rural regions, a new cadre of health extension workers (HEW) was created, with training in preventive care; most are female. (However, a July 2005 World Bank desk review identified skill deficiencies among the first groups of HEWs sent to the field.)

3.4 HEALTH SUPPORT SYSTEMS

Detailed information on Ethiopia's medical education system is unavailable. However, HSDP I contributed to the supply of newly trained health workers, whereas the Human

Resources for Health policy under HSDP II (the second phase of HSDP, 2002/03–2004/05) emphasizes training needs and an appropriate mix of health care workers.

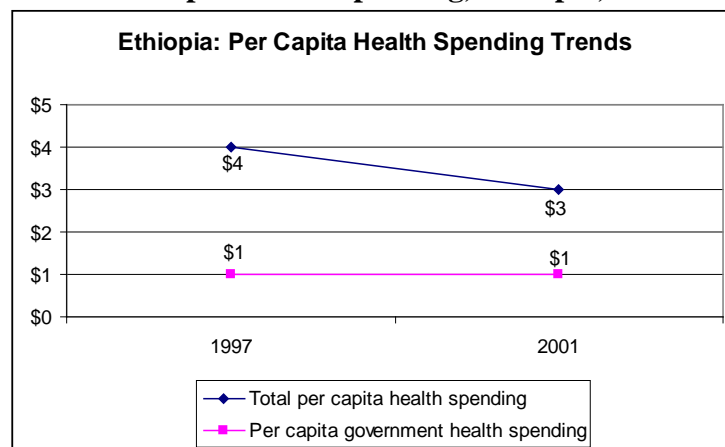
Regulatory reforms under HSDP I and II have attempted to improve drug availability by licensing large numbers of drug outlets and establishing several domestic manufacturers of drugs and medical supplies. In 1998, the government established “special pharmacies” to sell low-price drugs and make them more accessible to the poor. Some 62 pharmaceutical items and supplies are currently being manufactured, accounting for approximately 30 percent of market share (as opposed to 70 percent imported items). Despite these efforts, there are critical shortages of trained pharmaceutical staff, and problems with stock management and distribution of essential drugs. Information on medical technology is not available.

Health education centers are functional in many regions. In most regional health bureaus, information, education, and communication (IEC) focal points have been established, where various mass media such as radio, television, and electronic health learning materials are available. However, due to lack of skilled professionals, the quality of IEC activities is highly variable.

3.5 HEALTH CARE FINANCING

In general, Ethiopia’s health spending is lower than the average for Sub-Saharan Africa, with the exception of private expenditures as a share of total spending. Total per capita health spending decreased from US\$4 in 1997 to US\$3 in 2001, while per capita government health spending remained at US\$1 over the same period (figure 3.8). Government health expenditures ranged from 35 percent to 40 percent of total health expenditures between 1997 and 2001. Out-of-pocket expenditures were approximately 85 percent of private health spending. Overall, external resources for health increased from 9 percent in 1997 to 34 percent in 2001. However, per capita health spending increased to US\$7.1 in 2006.

Figure 3.8: Per capita health spending, Ethiopia, 1997 and 2001



Source: World Health Organization, 2004.

3.6 HEALTH SECTOR PERFORMANCE

Geographic access. EDHS 2005 noted that, between 1995 and 2000, 75 percent of urban households and 42 percent of rural households lived within 10 kilometers of a health facility. The average distance to the nearest health facility was greater for low-income groups. Overall, nearly 71 percent of the total population was estimated to have access to health centers, stations, posts, or private clinics.

Financial access. Subsidies for the poor have been attempted through Revolving Drug Fund schemes (launched in 1991) and the special pharmacies selling low-priced drugs (begun in 1998). However, limited information is available on their implementation, impact, and current status.

Efficiency/utilization. During 1993–1998, per capita outpatient consultations fluctuated at around 0.25 visits. By 2001/02, outpatient visits had fallen to an average rate of 0.23, ranging from 0.04 (in Tigray and in Gambela) to 0.80 (in Somali). Information was not available for efficiency indicators such as hospital admission rates or average length of stay.

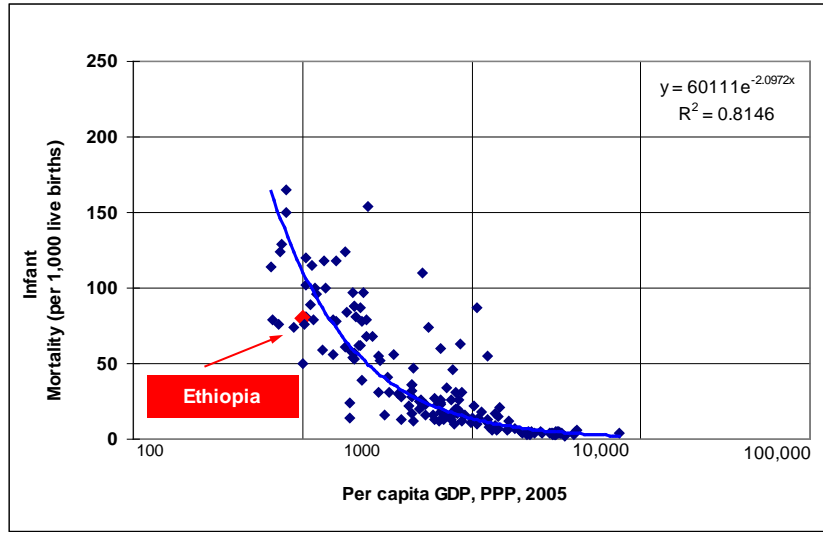
Equity. Data regarding the equity implications of Ethiopia's current health system are noted in each of the above sections of the country background report.

Quality. Data on quality indicators are unavailable.

3.7 INTERNATIONAL COMPARISONS

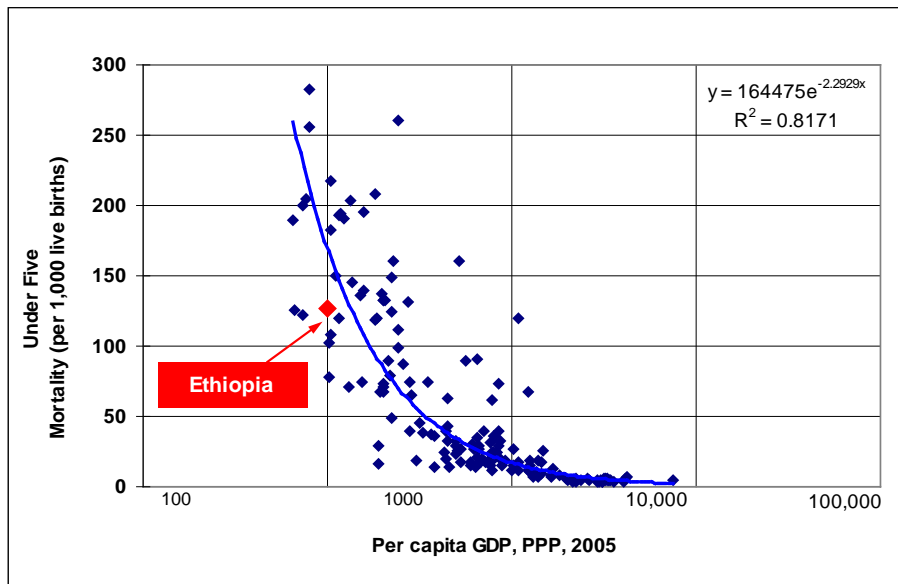
International comparisons reveal that Ethiopia's health outcomes compare favorably. Both infant and under-five mortality rates are lower than other countries with comparable income levels (figures 3.9 and 3.10). Adult mortality rates are at the same level as other countries with comparable income levels (figure 3.11).

Figure 3.9: Global trends in infant mortality rates, 2005



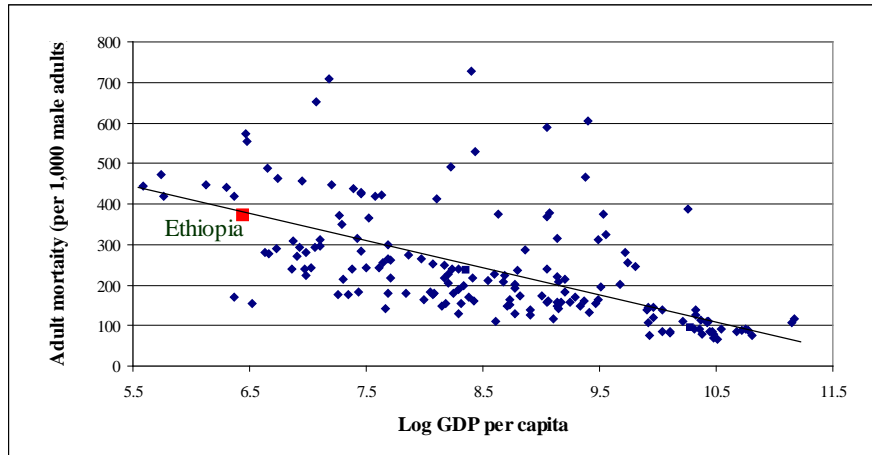
Source: *World Development Indicators 2005*.

Figure 3.10: Global trends in under-five mortality rates, 2005



Source: *World Development Indicators 2005*.

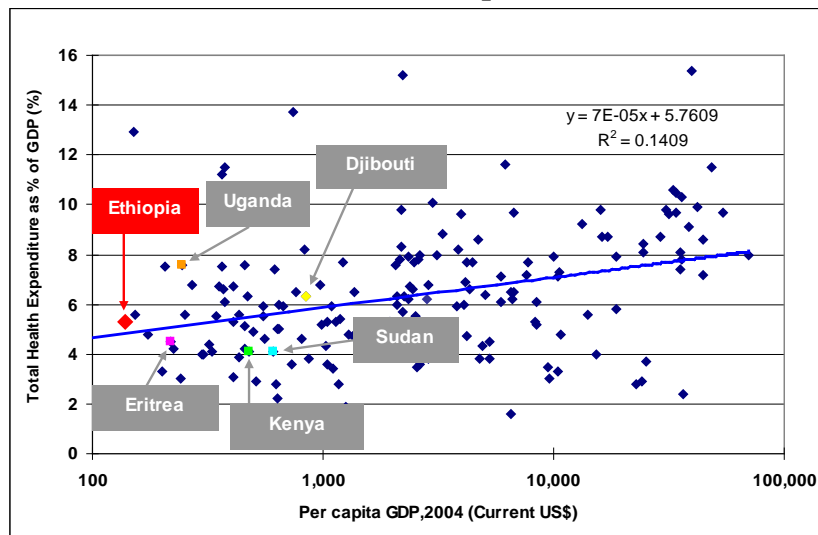
Figure 3.11: Global trends in adult mortality rates, 2005



Source: *World Development Indicators 2005*.

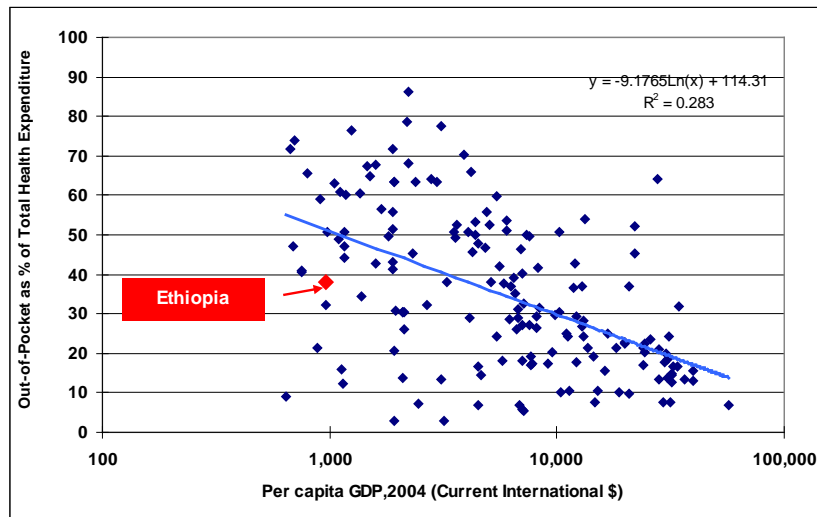
In terms of health financing, as a share of GDP Ethiopia's total health expenditures is slightly higher, and as a share of total health expenditures out-of-pocket spending is lower, than other countries' spending with comparable income levels (figures 3.12 and 3.13).

Figure 3.12: Global trends in total health expenditures as a share of GDP, 2005



Source: *World Development Indicators 2005*.

Figure 3.13: Global trends in private health expenditures as a share of total health expenditures, 2005



Source: *World Development Indicators 2005*.

