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**Human Development in Uganda: Meeting Challenges
and Finding Solutions**

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Human Development Cluster
Uganda Country Team
World Bank**

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Abbreviations and Acronyms

ANC	Antenatal clinics
CCT	Conditional cash transfer
DPT3	Three doses of diphtheria-pertussis-tetanus
ESSP	Education Sector Strategic Plan
GDP	Gross domestic product
HIV/AIDS	Human immunodeficiency virus / acquired immunodeficiency syndrome
HSSP I	Health Sector Strategic Plan I
HSSP II	Health Sector Strategic Plan II
MDGs	Millennium Development Goals
MoES	Ministry of Education and Sports
MoFPED	Ministry of Finance, Planning, and Economic Development
MoH	Ministry of Health
MoWLE	Ministry of Water, Land, and Environment
MTEF	Medium Term Expenditure Framework
NMS	National Medical Stores
NUSAF	Northern Uganda Social Action Fund
PAF	Poverty Action Fund
PEAP	Poverty Eradication Action Plan
PTA	Parents-Teachers Association
SFG	School Facilities Grant

SMC School management committees

SWAp Sector wide approach

UBoS Uganda Bureau of Statistics

UDHS Uganda Demographic and Health Survey

UNDP United Nations Development Program

UNHS Uganda National Household Survey

U Shs Uganda Shillings

Acknowledgements

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Overview

A nation's most valuable resource is its people, its human capital. Investing in human development to maintain an adequate population of educated, skilled, healthy, and productive workforce is crucial for sustained growth and poverty reduction. Human development is considered both an important means for promoting economic development, as an end in itself and as a means of sustained poverty reduction.

It is not surprising therefore that the Millennium Development Goals (MDGs) set ambitious targets for economic and social development, earmarking eight broad targets. Uganda appears to be on track to meet four of these goals by 2015: halving the poverty rate, eliminating gender disparities in primary school, halving the number of people without safe drinking water, and reversing the spread of AIDS. The country's performance is off track, however, in achieving substantial reduction in infant, child and maternal mortality, halving the number of people without access to sanitation facilities, eliminating gender disparities in secondary school, and achieving 100 percent primary school enrolment.

The blueprint for Uganda's development and fulfillment of the MDGs is the Poverty Eradication Action Plan (PEAP). In its 2004 revision, the PEAP added human development as its fifth pillar, identifying targets in health, education, water and sanitation, nutrition, inequality, and social protection. It also commits the country to combating HIV/AIDS, addressing gender equality, and increasing access to family planning services.

This report seeks to identify challenges to improvement of human development outcomes, and to suggest ways of dealing with these challenges in order to improve service delivery, and therefore progress in human development indicators. It examines how well Uganda has moved toward achieving its PEAP targets for human development, focusing on three sectors: education, health care, and water and sanitation.

The report argues that the key to improvement in social services—whether it be education, health care, or water and sanitation—is a *new more efficient service delivery framework*, a framework with improved links among the policymakers who shape broad goals, the providers of the services, and the customers who are the recipients.

Human Development in Uganda: A Report Card

Poverty is clearly correlated with low levels of human development. The poor have larger households and lower consumption. They are less likely to have a clean source of water or a toilet. And they spend more time fetching water. The specific links among inadequate sanitation, health, and poverty are cruel and direct: those who do not have access to sanitation are almost invariably poor; those who suffer the health consequences of poor sanitation and hygiene are usually poor. They are least able to cope with the costs of illness. They spend about 75 percent less on health and generally have less education.

Uganda has made some progress in human development. But that progress has been uneven. The country's progress toward meeting the Millennium Development Goals is in many ways typical of a country at its level of development. It has improved health and education and AIDS services. But it still lags behind in infant mortality, access to water and sanitation, and secondary school enrolment, and quality of services remains a major challenge.

Between 1993 and 2000 Uganda made progress in reducing poverty. The overall consumption poverty head count fell from 56 percent of the population in 1993 to 34 percent in 2000. Since 2000, however, that pace has slowed. As in many countries, poverty in Uganda's rural areas is three times that in urban areas, although that disparity has declined somewhat since 2000.

Despite average economic growth of 2.1 percent per capita between 2000 and 2006, there was limited progress in translating this into higher incomes for the poor. Per capita GDP rose 13 percent, but the poverty rate declined by only 8 percent. It is not clear why growth has had such a small impact on poverty.

Uganda's population is continuing to grow rapidly, making improvements in human development more difficult. Total fertility rate is estimated at 7.1 births per woman in rural areas and 4.4 in urban areas. The population growth rate between 1991 and 2002 was 3.2 percent a year, producing a population increase of 7.5 million people in 11 years.

Aiming for universal primary education, Uganda has made significant progress in recent years in accelerating primary school enrolments. Net primary enrolments rose from 62 percent in 1992 to 87 percent in 2001 but then declined to 84 percent in 2006. Despite high primary enrolments, almost one million children are out of school and many who enroll drop out after five or six years and do not complete the full seven-year cycle. In addition, geographical inequalities and quality remain major challenges.

In general, health indicators have improved, but access remains a problem, with less access for the poor and for people from rural areas. Broadly speaking, most health indicators worsened while others stagnated between 1995–2001 but registered gains in 2001–2006. Evidence suggests that malnutrition remains a challenge.

The PEAP has a target of bringing sustainable, safe water and sanitation within easy reach for 77 percent of the rural population and 100 percent of the urban population by 2015. According to the Ministry of Water, Land, and Environment, nearly 63 percent of the rural population had access to an improved water source within 1.5 kilometers in 2006. The coverage in large towns is estimated to be 71 percent by 2007. Lack of progress partly reflects fast population growth: providing improved water has not kept pace. Government and nongovernmental organizations have invested massively in infrastructure to bring improved water sources closer to households, but maintaining the infrastructure remains a challenge.

Spending on Human Development

Uganda has spent a lot on human development, but the results have not been commensurate with the expenditures. Although expenditures have increased in absolute terms, they are a declining share of the total budget, a special concern given the country's rapid population growth. Staffing in both health and education, for example, remains below PEAP targets. Neither sector can afford to offer the incentives to attract qualified teachers and medical personnel to poor areas. Allocations within social sectors are also skewed—most spending is on wages, leaving little for the consumables needed to deliver services more effectively.

Overall, this report demonstrates that some progress has been realized in the areas of education, health, water and sanitation: Most children access primary education – and soon to be made compulsory; more are getting opportunities to continue to secondary education and learning outcome are beginning to improve. For health, more children are immunized, fewer children are likely to die and maternal mortality rate is improving although not fast. Infant and child mortality are half the 1990 level; more people access clean water and sanitation. The report also documents several reforms in the three sectors, ranging from increasing resources, providing free services, decentralization and citizen participation.

However, gaps exist in service delivery: While human development outcomes have improved, many children remain out of school, are in poor health, and die from easily preventable diseases. In education, arguably the most successful effort of enrolling children into school, at least 1 million children are not enrolled in school, and many children who are enrolled do not attend regularly or are not learning, for a variety of reasons. Uganda's indicators still lag those observed in many other developing countries, and progress in many areas has not been as fast. In both health and education the quality of inputs (staff, books, classrooms, drugs) is inadequate; in all areas, including water and sanitation, inequality of access between rich and poor as well as geographical location remain.

Improving Service Delivery

The key to improving service delivery is increasing accountability through strengthening the links among clients, providers, and policymakers, as detailed in the Service Delivery Triangle in the World Bank's *World Development Report 2004: Making Services Work for Poor People* (figure 1). Decentralization was introduced among others to improve accountability and service delivery, and Uganda has made some progress in decentralization of service delivery in the social sectors.

The key message in this report is that good progress has been made in improving human development outcomes in Uganda, but more needs to be done if faster progress is to be made. Past and ongoing reforms in service delivery have focused so much on inputs and

little on motivating actors involved in service delivery and enhancing public accountability. These deficiencies threaten progress in service delivery. The report recommends paying attention to: (i) incentives to promote better performance and responsiveness from service providers; (ii) improving monitoring and evaluation; (iii) promoting greater citizen voice in service delivery; (iv) establishing mechanisms for improved accountability at the facility level; (v) sub-contracting some services; (vi) paying attention to equity issues through various mechanisms, including through reducing opportunity costs; (vii) increased use of information, education and communication (IEC); (iv) meeting contraceptive demand.

Improving expenditures in service delivery would require more innovative approaches, to take into consideration multiple challenges and specific local circumstances in different areas. For example, the education problems in Kalangala (geographically isolated, sparsely populated and where the opportunity cost of schooling can be significantly high) would not be solved using the same strategies as those for Kampala. In addition, it should be understood that increasing enrolment in such areas like Kalangala would require a higher unit cost than other areas (due to the specific nature of challenges) and this should be factored into resource allocation. Many countries world wide are now depending more on incentives to service providers to improve service delivery and many have also put in place incentives to attract and deploy qualified personnel to schools and health units, particularly in hard to reach areas. Other options would include non public provision, greater autonomy and improved accountability.

The report is organized in five chapters: Chapter one describes the importance of human development, how Uganda compares with other countries and highlights population as a concern. Chapter two describes the framework for understanding service delivery outcomes. Chapter three describes progress in human development and key challenges. Chapter four focuses on financing and expenditure issues in service delivery. And, chapter five discusses how to address challenges in service delivery, including highlighting examples about promising approaches or experiences from other countries. It stresses the need to empower citizens by providing them with more information.

Chapter 1

Introduction

Uganda's Development Framework and Human Development

The MDGs and the PEAP constitute, respectively, Uganda's global and national development frameworks. A detailed outline of the MDGs is not necessary here given that a lot is already known about these global development goals. What deserves space here is the PEAP. The PEAP has been Uganda's development framework since 1997 when the first version was prepared. The PEAP was subsequently revised in 2000 and in 2004 on account of emerging development challenges. The 2004 version of the PEAP has five pillars. First is economic management (including macroeconomic stability, fiscal consolidation, export promotion and private sector investment). Second is boosting production, competitiveness and incomes (via agricultural modernization, preservation of natural resources, and infrastructural development). Third is conflict resolution/disaster management. Fourth is governance (human rights, democratisation, accountability and elimination of corruption). The fifth is human development pillar, (MoFPED, 2004). Implementation of the PEAP was through Sector Wide Approaches (SWAs).

The major sectors in the HD pillar are education, health, and water and sanitation. The sectors developed plans that focussed mainly on increased access by the poor to publicly provided social services. Furthermore, decentralization was implemented with a view to taking publicly provided social services nearer to the rural poor. The thinking was that decentralisation would be an effective tool for improving access by the poor to publicly provided social services.

Human development is important for economic development. Human development is considered both an important means for promoting economic development as an end in itself, and as a means of reducing poverty. It is critical for participation in long-term growth. Previous studies on Uganda have empirically demonstrated the economic and social benefits of education. Education is a powerful instrument in enhancing growth in household incomes (Deininger & Okidi, 2003); enhancing private and social returns (Appleton, 1999; Okurut *et al.* 2006); distributing the gains from growth (Ssewanyana *et al.* 2004a); reducing infant mortality (Ssewanyana & Younger, 2007); improving child nutrition (Ssewanyana, 2002; Bahigwa & Younger, 2006) and improving an individual's health seeking behavior (Ssewanyana *et al.* 2004b), among others. It is therefore not surprising that the Uganda Poverty Eradication Action Plan (PEAP) makes human development one of its key priorities, and states that "it is both a necessary condition for development and one of the central objectives of development".¹

¹ PEAP, p. xxii

Uganda's ranking on HD puts it among the poorest countries. The definition of human development is not precise. Normally, we think in terms of education, health, nutrition, and access to housing and water, but the concept can include social development, gender and participation as essential elements. The UNDP's Human Development Index is based on three factors: per capita income, life expectancy and an education index made up of adult literacy and gross enrolments. According to this index, Uganda ranks 145 out of 177 countries (with 177 being the lowest). It ranks close to such countries as Cameroon and Swaziland, but substantially ahead of Kenya (152) and Tanzania (162). By contrast, its rank on Gross National Income (GNI, ppp converted) per capita is 152 in the world, suggesting that it is moderately advanced in its human development considering its level of economic development. Even so, in human development, as in economic development, Uganda's rank puts it among the world's poorest countries, in the lower 20 percent in terms of both per capita income and human development.

Poverty correlates strongly with low levels of human development (table 1). The poor have larger households (6 per household, compared with 5 for the non-poor), and have lower consumption (about 74 percent less than the non-poor). They are less likely to have a clean source of water or a toilet, and they spend more time fetching water (79 minutes compared with 55). They spend about 75 percent less on health and generally have less education (4.1 years for the household head, 2.1 for the spouse compared to 6.5 and 3.3 for their non poor counterparts respectively).

Table 1 Human Development and the Poor, 2005/06

Characteristic	Poor	Non-poor
Household size (people)	6	5
Percent rural	89	73
Consumption per adult equivalent (US\$)	15,069	58,134
Time to access water (minutes)	79	55
Access to a clean water source (percent)	70	73
Access to a toilet (percent)	61	82
Distance to a health facility (kilometers)	3.24	4.42
Health cost (US\$)	2,394	9,510
Education (years)	1.5	2.8
Education of household head (years)	4.1	6.5
Education of spouse (years)	2.1	3.3
Days ill	3.5	4.0
Days without work	1.6	2.0

Source: Based on data from UNHS 2005/06.

Between 1993 and 2000 Uganda made remarkable strides in reducing poverty. The overall consumption-poverty head count fell from 56 percent of the population in 1993 to

34 percent in 2000. The proportion of Ugandans living below the poverty line was 56.4% in 1992/93, translating into 9.8 million poor people. The poverty rate rose to 38 percent in 2003, and then declined to 31 percent in 2006, indicating a significant reduction in poverty. Poverty in Uganda's rural areas is three times that in urban areas, although that disparity has declined somewhat since 2000. The overall poverty gap—how far the average poor household falls below the poverty line, expressed as a percentage of the poverty line—has also declined slightly since 2000 (from 10 percent to 9 percent).

Table 2. Poverty in Urban and Rural Areas of Uganda (percent of population)

	<u>1993</u>	<u>2000</u>	<u>2003</u>	<u>2006</u>
Poverty, total	56	34	38	31
Urban	28	10	12	14
Rural	60	37	42	34
Poverty gap	20	10	11	9
Urban	22	2	3	4
Rural	8	11	13	10

Source: Based on data from UBoS and UNHS 2005/06 *Report on Socio-Economic Module*, Dec. 2006,

Economic growth not translated into lower poverty. Despite average economic growth of 2.1 percent per capita from 2000 to 2006, there was only limited progress in translating growth into higher incomes for the poor.² Per capita GDP rose 13 percent, but the poverty rate declined by only 8 percent, a rather low poverty elasticity of only -0.6 ; many African countries have elasticities of -1.0 or greater (table 3). It is not clear why economic growth has had so little impact on poverty, although it might be related to the war and civil unrest in the north.

Table 3. Poverty Elasticities in African Countries

<u>Country</u>	<u>Period</u>	<u>Elasticity</u>
Benin	1995–99	1.1
Burkina Faso	1988–2003	-1.6
Cameroon	1996–2001	-1.9
Ethiopia	1996–99	-2.9
Uganda	2000–06	-0.6
Zambia	1998–2004	-0.5

Note: Poverty elasticity is the percentage change in the poverty rate divided by the percentage change in real per capita gross domestic product for a given period. Elasticities are normally negative, as growth usually reduces poverty.

Source: [provide].

Compared to other countries, where does Uganda stand in terms of key human development indicators? Figures 1-4 show data for secondary education, water supply, child mortality and sanitation services graphed against the log of per capita GNI. In this way, Uganda's performance can be compared with other countries at similar levels of income. On this basis, Uganda scores fairly well on sanitation coverage, just equal to its expected value (43 percent coverage). But on the three other indicators, it underperforms for a country with its per capita income. On water its performance, 50 percent coverage

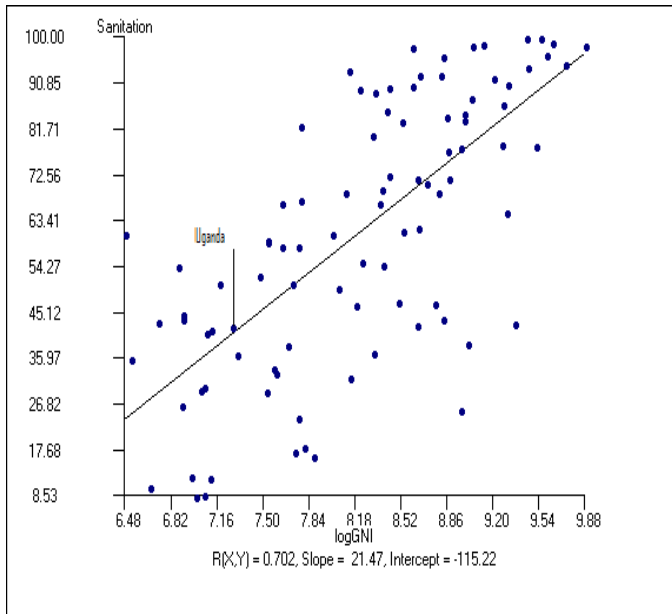
² Calculations from *World Development Indicators* database and 2006 estimates from House Hold Survey, 2006.

in 2004, was below the expected 64 percent.³ And on child mortality Uganda should have a rate of about 127 deaths per 1,000 live births, but the actual rate is 136. The most serious shortfall is on secondary education: gross enrolment, at 19 percent, is well below the expected 39 percent.⁴

³ These data are from World Bank *World Development Indicators*. The census figure for 2002 in Uganda is 61 percent. To ensure comparability across countries, the original *World Development Indicators* data are retained.

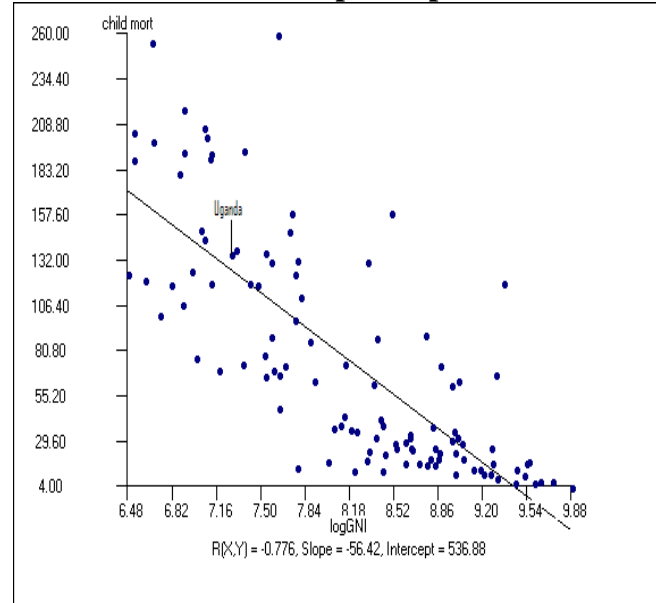
⁴ The 19 percent figure refers to 2004. *World Development Indicators* estimates for 2005 show a gross enrolment of 16 percent.

Figure 1. Sanitation and Per Capita Gross National Income



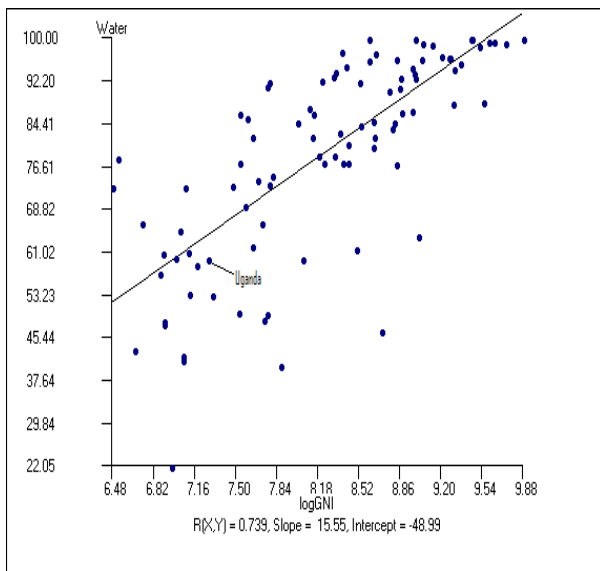
Source: Based on data from World Bank, *World Development Indicators 2004* and Per capita gross national income (PPP) data for 2005 (as of June 2007).

Figure 3. Child Mortality and Per Capita Gross National Income per Capita



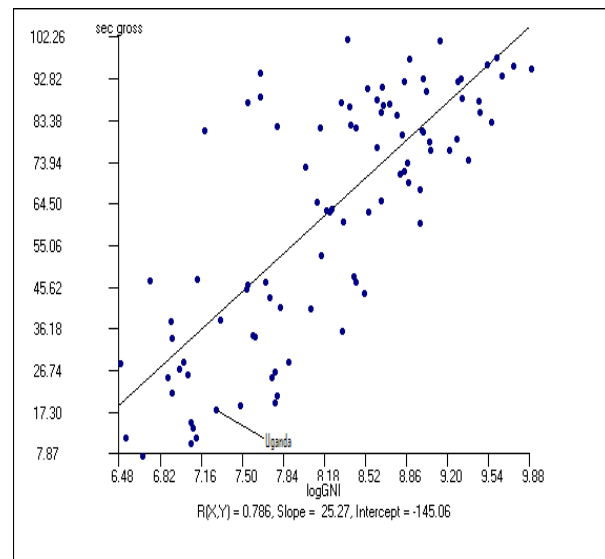
Source: Based on data from World Bank, *World Development Indicators 2004* and Per capita gross national income per capita data for 2005 (as of June 2007).

Figure 2. Water Access and Per Capita Gross National Income



Source: Based on data from World Bank, *World Development Indicators 2004*. Per capita gross national income (PPP) data for 2005 (as of June 2007).

Figure 4. Secondary School Enrolment and Per Capita Gross National Income



Source: Based on data from World Bank, *World Development Indicators 2004* and Per capita gross national income (PPP) data for 2005 (as of June 2007).

Progress towards meeting the Millennium Development Goals.

The Millennium Development Goals set ambitious targets for reducing poverty and improving access to health, education, and water and sanitation, as well as reducing gender disparities. Of the eight goals described in table A4, Uganda seems to be on the path to meet only four of them by 2015: halving the poverty rate, eliminating gender disparities in primary school, halving the number without safe drinking water, and reversing the spread of AIDS. The areas where performance is lagging include substantial reductions in infant, child, and maternal mortality; eliminating gender disparities in secondary school; and achieving 100 percent primary school enrolments.

Table 4 Progress in Meeting the Millennium Development Goals

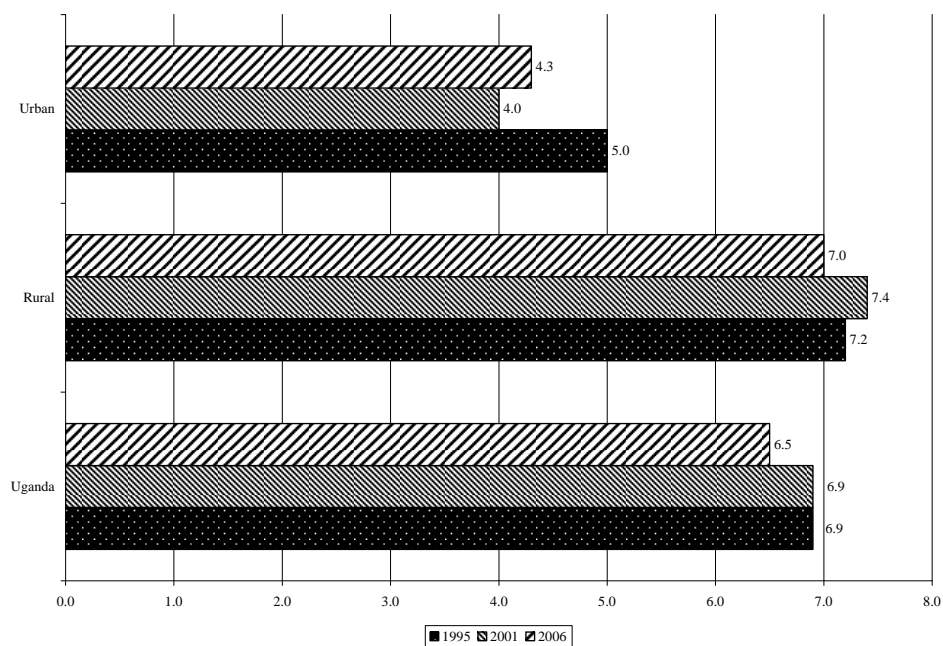
Goal	Indicator	About 1992	About 2000	Present	2015 goal	2015 likely	Status
Halve # living in poverty	% poor	56	34	31 (2005/06)	28	20	Likely
Achieve 100% primary enrolment	primary enrolment % female in	62	84	84 (2005/06)	100	95	Unlikely
Eliminate gender disparity in school enrolments	primary school	95	99	96 (2005/06)	100	100	Likely
Reduce infant mortality by 2/3rds	Infant mortality per 10,000 births	92(1989)	88	88 (2000/01)	31	55	Unlikely
Reduce under-5 mortality by 2/3rds	Child mortality per 10,000	167(1989)	152	152 (2000/01)	56	110	Very Unlikely
Reduce Maternal Mortality by 3/4ths	Maternal mortality per 100,000 births	523 (1989)	505	505 (2000/01)	131	375	Very Unlikely
Begin to reverse the spread of HIV/AIDS	HIV/AIDS prevalence rate	15%	5%	7% (2006?)			already accomplished
Halve the proportion of people without access to safe drinking water	Percent with access to clean water	25(1991)	57	68 (2005/06)	62.5	100	Already achieved

Sources: 1992 and 2000 from "UNDP, The MGDs: Progress Report for Uganda", 2003 and Uganda "Statistical Abstract 2006". 2005/06 from National Household Survey. HIV/AIDS data for 1991 and 2001 from USAID "What Happened in Uganda", 2002

Population Growth—A Concern

Before looking at the three areas of development on which this report focuses—education, health, and water and sanitation—it is important to consider the impact that population growth has on Uganda’s capacity to advance human development. The country’s population continues to grow rapidly, making any acceleration in human development more difficult. Total fertility rates are an estimated 7.1 births per woman in rural areas and 4.4 in urban areas, with a national average of 6.7 (Uganda is about 83 percent rural).⁵ The population growth rate between 1991 and 2002 was 3.2 percent a year, producing a population increase of 7.5 million people in 11 years. The constancy in crude birth and death rates in Uganda over the past 40 years is surprising. Crude birth rates have stagnated at about 50 per 1,000 people, while crude death rates have varied between 17 and 20, rising slightly in the 1990s before falling again to the 1985 level. Even countries with low per capita incomes usually demonstrate early declines in death rates as a result of better sanitation and health practices followed, after a lag, by a decline in birth rates. This is consistent with the demographic transition theory, but largely attributed to the gains in the health frontier.

Trends in Total Fertility Rate among Women 15-49 Years



Source: Macro/UBoS, several reports

⁵ UDHS Preliminary Report 2006, table 5.

This high population growth rate has serious consequences on women's and children's health and welfare. High fertility is associated with closely spaced births and is directly linked with neonatal, infant, child and maternal health and mortality. Women's status in particular their education is associated with lower fertility attributable to better knowledge and use of contraception and higher age at marriage. Evidence, including from Uganda indicates that maternal education has a positive and impact on child survival, nutrition, and schooling.