4 STRATEGIES TO IMPROVE HEALTH SERVICE DELIVERY

The primary strategy used for improving health services in Ethiopia was the decentralization of authority and accountability of managing health services to subnational levels. This strategy was part of a broader government decentralization policy across sectors.

Decentralization holds a lot of promise, but whether it improves public service delivery depends on the institutional arrangements governing its implementation. Several conditions must be present before the full benefits of decentralization can be reaped. First, for decentralization to increase efficiency, local governments need to have the *authority* to respond to local demand as well as adequate mechanisms for *accountability*. Because granting authority without accountability can lead to corruption and lower productive efficiency, decentralization needs to be accompanied by reforms that increase the transparency and accountability of local government. Second, functions need to be *devolved* to a low enough level of government for allocative efficiency to increase as a result of decentralization. Low-level governments are likely to be aware of local preferences and, if able to do so, are likely to adjust service delivery accordingly. Third, citizens should have channels to communicate their preferences and to have their voices heard in local governments. But the existence of such channels is not enough. To effectively influence public policy and oversee local governments, citizens need to have information about government policies and activities. The media play a crucial role in this area (World Bank 2001).

While an analysis of national trends in health outcomes and outputs may be used to understand the impact of decentralization on improving HSD, it may be inadequate to

explain the dynamic relationships at subnational levels and the contributing enabling and inhibiting factors. Variations in the performance of the same subnational levels may then be more revealing. In this case study, the impact of decentralization on health outcomes and HSD outputs will therefore be analyzed at the regional and *woreda* levels in comparison with the national level.

This study covers four of the country’s nine regions—Afar, Amhara, Oromia, and Southern Nations, Nationalities and People’s Region (SNNPR)—which together account for more than 80 percent of the population; six *woredas*; six *woreda* hospitals; and six health centers. The selected regions represent different geographic, ethnic, and socioeconomic variations. The key criterion for selecting the *woredas* was the presence of a *woreda* hospital. Table 4.1 provides a summary of the selected study subjects.

Table 4.1: Scope of the case study

Regions (population)	Oromia (27 million)	Amhara (20 million)		SNNPR (15 million)		Afar (1.5 million)
<i>Woreda</i>	Ambo	Gozamen	Bosana Worana	Soddo Zuria	Lemo	Dubti
<i>Woreda</i> hospital	Ambo	Debre Markos	Debre Berhan	Soddo	Hosana	Dubti
Health center	Ambo	Debre Markos	Debre Berhan	Soddo	Hosana	Semara

SNNPR = Southern Nations, Nationalities and People’s Region.

Source: Authors.

4.1 DESCRIPTION OF THE PRIMARY STRATEGY

In 1994, the federal government enacted a new constitution, which adopted decentralization as a national strategy. The constitution provided “semi-autonomous” status to local governments in the nine regions of the country. Decentralization therefore took the form of “devolution of authority and accountability” to manage public services in order to better respond to the local needs of the population in all sectors, including health. Implementation of the decentralization program was incremental as it was initiated at the regional level. Subsequently, in 2002, the regional governments further decentralized public functions to the *woreda* level.

Early in 1993, the government approved the National Health Policy and Strategy based on 10 principles covering the following: democratization and decentralization of the HSD system; strengthening of preventive and promotive health programs; ensuring equitable access to all segments of the population; improving the quality of health services; increasing demand through changes in population behavior; promotion of intersectoral activities; development of institutional capacity; and promotion of private sector and NGO participation.

Based on the National Health Policy and Strategy, the 20-year Health Sector Development Program (HSDP) was developed with a series of medium-term

implementation plans and investment programs. The first phase, HSDP I, covered the period 1997/98–2001/02 and was followed by the second phase, HSDP II (2002/03–2004/05), and the third phase, HSDP III (2005/06–2009/10).

The main objective of HSDP was to develop an effective and efficient health system, which provides comprehensive and integrated health services that respond to population needs. HSDP focused primarily on maternal and child health programs such as reproductive health and immunization, communicable diseases such as malaria and HIV/AIDS, and nutritional disorders.

HSDP I consisted of the following eight components: health service delivery and quality of care; health facility rehabilitation and expansion; human resource development; pharmaceutical supply and management; information, education, and communication; health sector management; health management information systems; and health care financing. However, both HSDP II and HSDP III had (or have) only seven components, which resulted from combining health sector management and health management information systems into a single component.²

The total cost of HSDP I was estimated at US\$737.8 million, of which some 10 percent (US\$74.5 million) was reserved for contingency fees. The capital investment (US\$218.2 million) aimed to increase health coverage, equity, and efficiency at all levels of the health system, but with a special focus on the expansion of basic health facilities and the development of health human resources. The specific civil works components included: the construction and rehabilitation of health facilities (including staff housing in certain cases, training rooms and dormitories for trainees, and rooms for minor surgery); construction and upgrading of training facilities; and construction of zonal and *woreda* health offices and drug stores. The health human resources development component concentrated on the training of PHC workers. Supportive components such as the development of the health management information system and IEC were also covered by the capital budget.

The recurrent investment budget (total base cost³ US\$445 million) aimed to improve efficiency, quality, and relevance, but with a particular emphasis on the need both to build management capacity at all levels of the HSD system and to ensure the sustainability (technical, managerial, and financial) of the resulting comprehensive and integrated system. According to the HSDP Implementation Completion Report (World Bank 2007), the recurrent budget covered spending on salaries, drugs, and other nonpersonnel expenses.

² For the purposes of this case study, these components were considered “corollary strategies” to improve health services that support the primary strategy, which is decentralization. The term “corollary” was used to distinguish these strategies from the primary strategy, decentralization, for which Ethiopia was selected

³ The base cost is the amount estimated for the component over the long-term program, of which a certain percentage was allocated under phase I.

The donor community encouraged and supported the overall HSDP. In 1996, the government presented it at a consultative group meeting of donors, which was followed by the adoption of a sectorwide approach to support the implementation of the first phase (HSDP I).

Regional governments are fully authorized to adapt and implement HSDP. They allocate funds received from regional block grants and mobilize additional resources, as required, from their locality. The decentralized planning and implementation of HSDP is synchronized with other national and development partner initiatives as depicted in HSDP III (box 4.1).

Box 4.1: Health Sector Development Program, Phase III

Phase III of the Health Sector Development Program (HSDP III) was formulated within a national policy context that strived to harmonize the relevant goals, objectives, and targets set forth in the following documents and initiatives:

- The National Health Policy and Strategy
- The Sustainable Development and Poverty Reduction Program
- Health Service Extension Program
- Accelerated Expansion of Primary Health Care Coverage
- The Health Care Financing Strategy
- The National Strategy for Child Survival
- Policy and Strategy for Prevention and Control of HIV/AIDS
- The National Health Communication Strategy
- Health Human Resource Development Plan
- The National Drug Policy
- The National Population Policy
- The National Policy on Women
- Policy and Strategy on Democracy, Good Governance and Decentralization
- The Capacity Building Strategy and Program
- The Rural Development Policy and Strategy.

Moreover, Ethiopia is committed to various global partnerships and initiatives so as to contribute to and benefit from them. They include the Global Fund to Fight HIV/AIDS, Tuberculosis, and Malaria; the (United States) President's Emergency Plan for AIDS Relief; the Global Alliance for Vaccine Initiatives; and the Rollback Malaria Initiative. Achieving the health-related Millennium Development Goals is obviously one of the top global commitments that has important bearing on the formulation and implementation of HSDP III.

Source: HSDP III, September 2005, Ministry of Health.

Regional governments oversee the performance of the entire health sector. The health budget is allocated and approved annually by the regionally elected parliamentary body, and during the approval process the elected members raise and debate the issues of their constituencies to be addressed in the annual budget. This is one of the mechanisms used to provide local governments with a voice in decision making.

Team members of regional health bureaus participate in national planning as well as monitoring and evaluation activities of HSDP I and subsequent phases, which have contributed to the adoption of national programs into regional planning and implementation.

The regional health bureaus use *woreda* governments to implement the decentralization strategy. Specifically, the *woreda* health offices, with local governments and local community leaders, are the most important structures at the grass-roots level for implementing the strategy.

For the purposes of this case study, the above components are analyzed as “corollary” strategies that are implemented in the context of the primary strategy of decentralization. The following is a brief description of the scope of the corollary strategies (World Bank 2007, annex 10).

1. Improving Health Service Delivery and Quality of PHC (US\$331.7 million or 50 percent of total base cost). The objective of this strategy was to increase the coverage and quality of promotive, preventive, and curative activities. To this end, the Health Services Extension Program was adopted and included a comprehensive maternal and child health package (including child health services such as an Expanded Program of Immunization and Integrated Management of Childhood Illness); and reproductive health services such as ante- and postnatal care, and safe and clean delivery services, as well as family planning services. New emphasis was given to prevention and management of sexually transmitted diseases, including HIV/AIDS, and prevention of teenage pregnancy, abortion, and substance abuse. The implementation plan included provisions for training of medical staff with the necessary equipment to perform their duties and to deliver PHC services in a gender-sensitive manner.

2. Expanding PHC Access through Facility Expansion and Rehabilitation (US\$182.4 million or 27.5 percent of total base cost). This strategy sought to ensure access to basic PHC services for all Ethiopians by 2017, with the first phase of HSDP increasing coverage from 45 percent of the population in 1995/96 to 55–60 percent by 2002. Health services were to be delivered through a four-tier system, including specialized hospitals, *woreda* hospitals, zonal hospitals, and PHC units (each consisting of a health center and health posts). The facility expansion and rehabilitation strategy emphasized the construction and equipping of *woreda* hospitals and PHC units. Management of medical equipment was to be improved by the establishment of national and regional standards, the identification and registration of local service agents, and the organization of training programs.

3. Developing Human Resources for Health (US\$20.0 million or 3 percent of total base cost). This strategy aimed to address the issues of selection, training, deployment, and management of an adequate number of motivated staff to provide quality care. It also aimed to improve the staffing situation in publicly operated health facilities in three ways: expanding supply; increasing productivity; and contracting out to the private

sector. Additional training facilities and trainers were to be organized to provide the training, based on the development of new curricula, and the reorientation of trainers. Training was to focus on community-oriented front-line and mid-level health personnel. In terms of staffing, the National Task Force on Human Resources Development for Health proposed changes in staffing patterns for each type of health facility. To ensure an adequate number and an appropriate deployment of properly trained and managed health personnel, the MOH was to issue National Human Resource Transfer and Placement directives by the end of 1998/99.

4. Improving the Availability of Pharmaceuticals (US\$103.4 million or 15.6 percent of total base cost). This strategy aimed to ensure a regular and adequate supply of effective, safe, and affordable high-quality drugs; and improve prescribing behavior by health providers through the use of standard forms and the development of essential drugs lists for all health service levels. Progress had already been made with the approval in November 1993 of the National Drug Policy and the completion in February 1994 of the Master Plan for the Ethiopian National Drugs Program.

5. Strengthening Information, Education, and Communication (US\$8.5 million or 1.35 percent of total base cost). A significant portion of Ethiopia's burden of disease can be attributed to preventable diseases and nutritional deficiencies. Thus, the goals of this strategy were to improve awareness about personal and environmental hygiene, and basic knowledge of common diseases and their causes; and promote political and community support for health services through educating and influencing planners, policy makers, managers, women's groups, and potential collaborators. The MOH was to take the lead in developing a national IEC plan (media, including radio, would be used as a means of communication) and an implementation strategy based on Ethiopia's prevailing burden of disease. This strategy would allow for enough flexibility for regional governments to adapt these guidelines to their local situation using local languages. The MOH was also to provide technical support and guidance to the regions to improve their ability to plan, implement, monitor, and evaluate results (including operational research).

6. Improving Health Sector Management and Management Information Systems (US\$12.7 million or 1.9 percent of total base cost). This strategy sought to transform the highly centralized health system into a four-tier system that would be appropriately linked, equitably distributed, and managed in a decentralized, participatory, and efficient manner. Important measures to realize this strategy's goals included decentralization or the devolution of power, decision making, and services to the regions; and capacity building. This strategy aimed to improve skills in the areas of policy formulation, planning and budgeting, financial management, program implementation, and monitoring and evaluation for MOH and regional staff. To enable managers at regional, zonal, and *woreda* levels to execute their mandates, HSDP envisaged adequate staffing, accelerated training of managers, and rehabilitation or construction, as well as equipping, offices. HSDP was to support improvements in management information systems in order to document disease patterns, increases in PHC service provision and coverage, and improvements in health status; and improve decision making at the regional, zonal, and *woreda* levels. HSDP would focus initially on the regional and zonal levels. This strategy

also included the strengthening of monitoring and evaluation and applied research in the amount of US\$3.6 million (or 0.6 percent of total base cost) to monitor improvements in service delivery, quality, and financial performance; and evaluate the impact, effectiveness and cost-effectiveness of the HSDP.