Chapter 2

A Framework for Understanding Service Delivery Outcomes

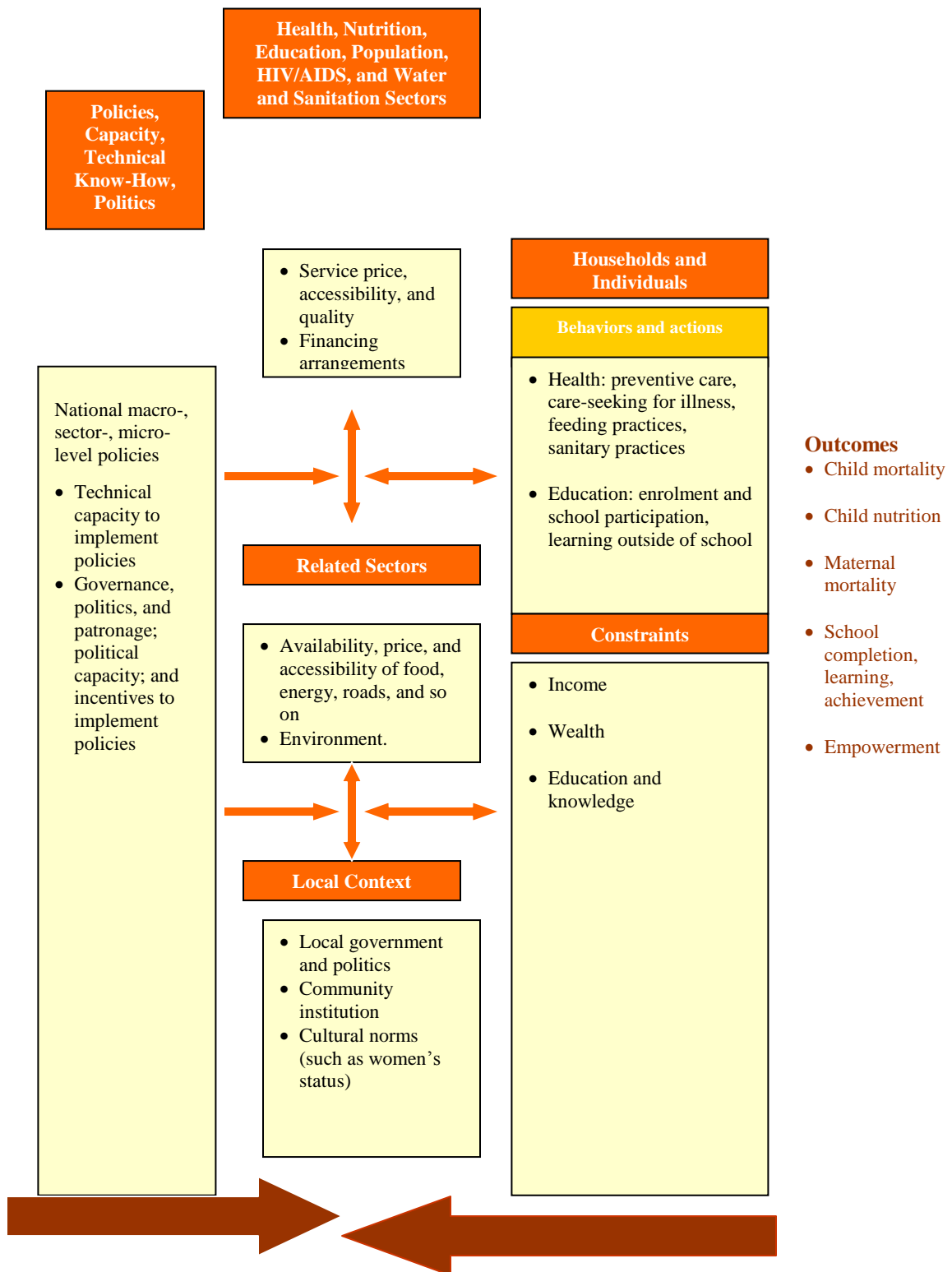
Interaction between demand and supply factors and households. In the past, analysis of outcomes focused on interactions between households and individual variables (behavior, actions, income) service price, availability, quality and financing arrangements within sectors. This approach looks at both the demand and supply side to assess determinants of human development outcomes using selected human development inputs, processes, outputs, and outcomes (Figure 5). This framework reveals how sectors interact to produce human development outcomes. Health and education outcomes, for instance, are determined by more than the availability and quality of health care and schooling. Better nutrition helps children learn. For maximum benefits, safe water supply has to be accompanied by good sanitation and hygiene practices. This framework also looked at the demand and supply side. This focus promoted technical fixes and larger budgets, both of which, while important, were found insufficient.

Demand for services

Individuals and households. Benefits and costs determine how much an individual or household invests in education or health. What are the benefits? Higher levels of education and health are associated with higher productivity—and higher earnings. Investing in human capital is a way to get those returns. There are direct costs: user fees, transport costs, textbook fees, and drug expenses. Richer families can cope better with these costs, poorer families less so, which produces a direct association between income and outcomes.

Links between sectors at individual and household levels. Improving the health and nutritional status of students positively affects school enrolment and attendance. Parents' education has intergenerational effects on the health, nutritional status, and schooling of their children. Adult female education is one of the most robust correlates of child mortality in cross-national studies, even controlling for national income. Good sanitation and hygiene brings substantial economic returns and reduces costs in other sectors - most obvious cost reduction is in the curative health sector, both for the government and the individual households. The other major impact on government spending is the increased effectiveness of education for children who are healthy through increased attendance, particularly for girls.

Figure 5. Determinants of Human Development Outcomes within and Outside Sectors



Source: World Bank 2004.

Supply of services

Local government and communities. Decentralization can be a powerful tool for bringing decision making closer to those affected by it. It can strengthen the links and accountability between policymakers and citizens, with local governments potentially more accountable to local demands. It can also strengthen links between policymakers and providers, with local governments more able to monitor providers.

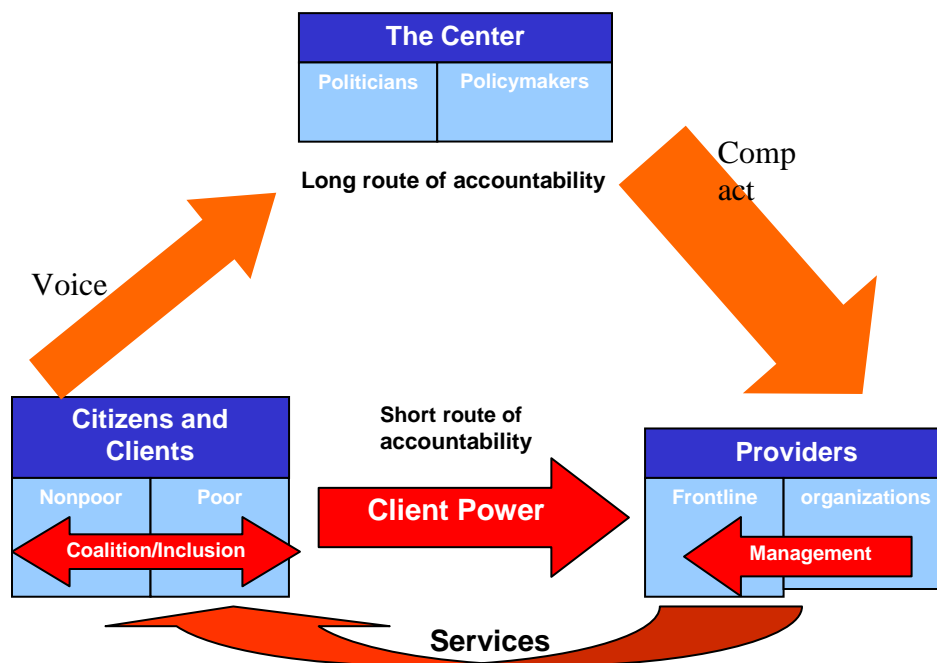
Based on this earlier framework, most of the right policies are in place to improve service delivery, but progress in human development indicators remains slow. The key argument in this report is that improvement in service delivery and indicators will require (1) giving citizens a voice to contribute to policy formulation, (2) reforming processes in service delivery, and (3) motivating service providers. Put another way, inputs (including funding) alone cannot improve service delivery. Alone, inputs fail to motivate service providers to do their best because of the weak link between rewards and achievements, and it fails to equip citizens with mechanisms to monitor service delivery or to give them an option of choosing a provider or mechanism or exerting influence on policies for service delivery. Reforms and policies that only focus on inputs fail to make good progress.

Accountability Framework

Broadening the approach. This report adopts an analytical framework which broadens the approach. This framework is used in discussing the chapter on the missing link.

This framework involves policymakers, service providers, and citizens in the service delivery process (figure 6). Policymakers provide rules of the game for service delivery and incentives. Service providers (teachers, doctors, nurses, water officers and so forth) provide services to citizens (patients, students, parents and so forth) who may have (or may not have) a choice and may not be in position to monitor performance. Finally, citizens may or may not be able to influence policy makers with respect to objectives of service delivery and associated resource allocation. These relationships are complex and dynamic, but there is extensive information of how they can be improved in order to achieve better outcomes:

Figure 6. Accountability framework for Providing Services (Service Delivery Triangle)



Source: Adopted from World Development Report 2004

Route to accountability. The framework identifies a long route and a short route of accountability. In the long route, citizens use political institutions to hold politicians and policy makers accountable, and policy makers enter into agreements with providers to deliver services to citizens. Citizens delegate policy making and allocation of resources across competing needs to politicians and policy makers, who use providers to implement these policies. Along the short route, the influence of citizens/clients on providers is more direct. Clients/citizens can switch providers, they can participate in decision making, and can use better information to monitor the actions of providers and enforce compliance. All these relationships are important, and any weak link in the chain can lead to service delivery failure. In an ideal world, better services would result if politicians and policy makers respond to citizen/client demands by establishing strong agreements, which citizens/clients monitor and enforce by exercising power over providers. How well the accountability mechanisms; power of citizens/clients over politicians/policy makers and providers works depends on a country's the political economy.

Politicians and policy makers. Policy makers often request additional resources from the Ministry of Finance to provide inputs for example pay wages, build facilities, train workers or maintain facilities. However, there might not be any explicit mechanisms for accountability for results. There may also not be motivation for service providers to do their best because of the weak link between rewards and achievements or poor monitoring. While politicians and policy makers are interested in particular outcomes – for example quality of education - they have to rely on providers and agents to achieve these outcomes but citizens are not brought on board. This fails to equip citizens with

mechanisms to monitor service delivery or give them an option to choose a provider or to exert influence on policies, and this cannot deliver better results.

Alignment of incentives with objectives. However, providers may have different objectives from those of politicians. The quest then becomes how to align incentives of providers with those of politicians and policy makers. To align these objectives, the World Development Report 2004 suggests designing contracts with providers to align incentives of providers with those of politicians and policy makers. Realizing that reforms and inputs do not necessarily lead to improved outcomes, many countries are moving in this direction. Policymakers in many countries are increasingly attempting to link rewards of service providers/frontline workers to achievement of outcomes.

Citizen voice. We argue that improving service delivery would require strengthening citizen voice and the opportunity for them to contribute towards improved service delivery. Developing mechanisms to monitor performance of service providers and establishing links between their performance and rewards can bring reforms closer to achieving their objectives. According to WDR 2004, improving citizen voice can be achieved by making public institutions/politicians more accountable to citizens, and making information about resource allocation and outcomes available to the public. Another building block could be equipping citizens with mechanisms to demand better services.

Another building block is citizen ability to influence the formulation of objectives, policies and resource allocation. The idea is that citizen voice would improve outcomes. This would help to improve resource allocation and ensure that the broader population is served. Citizens could play a key role in improving services if they had a choice of provider and clear mechanisms to monitor performance. This would help to put pressure on providers to do better. However, this can only work if there was a real choice, citizens had reliable information about performance and providers were affected by failing to attract or retain clients for the services. Citizens can also be better at monitoring than policy makers since they interact with providers more regularly and have the desire for better services. However, this can work if this involvement is not captured by an elite group, facility managers are responsive to representatives of citizens, and their involvement does not encroach upon the autonomy of service providers.

Decentralization can be useful for promoting accountability, but its usefulness depends on the way it is designed and implemented. One of the aims of decentralization in Uganda was to empower communities to engage in development interventions, improve local democratic governance, and enhance the scope and quality of delivery of basic services at the local level.

Data Sources

The report includes data from the nationally representative household surveys conducted by the Uganda Bureau of Statistics (Uganda National Household Survey and Uganda Demographic and Health Survey) and official administrative data from the line

ministries, several government policy and line ministry documents, and nationwide field interviews with key stakeholders. The field interviews were conducted at the national level. High-level policymakers from the ministries of finance, health, and education were interviewed, as well as officials of key institutions, including the Education Standards Agency, the National Medical Stores, and the National Curriculum Development Centre.

Three focus districts were selected for interviews based on their human development outcome rankings—Apac, Hoima, and Rukungiri. In each, key informant interviews were conducted with elite politicians and technical officers at the headquarters and with lower-level government officials. The aim was to understand the respondents' perceptions of service delivery in their districts. In addition, focus group discussions were conducted in villages to seek beneficiaries' perceptions of service delivery in their localities.

Chapter 3

Progress and Challenges

Education—Demand Outstrips Supply

Access to primary education increased substantially, but has stagnated. Uganda codified access to free primary education and made it a constitutional right for all citizens (Article 30 of the Constitution). The cost of sending children to school was always high for many households. The UPE program was put in place to reduce the direct cost of education for poor families. To implement the UPE program, Government increased resources to primary education, invested heavily in building classrooms (through the School Facilities Grant), recruiting and training teachers, providing textbooks, and introduced an Education Management Information System to improve decision making. Managing this enormous challenge was by central command and control, while implementation was by districts and schools.

Aiming for universalizing primary education, through removal of school fees, Uganda made significant progress in accelerating primary school enrolments. This led to an increase in primary enrolment from 3.1 million in 1996 to 7.5 million in 2007. The growth rate was substantially faster for girls (48.3 percent) than for boys (9.2 percent), indicating a fairly rapid narrowing of the gender gap. Net primary enrolments rose from 62 percent in 1992 to 84 percent in 2006.⁶ This indicates a remarkable achievement from a baseline level of 60.9% in 1992/93 to 82.5%, 84.5% and 84.9% in 1999/00, 2002/03 and 2005/06, respectively⁷. Net enrolment for girls and boys was almost equal by 2005/06 (table 4). The gender inequalities of the early 1990s appear to be gone, in both rural and urban areas and across expenditure quintiles. Nationally, net enrolment rates stood at 85.0 percent for boys and 84.9 percent for girls. However, stagnation since 2002 raises concerns on whether the government will attain its PEAP target of 100% by 2015, and inequalities remain.

Aggregate national numbers hide wide disparities. The problem is worse in the poorer and rural areas, particularly in the north. Net Enrolment Rates for some of the districts for example Kotido (27%); Moroto (28%); Kalangala (31%) are very low and worrisome. Close to one million children between the ages of 6 and 12 years remain out of school and many of those who enroll drop out after 5–6 years and do not complete the seven-year cycle. Of those out of school, nearly 90% reside in rural areas; and regionally 24.4% reside in Central Region, 21.8% in Eastern Region, 26.7% in Northern Region and 27.1% in Western Region. By 2007, the national average for primary school completion was 48

⁶ UBoS ,UNHS 2005/2006. “Report on the Socio-Economic Module” p. 19. MoE figures are somewhat higher.