7. Improving the Financial Sustainability of the Health Sector (US\$1.0 million or 0.1 percent of total base cost). The objectives of this strategy were to improve public health sector efficiency and to generate additional sources of revenue. It was intended that efficiency gains would result from improvements in the allocation of resources, in the management of resources, and in the rationalization of curative care. While government commitment to support the health sector financially was high, the share of total government spending allocated to health was expected to rise only modestly in the medium term (from around 6 percent in 1996 to perhaps over 7 percent in 2000). The government was to take steps to stimulate nongovernmental participation in the health sector, such as actively seeking private and/or NGO investments in health facilities. In addition, health facilities were to strengthen the management of their cost-recovery systems.

4.2 ADAPTATION OF AND SUPPORT TO THE PRIMARY STRATEGY

The MOH collaborated with partners and regional health bureau teams, professional associations, and private health sector investors in the planning, implementation, monitoring, and evaluation of HSDP.

During the consultation process, each stakeholder (including members of regional health management teams) addressed relevant issues to assist planning within their respective regions and institutions.

In 2000, the MOH, in collaboration with the various stakeholders, drafted the HSDP implementation harmonization manual. Following several stakeholder consultations, this manual was jointly approved for action. It provides guidance on how different stakeholders and different levels of government, including donor groups, can work together.

The federal and regional governments committed in 2003/4 to include HEWs as regular health workers and government employees. This is one of the major shifts in the recruitment and deployment of frontline health workers in Ethiopia's HSD strategy. Training for HEWs was to be of one year for females who completed the tenth grade within their locality; this allowed HSDP implementation to go inside the community. The health posts and HEW expansion program started nationwide in 2003/4 with innovative policy actions to reach both rural communities and each household for preventive and promotive HSD.

HSDP received strong support from the donor community that financed it through a sectorwide approach, spanning the different implementation phases (HSDP I, II, and III).

4.3 IMPLEMENTATION OF THE PRIMARY STRATEGY AND COROLLARY STRATEGIES

Primary strategy: Decentralization

Regional level. Regional health bureaus have developed their own mid-term HSDP implementation plan based on the nationally agreed health implementation plan. The regions work closely with the MOH and donors at regional and national levels to obtain additional support for the implementation of HSDP. They also work with civil society, NGOs, and other community-based organizations in planning and evaluating HSDP at the regional level. This type of participation has facilitated better resource mobilization and harmonization for HSDP implementation.

This case study shows that per capita public health spending varies from region to region due to varying regional priorities. Afar's, for example, is high, since it is pastoral, and requires a greater budget for basic health services.

All the regional health bureaus have equal authority and responsibility under the decentralized regional governments, but the capacity to implement the decentralized HSDP varies by region both because of the stability of the regional health management team and the capacity of the team to manage health programs.

The major differences among the regions are the capacity to implement the decentralized HSD strategy, as well as the ability to mobilize local resources for the implementation of HSDP. In this regard, the SNNPR health bureau had a more stable health management team at the regional, zonal, and *woreda* health office levels which, in turn, have facilitated HSDP implementation. In regions like Amhara and Oromia, however, regional health management teams are relatively unstable with weak zonal health departments and *woreda* health offices. This unstable and weak management at the *woreda* level has affected HSD outputs in their localities. As an example, the Afar regional health bureau started *woreda*-level decentralization in 2004 and continues to further decentralize at that level.

Woreda level. In 2002/3, the Amhara, SNNPR, and Oromia regional governments enacted laws establishing *woreda* government structures. These structures receive block grants from regional governments and allocate funds to public sector government offices, including that for health, in accordance with local district priorities while keeping national health policies in mind. The *woreda* is responsible for all economic development and social services in its area. *Woredas* are the grass-roots means through which to adapt and implement HSDP within their locality, using mainly community health extension programs.

In theory, *woredas* are responsible for personnel issues (hiring, firing, promoting), health facility construction, and procurement. However, in practice, regional and central health departments lead recruitment and allocation of health personnel, from training programs at the federal level to procurement and distribution of supplies. Furthermore, *woredas* are responsible for mobilizing local community resources for the construction of health posts

and rehabilitation of health centers for preventive and promotive health services; recruitment of HEWs for training; and deployment of HEWs to their respective communities. *Woredas* are also responsible for the mobilization of community leaders, of the community itself, and of community-based NGOs. Community-based preventive and promotive services are provided free of charge.

This case study found that decentralization of HSD to the *woreda* level varied among *woredas* both within and between regions due to *woredas*' varying capacities to implement strategies locally. There were major difficulties in the implementation that included shortages of trained human resources, high turnover of existing staff, inadequate office facilities, and limited financial resources within *woredas* and health facilities. Overall data collection, reporting, use, and storage were a serious constraint hindering proper monitoring and evaluation of implementation of the decentralization strategy at regional and subregional levels. Emerging issues included:

- Block grant allocation formulas based on population rather than existing needs and capacity
- Lack of capacity (e.g. facilities, trained personnel) resulting in low budget-execution rates
- Poor capacity at *woreda* level for both planning and implementation
- Lack of a mechanism to align *woreda* goals with national goals
- Lack of clarity regarding responsibilities among the four levels of the health system
- Problems with financial reporting
- In remote areas, resistance to health posts (because they primarily offer preventive care but little or no access to curative services)
- Inadequate training and failure to meet minimum staffing levels
- Lack of capacity among central and regional health bureaus to support other levels
- Inability at regional and *woreda* level to communicate with and integrate private sector facilities/providers.

Corollary 1. Improving Health Service Delivery and Quality of Care

The implementation of this corollary strategy is discussed under the results in section 4.4.

Corollary 2. Expanding PHC Access through Facility Expansion and Rehabilitation

The overall implementation of this corollary strategy exceeded the plan for construction, rehabilitation, and transformation of the health facility network. There was significant variation across regions in the types of health facilities that proliferated, and in the pace of implementation.

Between 2000 and 2006, the number of hospitals and health centers increased by about 34 percent and 78 percent, respectively. During the same period, health posts showed an almost sevenfold increase. In contrast, the number of health stations (intermediate facilities between health posts and health centers) fell by almost a third as a result of the transformation of more than 1,000 health stations into health centers or health posts. However, some health stations did not undergo real transformation and continued to function as such as the government was phasing out its funding to this facility level. This increase in the number of first-line health facilities partially contributed to improvements in access to and utilization of health services (table 4.2).

Table 4.2: Trend in growth of selected categories of health facilities, 1997–2005

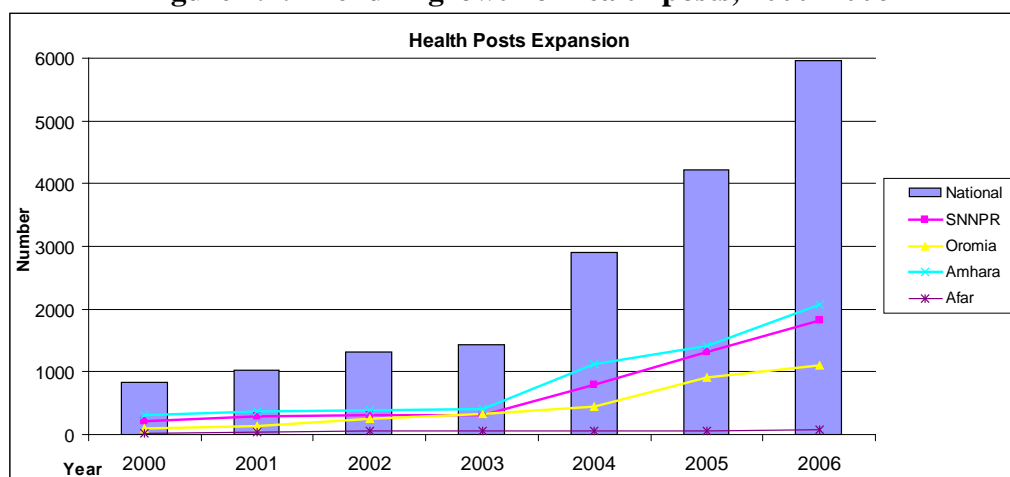
	Number in 1997/8	Number in 2004/5	Increase/ (Decrease)	Change
Hospitals	96	131	35	+36%
Health centers	282	600	318	+113%
Health posts	802	4,211	3,409	+425%
Health stations	2,331	1,662	(669)	-29%

Source: HSDP *Implementation Completion Report*, World Bank (2007).

The pace of growth at the national level was steady except for the proliferation of health posts, which showed a significant increase between 2003 and 2006. Notably, in 2005 and 2006, the stock of primary health care facilities increased by 50 percent.

However, the pace of implementation at the subnational level varied significantly between regions, particularly with respect to the proliferation of health posts. Oromia, for instance, exhibited an almost 11-fold increase in health posts, the highest among the four regions, followed by SNNPR (nearly ninefold), Amhara (sevenfold), and Afar (an increase of only 3.3 times, as decentralization was implemented later than in other regions) (figure 4.1).

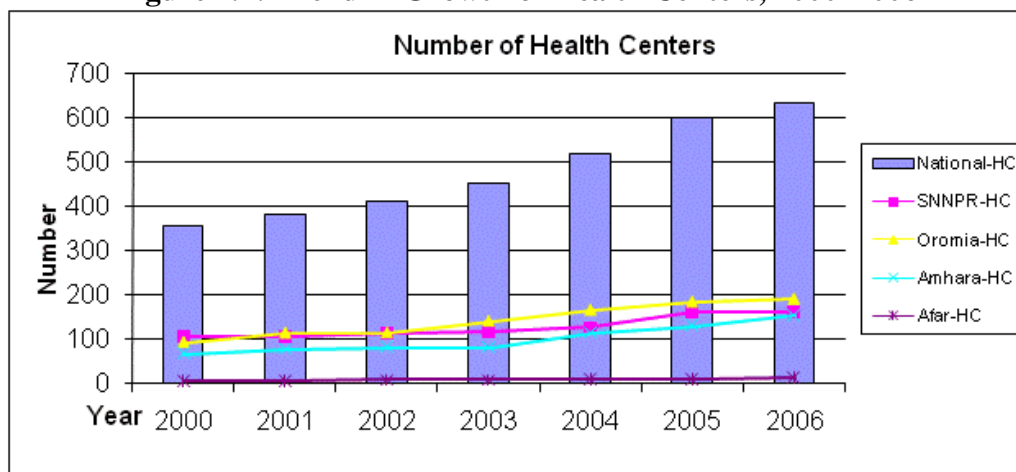
Figure 4.1: Trend in growth of health posts, 2000–2006



Source: *Health and Health-Related Indicators*, Ministry of Health, Addis Ababa, 2007.

In contrast, health centers in both Oromia and Amhara more than doubled while health centers increased only by 50 percent in SNNPR. Moreover, Amhara was the only region that completely abolished health stations by 2006 (figure 4.2).

Figure 4.2: Trend in Growth of Health Centers, 2000–2006



Source: *Health and Health-Related Indicators*, Ministry of Health, Addis Ababa, 2007.

The expansion of the HSD network faced several problems: there were significant delays in executing civil works programs; the mobilization of equipment and health staff was not appropriately synchronized with the completion of civil works; and the completed facilities suffered from lack of supplies and needed periodic maintenance.

Corollary 3. Developing Human Resources for Health

At the initiation of HSDP, a health human resource development plan was developed, which included projections of the required human resources by category, as well as strategies for improving the quality of training and human resource management. During HSDP implementation, the MOH developed several policy documents such as the National Human Resource Transfer and Placement Directives, the Health Sector Human Resource Development Framework (2006–2010), and the Essential Health Services Package in 2005.

Under HSDP, training programs at some training institutions were expanded (Alemaya and Dilla) and new programs were established (Arbaminch, Gambela, Jijiga, Borena, and Benishangul Gumuz) to increase the number of health workers. This move was coupled with increasing trainers' skills and updating the training curricula. As a result, there was a substantial increase in the number of health workers, particularly nurses, in the labor market. For example, the average annual number of nurses graduating before 1999 was about 683, which increased almost threefold to 2,601 by 2002. The number of graduating public health officers also increased fivefold.

This health worker increase was apparent in both the public and private sector. Table 4.3 provides a summary of the increases in selected categories of health workers, which shows a marked surge in the number of public health officers, nurses, midwives, and laboratory technicians.