⁷. These net enrolment rates are 5-10% lower than to those reported by MoES.

percent,⁸ but as low as 7 percent in Kaabong, Kotido, and Nakapiripirit Districts. Completion rates are also higher for boys than girls—50 percent for boys compared with 42 percent for girls.

Table 5. Primary Net Enrolment Rates by Gender (percent)

Category	2002/03			2005/06		
	All	Females	Males	Males	Females	Males
Nationwide	85.2	85.3	85.1	85.0	84.9	85.0
Poorest quintile	77.8	77.4	78.3	78.0	78.3	78.0
Richest quintile	89.7	90.6	88.7	90.0	89.8	90.0
Rural	84.7	84.7	84.6	84.4	84.3	84.4
Urban	89.7	89.7	89.7	88.7	89.0	88.7

Source: Author Calculations from Household Survey

It is clear from the analysis that children who are out of school or do not attend school are more likely to be from poor households. There is nearly 12 percentage points of NER between children from the richest and poorest households. Most of the reasons for not attending school at the time of the survey are demand related, including financial constraints, domestic chores, and lack of interest⁹. Other reasons for non-attendance worth noting are calamities (including insecurity) and disabilities. Nearly 27% of the children living with disabilities are out of school, of which 74.3% are living with permanent disabilities. These children are starting life with a severe handicap, one that virtually ensures that they will remain in poverty.

Regression results help to deepen our understanding of the underlying determinants of school enrolments. Evidently both supply- and demand- side factors influence households' decision to send their children to school. The results of the analysis indicate that, after controlling for other variables, vulnerable children are less advantaged relative to their counterparts. For example, a child who has lost a mother is somewhat less likely to enrol compared to a child with both parents still alive. By extension, the income as proxied by consumption expenditure per adult equivalent has a significant effect on enrolment at both primary and lower secondary level, though the impact is small. An increase of income of 10% would lead to an increase in enrolment between 0.5-0.7percent. The impact on primary education is very close to that of lower secondary education. Head of household's years of schooling has a significant impact on school enrolment and the impact is greater at secondary (since they are fewer, they are likely to be further) than primary level.

Despite primary education being free, cost still matters. It is worth noting that UPE caters for only tuition, and non tuition costs such as lunch, scholastic materials, local examination fees and transport costs are supposed to be met by households. However, capacity to meet these costs varies and many children do not attend or drop out due to cost related reasons. The pattern of pupil absenteeism varies with the socio-economic activities of the respective communities. The pupils are either involved in household

⁸ MoES 2006, Joint Review Aide Memoire

⁹. It should be pointed out here that little is known on how to induce parents of the non-enrolled children to their children to school.

chores, going to the market, looking after livestock or fishing in the nearby lake depending on the economic activities of the respective communities. There are also areas where there are seasonal markets (Box 1). These may be fortnightly or weekly, and many parents involve their children in such activities denying them of the opportunity of being in school. In Nakasongola and Kaberamaido districts absenteeism can be as high as 30 percent, and 50 percent in Karamoja due to cattle keeping or fishing activities. Fishing communities like Nakasongola, Kalangala, Apac and their neighborhoods attract a lot of child labor. Boys are hired by fishermen in a number of activities ranging from fishing, fish processing to marketing.

Box 1: Opportunity cost of schooling: *Livestock is a major economic activity in this area and children form part of the labor that looks for pastures and water for livestock, especially during drought periods. During such seasons, absenteeism is about 30 percent. Some poor parents prefer to send their daughters to work as house girls in towns and trading centers to sending them to school.*

Source: *Field findings*

On the supply side, proximity to school raises the probability of being in school at all levels. Much as physical access to primary school has improved over time, distance remains a constraint to accessing primary education. More notably, distance to school has a greater impact on lower secondary enrolments than primary enrolment. Some areas like Kalangala Islands are geographically isolated making access to schools difficult (Box 2).

Box 2: Geographical isolation – a case of Kalangala District: *In Kalangala pupils have to move through thick forests to the nearest school. Most of the inhabited islands are heavily forested so that children attending school have to traverse through the dense forests to reach school. They are exposed to dangers like snakes and criminals who may use the forest as a hideout. The worst-case scenario on the Islands is where children have to move by canoes from Islands without schools to those with schools on a daily basis. This is not only costly but risky because children are exposed to dangers of canoes capsizing.*

Interview in Kalangala District

Learning outcomes are low, although improving slowly. Supply factors affect quality. The proportion of qualified teachers has a positive and significant impact on primary school enrolment. Pupil–teacher ratios vary from a low of 1:42 in Kampala to highs of 1:94 in Pader.¹⁰ Primary classroom size averages 72 pupils per classroom. Schools also suffer from inadequate sanitation facilities, student and teacher absenteeism, and inadequate staff housing in rural areas. As a result, learning outcomes are very low. Learning outcomes are improving, albeit slowly. The percentage of primary six pupils

¹⁰ MoES Education Statistics Abstract: Education Planning Department, Kampala, Uganda, 2007 (http://www.education.go.ug/abstract%202005/comments_on_key_statistics%202005.htm).

who achieved the defined level of competency in literacy increased from 20 percent in 2003 to 33.5 percent in 2006. Not surprising that the recent Country Economic Memorandum (CEM) for Uganda noted a low contribution of education to growth¹¹.

Health Care—Getting Better, If You Can Get It

Uganda’s health sector has an impressive institutional framework, including the line Ministry of Health; the national referral hospitals; the district health systems; the Health Sub-Districts; and the private health service delivery system, strengthened by community-level traditional and complementary medicine practitioners (TCMP). This institutional framework has increased *physical* access to medical facilities. Under Uganda decentralization program, physical health facilities have been brought closer to the people; but problems such as drug stock-outs still constrain the quality, timeliness and reliability of health services. The challenge is to explain “why” these obstacles persist.

Overall, health Services Delivery are getting better, but access remains a problem, with less access for the poor and for people from rural areas. The 2004 National Services Delivery Survey found that only 37 percent of households felt that the overall quality of government health facilities were good and 51 percent felt it had improved since 2000. Utilization of outpatient departments, a proxy indicator for service quality and quantity (table 5) covering both government and private not-for-profit facilities, improved since 2001. The improved access is due to: (i) abolition of user fees in public health centers; (ii) increase in geographical coverage of health facilities; and (iii) improved funding for primary health care inputs. Less encouraging is the stagnating per capita attendance since 2005 (0.90 a year).

Table 6. Health Output Indicators, 2000–2006

Output indicator	2000	2001	2002	2003	2004	2005	2006	Target 2010 ^a
Outpatient department utilization (new attendance)	0.40	0.43	0.60	0.72	0.79	0.90	0.90	1.00
Three doses of diphtheria-pertussis-tetanus / pentavalent vaccine coverage (percent)	41	48	63	84	83	89	89	93
Deliveries in health facilities—government and private-not-for-profit (percent)	25.2	22.6	19.0	20.3	24.4	25.0	29.0	50.0
Approved posts filled by trained health workers	33	40	42	66	68	68	—	90

¹¹ Earlier analysis (involving 50 countries) emphasized the importance of quality of education for economic growth.

(percent)								
HIV sero-prevalence (percent) ^b	6.8	6.1	6.5	6.2	—	6.4	—	
Latrine coverage (percent)	—	—	51.3	55.6	57	57	58	80
Couple years of protection	—	—	—	210,839	212,089	234,259	309,757	494,908

a. 2010 data refer to targets identified in the Health Sector Strategic Plan II.

b. 2005 data are based on the first national sero-survey. Other data are from antenatal clinic surveillance sites.

Source: MoH. *Annual Health Sector Performance Reports* various years. [please add to references and cite here as author-date]

Health services utilization remains low. Even among the poorest quintile, only 39 percent of the sick sought treatment from a public facility, while 61 percent went to private facilities, pharmacies, religious and nongovernmental facilities, or traditional healers—or simply treated themselves. Among the richest quintile, 27 percent went to public facilities. Reasons for not using public facilities were: (i) the distance to the facility (primarily in rural areas)¹²; (ii) long waiting times (especially in urban areas); (iii) absence of health workers. In addition, findings from field interviews with health workers and focus group participants show that the proportion of health facilities keeping medicines in stock fell from 35 percent in 2005 to 27 percent in 2006.

Immunization coverage has stagnated. Coverage of the three doses of diphtheria-pertussis-tetanus (DPT3) vaccine for children under age 1 increased from 48 percent in 2001 to 89 percent in 2006. But since then coverage has stagnated at 89 percent, due to vaccine stock-outs that lasted six weeks.

Table 7. Health-related Outcome Indicators, 1990–2006

Indicator	1990	1995	2001	2006	Poverty Eradication Action Plan Targets, 2008/09	Millennium Development Goal Targets, 2015
Infant mortality rate (per 1,000 live births)	122	81	88	76	68	41
Child mortality rate (per 1,000 live births)	180	147	152	135	102	60
Maternal mortality rate (per 100,000 deliveries)	527	527	505	435	354	131
Child nutrition—stunting (percent)	38	38	39	32	28	19

Note: The estimates of the maternal mortality ratio should be interpreted cautiously, according to the Uganda Bureau of Statistics and Macro International (2006, p. 280).

Source: UBoS and Macro International (1995, 2001, and 2005/06). [add to references]

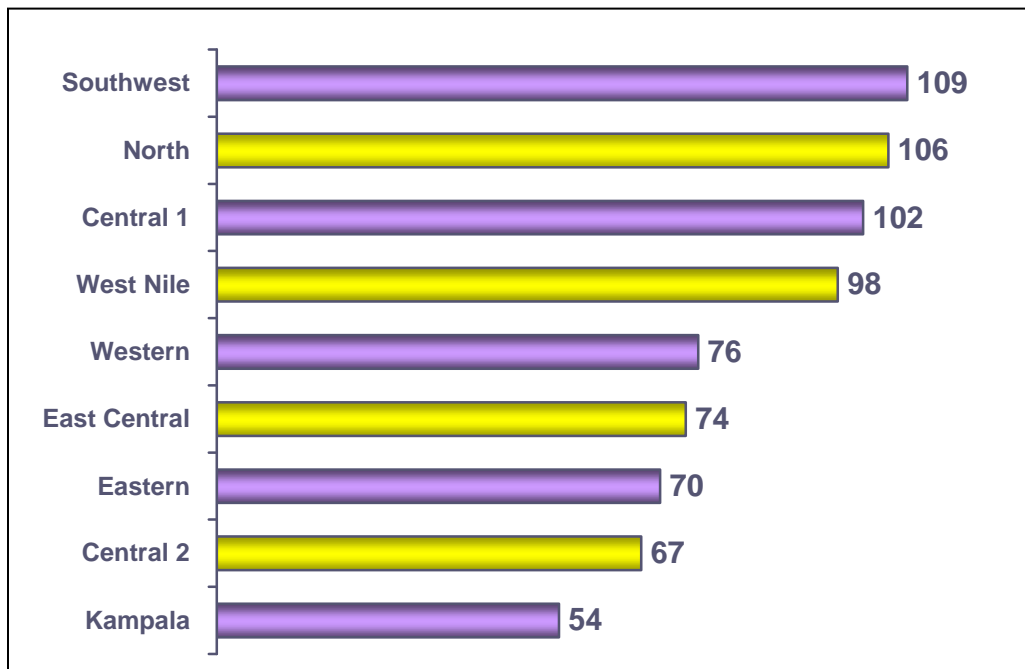
Maternal health services are poor. The proportion of births in health facilities supervised by qualified health workers—both government and private not-for-profit—did not improve much between 2000 (25.2 percent) and 2006 (29.0 percent). Even so, an

¹² While the Health Sector Plan aims to place a clinic within 5 kilometers of every person, the 2002 census found that only 70 percent of the population has such access.

upward trend since 2002 is clear, partly due to expanding coverage for maternity services. The maternal mortality rate in 2006 was 435 deaths per 100,000 deliveries—down by 70 from 2001. The decrease was faster during 2001–06 than during 1995–2001.

Infant mortality remains high. The infant mortality rate increased from 81 deaths per 1,000 live births in 1995 to 88 in 2001 (table 6), but then reversed during 2001–2006 due in part to broader immunization coverage and better sanitation. Still, nearly 76 children of every 1,000 die before their first birthday. And geographic disparities persist: the southwestern region has the highest infant mortality rate (109 deaths per 1,000 live births),¹³ followed by the northern region (106).¹⁴ Kampala has the lowest rate (54 deaths per 1,000 live births) – figure 7. Mortality rates also vary by wealth quintiles and rural-urban status. Mortality for children under the age of five fell by 17 deaths per 1,000 live births between 2001 and 2006, after increasing between 1995 and 2001. A reduction of one birth per woman within a five-year period would reduce infant mortality by about 3 percent.¹⁵

Figure 7. Infant Mortality Rates by Region, 2005/06



Source: Author calculations.

Health service provision is inequitable

In health care the major concern is inadequate access, especially for the rural poor. Existing data suggests that physical access to health facilities has improved, but the distribution is not efficient, and spatial disparities remain wide. Aggregate figures in

¹³ Southwest includes Bushenyi, Kabale, Kanungu, Kisoro, Mbarara, Ntungamo, and Rukungiri.

¹⁴ The North Region here excludes the West Nile subregion.

¹⁵ Uganda's Ministry of Finance, Planning, and Economic Development (2002).

official documents hide inequitable distribution within districts. In Hoima, for example, field findings reveal that there was greater concentration of health centers in Buhimba Sub County than in other sub counties, especially those bordering Lake Albert. Buseruka Sub County, for example, had just one health center III. Nyakabingo parish of Buserulka Sub County had no health center II—and it is far from the sub county headquarters, where the health facility is located.

Hunger and Malnutrition are high and this affects health and education.

The first Millennium Development Goal calls for the elimination of hunger. The target and measure for this goal is the percent of undernourished people in the population. The United Nations classifies Uganda as “far behind” in meeting this goal.¹⁶ But malnourishment measures generally focus on children under five, as little information is collected on hunger and malnutrition for the adult population. The 2006 Uganda Demographic Health Survey (UDHS) shows that Uganda has made slow progress on nutrition indicators. And inadequate weight for age has only dropped from 25.5 percent to 20.1 percent over a ten year period (table 7).

Table 8. Trend in Nutritional Status (for children 6–59 months)

Indicator	1995	2001	2006
Height-for-age	38.3	39.1	31.8
Weight-for-height	5.3	4.1	5.4
Weight-for-age	25.5	22.8	20.1

Source: UDHS 2006 preliminary data

The results from UDHS 2005/06 suggest an improvement in the nutritional status of children aged 6–59 months, especially on the basis of stunting and wasting indicators. While the share of stunted children increased from 38.3 percent in 1995 to 39.1 percent in 2001, it declined by 7.3 percentage points between 2001 and 2006 (see table 7). Meanwhile, the wasting indicator declined by 2.7 percentage points between 2001 and 2006.

Malnourishment affects health and mental development, and is linked to inadequate income and poor sanitation. It is also the result of poor health, particularly weight loss as a result of repeated bouts of diarrhea. The 2005/06 UDHS preliminary report notes that rural children are almost 54 percent more likely to be underweight than urban children. The proportion of underweight children varies from 12 percent in Kampala to 28 percent in the northern region, with a high of 49 percent in Karamoja.

Interestingly, there is a rather weak correlation between child nutrition indicators and the incidence of poverty. While the Western region has the second highest income and the

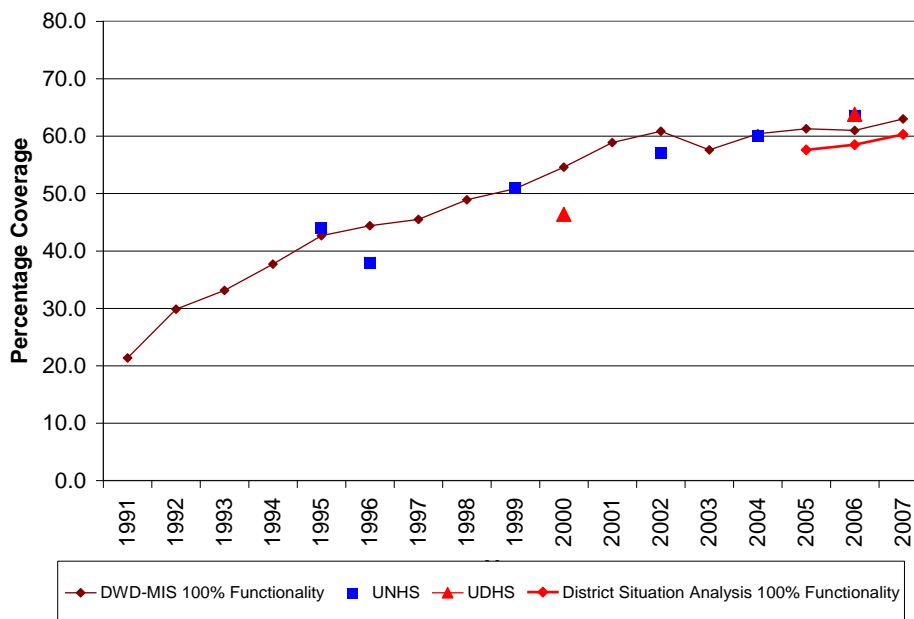
¹⁶ UNDP 2002.

highest food production per capita, it has the highest prevalence of stunting rate among the four regions of Uganda, thus pointing to other factors beyond availability.

Water and Sanitation—They Don’t Flow Equally

The PEAP target is to bring sustainable, safe water and sanitation within easy reach of 77 percent of the rural population and 100 percent of the urban population by 2015. According to the Ministry of Water and Environment, nearly 63 percent of the rural population had access to an improved water source within 1.5 kilometers in 2007 (see Trends in the Figure 8)¹⁷ and only slightly higher than the estimates for 2005.¹⁸ The lack of progress partly reflects fast population growth and stagnant or declining financing of the sector. The net increase in coverage is mainly due to off-budget investments, especially by NGOs.

Figure 8. Trend in Access to Improved Rural Water Supply (1991–2007)



According to the Uganda Demographic and Health Survey, 66 percent of households reported access to safe drinking water in 2005/06, 86 percent in urban areas and 62 percent in rural areas. Nearly 56 percent of urban households—but only about 6 percent of rural households—are covered by piped water. Nationally, the share of households with access to piped water increased from 13.0 percent in 2002 to 14.6 percent in 2005.

¹⁷ Government of Uganda. 2007. *Water and Sanitation Sector Performance Report 2007*. Ministry of Water and Environment: Kampala.

¹⁸ MoWLE 2006 [add to references].

Again, spatial disparities were marked, with a higher proportion of households in the western and central regions having access to unprotected water sources.

In the 2005/06 Uganda National Household Survey, 68 percent of respondents reported having access to safe water—17 percent in the house, 30 percent from a borehole, and 21 percent from a protected well or spring. Of the rest, 19 percent used an unprotected well or spring and 9 percent used a river, stream, lake, or pond.

Contaminated water is a major source of water-borne diseases, such as cholera, dysentery, and intestinal worms. According to one estimate, diarrhea causes 19 percent of infant deaths.¹⁹ And improved access to safe water has benefits beyond health. Less travel and waiting time to fetch water frees women and children for other activities, including work and school. While 72 percent of the population is within a kilometer of a water source, the waiting time averages 28 minutes; in the northern region the average is 54 minutes.

Functionality of water services is a challenge. Government and nongovernmental organizations have invested massively in bringing improved water sources closer to households. But maintaining them remains a challenge. The functionality of water points increased from 70 percent in 2003/04 to 83 percent in 2005/06 in rural areas and from 81 percent in 2003/04 to 93 percent in 2005/06 in small towns.²⁰ However, there are significant disparities across districts. Nakapiripiiti and Kotido recorded declining functionality, and Kamwenge, Masaka, and Rakai have persistently low functionality rates. Functionality also varies by the type of water source, with valley tanks having the lowest rate. Box 3 illustrates some of the challenges in access to clean water.

Box 3: Hard-to-reach areas face severe challenges in accessing safe water. In Buseruka Sub County, a focus group reported that water was its greatest need, but the proportion of the district budget devoted to it was smaller than that in better-served areas. In Buseruka boreholes are the only possible source of safe water. However, because sinking boreholes is expensive, the Hoima district authorities reported that they prefer other sources of water, such as protected springs. This technological preference has spurred a focus on areas already better served at the expense of harder-to-reach areas, where boreholes are the only option. Nyakabingo Parish in Buseruka has only three boreholes, with only two functional. And one of the two is very old, sunk perhaps in the 1950s. Queues at the water sources are long, so residents need about six hours to fetch a 20-liter container of water. Some children cannot go to school because they have to collect water for home use.

Source: Field Interview

Sanitation coverage has stagnated. The 2005/06 Uganda National Household Survey reported that 89 percent of households had toilets, but 12 percent are uncovered pit latrines, which are not sanitary. However, an estimate by district health inspectors based

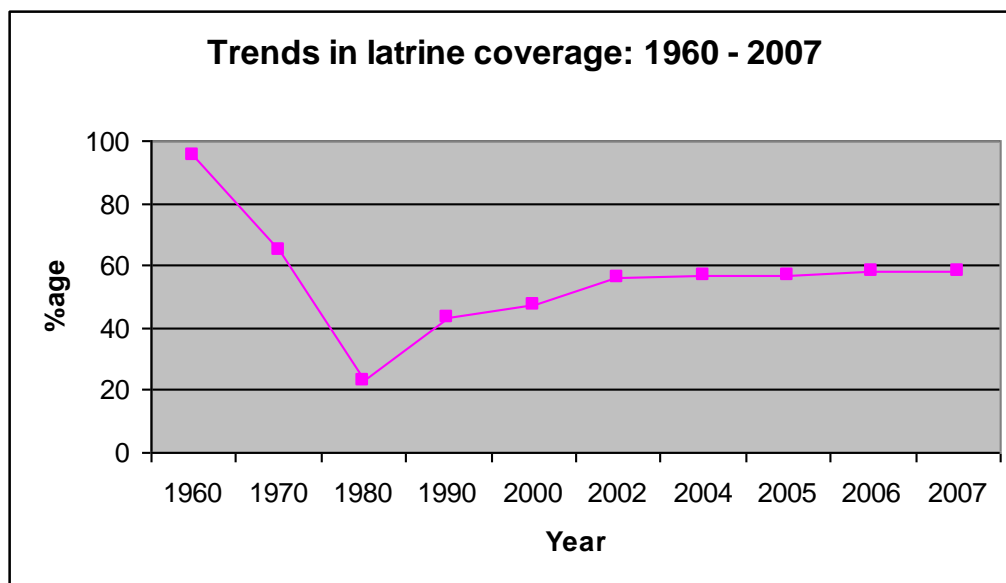
¹⁹ WWAP 2006 (<http://unesdoc.unesco.org/images/0014/001467/146760E.pdf>).

²⁰ MoWLE 2006.

on hygienic latrines puts the coverage at 59 percent (figure 9). The disparity is associated with the methodology and specification of a latrine.

Poor sanitation and hygiene impacts the poorest segments of society, whether in rural or urban areas. The shame, indignity, and nuisance of life without sanitation is one of the defining characteristics of severe poverty. The links among inadequate sanitation, health, and poverty are cruel and direct: those who do not have access to sanitation are almost invariably poor; those who suffer the health consequences of poor sanitation and hygiene are usually poor and least able to cope with the costs of illness. Uganda's challenges in sanitation include lack of prioritization of sanitation at all levels, financial constraints, insufficient human-resource capacity, inadequate dissemination of best practices, poor urban planning, high investment costs, and poor operation and maintenance of sewerage.

Figure 9. Latrine Coverage in Uganda



Source: HSSP II Mid term Review 2008, Ministry of Health

Improved sanitation is linked to better health and education. Given the fairly high rates of reported water and sanitation coverage, why are health indicators not improving? One possibility is that the numbers are exaggerated because they are self-reported. There is also evidence that having a safe water source and a latrine and using them properly are not the same. Hygiene especially hand washing with soap are very important to ensure benefits from the facilities. Visits by health assistants for the Health Inspectors Annual Sanitation Survey show much lower effective access—about 59 percent overall in 2007²¹. Even so, effects of good water and sanitation on health are clear. Access to clean water would reduce days incapacitated by 22 percent, and having a toilet would improve health

²¹ (Government of Uganda, 2007. *Water and Sanitation Sector Performance Report 2007*. Ministry of Water and Environment: Kampala.)

by 11 percent. Each \$1 invested in water, sanitation and hygiene (WASH) can yield an economic return between \$3 and \$34, depending on the region (WHO).

Households with improved sanitation services suffer lower morbidity and mortality from diseases related to poor water and sanitation. There are significant time savings when services are close to home. Water and sanitation at home and schools promote more educational opportunities for women and girls, including higher attendance. The services create new economic, productive opportunities and extra household income, which in turn can result in better health.

Washing hands with soap can help, but the practice needs to improve. Washing hands with soap at the right times can reduce instances of diarrhea by 35–50 percent. Evidence also suggests that hand washing with soap can reduce acute respiratory infections by 30 percent (Rabie, T. and V. Curtis. 2006. "Hand washing and Risk of Respiratory Infections: A Quantitative Systematic Review." *Tropical Medicine and International Health* 11(3)). Only 14% of mothers of children under five wash their hands with soap after visiting the toilet, 19% of the caregivers wash hands with soap after cleaning a baby's bottom and only 6% wash their hands before feeding a child (Government of Uganda. 2007a. *Water and Sanitation Sector Performance Report 2007*. Ministry of Water and Environment: Kampala). A study carried out in 2006 found that only 41% of the schools had hand washing facilities, 56% of these had water in them, and only 19% had soap or ash for washing their hands (.Government of Uganda. 2006b. *School Sanitation and Hygiene in Uganda*. Ministry of Education and Sports in collaboration with UNICEF. Ministry of Education and Sports: Kampala)

Overall, inequalities remain in all the three sectors

Attempts to reach the Millennium Development Goals are made more difficult by the large geographical disparities, particularly the difference between the central region and the rural north and southwest. Preliminary data from the 2006 Demographic and Health Survey (Figure 7) indicates that infant mortality, which averages 76 per 1,000 live births for the country as a whole, ranges from a low of 54 in Kampala to a high of 109 in the southwest, 106 in the north region, and 102 in some parts of the central region. Other MDG indicators display similar regional disparities (Table 8). The poverty rate is 61 percent in the Northern Region, compared with 31 percent nationally. A study of the northern region notes that the poverty rate has fallen only 3.5 percentage points in the past 12 years.²² Access to safe water is 95 percent in urban areas and only 54 percent in rural areas; 62 percent of the urban population has completed primary school, compared to only 32 percent of the rural population.

²² Ssewanyan, Younger, and Kasirye 2006.

Table 9. Millennium Development Goal Performance by Region

Indicator	Total	Urban	Rural	Kampala	Central	Eastern	Northern	Western
Poverty rate	31	14	34	—	16	36	61	21
Access to safe water	59	95	54	—	66	63	51	55
Primary education completion rate ^a	37	62	32	68	44	34	27	32
Access to adequate sanitation	89	97	88	99	95	84	79	95

— is included in Central Region.

a. Percent of population over 15 with at least a primary education.

Source: Uganda National Health Survey 2005/06.

Service Delivery in Northern Uganda remains a major challenge: Northern Uganda poses an especially heavy challenge (Box 4). Children from rural households in the north are less likely to be in school. This finding is complemented by the fact that the net enrolment rate for children from households living in internally displaced person camps is 79 percent, compared with 85.3 percent for their out-of-camp counterparts.

Box 4. Uganda's Great Human Development Challenge—Northern Uganda

Northern Uganda has faced grave insecurity, population displacement, and loss of assets. But restoring security might not raise household incomes to levels comparable to the rest of Uganda. Interventions aimed at improving people's lives will be needed, now that there is relative peace.

School enrolments, especially in primary school, are much lower in Northern Uganda than in the rest of the country. And the unmet need for reproductive health services remains high in the region, especially in camps for internally displaced persons. Most worrying, however, is that the infant mortality rate in the region is 30 percent higher than the national average. And although access to safe water in the region is high, the large, concentrated populations in small areas risk contaminating the water. Despite numerous public and nongovernmental interventions, northern Uganda seems unlikely to reach any MDG targets.