Table 4.3: Trend in growth of selected categories of human resources for health, Ethiopia, 1997/98–2004/05

	1997/8		2004/5		Percentage increase
	Number	Ratio to pop	Number	Ratio to pop	
All physicians	1,483	1:38,618	2,453	1:29,777	65.4
General practitioners	1,169	1:48,992	1,386	1:52,701	18.6
Public health officers	30	1:1,909,054	776	1:94,128	2,486.7
Nurses	3,864	1:14,821	17,300	1:4,222	347.7
Midwives	250	1:229,086	1,509	1:48,405	503.6
Lab. technicians	621	1:92,224	2,837	1:25,746	356.8

Source: HSDP *Implementation Completion Report*, World Bank (2007).

The development and deployment of health workers focused on strengthening preventive and primary health care services. To this effect, a key strategy was to create a cadre of health workers that would act as the link between the HSD system and the community. Under HSDP, two categories were created: frontline health workers during the first phase and HEWs during the second. By the end of 2005, about 11,200 were deployed in the former category and 2,737 in the latter. (The implementation of these two categories of workers will be further discussed under corollary 5, IEC, as their role was mainly to increase awareness and induce demand for community health services.)

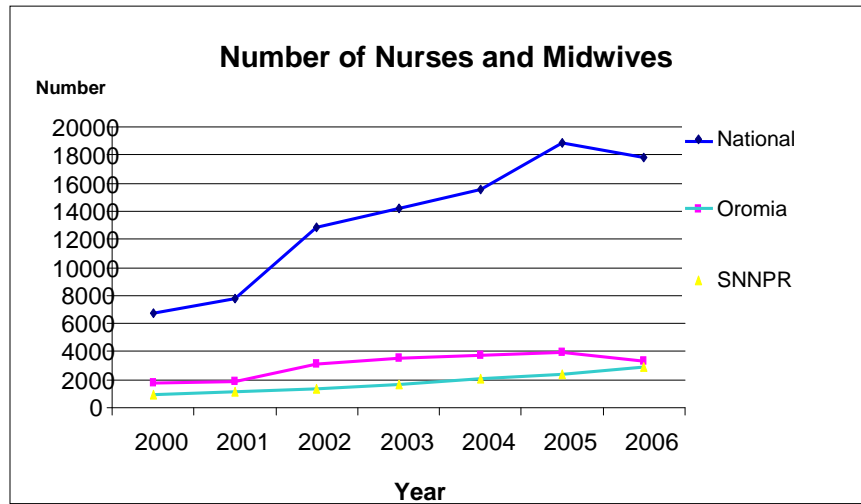
The implementation of this human resource strategy at the subnational level does not tell a consistent story, based on the time series data for nurses obtained from the regions for the period 2000–2006 (table 4.4). SNNPR was the only region to show a steady annual increase in nurses, which almost tripled to 2,945 while Oromia doubled its stock of nurses to 3,343 by 2006. In contrast, Amhara and Afar did not significantly increase their number of nurses, which fluctuated at around 1,000 and 250, respectively. Notably, the ability of regions to recruit, deploy, and retain health workers was commensurate with the effectiveness of the HSD system, as explained in subsection 4.4.

Table 4.4: Trend in the growth of number of nurses in the four regions, 2000–2006

Region	2000	2001	2002	2003	2004	2005	2006
National	6,713	7,723	12,838	14,160	15,544	18,809	17,845
Oromia	1,807	1,894	3,117	3,531	3,685	3,889	3,343
SNNPR	957	1,140	1,307	1,655	2,034	2,334	2,945
Amhara	1,000	982	1,342	NA	1,232	1,084	NA
Afar	NA	252	223	244	269	256	NA

Source: *Health and Health-Related Indicators*, Ministry of Health, Addis Ababa, 2007.

Figure 4.3: Trend in the number of nurses and midwives in SNNPR and Oromia, 2000–2006



Source: Authors' calculations; Ministry of Health.

Despite the increase in the number of health workers, the population-to-health worker ratio still remains very low compared to countries with similar income levels. This problem was compounded by two factors. First was the migration of highly qualified health personnel abroad and attractive employment conditions in the rapidly growing private sector. For example, the proportion of medical doctors employed in the public sector declined from 73 percent in 2002 to 44 percent in 2005. Second, the lack of incentives to encourage skilled professionals, such as those to deploy medical doctors to rural areas, further increased the regional and urban–rural differential. Moreover, the recruitment of male midwives may have discouraged many women in seeking health services for cultural reasons (male midwives constituted about 10 percent of the total number of midwives). As a result, health facilities in rural Ethiopia remained understaffed; in particular, female midwives were underutilized. Furthermore, the quality of training provided to health workers was suboptimal. For example, many health workers in primary health care, such as HEWs, received only one year of training. More importantly, HEWs would have been more effective if they were backed by an adequately trained cadre of qualified nurses and doctors to provide continued support and on-the-job training. Even general practitioners lacked adequate skills in emergency obstetric care, contributing to the high maternal mortality ratio.

Another key challenge in implementing the human resource development strategy was the need for appropriate monetary and nonmonetary incentives to reward health personnel for efficient and high-quality performance. The government created public sector salary bands for each type of health worker, with titles and salaries in each band determined by experience level. This was an attempt to standardize titles and salaries across regions and facilities. Between 1999 and 2003, health worker base salaries increased on average by almost 21 percent, making them higher than the Sub-Saharan African average. Workers in remote *woredas* were eligible for hardship allowances and workers working beyond regular hours (e.g. night duty or on-call duty) were eligible for

duty allowances. The regional health bureaus had the authority to establish allowance and benefit levels; however, their inability to establish salary levels inhibited their ability to attract health workers to remote areas. The MOH was responsible for monitoring the effects of the hardship and duty allowances. There were also discussions on grouping *woredas* according to how remote deprived areas were and, subsequently, setting salaries and benefits according to these categories. Provision of staff housing was included in some regional health sector plans, but details on the extent to which it was carried out, its impact, and its current status are unknown. Despite these efforts, the low morale and absenteeism remained pervasive in the HSD system as health workers still lacked adequate incentives to work in rural and remote areas.

Corollary 4. Improving the Availability of Pharmaceuticals

In support of the implementation of this corollary strategy, a number of major legislative and organizational reforms took place based on the Proclamation to Provide for Drug Administration Control 176/1999. The List of Drugs for Ethiopia (2002), detailing the drugs that can be legally registered and marketed in Ethiopia at different health care facility levels, has been distributed. A list of priority drugs that should be available at all times has been developed as part of the basic PHC services and is used as the basis for procurement. The essential drug list has been revised, and a policy on the supply and use of anti-retroviral drugs has been developed and copies distributed throughout the country.

About 450 special pharmacies have been established countrywide. These pharmacies allow patients to obtain drugs when they are not available in budget pharmacies. Although special pharmacies are more expensive than budget pharmacies, they are still less expensive than private pharmacies, and act as alternative sources of drugs.

Despite these efforts, the status of drug supply in the public sector remains problematic and is considered one of the most poorly implemented corollary strategies. In this regard, different evaluations indicated that storage and inventory control was poor; availability in the Ethiopia Red Cross pharmacies, special pharmacies, and private pharmacies was adequate throughout HSDP; and the availability of essential drugs has improved but shortages of drugs in public facilities are still common due to budgetary, procurement, and logistical problems. For example, the overall waste of drugs was estimated at 8 percent in 2004/05.

Corollary 5. Strengthening Information, Education, and Communication

This strategy aimed to improve the knowledge, attitude, and practice with respect to preventive and promotive health services. The key activities included the provision of health communication materials and equipping all the villages (*kebeles*) implementing the Health Extension Worker Program.

The new cadre of HEWs focused on providing a minimum basic package in four essential health service areas: hygiene and environmental sanitation, disease prevention and control, family health services, and health education. The plan for the outreach worker

component was to train and deploy 20,000 HEWs to 10,000 rural *kebeles* (with two workers per *kebele*) over five years. HEWs were to be trained in preventive care and it was intended that most would be female. The initiative was piloted in five regions. Available information indicated that there were more men enrolled in the program than expected due to the lack of women who had completed a tenth grade level of education (the minimum education requirement for HEWs). By 2005, only 2,612 HEWs had been deployed (in many rural villages of Ethiopia).

HEWs, in addition to frontline health workers, have been instrumental in promoting early care-seeking behaviors, and adherence to anti-malarial drug regimes and other case management approaches. Reviews and consultation reports document increased levels of awareness and positive trends in behavioral change, greater demand for voluntary counseling and testing, and an upward trend in condom distribution and utilization. Strategies that have been used include sponsored drama, panel discussions transmitted to the public, and mass media campaigns.

Yet against this, HEW training time was considered to be too short, teachers and teaching materials inadequate, course curricula insufficient, and practical training in urban hospital settings differing markedly from real working conditions. Preliminary reports revealed skill deficiencies among the first groups of HEWs sent to the field, as well as dissatisfaction with new workers among existing health workers. Other emerging issues included the inadequacy of vacation and benefits for trainees, the need to have allowances for trainees commensurate with the geographic region, the need for better supervision and support to training centers, and the need for two-way feedback on training programs.

The effectiveness in implementing this corollary strategy was constrained by several factors. First was the weak capacity of the existing cadre to conduct IEC and communication for behavior change activities intended to reach all segments of the population. The second was the diversity in culture, ethnicity, religion, and language of the population. This required additional resources for training and adaptation of IEC materials. The third and most important factor, however, was the lack of key inputs. The lack of medicines, supplies, contraceptives, vaccines, and educational materials was the key factor in the underutilization of health services, particularly in rural areas. The results reflect the weak implementation of the communication strategy. For example, the share of children who slept under an insecticide-treated bednet in endemic areas was only 4 percent; the contraceptive prevalence rate was unacceptable at 14 percent, with a 63 percent unmet need for contraception among married women of reproductive age; and vaccination levels remained very low.

Corollary 6. Improving Health Sector Management and Management Information Systems

The different and complementary roles of the MOH, regional health bureaus, zonal health departments, and *woreda* health offices were clearly specified in HSDP and the broader government decentralization policy. The decentralization policy created opportunities for

local governments to be responsive to local challenges, but it also created a major challenge in ensuring that national priorities were adequately funded in regional and *woreda* plans. Weak management capacity in particular at the *woreda* level stood out as a key constraint to governance in the health sector. Rapid staff turnover affected health sector management at all levels, and was arguably the most common and serious bottleneck to the country's efforts to implement HSDP. The key lesson learned was the need to strengthen planning and management capacity at all levels.

HSDP has served as a framework for aligning donors to the government's general sector policy and strategy. However, aid to the sector remains fragmented with a large number of donors and project-tied interventions guided by multiple procedures, targeting different regions and/or inputs to HSDP, contributing to a high overall transaction cost for the government. Alignment of donors and government procedures can be further improved, despite some progress.

The objective of the health management information system (HMIS) is to produce timely health information for planning, management, and decision making. Health and health-related indicator booklets have been published and disseminated every year by the Planning and Programming Department at the MOH. Despite their limitations, the booklets have provided the information base for a unique trend analysis over the period 2000–2007, which is useful for planning and evaluation purposes.

Although the HMIS has improved over time, the system is fragile and data collection and reporting need to be improved. There remains some resistance from various vertical program managers to the idea of reducing data collection requirements as currently carried out through these vertical programs and of integrating some of these data in the broader HMIS. There is a need to develop an HMIS system based on a common set of indicators, standardized procedures, and improved data for decision making.

Corollary 7. Improving the Financial Sustainability of the Health Sector

The health care financing trend over the period 2001/02–2004/05 by donors and NGOs increased while the share of government and households decreased modestly. In 2004/05, government and households each financed about 31 percent of health expenditures (compared to 33 percent in 2001/02), and donors (public) 18 percent and NGOs 19 percent (compared to 16 percent and 11 percent in 2001 and 2002 respectively). The high dependence on donors and out-of-pocket health expenditures limits the sustainability of the gains accomplished through HSDP.

Health expenditures, both in aggregate and per capita terms, have increased over time. However, Ethiopia's total health care spending as a share of GDP of 5.6 percent (equivalent to about US\$7.1 per capita) is significantly lower than the Sub-Saharan Africa average, and far below the US\$34 per capita recommended by the Commission for Macroeconomics and Health of the WHO to deliver essential health services in developing countries. In keeping with the government's health sector policy and health care financing strategy, there was a considerable shift of resources from curative to

preventive care during the period 2001/02–2004/05: expenditures on preventive and public health services grew from 17 percent to 24 percent of total public health expenditures.

Expenditures vary widely from region to region, but spending rates have been low in all regions (which may be related to budget execution problems); this may explain the reluctance of the government to increase public funding for health. At both government and private facilities, user fees are common. Exemptions are, however, available at government facilities, so that the majority of patients who visit them do not pay. When user fees were originally introduced several decades ago, much of the total cost of service provision was recovered. However, the policy has remained unchanged for 50 years, making the fee merely symbolic. Also, until recently, fees collected by facilities were remitted to the government and eventually absorbed in general government revenues. These represented a fraction of revenue collection.

Recently, the government initiated the health facility revenue retention program, through which facilities are expected to be granted greater flexibility in the use of collected revenues, with revenues being kept at the facility level for reinvestment and current spending. This decentralization of revenue collection is also expected to stimulate a greater sense of ownership in the revenue collection process at the facility level, and therefore increase the revenue collected. Preliminary observations indicate that the amount collected has indeed risen, and has therefore begun to address the financial needs of health facilities.

4.4 RESULTS OF THE STRATEGY

The implementation of both HSDP I and II between 1998 and 2005 showed improvements in results at the outcome and HSD output levels including mortality, morbidity, coverage, and utilization indicators. Between 2000 and 2005, significant improvements were made in child health indicators and moderate results were seen in maternal health, according to the EDHS (table 4.5 and figure 4.4).

Table 4.5 Health outcomes and health care utilization indicators, 2000 and 2005

	2000	2005	% change
Child health			
Neonatal mortality (1–28 days, per 1,000 live births)	49	39	-20.4
Postneonatal mortality (>28 days–12 months, per 1,000 live births)	48	38	-20.8
Infant mortality rate (0–12 months, per 1,000 live births)	97	77	-20.6
Child mortality (2–5 years, per 1,000 children)	77	50	-35.1
Under-five mortality rate (0–5 years, per 1,000 live births)	166	123	-25.9
<i>Child nutrition</i>			
Stunted (%)	52	47	-9.6
Wasted (%)	11	11	0.0
Underweight (%)	47	38	-19.1
<i>Infant immunization (%)</i>			
Fully immunized (%)	14	20	42.9
DPT3 (%)	20.7	31.9	54.11
Measles (%)	26.6	34.9	31.20
Maternal health			
Total fertility rate (number of children)	5.9	5.4	-8.5
Maternal mortality ratio (per 100,000 live births)	871	673	-22.7
Contraceptive prevalence rate (%)	8.1	14.7	81.5
Antenatal care (%)	26.7	27.6	3.4
Attended delivery (%)	5.6	5.7	1.8
Postnatal care (%)	7.8	4.6	-41.0

Source: Ethiopian Demographic and Health Survey 2000 and 2005.

Child health. Between 2000 and 2005, child health indicators showed significant improvement but the levels attained were still low compared to other countries with similar income levels. The infant mortality, child mortality, and under-five mortality rates all decreased to varying degrees, as did stunting and the share of children underweight. A commensurate pattern of increase was observed in the utilization of child health services. For example, the share of fully immunized children increased, as did coverage for DPT3 and measles, though only one in five children was fully immunized, reflecting the low level of immunization coverage.

At the regional level, the EDHS showed that Afar outperformed the three other regions as it showed the steepest decline in both infant and child mortality rates (reductions of 53 percent and 46 percent, respectively). Oromia also decreased infant and child mortality rates by about one third and SNNRP by about one quarter. In terms of utilization of services, Oromia and SNNRP almost doubled the rates of fully immunized children while DPT3 coverage also doubled, and measles coverage increased by 1.5 times. Improvements in mortality and immunization rates in both Oromia and SNNRP exceeded the national averages. While Amhara showed improvements in mortality rates and increases in immunization coverage, its levels were below the national averages. Although other factors contribute to reductions in infant and child mortality rates, immunization is believed to play a key role.

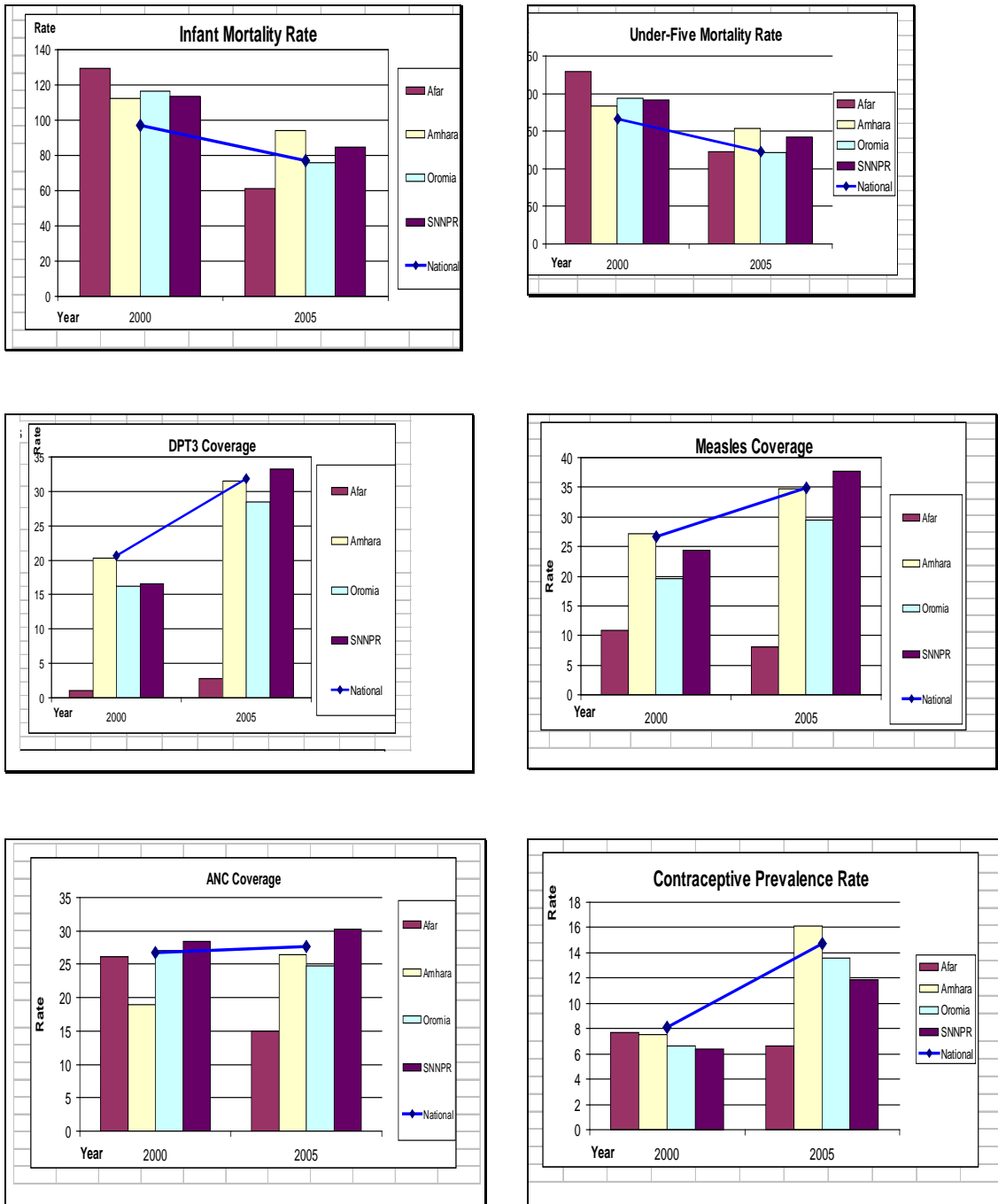
Maternal health. Between 2000 and 2005, the total fertility rate fell by 8.5 percent from 5.9 to 5.4 children and the maternal mortality ratio was reduced by about 23 percent from

871 to 673 deaths per 100,000 live births. In contrast, however, the utilization of maternal health services was very modest. During the same period, utilization rates of perinatal services either stagnated or deteriorated. The contraceptive prevalence rate increased by 81.5 percent to reach only 14.7 percent, which is extremely low.

At the regional level, Amhara increased its antenatal care coverage by 40 percent, reaching 26.5 percent, which is close to the national level. SNNPR modestly increased its antenatal care coverage but it was the only region that exceeded the national average. In contrast, Oromia and Afar showed a reduction in their antenatal care coverage. Contraceptive prevalence rate more than doubled in Amhara and Oromia and increased 1.8 fold in SNNPR. Afar however showed a decline in its contraceptive prevalence rate.

Health coverage. MOH routine data reveal that coverage of basic health services and infrastructure in Ethiopia has been low and inequitable. Coverage is measured by access, which is defined as having a health facility (MOH, public, or NGO) within a 10 kilometer radius. In 1997/8, it was estimated that only about 45 percent of the population had access to a health facility, with regional variations between 11 and 86 percent. By the end of 2005, the potential health service coverage by any type of MOH or NGO health facility (health center, post, or station) had reached a high of 72.1 percent, above the planned target of 60 percent. However, this increase has not been translated into improved overall utilization as reflected by low outpatient visits of only 0.3 visits per person.

Figure 4.4: Comparison of maternal and child health outcomes and service utilization between 2000 and 2005



Note: For infant and under-five mortality rate data, national figures reflect data collected 0–4 years preceding the survey, whereas regional figures reflect data collected 5–9 years preceding the survey, as reported by the Ethiopian Demographic and Health Survey.

Source: Ethiopian Demographic and Health Survey 2000 and 2005.

Communicable diseases. MOH routine data reveal that, between 2000 and 2006, management of tuberculosis cases showed reasonable improvements as the tuberculosis treatment success rates increased from 69 percent to 78 percent and the treatment failure rate decreased from 8 percent to 4 percent. At the regional level, data were available only for SNNPR and Amhara. It showed that SNNPR outperformed Amhara in terms of success rate, although both performed equally well in reducing the treatment failure rate.

Health services utilization. No data were available that *systematically* documented health system performance at the facility level, such as the number of outpatient visits, bed occupancy rate, number of hospital days, bed turnover rate, or average length of stay. During the course of this case study, some utilization data were collected at the facility level but their analysis was inconclusive in the absence of systematic national data collection.

Targeting the poor. The HSDP design did not include any indicators to measure health outcomes and health service utilization of the poor. It was assumed that the type of services included in HSDP would eventually benefit the poor and the disadvantaged population generally. However, in the context of the broader Sustainable Development and Poverty Reduction Program (SDPRP), the Government embarked on increasing spending in pro-poor sectors, which included education, health, agriculture, natural resources, and rural roads. As a result, pro-poor spending more than doubled in five years, increasing from 28 percent of total public expenditures in 1999/2000 to 57 percent in 2004/05.

5 ANALYSIS OF ENABLING AND INHIBITING FACTORS

This section describes the factors in each environment that, in Ethiopia, helped or hindered a strategy's adoption, implementation, and outcomes at three main levels: the macro environment (the country's political economy and community voice); the micro environment (the health sector's scope of decentralization, role of donors, and non-public sector service provider organizations); and the strategy environment (implementation, organization and management, and mobilization of resources). (See the case study analytical framework in annex III).

5.1 MACRO ENVIRONMENT

- ***The political economy of decentralization largely constituted an enabling condition.*** The adoption of the decentralization strategy in the health sector was an enabling factor that recognized the population's ethnic diversity and its different needs. It provided authority to the regional and *woreda* levels in resource management and took service delivery closer to the population. Implementation, however, was discordant, as pointed out by the following. Holland, for example, says:

On paper, Ethiopia is a radically devolved confederation with all residual powers and sovereignty resting with the regions [National Regional States]. In practice, however, three centripetal influences counteract this degree of devolution: the constitutional requirement that the regional policy making develop in line with federal norms; the combination of centralized policy making and a lack of regional capacity; and the concentration of financial control in the center, which controls the flow of federal subsidy (the overwhelming majority of their budgets) to each region (Holland 2007).

DFID notes:

Key institutions for managing political conflict are underdeveloped: the centre still exercises strong control over regional executives, civil society and the media; national and regional parliaments are underdeveloped; the judiciary needs strengthening; and power is still seen to rest with the traditional elites. ... Accountability is hampered by the lack of separation between the role of the party and the state (DFID n.d.).

While this case study did not analyze in detail the political economy of decentralization in the health sector, the influence of the political economy and the de facto center–region political power relationship on the health sector cannot be ignored. To a certain extent, the variation in the implementation and the results across the four regions may be partly explained by the “clientelistic” relationship between central and regional political parties.