Northern Uganda has lower net enrolment rates than the rest of the country—78.4 percent, compared with 84.5 percent nationally. And it has greater disparities in enrolment rates between rural and urban households. National rural enrolment rates are 84 percent, but just 77 percent in northern Uganda. In the Karamoja Subregion enrolment rates are about one-third of those in the rest of northern Uganda.

Because of humanitarian interventions in the north, households have greater access to safe water, though not without environmental and health concerns.

Although the distance to water in camps is short (an average of 0.54 kilometers), the average waiting time for camp residents is much longer (106 minutes in camps and 37 minutes outside). The risk of contamination is also higher due to the large, concentrated population in camps. Camp residents report a higher prevalence of water-borne disease, particularly diarrhea, than do households outside camps.

Note.

1. Ssewanyana and others 2006.

Gender issues and gender equity

Gender remains a major factor in all areas of service delivery. Gender issues cut across all the sectors under this study (Box 5). Therefore, gender inequality has to be addressed, not only in education but in all human development sectors. There is a substantial gender gap in service delivery along several dimensions as well as rural-urban divide. Overall, education indicators for girls are worse than those for boys - girls are as likely as boys to continue to grade 5 but significantly less likely to survive to grade 7. The field findings suggest three reasons for this differential: early pregnancies, defilements, and rural parents who require their daughters to stay at home and assist with domestic chores.

Box 5. Human Development and Gender Equality: a Working Partnership?

Gender issues cut across all sectors.

- *Literacy. Women and men are almost equal in school enrolment at the primary level, but disparities are greater at the secondary and tertiary levels. And despite almost equal primary enrolments, female literacy is generally lower, particularly in rural areas.² However these averages mask the enormous gender gaps in different districts. For example, while about 90 percent of the girls in Kampala district are enrolled in primary schools, only 9 percent are enrolled in Karamoja.*
- *Sanitation. As the main managers and users of sanitation facilities, women are at the center of the sanitation process. In addition to health benefits, they have much to gain from improved sanitation facilities—in convenience, safety, and privacy. Indeed, female dropout rates are high at the secondary level in part because schools lack adequate separate sanitation facilities, crucial for girls who have begun to menstruate.*
- *Water. Improving access to water, particularly by reducing waiting and walking time to access water, frees up the time of women and girls for productive or educational activities.*
- *Modern contraception. While 64 percent of women want to use contraception, only 22 percent currently do. This gap can be explained by male dominance in decision making, lack of knowledge, lack of access or funds to purchase contraceptive supplies. Fertility is clearly linked to female education, with literate women having lower fertility rates.*
- *Health. Improvements in health—which would lead to reductions in infant, child, and maternal mortality—would clearly benefit women. The concern is the increase of HIV/AIDS among married people, thus transmitting the disease from men to women and their children.*

Notes.

2. In rural areas, men have a literacy rate of 75 percent, women 59 percent, according to the 2002 Census. The national female literacy rate is 62 percent.

Human resources issues

Attracting personnel to remote areas is a challenge. The approach to staffing for service delivery is to have frontline workers as civil servants to assure stable conditions of employment, promotion and salary based on seniority and qualifications. However, attracting personnel to rural areas is a major challenge, and as a consequence, Government has set up incentives for teachers in hard-to-reach areas and is considering a similar option for health workers. In several cases, Government has resorted to using unqualified teachers or under-qualified personnel (an example of untrained teachers and health workers - Box 6 of nursing officer managing unit).

Health institutions are grossly understaffed, and cannot afford the incentives to attract qualified medical personnel to less-well-off areas, especially those hard to reach and in conflict. Investments in health infrastructure and drugs mean little without the trained people to deliver services. Hard-to-reach areas in districts visited by the study team had great trouble attracting and retaining qualified personnel. Health center IVs²³ expected to be led by qualified doctors did not have a doctor in any of the three districts. None of the health center IV had a functioning operating theater, contrary to requirements.

Box6. -At Buseruka Health Center III in Hoima, they reported having only one medical employee, a nursing officer who had taken a lunch break. The newly posted clinical officer had not yet reported to the station. The previous officer, who doubled as the ambulance driver, had been transferred three months back. The nursing officer was expected to attend to all categories of health cases, including assisting mothers in delivery, attending to clinical services, and dispensing drugs. When the nursing officer returned from lunch, she had several cases waiting. The sick were lined up, some waiting for prescriptions and others for drugs. While the study team was there, a mother in labor arrived. The nursing officer had to abandon the other patients to attend to the mother.
Source: Field visit discussions

Trained health workers are getting jobs with nongovernmental organizations, elsewhere in the private sector, or outside the country. Health workers also prefer to work in urban areas, especially in referral hospitals, partly because of greater career opportunities. Health centers II, III, and IV often lose their staff to advertisements from referral hospitals.

Inequality in service delivery is also manifested in availability of personnel in schools. About 40 percent of the 80 districts have pupil –teacher ratios that are higher than the national average of 53, meaning that a significant number of teacher positions are vacant. In Buseruka primary school, in the hard-to-reach area in Hoima district, 38 percent of its teachers (5 of 13) were untrained. In the Parajwooki primary school—in the same district but 6 kilometers from Hoima town—all teachers are trained. There are more

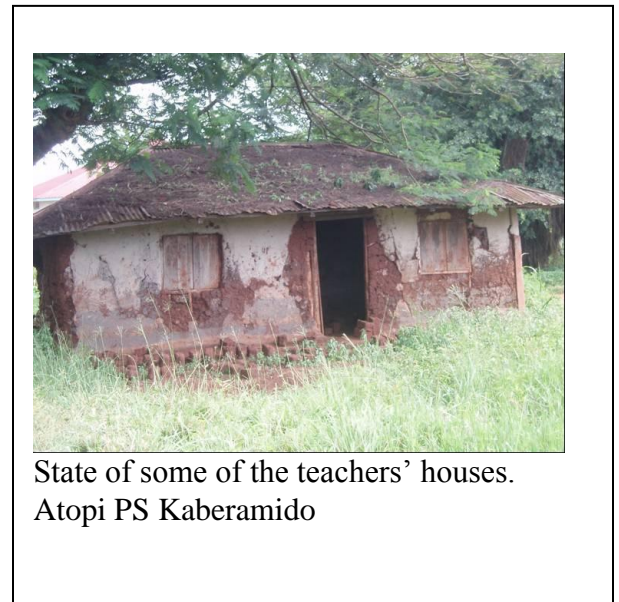
²³ Health Centres are classified as 1, II, III, IV and V

than 200 students per teacher in Alito compared to 60 students in the Kagorogoro primary school in Rukungiri district.

The Rukungiri Department of Education reported that its district has no untrained teachers. Similarly, according to the Apac District Inspector of Schools most Apac primary schools have trained teachers, and all school heads hold diplomas or above. If the qualifications of teachers in Apac are comparable to those in Rukungiri, why are the education standards in Apac still low? According to a district official in Apac district, several factors constrain basic education in his district (Box 7).

In most schools there are no teachers' houses and where they exist, they are in a very poor condition (Picture 1 and 2) and only a very small number of teachers can be accommodated. In some cases 6-8 teachers occupy a house meant for only 2 teachers. More than 70 percent of teachers reside far away from the schools. The inevitable result is for teachers to travel long distances to and from schools. During rainy seasons, lessons effectively start at 11:00 am and departure from school is earlier than is supposed to be. It was estimated that most teachers traverse a distance between 3 -10 kilometers to schools. Given such circumstances, sufficient attention is not given to pupils, and this negatively affects delivery of quality education services and result in poor learning achievement and or dropping out of school.

Picture 1 and 2



Box 7. Factors beyond Teaching Staff Affecting Quality Primary Education

Quality education is about more than trained teachers. All districts operate under centrally determined staff ceilings. In some schools, the staff ceilings were determined at the pre-universal-primary education levels and have not yet been lifted. New schools are particularly affected since they typically have inadequate teachers to handle their large lower classes. What we do, as district education officers, is to make local redeployments, particularly for teachers of critical subjects. Such locally redeployed teachers continue to get their salaries through the schools where they are officially posted. Closely related to this is the need to streamline the transfer of teachers. When teachers are transferred, it often takes two or more years to have their payroll transferred from their old duty post. This obviously de-motivates teachers and reduces their efficiency and productivity.

Another problem is inadequate housing facilities for teachers. Very few teachers' houses exist, and three-quarters of them are temporary, grass-thatched huts without proper lighting or concrete floors. Because of inadequate housing facilities, many of our teachers do not reside at the schools.

In most areas, roads and village paths get flooded during rainy seasons, and teachers have to pass through flooded, bushy, and dirty village paths, often braving early morning downpours. By the time these teachers get to school, they are late, wet, dirty, and demoralized. Yet they are supposed to teach our pupils to be timely, smart and professional. Such teachers see a contradiction between the professional values they hold and the unprofessional life they are forced to live. Some come to class unprepared, while others end up absenting themselves. The net outcome is a low quality of teaching and learning.

From the Field: Key Respondent in Apac

Chapter 4

Public Spending on Human Development

Expenditure on social sectors is loosing ground. Uganda spends a great deal of its budget on human development activities. Education alone is the biggest single sector, accounting for about 18 percent of the budget (see Table 9). While education and other human development activities have grown in constant prices, they have lost ground to other sectors, particularly roads and agriculture. According to the PEAP and the Medium Term Expenditure Framework, the share for human development would remain at about that level, declining slightly in fiscal 2007/08 and rising to 33 percent by fiscal 2008/09. But, while Medium Term Expenditure Framework projections are not binding, they do reiterate that the room for higher spending on pillar five areas is constrained, given equally important priorities in other sectors, such as security, infrastructure, and agriculture.

Table 10. Actual and Projected Government Expenditures (sector shares)

Sector	Actual		Budget	Medium Term Expenditure Framework
	2003/04	2005/06	2006/07	2008/09
Security	10.4	10.1	9.6	9.0
Roads and works	9.4	10.1	11.3	11.8
Agriculture	3.0	4.3	3.5	4.8
Education	17.8	17.1	18.3	19.3
Health	11.6	13.7	9.7	9.6
Water and sanitation	2.7	3.0	2.6	3.6
Gender, labor, social ^a	0.4	0.4	0.3	0.4
Law and order	6.4	4.9	4.8	5.0
Accountability	8.1	4.7	4.7	4.3
Economic functions	8.1	10.7	15.2	11.7
Public sector management / administration	11.9	13.6	13.0	12.7
Interest payments	7.6	7.8	7.0	7.5
Total (includes unallocated)	100.0	100.0	100.0	100.0
Total for Human Development	32.5	34.2	30.9	32.9

a. Gender, labor, and social estimates are for fiscal 2003/04 and fiscal 2005/06.
Source: Background to the budget fiscal 2006/07.

How does Uganda's expenditure on social sectors compare with other countries? In this situation, it is likely that any increase in public expenditure on service delivery will come largely from the growth in the overall budget envelope, rather than a substantial increase in the share. Furthermore, Uganda's spending on health and education is already

at average levels when compared with similarly situated countries. Table 10 lists countries with about the same human development index as Uganda and their health and education spending (public only). Uganda, at 2.2 percent of gross domestic product for health, and 5.2 percent for education, ranks about average among the 13 countries in the table. However, when the *Human Development Report 2006* breaks down countries into over-performers and under-performers, it reveals that such spending is not necessarily linked to successful indicator outcomes. While the human development index ranking gaps may be due to factors other than public expenditures, it would seem to suggest that some countries spend their resources more efficiently and get better results (Box 8).

Table 11. Health and Education Spending in Comparable Countries

Rank of countries by		Country	Public health expenditure, 2003 (percent of gross domestic product)	Public education expenditure, 2002–04 (percent of gross domestic product)
Human development index	Gross domestic product per capita			
140	165	Congo	1.3	3.2
141	139	Sudan	1.9	..
142	162	Timor-Leste	7.3	..
143	169	Madagascar	1.7	3.3
144	131	Cameroon	1.2	3.8
145	152	Uganda	2.2	5.2
146	96	Swaziland	3.3	6.2
147	150	Togo	1.4	2.6
148	135	Djibouti	3.8	6.1
149	123	Lesotho	4.1	9.0
150	168	Yemen	2.2	..
151	133	Zimbabwe	2.8	..
152	159	Kenya	1.7	7.0
Average			2.7	5.2

Source: UNDP 2006. The Congo, Lesotho, and Uganda estimates for public education expenditure come from WWAP 2006.

Over-Performers and Under-Performers

Looking at spending on health and education for these two groups, we see very little difference between the over- and under-performers²⁴. Both groups spend about 3 percent of gross domestic product, with private spending on health at about 2.7 percent. Both groups spend 16–17 percent of their budgets on education. The under-performers actually spend more on education as a share of gross domestic product (5.1 percent compared with 3.8 percent). Thus countries that do relatively well do so by spending about the same on health and education as those that do poorly. While the human development index ranking gaps may be due to factors other than public expenditures, it would seem to suggest that some countries spend their resources more efficiently and get better results.

²⁴ As classified in *Human Development Report 2006* data bank were classified into “over-performers” and “under-performers,” based on having at least a 10-point rank gap (+ or –) between the rank on gross domestic product and the human development index.

Table 12. Characteristics of Countries Under- and Over-Performing on the Human Development Index

		Public education (2002–04)		Health (percent of gross domestic product, 2003)		Per capita gross domestic product (PPP, 2004)
	Number of countries	Percent of gross domestic product	Percent of budget	Public	Private	
				Over-performers	32	3.8 (20)
Under-performers	37	5.1 (16)	16.8 (10)	3.0	2.6	3,387
Uganda		5.1	17.3	2.6	5.1	1,478

Note: Data in parentheses show number of countries when complete data were not available.
Source: UNDP 2006.

Spending is not pro poor

Box 8. More Public Spending for Less Advantaged Districts

Apac district missed out on the health infrastructure development financed under Health Sector Strategic Plan I. Partly as a result, it lacks basic health infrastructure. But Health Sector Strategic Plan II lacks a component for infrastructure development. So, unless health and education development expenditures increase to accommodate such situations, disadvantaged districts like Apac are likely to suffer from inadequate infrastructure.