- ***Limited voice and community involvement was an inhibiting factor for the impact of decentralization.*** The role of the community was limited in the decentralization process. A few activities were planned so as to involve communities in budgetary and decision-making processes, such as including three elected representatives from the community in the *woreda* council. However, there was a lack of interventions in the following: enhancing transparency around public budget procedures (such as budget preparation, expenditure, and audits); fostering broad engagement; and strengthening voice and client power of representative citizen groups and citizens in relation to public budget processes and public service delivery. In the health sector, the weak accountability of local authorities to the public, the lack of transparency, and the weak management capacity in certain regions and *woredas* were inhibiting factors as they may explain in part the variation in the health outcomes across the regions and *woredas*. In general, community empowerment and citizen voice are essential to improving accountability and transparency in order, in turn, to protect public health resources from potential capture by the political elite. As noted by DFID:

The hierarchy of the Ethiopian state, from the federal to the regional, to the *woreda* level, is designed to increase vertical accountability and participation by bringing Government closer to the people. There are institutions in place, such as the judiciary, Parliament, the Office of the

Federal Auditor General, and the Anti-corruption Commission, but their effectiveness to hold the other branches of government to account is limited. ... While progress has been made in decentralization, further action is required to make the state apparatus more responsive and accountable. A number of fiscal, technical and political constraints limit the downward accountability and meaningful responsiveness of state institutions to citizens (DFID n.d.).⁴

5.2 MICRO ENVIRONMENT

- ***The type and scope of public sector decentralization were enabling factors.*** A key binding constraint to the successful implementation of health sector decentralization is its implementation within the health sector itself, which provides limited space for the health management team to make decisions and take actions. In the case of Ethiopia, decentralization was fully implemented in the public sector, including health, as part of its federation system. The scope and type of decentralization provided the impetus to the local government apparatus to act in harmony. The scope was broad-based and included most public sectors, not only health, providing local governments with the authority to deal with cross cutting issues such as civil service and resource allocation across sectors. Moreover, the type of decentralization was in the form of devolution of administrative and fiscal authority to manage public services at the local level. Decentralization in the health sector is likely to be more effective and sustainable when it is implemented as part of a broader government decentralization policy across sectors.
- ***Donors played a key enabling role.*** Another key enabling factor that greatly influenced the adaptation and implementation of the decentralization strategy was the mobilization of large financial resources by several committed donors who exerted sincere efforts to harmonize and align the different procedures and objectives. Moreover, an effective partnership was established between the government and donors. Donor coordination was very strong during HSDP preparation and implementation. Annual review meetings were held regularly and joint review missions were conducted. On the one hand, much of the progress made in the health sector was realized because of the mobilization of these additional resources that supported one program through a single plan, budget and report. On the other hand, this made the health sector highly dependent on donor financing, which jeopardizes its sustainability. For example, the decrease in public health expenditures in 1999–2001 caused by the military conflict with Eritrea resulted in a drop in many health indicators within most regions in 2002

⁴ To remedy the weakness in the previous projects that did not adequately strengthen the voice and accountability dimensions of decentralization, the Protection of Basic Services Project, supported by the World Bank and other donors, aims to protect and promote the delivery of basic services by subnational governments while deepening transparency and local accountability in service delivery. The project also includes the piloting of selected approaches to strengthen the voice of citizens and civil society organizations, and also building the capacity of citizens to engage in public budgeting processes.

and 2003. However, this decrease was mitigated by the continued flow of donor funds, particularly from the World Bank, which were the main source of health services financing at that time. The health sector was thus sustained, allowing health services to recover from 2004.

- ***The limited role of the nongovernmental sector in health service delivery was an inhibiting factor.*** Given the type and scope of decentralization, it was logical to delegate authority to local governments within the public sector. The reform therefore focused largely on the public sector with little role for the nongovernmental sector, whether NGOs or private. This serves as an inhibiting factor as it discounted the potential contribution of the nongovernmental sector in implementing the different strategies, particularly where the management capacity of local governments was weak in service delivery or in outreach and demand creation activities.

5.3 STRATEGY ENVIRONMENT

- ***The sequencing in implementing the decentralization strategy was an important enabling factor as it made the strategy more manageable; however, decentralization was rolled out prematurely.*** Given the relative cultural, ethnic, social, and economic diversity of the regions and the districts within regions, the creation of autonomous subnational entities with devolved administrative, fiscal, and political power was appropriate. Implementation was reasonably manageable when it was first implemented at the regional level before it was rolled out to the district level. Actual implementation, however, varied considerably between regions due to variations in the management and institutional capacity of regional governments. There was, therefore, a need to consolidate the gains of decentralization at the regional level before rolling it out to the district level in 2003. The lack of adequate capacity to implement a decentralized health system at the *woreda* level impeded progress. Where the regional capacity was not fully strengthened, further decentralization to the district level may have had a negative impact
- ***The institutional and management capacity at the subnational level, in the context of decentralization, played a key role in the effectiveness of program implementation.*** Progress in improving public sector performance in the past decade was largely driven by improved institutions, including those at the regional and local levels, which have been able to scale up services and infrastructure. The regions and districts were provided with almost the same level of devolution of power and delegation of authority. However, implementation and progress varied significantly across regions in the types of health facilities (e.g. more health posts than health centers) and health workers (e.g. more nurses than midwives). This suggests that regional governments were adapting the aforementioned corollary strategies to their local needs and priorities. Improvements observed in certain regions may be explained in part by better management capacity. Regions that had a stronger institutional capacity and a

stable health management team, such as Oromia and SNNPR, achieved better results. Both regions rehabilitated and constructed more health posts and health centers, mobilized more nurses and midwives, and achieved better child health outcomes and coverage than the national averages.

- ***The organizational structure at the subnational level determined the pace of strategy implementation.*** The HSD improvement strategy was implemented through a strengthening and expansion of existing formal organizational structures and not the creation of parallel structures. Delegation of authority was provided to existing local government structures at regional and district levels, which were strengthened to execute the primary and corollary strategies. On the one hand, the pace of implementation was slow and the impact was limited because of the bureaucracy and the limited management capacity, which led to the slow adaptation of the new system. On the other hand, this approach is more sustainable and less costly than the creation of parallel implementation structures, such as project implementation units or outsourcing to outside organizations.
- ***The lack of indicators and measurement mechanisms related to the poor made it difficult to measure the impact on the poor.*** Despite the stated objective of targeting the poor, most of the progress in health indicators was made in urban areas and there were no indicators designed to measure progress in reaching the poor. To this effect, HSDP focused on increasing access to preventive and primary health care services to combat communicable diseases in rural areas, where the majority of the population is poor. However, much of the progress made in maternal and child health was in urban areas. Moreover, there was no systematic effort made to collect data on the utilization of services by the poor and the financial protection of the poor from catastrophic health expenditures. *A key lesson is that what is not measured is not usually done.*
- ***The significant delay in completing the construction and/or rehabilitation of health facilities was a major obstacle to demonstrating earlier signs of HSD improvement.*** The procurement and contracting procedures of the construction and rehabilitation work of health facilities experienced significant delays due to the weak implementation capacity of local governments. They also complicated donor procedures, particularly at the beginning of the reforms in the late 1990s. Moreover, there was lack of synchronization between the completion of civil works; the mobilization of staffing and of medical and office equipment; and allocation of the recurrent budget.
- ***Increasing the availability of nurses and midwives in the expanding PHC network was the driving force behind the improved HSD system performance at the primary care level.*** The increase in HSD utilization in the PHC units and centers may be attributable to several factors such as the expansion of physical infrastructure and the increase in the availability of drugs and medical supplies. It was, however, noted that most of these inputs were necessary but insufficient to effect this improvement, which is believed to be associated with the several-fold

increase in the number of health service providers, particularly nurses and midwives.

- ***The lack of qualified health service providers remains the main obstacle in the provision of basic surgical services at the primary and secondary care level.*** Despite the increase in the utilization data of the four district hospitals in this case study, the level of utilization remained low. Also, the utilization of basic surgical services piloted in some new PHC units was extremely low. The key constraint was the lack of specialized doctors. They could not be attracted to work in rural and remote areas. From a political perspective, it may be appealing to make surgical services available as close as possible to the rural population but, in practice, it is extremely challenging to make them operational. In the future, investing in surgical facilities at the PHC level should be carefully considered. On the other hand, establishing basic emergency obstetric care services is critically needed to reduce maternal mortality in the country. The first-level surgical facilities remain the weakest link in the HSD system.
- ***The lack of drugs and medical supplies limited the effectiveness of the HSD system.*** The proliferation of the PHC network and the increase in the number of health service providers physically expanded the HSD network and provided increased access to PHC services. However, this expansion was limited by the lack of drugs, which resulted in underutilization of these services and unmet health needs. *The key lessons for implementing HSD improvement are that the lack of any critical inputs (facilities, health workers, and drugs) will inevitably limit the overall strategy impact, and that the roll-out of such key inputs should be carefully coordinated and properly synchronized.*
- ***The balance between supply-increase interventions and demand-creation activities is critical for improving the synergy and impact of the strategy.*** The experience in Ethiopia demonstrated the relative ease of increasing health system inputs, such as constructing more facilities, procuring equipment and supplies, and training more service providers. It was more challenging to create demand through IEC activities so as to change population behavior and increase the utilization of available services, particularly at the community level and among the poor population. A key factor that contributed to this difficulty was the diversity in culture, ethnicity, religion, and language of the population, which made it difficult to adapt IEC materials to different needs. More recently, the introduction of HEWs from the local communities has shown an early indication of increasing demand for health services.

6 CONCLUSIONS

The Ethiopia case study provides useful lessons drawn from adapting and implementing the decentralization strategy as a means to improve the HSD system and, more broadly via corollary strategies, the health sector.

The strategies were implemented with different degrees of success. Decentralization to the regional level was associated with improved health outcomes and HSD outputs, though these results were flattered by having a very low baseline level. Decentralization to the district (*woreda*) level was probably premature, particularly given the weak management capacity at that level and the lack of consolidation of gains at the regional level.

The expansion of the HSD network and human resources for primary care services was successfully implemented and even exceeded the planned targets, but the availability of drugs seemed problematic. Also, the implementation of IEC activities fell short of creating demand for the available services. Moreover, the management and institutional capacity was strengthened, to varying degrees, particularly at the subnational level, although the HMIS remained fragile. Finally, the health care financing strategy succeeded in mobilizing additional resources from the donor community and increasing per capita health spending, but resulted in an increased health sector dependency on donor financing. The results achieved were significant in child health, but less so in maternal health.

At the subnational level, decentralization was more effective in those regions that increasingly strengthened their management and institutional capacity and where regional governments were able to prioritize their needs and adapt the corollary strategies to local needs. However, decentralization was influenced by the clientelistic center–region power relationship, which was compounded by the weak accountability and lack of community voice.

This case study demonstrated that the results achieved in Oromia and SNNPR were overall better than in the other two regions and exceeded the national averages. This variation may require further in-depth analysis to provide some insight on the factors and dynamics related to the adaptation and implementation of the decentralization strategy together with the corollary strategies in these two regions, which may be useful for scaling up the reforms in the newly-emerging regions and the remaining districts.

Finally, the lessons learned from this case study also may be beneficial for other countries that seek to improve the performance of their HSD systems particularly those related to strategy implementation such as sequencing, building the institutional capacity, focusing human resources development on nurses and midwives, synchronizing the completion of health facility construction works with related inputs to efficiently operate the health facilities, and balancing supply and demand interventions.

REFERENCES

- Department for International Development (DFID). n.d. "Ethiopia Country Assistance Plan 2006–10." Consultation Draft. www.dfid.gov.uk/Pubs/files/cap-ethiopia-draft.pdf.
- Central Statistical Authority (Ethiopia). 1993. "The 1990 National Family and Fertility Survey Report." Addis Ababa, Ethiopia.
- Central Statistical Agency (Ethiopia) and ORC Macro. 2006. "Ethiopia Demographic and Health Survey 2005." Addis Ababa, Ethiopia and Calverton, Maryland, United States.
- Holland, Jeremy. 2007. "Tools for Institutional, Political, and Social Analysis of Policy Reform: A Sourcebook for Development Practitioners," pp. 118-119. World Bank, Washington, DC.
- Kaufmann D., A. Kraay, and M. Mastruzzi. 2009. *Governance Matters VII: Governance Indicators for 1996–2007*, www.worldbank.org/wbi/governance/pubs/govmatters4.html. Washington, DC: World Bank.
- Ministry of Health. 2007. *Health and Health-Related Indicators*. Addis Ababa.
- Organisation for Economic Co-operation and Development (OECD). 2006. *African Economic Outlook 2005/2006*. OECD Publishing/African Development Bank.
- World Bank. 2001. "Decentralization and Governance: Does Decentralization Improve Public Service Delivery?" *PREM Note 55*, June.
- . 2005. *World Development Indicators 2005*. Washington, DC: World Bank.
- . 2006. *Ethiopia at a Glance*. Washington, DC: World Bank.
http://devdata.worldbank.org/AAG/eth_aag.pdf, accessed February 18, 2007.
- . 2007. *Implementation Completion Report of Health Services Development Program*.
- World Bank and Ministry of Health, Ethiopia. 2004. "Ethiopia: A Country Status Report on Health and Poverty." Draft report no. 28963-ET. World Bank, Washington, DC.
- World Health Organization (WHO). 2004. *The World Health Report 2004: Changing History*. Geneva. <http://www.who.int/whr/2004/annex/country/eth/en/index.html>.
- . 2006. *Global TB Control Report 2006*.
http://www.who.int/tb/country/tb_burden/en/index.html, accessed February 19, 2007.

BIBLIOGRAPHY

- Asfaw, A. and J. von Braun. 2004. "Can Community Health Insurance Schemes Shield The Poor Against The Downside Health Effects Of Economic Reforms? The Case of Rural Ethiopia." *Health Policy* 70: 97–108.
- Barnabas, G.A. and A. Zwi. 1997. "Health Policy Development in Wartime: Establishing the Baito Health System in Tigray, Ethiopia." *Health Policy and Planning* 12(1): 38–49.
- Bijlmakers, L. 2003. "Process and Impact of the PRSP in Ethiopia." March.

- Brady W, P DeLargy, and L. Leon. 2000. "Controlling HIV/AIDS in complex emergencies and Post-conflict Situations: follow-up to Security Council Resolution 1308—Joint Agency Post-conflict Assessment for Ethiopia." October 23–29. UNAIDS and UNFPA.
- Centers for Disease Control and Prevention. 2002. *Progress toward Poliomyelitis Eradication—Ethiopia, Somalia, Sudan—January 2001–October 2002*.
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5147a3.htm#fig>, accessed February 18, 2007.
- Central Intelligence Agency. (n.d.). *World Factbook*.
<http://www.cia.gov/cia/publications/factbook/geos/et.html>, accessed December 17, 2004.
- Christian Relief and Development Association. 2004. "The Participation of NGOs/CSOs in the Health Sector Development Program of Ethiopia."
<http://www.crdaethiopia.org/PolicyDocuments/NGOs%20in%20HSDP.pdf>, accessed December 28, 2004.
- Demissie, M., H. Getahun, and B. Lindtjorn. 2003. "Community Tuberculosis Care Through 'TB clubs' in Rural North Ethiopia." *Soc Sci Med* 56: 2009–2018.
- Demissie, M., B. Lindtjorn, and Y. Berhane. 2002. "Patient and Health Service Delay in the Diagnosis of Pulmonary Tuberculosis in Ethiopia." *BMC Public Health*.
<http://www.biomedcentral.com/1471-2458/2/23>, accessed December 17, 2004.
- Economist Intelligence Unit. n.d. "Ethiopia Country Profile 2001–2002."
http://store.eiu.com/index.asp?layout=show_sample&product_id=30000203&country_id=ET, accessed December 15, 2004.
- Finger, R.W. 1998. "Condom Use Increases." *Network* 18(3): 20–23.
- Getahun, H., H. Yirga, and D. Argaw. 2002. "The New Middle Level Health Workers Training in the Amhara Regional State of Ethiopia: Students' Perspective." *BMC Public Health*.
<http://www.biomedcentral.com/1471-2458/2/15>, accessed December 17, 2005.
- Inter-Parliamentary Union. 2004. "Women in National Parliaments." <http://www.ipu.org/wmn-e/classif.htm>, accessed January 3, 2005.
- Kello, A.B. 2000. "Health Care Financing in Ethiopia." Paper presented at the 14th International Conference of Ethiopian Studies. Addis Ababa, November 6–11.
- Leighton, C. 1995. "22 Policy Questions about Health Care Financing in Africa." Report Submitted to USAID. http://www.dec.org/pdf_docs/PNABW870.pdf, accessed January 5, 2005.
- Leulseged, Ageze. 2007. "Mobilizing Resources For Health: Evidence from Ethiopia's Health Care Financing Reform." International Health Division, Abt Associates, Inc. Poster presentation at the 135th APHA annual meeting.
- Mariam, D.H. 2003. "Indigenous Social Insurance as an Alternative Financing Mechanism for Health Care in Ethiopia (the case of *eders*)." *Soc Sci Med* 56: 1719–1726.
- . 2003. "Traditional Insurance Mechanisms and the Choice of Health Care Providers in Ethiopia." UCIAE Edited Volume 5—Africa's Changing Markets for Health and Veterinary Services: The New Institutional Issues. Article 2.
<http://repositories.cdlib.org/uciaspubs/editedvolumes/5/2>, accessed January 5, 2005.
- Matthew Andrews and Larry Schroeder. 2003. *Sectoral Decentralisation and Intergovernmental Arrangements in Africa*. John Wiley & Sons, Ltd. <http://www3.interscience.wiley.com/cgi-bin/fulltext/102529096/PDFSTART>.

- Mid-term Review Mission. 2001. "Ethiopia Health Sector Development Program Mid-term Review Mission (MTR), 7 February to 8 March 2001." <http://www.sti.ch/pdfs/swap165.pdf>, accessed January 5, 2005.
- Ministry of Finance and Economic Development, Ethiopia. 2003. "Ethiopia: Sustainable Development and Poverty Reduction Program (SDPRP)—Annual Progress Report (2003/03)." Addis Ababa: MOFED.
- Ministry of Health, Ethiopia. 1993. "Health Policy of Transitional Government of Ethiopia." http://www.geocities.com/healthinfo_ethiopia/page5.html, accessed December 28, 2004.
- . 1998. "Policy on HIV/AIDS of the Federal Democratic Republic of Ethiopia." http://www.geocities.com/healthinfo_ethiopia/page12.html, accessed December 28, 2004.
- . 2002. "The Policy of Fee Retention and its Implementation in SNNPR: The Experience of Government Hospitals." *Study Report #4*.
- . 2002. *Health Sector Development Programme II: 2002/03–2004/05 (EFY 1995–1997)*.
- . 2003. "NGOs Involvement in the Ethiopian Health Sector: Facts, Challenges, and Suggestions for Collaborative Environment." *Study Report #8*.
- Mwambezi, W.C., and M. Yadeta. 2004. "Monitoring and Evaluation of HIV/AIDS/STD—Ethiopia." http://www.cpc.unc.edu/measure/publications/pdf/sr-01-04-country_report_et.pdf, accessed January 5, 2005.
- Okubaghi, G., and S. Singh. 2002. "Establishing an HIV/AIDS Programme in Developing Countries: The Ethiopian Experience." Editorial Review. *AIDS* 16: 1575–1586.
- Paulos, Chaniea. 2007. "Clientelism and Ethiopia's post-1991 Decentralisation." *The Journal of Modern African Studies*, 45: 355–384.
http://journals.cambridge.org/download.php?file=%2FMOA%2FMOA45_03%2FS0022278X07002662a.pdf&code=1193df5924bfdd6e9f1f376d4cb1ef35
- Peters, D.H., A.E., Elmendorf, K. Kandola, and G. Chellaraj. 1998. "Benchmarks for Health Expenditures, Services and Outcomes in Africa during the 1990s." *Bull WHO* 78(6): 761–769.
- Population Reference Bureau. 2004. "The Wealth Gap in Health: Data on Women and Children in 53 Developing Countries." <http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=11007>, accessed January 3, 2005.
- Rider-Araki, L. 2003. "Rapid Assessment of Single-Practice Models." Pasig City, The Philippines: Philippine Tuberculosis Initiatives for the Private Sector/USAID.
- Roll Back Malaria. 2005. *World Malaria Report 2005*.
<http://www.rollbackmalaria.org/wmr2005/>, accessed February 18, 2007.
- Streefland, P., A.M.R. Chowdhury, and P. Ramos-Jimenez. 1999. "Patterns of Vaccination Acceptance." *Soc Sci Med* 49: 1705–1716.
- UNAIDS. 2006. *AIDS Epidemic Update: Sub-Saharan Africa*.
http://data.unaids.org/pub/EpiReport/2006/04-Sub_Saharan_Africa_2006_EpiUpdate_eng.pdf, accessed February 18, 2007.
- United States Agency for International Development. 2000. "Congressional Presentation FY2000." <http://www.usaid.gov/pubs/cp2000/afr/ethiopia.html>, accessed January 5, 2005.

- . 2002. “Health and Family Planning Overview: Ethiopia. Washington, DC: USAID.” World Bank. 2002. *Country Assistance Strategy for Ethiopia*. <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/ETHIOPIAEXTN/0,,contentMDK:20200613~pagePK:1497618~piPK:217854~theSitePK:295930,00.html>, accessed February 18, 2007.
- . 2004. *Poverty Reduction Credit and Support Grant for Ethiopia*. <http://intranet.worldbank.org/WBSITE/INTRANET/INTCOUNTRIES/INTAFRICA/INTETHIOPIA/0,,menuPK:295844~pagePK:145893~piPK:244437~theSitePK:295830,00.html>, accessed February 18, 2007.
- . 2005. “Ethiopia Desk Review: Improving Health Services and Strengthening Health Systems—A Critical Review of Selected Strategies.” World Bank, Washington, DC.
- . 2006. *Ethiopia Country Brief*. <http://intranet.worldbank.org/WBSITE/INTRANET/INTCOUNTRIES/INTAFRICA/INTETHIOPIA/0,,menuPK:295839~pagePK:145893~piPK:147168~theSitePK:295830,00.html>, accessed February 18, 2007.
- . 2006. “Ethiopia Country Economic Memorandum (CEM) on Growth and Governance.”
- . 2006. *Ethiopia Millennium Development Goals*. <http://devdata.worldbank.org/idg/IDGProfile.asp?CCODE=ETH&CNAME=ETHIOPIA&SelectedCountry=ETH>, accessed February 18, 2007.
- . 2006. *WBI Governance and Anti-Corruption*. <http://www.worldbank.org/wbi/governance/index.html>, accessed February 9, 2007.
- . 2007. “Protection of Basic Services Project.” Project Appraisal Document.
- World Health Organization. 1999. “Health System Profile of Ethiopia.” Draft dated April 27, 1999.
- . 2004. “Towards Achieving MDGs: Priority Health Interventions and HRH Implications in Ethiopia.” Draft. Geneva: World Health Organization.
- . 2004. “Human Resources for Health in Ethiopia: Current Policies, Trends and Key Issues.” Geneva: World Health Organization.
- . 2005. *Health Status: Morbidity*. http://www.who.int/whosis/whostat2006_morbidity.pdf, accessed February 9, 2007.
- . 2005. *Health Status: Mortality*. http://www.who.int/whosis/whostat2006_mortality.pdf, accessed February 9, 2007.
- . 2006. *World Health Organization Core Health Indicators*. http://www3.who.int/whosis/core/core_select_process.cfm?country=afg&indicators=nha&language=en#, accessed February 9, 2007.

ANNEX I: MILLENNIUM DEVELOPMENT GOALS IN ETHIOPIA

ETHIOPIA COUNTRY PROFILE

	1990	1995	2001	2002	2003
1 Eradicate extreme poverty and hunger	<i>2015 target = halve 1990 \$1 a day poverty and malnutrition rates</i>				
Population below \$1 a day (%)	..	31.3	..	..	..
Poverty gap at \$1 a day (%)	..	8.0	..	..	..
Percentage share of income or consumption held by poorest 20%	..	..	..	..	..
Prevalence of child malnutrition (% of children under 5)	..	..	..	..	..
Population below minimum level of dietary energy consumption (%)	..	..	..	46.0	..
2 Achieve universal primary education	<i>2015 target = net enrollment to 100</i>				
Net primary enrollment ratio (% of relevant age group)	23.3	..	46.2	47.4	..
Percentage of cohort reaching grade 5 (%)	18.3	..	58.7	61.5	..
Youth literacy rate (% ages 15–24)	..	..	..	57.4	..
3 Promote gender equality	<i>2005 target = education ratio to 100</i>				
Ratio of girls to boys in primary and secondary education (%)	68.2	..	69.0	69.3	..
Ratio of young literate females to males (% ages 15–24)	..	..	..	82.2	..
Share of women employed in the nonagricultural sector (%)	..	..	..	..	..
Proportion of seats held by women in national parliament (%)	..	..	8.0	8.0	8.0
4 Reduce child mortality	<i>2015 target = reduce 1990 under 5 mortality by two-thirds</i>				
Under 5 mortality rate (per 1,000)	204.0	192.0	..	..	169.0
Infant mortality rate (per 1,000 live births)	131.0	123.0	..	..	112.0
Immunization, measles (% of children under 12 months)	38.0	38.0	52.0	52.0	52.0
5 Improve maternal health	<i>2015 target = reduce 1990 maternal mortality by three-fourths</i>				
Maternal mortality ratio (modeled estimate, per 100,000 live births)	..	..	..	..	..
Births attended by skilled health staff (% of total)	..	..	..	..	..
6 Combat HIV/AIDS, malaria and other diseases	<i>2015 target = halt, and begin to reverse, AIDS, etc.</i>				
Prevalence of HIV, female (% ages 15–24)	..	..	7.8	..	..
Contraceptive prevalence rate (% of women ages 15–49)	4.3	..	..	..	..
Number of children orphaned by HIV/AIDS	..	..	560.0 thousand	..	720.0 thousand
Incidence of tuberculosis (per 100,000 people)	123.6	223.5	324.6	340.3	356.1
Tuberculosis cases detected under DOTS (%)	..	16.2	34.8	35.8	36.3
7 Ensure environmental sustainability	<i>2015 target = various (see notes)</i>				
Forest area (% of total land area)	..	..	..	..	..
Nationally protected areas (% of total land area)	..	..	..	..	16.9
GDP per unit of energy use (PPP \$ per kg oil equivalent)	1.7	1.9	2.5	2.5	..
CO2 emissions (metric tons per capita)	0.1	0.0	..	..	..
Access to an improved water source (% of population)	25.0	..	..	22.0	..
Access to improved sanitation (% of population)	4.0	..	..	6.0	..
Access to secure tenure (% of population)	..	..	..	..	..
8 Develop a Global Partnership for Development	<i>2015 target = various (see notes)</i>				
Youth unemployment rate (% of total labor force ages 15–24)	..	..	..	..	..
Fixed line and mobile telephones (per 1,000 people)	2.6	2.5	4.8	6.0	7.7
Personal computers (per 1,000 people)	..	..	1.1	1.5	2.2
General indicators					
Population	51.2 million	56.5 million	65.8 million	67.2 million	68.6 million