In primary education, too, not enough funding flows to disadvantaged districts. The study team observed overcrowding in primary grades 1, 2, and 3 in Alito schools. The need for development expenditures for education is great.

Source. Apac District field visit.

Expenditure on education is inefficient. A recent efficiency study for the education sector found low efficiency of public expenditure. At the primary level, the major causes of inefficiency include: (i) leakage of resources between the central government and the school through ghost teachers, misuse of education grants to district governments (estimated at about 16 percent) etc. (ii) leakage of resources within the school, mainly attributable to high rates of student, teacher, headmaster absenteeism (over 19 percent unexcused absences); (iii) deployment of teachers both across and within districts, which appears to be unrelated to measures of need; and (iv) allocation of resources within government schools is inequitable with some rural schools unable to raise resources to support improvement of quality, and where class sizes are largest in the early grades and smallest in the later grades. Box 8 further elaborates on resource allocation issues.

Resource allocation within schools also affects results. For example, about 91 percent of the resources sent to local governments for education are spent on wages and only 9 percent goes to non wage. This means that only a small proportion of the budget is

devoted to improvement of learning at the schools level. This may partly explain why learning achievement remains low.

Education—Achieving Universal Secondary Education with a Falling Sector Share.

Although education spending has risen in recent years in real terms, its sector share declined to about 17 percent of total government spending. The problems will only become worse with the expansion of universal secondary education, where per-pupil costs are higher. Only about 40 percent of primary students now enter secondary school. The government plans to raise this figure to 80 percent by 2015. And the bulge from universal primary education is now hitting the secondary system.

Health—More Money, but Still Falling Short on achievement

Government focus on health. Uganda has a large public health system, ranging from many rural health units, through a referral ladder, to regional and national hospitals. The government has recently shifted its focus from curative to preventive care, with more emphasis on primary health care facilities in rural areas. Progress has been significant in health system development, particularly in decentralizing health services partnerships with donors, and use of private-not-for-profit health providers within a sector-wide approach. But this shift has not been cheap.

Health spending is low. Health spending rose from about 6 percent of the budget in 1998/99 to 14 percent in 2005/06. Still, the public health system remains underfunded and understaffed. And it often cannot meet the needs of its clients.²⁵ A substantial proportion of health care is provided by the private sector, both at the high end for people who can afford to pay, and at the low end for the poor who prefer local healers, midwives, and traditional remedies. More than 40 percent of the poor use private providers when they are ill.²⁶ Only 24 percent of child births take place in a health facility—attesting to the health system’s high cost and its poor performance.²⁷

Government health services have been nominally free since user charges were abolished in 2001. However, public health facilities are often out of drugs requiring patients to buy them from the private market. The World Bank’s health-sector report found an average stock-out rate of 40 percent in the public health clinics.²⁸ Patients having surgical procedures are normally required to bring the required supplies, including sheets, towels, gloves, and other items. These shortages have become less severe in recent years since the government increased allocations for drugs and supplies. The 2005/06 Uganda National Household Survey reports that Ugandans spend about 7 percent of their household budget on medical care, up from 4 percent in 2002/03. The proportion is higher in rural areas than in urban, reflecting better and more accessible public facilities.

²⁵ World Bank 2004, p. xiv.

²⁶ World Bank 2004, p. xvii.

²⁷ PRSC-5, Program Document, p. 23.

²⁸ World Bank 2004, p.91.

The share of district budget in the recurrent health spending increased from 37 percent in fiscal year 1999/2000 to 46 percent in fiscal 2002/03, due to significant funds from the Primary Health Care Conditional Grant.

Water—Struggling with increasing unit costs, but declining budget

Spending on water is up over the past few years. In nominal terms, public investment per beneficiary of new water and sanitation projects in rural areas doubled between 2002/03 and 2005/06. Investment changed little between 2003/04 and 2004/05 but increased from US\$ 47,791 in 2004/05 to US\$ 61,691 in 2005/06—a 29.1 percent increase in one year. The Ministry of Water, Land, and Environment attributes the increase to fewer low-cost options being available (including springs and shallow wells), higher overhead, rising costs for other resources (such as fuel and construction materials), and rehabilitating more boreholes.

Figure 10 Water and Sanitation Sector Share as Percentage of National Budget (2004/5 to 2008/9)

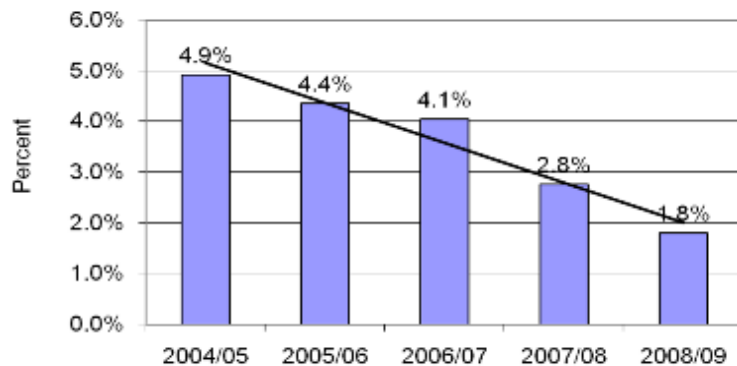
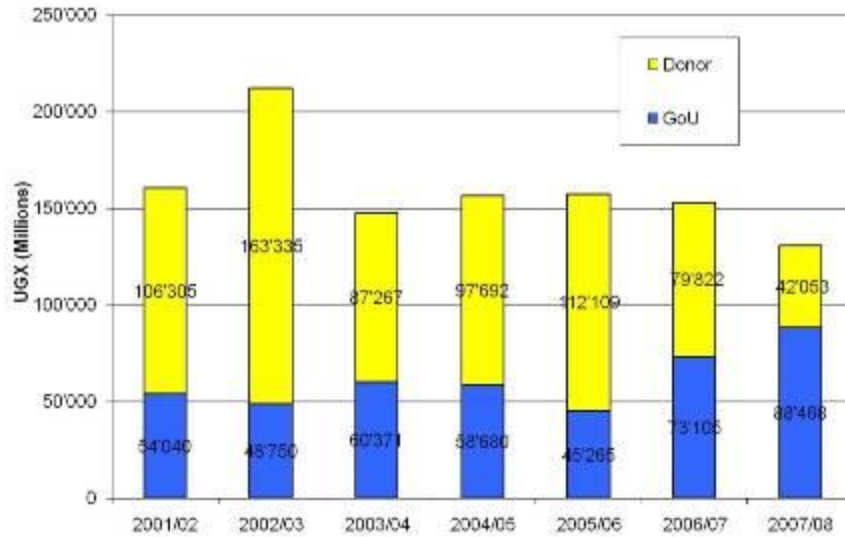


Figure 11 Water and Sanitation Sector Allocated Budget Trend

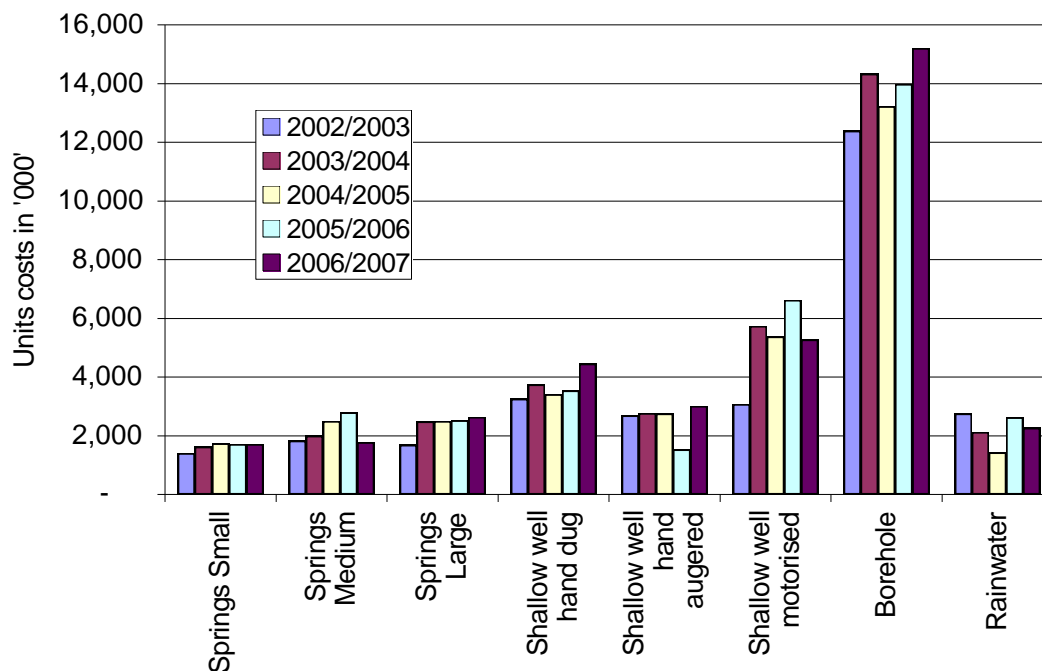


(Government of Uganda, Water and Sanitation Sector Performance Report 2008.

Since 2001, all Water and Sanitation Sector (WSS) services to urban, small towns and rural communities have been directed through the government budget process. Making the WSS sector a priority in the PEAP/PRSP process has ensured a fair level of predictability in budgeting and resource allocation. However, as can be seen from Figure 10 and 11, the funding for the water and sanitation sector is on the decline. (Government of Uganda, 2007). Water and Sanitation Sector Performance Report 2007. Ministry of Water and Environment: Kampala).

Unit costs are increasing. The number of people served annually is not meeting the population increase each year, and unit costs in the rural and small-town subsectors are increasing as the number served decreases. As indicated in Figure 12, unit costs per person served in rural areas rose from approximately US\$ 16,000 to US\$ 27,000 between 2002/3 and 2006/07. The reasons include a marked reduction in the availability of cheap technologies, an increase in the cost of other resources, and an increase in overhead costs as a result of the creation of new districts, which in addition compound the capacity needs for local governments. The proportion of sector grants available for water supply facilities has fallen from 81 percent to 70 percent over the last five years, due to set-up costs of new districts. However, the governance issues cannot also be ruled out.

Figure 2.2. Trend of Unit Costs for Water Supply Technologies



Water—Sharing the Maintenance

User participation is weak leading to poor maintenance. Uganda has improved access to safe drinking water for its citizens. But inefficiency remains in the functionality of water sources and the distributions of funding. The sector has carried out value-for-money and tracking studies that have helped to improve service delivery. A weak procurement system, poor contract management, and lax supervision have also contributed to poor facilities. Poor user participation due to inadequate mobilization and training (as some local government councils allocate all the funds on infrastructure) is contributing to the poor maintenance of facilities. The sector is carrying out a cost-effectiveness study to further address these problems.

Under Uganda’s demand-driven approach, operation and maintenance for water and sanitation are shared between districts and communities, with communities often bearing the greater burden. Site visits in Rukungiri, Apac, and Hoima showed that this approach has been developed more for water than for sanitation. Water source committees understand their role well—ensuring the sustainability of improved water and sanitation in their jurisdictions. Fees of US\$ 500 per household per month are levied to fund minor repairs. Many households, however, do not pay their contributions. Two pump mechanics were trained in every sub county, but these “volunteers” charged a facilitation fee of US\$ 10,000 for each repair call. Lack of maintenance funds, arising mainly from

communities' failure to contribute sufficiently, has rendered some water sources, especially boreholes, nonfunctional. Box 9 and 10 elaborate challenges in delivery of water and sanitation.

Box 9. Yolamu Ndyanabo, chairperson of a village committee in Hoima district, described the challenges: Water source committees cannot force people to pay, and village councils do not enforce compliance either. So, our improved water facilities often break down beyond the capacity of rural communities to repair. When this happens, the communities revert to the old practice of walking two kilometers to get water from the nearest natural spring. Others go back to the unprotected springs, swamps, rivers, and other unsafe water sources.

Unclear budgetary responsibilities exacerbate the problems. Water-user committees are responsible for minor repairs, while major repairs are the responsibility of the district authority. In Nyakabingo parish in Hoima district, the community could not repair a collapsed borehole because it was unable to raise the funds, so it reported the case to the district authority through the sub county. The repairs still had not been made a year later. With only three boreholes bringing water to the parish, the collapse of one left only two functional. Pupils missed school because of the longer time needed to collect water from congested boreholes.

Where did the district water budget go? The Hoima district authorities, reluctant to fund sinking of boreholes, spent the biggest proportion of the district water budget on maintaining water sources or developing new water sources in already better-served areas—a policy both inequitable and inefficient.

Source: Field interview

Box 10. Boreholes—Expensive, But Often the Only Option

Does the Hoima District Water Office have mechanisms for maintaining improved water sources that have broken down beyond community capacities to repair? Yes, says the district water officer. But about 70 percent of the boreholes are not functional. Boreholes are expensive to maintain, and each costs about US\$3 million to rehabilitate. The result, says the officer, is:

Because funding is inadequate, districts are often forced to use cheaper water sources, such as protected wells and shallow wells, which are relatively cheap to establish, operate, and maintain. Shallow wells cost US\$3.4 million to set up on average and are typically cheaper to maintain than boreholes, which cost US\$18–20 million to sink and about US\$3 million to repair. The problem is that cheap water sources are not feasible in all areas under our jurisdiction. For example, the lakeshore areas of Lake Albert have sandy soils and hardly any safe water sources close to the surface. Boreholes would be important sources of safe water there, but sinking boreholes is a tedious and costly venture in these areas.

Findings from the Field: the Hoima District

The Other Spending Sources - Nongovernmental Organizations

The role of nongovernmental organizations in service delivery. Field work reveals that in the Rukungiri district the Uganda Program for Human and Holistic Development sensitizes school management committees and the community to a range of issues, particularly HIV/AIDS. But despite the presence of many NGOs in the Apac district, their impact on the ground could hardly be seen. Indeed, two nongovernmental organizations reportedly collected registration fees from orphans and widows, agreeing to educate the orphans, then disappeared. In Hoima district a successful builder of primary schools failed to coordinate with government and built health units outside the government's work plan. After construction, the organization asked the government to take control of the facilities, staff them, and provide drugs—which is unlikely because they were not within government plans.