Gross national income (\$)	8.7 billion	6.3 billion	6.9 billion	6.5 billion	6.3 billion
GNI per capita (\$)	170.0	110.0	110.0	100.0	90.0
Adult literacy rate (% of people ages 15 and over)	..	..	..	41.5	..
Total fertility rate (births per woman)	6.9	..	..	5.6	5.6
Life expectancy at birth (years)	45.0	..	..	42.1	42.0
Aid (% of GNI)	11.9	15.4	17.3	21.7	22.8
External debt (% of GNI)	101.0	180.2	88.7	108.2	108.4
Investment (% of GDP)	12.0	16.4	17.8	20.5	20.5
Trade (% of GDP)	20.2	35.7	44.8	50.4	53.7

Note: In some cases the data are for earlier or later years than those stated.

Goal 1 targets: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day. Halve, between 1990 and 2015, the proportion of people who suffer from hunger.

Goal 2 target: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

Goal 3 target: Eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education no later than 2015.

Goal 4 target: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate.

Goal 5 target: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio.

Goal 6 targets: Have halted by 2015, and begun to reverse, the spread of HIV/AIDS. Have halted by 2015, and begun to reverse, the incidence of malaria and other major diseases.

Goal 7 targets: Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources. Halve, by 2015, the proportion of people without sustainable access to safe drinking water. By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

Goal 8 targets: Develop further an open, rule-based, predictable, nondiscriminatory trading and financial system. Address the Special Needs of the Least Developed Countries. Address the Special Needs of landlocked countries and small island developing states. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term. In cooperation with developing countries, develop and implement strategies for decent and productive work for youth. In cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries. In cooperation with the private sector, make available the benefits of new technologies, especially information and communications.

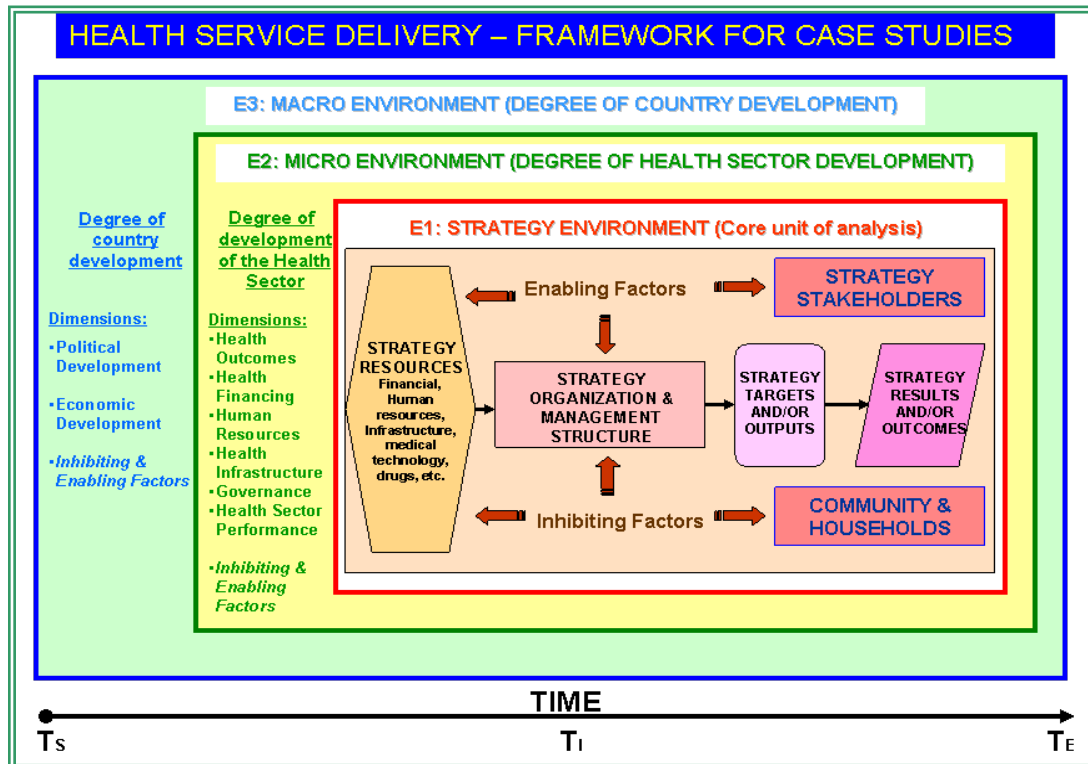
Source: *World Development Indicators* database, April 2004.

ANNEX II: GOVERNANCE INDICATORS FOR ETHIOPIA

Statistical Table: Six Governance Indicators for Ethiopia					
Governance Indicator	Year	Percentile Rank (0-100)	Estimate (-2.5 to + 2.5)	Standard Error	Number of surveys/polls
Voice and Accountability	2005	19.3	-1.1	0.12	10
	2004	20.3	-1.05	0.15	9
	2003	18.8	-1.08	0.16	8
	2002	14.5	-1.17	0.22	6
	2000	17.4	-1.06	0.26	5
Political Stability/No Violence	2005	8	-1.48	0.25	7
	2004	12.7	-1.21	0.23	8
	2003	13.2	-1.24	0.26	7
	2002	14.6	-1.32	0.29	5
	2000	10.8	-1.27	0.42	4
Government Effectiveness	2005	15.8	-0.97	0.16	9
	2004	18.7	-0.87	0.17	10
	2003	19.6	-0.79	0.18	9
	2002	20.1	-0.79	0.22	7
	2000	37.3	-0.46	0.28	5
Regulatory Quality	2005	13.9	-1.09	0.17	9
	2004	15.8	-1.05	0.18	9
	2003	14.8	-1.09	0.18	8
	2002	15.3	-1.02	0.22	6
	2000	22.2	-0.69	0.36	5
Rule of Law	2005	28	-0.77	0.15	12
	2004	24	-0.8	0.15	12
	2003	27.9	-0.73	0.16	11
	2002	41.3	-0.41	0.21	9
	2000	42.3	-0.47	0.25	8
Control of Corruption	2005	25.1	-0.79	0.17	9
	2004	21.6	-0.84	0.18	8
	2003	26	-0.78	0.18	8
	2002	43.6	-0.37	0.24	6
	2000	56.9	-0.01	0.3	5

Source: Kaufmann D., A. Kraay, and M. Mastruzzi, 2006. *Governance Matters V: Governance Indicators for 1996–2005*.

ANNEX III: ANALYTICAL FRAMEWORK FOR COUNTRY CASE STUDIES



Source: Authors.

This analytical framework provides the researchers with the components and elements that need to be examined in the case study. The model covers three different environments. First, is the strategy environment (E1), which constitutes the *core unit of analysis* of the research, while the second and third constitute the *context* that influences the adoption and implementation of the strategy, namely the micro environment or the health sector level (E2) and the macro environment or country level (E3).

STRATEGY ENVIRONMENT (E1)

The analysis of this environment will test three hypotheses: the adopted strategy, the strategy support, and the adaptation of the strategy to the local environment. The analysis will cover the following key components:

Strategy. The definition and description of the strategy or multiple strategies to improve health services is key in conducting the research. The particular health services expected to be affected by the Strategy should be identified and the boundaries should be made explicit in terms of what is and is not included. Equally important, is the description of any other strategies concurrent or sequential to the particular strategy under investigation.

The Strategy Resources: This is a description and analysis of the adequacy of the inputs and resources mobilized to implement the Strategy including financing, human resources, infrastructure and capital investments, medical technology, medical supplies and drugs. The

analysis will also include the external support provided to implement Strategy including technical assistance.

The Organization and Management Design: This is a description of the Organization of the Strategy resources and the Management structure responsible for implementing the Strategy. The researchers will also analyze the effectiveness of this structure as well as the work processes. The analysis will encompass the degree of management authority over resources including decision making, resource allocation, imposing sanctions, and providing rewards.

The Stakeholders: This is an analysis of the stakeholders “directly” involved in the adoption and implementation of the Strategy including program managers, service providers, local leaders, and other relevant stakeholders. For example, parliamentarians may be included if the Strategy includes legislative changes.

The Community/Household: The characteristics of the community and households affected by the Strategy will be analyzed both as stakeholders and beneficiaries. This will include community leaders and different population groups living in the geographic areas affected by the Strategy.

The Targets and Outputs: This provides a description of the targets and outputs to be generated by the Strategy. Moreover, the researchers will analyze the degree of effectiveness of the Strategy, which is determined by the level of achievement of the intended outputs.

The Results and Outcomes: Similarly, the researchers will provide a description of the results and outcomes to be achieved by the Strategy as well as an analysis of the degree of effectiveness of the Strategy, which is determined by the level of achievement of the intended outcomes. Particular attention will be paid to the poor beneficiaries.

The Inhibiting and Enabling Factors: The analysis should cover in detail the inhibiting and enabling factors and conditions that affected the adoption and implementation of the Strategy at the level of Resources, Organization and Management Structure as well as the stakeholders and community/household levels.

MICRO ENVIRONMENT OR HEALTH SECTOR LEVEL (E2)

The analysis of this environment will examine the context in which the Strategy was implemented; more specifically, the degree of development of the health sector. It will also test the hypothesis related to the conditions affecting the Strategy. The researchers will investigate the following key components:

Health Outcomes: An analysis of the key health outcomes such as child mortality compared to countries with similar income as well as the degree of socioeconomic, regional, and gender disparities.

Health Financing: An analysis of the sources and distribution of health financing including general and earmarked taxes and social scheme contributions as well as levels of public, private and out-of-pocket expenditures. The analysis will also include the key cost drivers (e.g. capital investments, drugs).

Human Resources: The type, level, and distribution of the different health sector workers in the public and private sectors.

Health Infrastructure: The type, level and distribution of the different types of health facilities in the public and private sectors.

Governance: The characteristics of the management structure of the health sector; the degree of its centralization/decentralization including deconcentration or devolution. The analysis will also include the management authority over resources including decision making, resource allocation, imposing sanctions, and providing rewards.

Health Sector Performance: The researchers will draw upon previous reports to assess health sector performance including measures of access, efficiency, equity, and quality.

The Inhibiting and Enabling Factors: The analysis should identify the inhibiting and enabling factors and conditions in the health sector that may have affected the adoption and implementation of the Strategy.

MACRO ENVIRONMENT OR COUNTRY LEVEL (E3)

The analysis of this macro environment will examine the broader national context in which the Strategy was implemented, which is reflected by the degree of the country's development. Similarly, it will also test the hypothesis related to the conditions affecting the Strategy. The researchers will investigate the following two key components:

Political development: The researchers will analyze the elements of “**governance**” as a reflection of the country level of political development. These include the degree of *statehood*, which entails the political stability, rule of law, and regulatory quality; and the degree of *institutionalization*, which entails government effectiveness, voice and accountability, and corruption control.

Economic development: This analysis will include indicators that reflect the degree of economic development and macroeconomic stability of the country. Such indicators may include average GDP growth rate, per capita GDP, percent government revenues to GDP, etc. A list of key relevant indicators will be detailed later.

The Inhibiting and Enabling Factors: The analysis should identify the inhibiting and enabling factors and conditions at the country level that may have affected the adoption and implementation of the Strategy.



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