Household Expenditure on Service Delivery

Cost remains a major factor in service delivery, despite the no cost sharing policy in health and the UPE policy. Abolishing user fees in public health facilities and introducing universal primary education has, not surprisingly, increased household demand for these services in some areas. Even so, household contributions to education and health costs remain significant. According to household survey data, the proportion of households spending their own money on education increased from 65.9 percent in 2002/03 to 66.7 percent in 2005/06. The northern and western regions registered the highest increases—nearly 2.7 percentage points, and 4.4 percentage points for urban areas. Private monthly expenditures on education increased from US\$ 51.9 billion in 2002/03 to US\$ 81.7 billion in 2005/06 (table 12) Overall out-of-pocket spending on education per capita increased from US\$ 51,866 in 2002/03 to US\$ 81,678 in 2005/06.

Inequity in financing human development is one of Uganda's development challenges. Where households must contribute for their members to access social services, richer households make substantial contributions while poor households make very little, if any. This partly explains the inequity in access to services. The divides between rural and urban areas and between richer and poorer regions are wide. And the private sector's growing role in delivering social services—particularly in health and education, and especially in urban areas—without any systematic partnership further widens those divides.

Beneficiaries are expected to contribute to delivery of services. For example, the universal primary education guidelines require parents to buy uniform, pens, pencils, exercise books, and clothing, which poor parents cannot always afford to buy. Beneficiary contribution to service delivery have varied from community to community. The two most important determinants of how much is paid are the poverty level of the community and the resolve of local governments to enact ordinances that compel households to contribute. Where community participation in financing human development is high, programs are more advanced than where community participation is low or nonexistent. For example, in Rukungiri district, where poverty is relatively low,

parents whose children were in universal primary education schools were willing to contribute financially. The same was true for pupils in universal secondary education schools. But this was not true in Apac and Hoima—two poorer districts.

Table 13 Household Out-of-Pocket Spending on Education and Health

Category	Education				Health			
	Households with nonzero expenses (percent)		Monthly spending (millions of UShs, 1997 prices)		Households with nonzero expenses (percent)		Monthly spending (millions of UShs, 1997 prices)	
	2002/03	2005/06	2002/03	2005/06	2002/03	2005/06	2002/03	2005/06
Country	65.9	66.7	51,866	81,678	62.3	71.9	29,310	53,751
<i>Place of residence</i>								
Rural	67.5	67.6	30,019	46,951	62.1	73.1	22,985	43,226
Urban	58.4	62.8	21,847	34,727	63.1	66.5	6,324	10,526
<i>Region</i>								
Central	63.1	62.5	27,420	42,840	65.6	70.3	12,606	20,229
Eastern	69.8	69.6	10,120	15,513	72.8	80.2	7,017	10,459
Northern	62.5	65.2	3,499	5,719	52.5	66.9	2,487	5,107
Western	68.0	70.7	10,827	17,606	54.3	70.3	7,200	17,956
<i>Quintile</i>								
Poorest	70.5	72.1	1,080	1,828	53.9	63.3	1,506	2,563
2nd	74.1	73.1	2,475	3,798	61.1	74.0	2,227	4,844
3 rd	72.9	67.3	4,462	6,152	65.4	74.8	3,634	7,782
4 th	64.1	65.5	7,743	11,013	63.8	74.2	5,664	12,554
Richest	54.0	59.2	36,105	58,887	64.9	72.1	16,278	26,009

Source: Calculated from Household Survey 2006

Household spending. The share of household spending on health—consultation fees, medicine, and transport—increased from 62.3 percent in 2002/03 to 71.9 percent in 2005/06 (Table 12). Driving the increase is higher household spending in rural areas. Monthly out-of-pocket expenses increased from UShs 29.3 billion in 2002/03 to UShs 53.8 billion in 2005/06. Disaggregated health care data broadly confirm that cost remains a major constraint. Out-of-pocket spending on education is progressive, with poorer households spending a smaller share of their consumption expenditure than their richer counterparts, regardless of location. The direct costs of education include school and registration fees, uniforms and sports wear, and books and school supplies. Almost all pupils attending government aided primary schools spend money on books, regardless of geographical location and social grouping. According to the 2005/06 National Household Survey, the fees paid vary by location and income. The per-unit direct costs are higher in urban areas than in rural areas, but the annual direct costs are higher in rural areas than in urban areas (Table 13).

Table 14. Direct Cost of Public Primary Education Schooling, 2005/06

Expenditure category	Households with nonzero expenses (percent)	Household share in education expenses (percent)	Total annual direct cost (US\$ millions)	Annual cost (US\$ millions) ^a	
				Mean	Median
<i>National</i>					
School & registration fees	36.7	18.2	18,537.7	13,126	6,000
Uniform and sports wear	69.7	30.4	14,269.6	5,322	4,500
Books and school supplies	96.0	36.5	15,840.2	4,288	3,000
Other costs	47.6	17.0	12,479.5	6,808	3,000
All direct costs	96.9		61,126.9		
<i>Rural</i>					
School & registration fees	34.7	16.8	12,137.9	9,970	6,000
Uniform and sports wear	69.2	30.8	11,936.7	4,920	4,200
Books and school supplies	96.2	37.6	13,492.5	3,998	3,000
Other costs	47.8	17.0	8,724.8	5,208	3,000
All direct costs	97.1		46,291.8		
<i>Urban</i>					
School & registration fees	56.9	33.5	6,399.8	32,847	15,000
Uniform and sports wear	74.5	26.4	2,332.9	9,146	6,000
Books and school supplies	93.1	25.0	2,347.6	7,363	4,000
Other costs	46.1	17.7	3,754.7	23,815	8,000
All direct costs	95.0		14,835.1		
<i>Extremely poor^b</i>					
School & registration fees	23.0	11.5	1,065.4	6,655	4,500
Uniform and sports wear	58.0	31.3	1,669.5	4,128	4,000
Books and school supplies	95.4	42.2	1,615.0	2,427	1,800
Other costs	43.2	16.4	880.2	2,922	2,000
All direct costs	96.9		5,230.1		

a. Annual costs are calculated based on only those children reporting nonzero costs per direct primary school expenditure category.

b. Extremely poor refers to those households or individuals unable to meet the minimum food basket for a healthy life.

Charges by school management committees for assessment and mid-day meals.

Defying the president's directive that universal primary and secondary schools should not charge, Rukungiri district's school management committees worked with parent-teacher associations to agree on charges. Schools now require every pupil in universal primary schools to pay a small contribution of (US\$ 1,000–2,000) towards pupil assessment. This resulted in students performing better on examinations at the end of primary school cycle. Other SMCs have agreed to charge a small fee to contribute towards mid-day meals, while in other locations pupils go hungry for the whole day, which greatly impacts on their learning. On the other hand, Apac and Hoima enforce the presidential directive. Parents' lack of contributions seems to have lowered performance.

Table 15. Cost of Health Care, 2005/06

Category	Consultation and medicine [U.Shs]	Transport [UShs.]
Country	7,960	5,624
Rural	7,318	5,987
Urban	12,050	4,028
<i>Region</i>		
Central	10,585	5,694
Eastern	4,769	4,620
Northern	4,582	5,314
Western	11,425	6,219
<i>Quintile</i>		
Poorest	2,867	3,721
2 nd	3,898	3,836
3 rd	5,524	4,390
4 th	8,364	5,578
Richest	16,614	7,129

Source: Compiled from Household Survey Data

Chapter 5

Improving Service Delivery - Fixing the Missing Link

New service delivery approach. There is now a realization that human development indicators are not improving as fast as expected and resource constraint is becoming more evident. The focus by policy makers on provision of inputs with the expectation that this will produce the desired results has to change. A more promising approach as described in the World Bank's *World Development Report 2004: Making Services Work for Poor People* is to strengthen the links among clients, providers, and policymakers. It is expected that approach would increase accountability and users' control and improve resource use.

This approach is not one-size-fits-all, and means must match ends. Some services can be better provided for by the national government and others by local governments. Independent user groups for schools and water supply systems can improve the quality of services, but they can also undercut legitimate local governments. Where politicians are likely to capture public services and distribute them to influential clients, arrangements that turn services over to private providers may improve services for the poor, even at the cost of some increase in user charges. But where results are difficult to monitor, using private providers may not work. Turning services over to local groups works best when local conditions differ markedly within the same country—that is for a heterogeneous rather than a homogeneous society as this enables local conditions to be factored into service delivery.

Improvement in service delivery is slow partly because accountability for results is weak. Emphasis has too often been placed on financial accountability and compliance with official guidelines, rather than on delivering human development results. During the early 1990s Uganda's civil service reforms introduced results-oriented management and performance-based budgeting. But these reforms remain largely on paper. Auditors and political supervisors rarely ask for results on-the-ground of local development programs. Local financial experts prepare impeccable accountability reports even when there are no results to show on the ground. In some sectors like education, Government has made an effort to put in place measures to publicize release of funds to schools and this greatly improved the amount of resources reaching schools. However, this study found that what is more important is what these resources are used for once they reach schools. Some of the schools used resources received for administrative purposes, mainly head teacher's travel.

Complicating the situation is the failure by policy makers to cascade the targets and clear standards of service delivery down to service providers to understand how they are expected to contribute. While the Ministry of Finance budget guidelines to sectors require submission of budget along with results/outcomes, what is submitted normally bears no relationship with what goes on at the service delivery units. While some sectors

have made an effort to cascade the results / outcomes to the districts, this is where it stops and the service providers (facility level) do not participate in setting targets for these outcomes. This lack of shared vision is a major impediment to improvement in key service delivery indicators. In addition, there is no mechanism for holding the sectors, local governments or service delivery facilities (health centers and schools) for results for the funds they receive.

Accountability relationships. Cross-national evidence suggests that making services work for poor people involves reforming public-sector institutions to build local administrative capacity, bring public services closer to the people, and to clarify the framework of accountability among clients, service providers, and central and local policymakers—as in Uganda’s 1998 Local Government Act. The most effective policy addresses several distinctive features of accountability relationships: delegating authority, informing stakeholders on the progress attained, and enforcing compliance. All of which must be present if pro-poor services are to be delivered effectively.²⁹

To imagine these relationships, consider a Ugandan parent who decides to enroll a child in a public primary school. Under universal primary education, the parent has the opportunity to select some members of the school management committee (delegation). The management committee decides how the capitation grant is spent (finance). The committees, together with the head teacher, are responsible for ensuring that teachers are in class teaching pupils (performance). Parents get to know whether their children are acquiring knowledge through continuous assessment reports, end-of-term reports, or children’s performance on the primary leaving exams (information). If pupils perform poorly, parents can request, through the management committee, that district authorities transfer the school head teacher (enforceability). But this is only easier said than done.

Decentralization was introduced to improve accountability and user control. The motivation for decentralization in Uganda was to improve service delivery by moving away from modalities that ignored local preferences. The main idea behind decentralization is that bringing government closer to the people increases accountability of elected officials to the public (citizen voice) and creates the necessary incentives for these policy makers to act on citizen demands³⁰. However, it happens that local politicians are subjected to the same pressures of patronage as their national counterparts. For example pressures of focusing on local infrastructure or visible investments remain strong in all areas and always override. While the Local Government Framework provides for bottom-up approach to planning, this process is not systematic and therefore ineffective in addressing the needs of the poor. This would address the inequalities. With decentralization, districts are responsible for service delivery, while the national ministries set policies, rules and guidelines to govern delivery. It is an attempt to focus on the benefits of the accountability framework by reducing the distance between citizens and politicians/policy makers.

²⁹ India Rural Governments and Service Delivery study

³⁰ Section 35 (3) of the Local Government Act stipulates that the District Council shall prepare a comprehensive and integrated development plan incorporating plans of lower level local governments.

Decentralization has been a radical change in the main responsibilities for delivery of education, health, water and sanitation, among others, for purposes of improving service delivery. New political structures for local governments and arrangements for sharing resources were established. District councils consist of elected representatives, and they have a dual accountability, upward to the state and downward to the electorate. The main constitutional duties for a district local council government is preparing and approving annual development plans and budgets and monitoring of their implementation. Decentralization devolved expenditure and revenue responsibilities for education, health and water and sanitation to local governments, retaining tertiary education and referral hospitals, setting standards and policies as responsibilities for the center.

The link between decentralization and improved service delivery is not obvious, and cross district evidence suggests that more needs to be done to improve service delivery. *“A focus group discussion found that: Planning involves putting together wish-lists generated by NGOs and CBOs, but without clear guidance on resource constraints and prioritization. At the end of the process, a district desk officer picks out a few big projects without systematically taking into consideration the needs by communities. The poor remain voiceless.”* In addition, adding districts often does not mean more resources for it - because the cost of public administration typically goes up, displacing resources available for service delivery. Besides, a new district often lacks the core capacities to function, and other factors, including unity of purpose among district officials can have significant influence. Greater impact of decentralization would depend on several factors, including:

a) Greater incentives for local policy makers to improve services delivered to citizens. To enhance accountability, it would be necessary for Government to establish mechanisms to evaluate performance of facilities, monitor their performance and to provide rewards to service providers for achieving better results. Incentives could help to change behavior. Monitoring performance without financial or non financial rewards is not likely to change behavior, and creating a system is not simple either. In most cases compensation is based on seniority rather than performance, salaries are too low for a decent standard of living, which contributes to “moon lighting” – by mainly teachers and health workers, and absenteeism goes on without any penalties. One way some countries have addressed this problem is by according facility managers (head teachers and health unit superintendents) the flexibility to hire and fire, as well as providing compensation on the basis of performance (as in the private sector). To avoid favoritism and poor judgment by facility managers, policy makers could set rules for monitoring and evaluation and holding facility managers accountable for measurable results. In this regard, facility managers would set their targets for specific agreed indicators. Setting aside some resources for the center to reward the most improved local government, then each local government rewarding the most improved service delivery unit would provide clear incentives to improve emphasis on results.

b) Improve monitoring and evaluation systems. Within the flexibility enjoyed by local governments, monitoring and evaluation is weak and there is no systematic system to encourage good performance. Policy makers need reliable data to measure progress, but

also good analysis to establish causality between policies and results, and to be able to put in place any corrective measures for various geographical areas or citizens groups. Lack of systematic monitoring has led policy makers to emphasize inputs such as financial resources and processes and less emphasis on results or impact on citizens. Although there are medium term budget frameworks for local governments, there is not yet a clear link between financial requirements and expected sector performance. The development of a binding three year public expenditure program with clear outcomes clearly linked to the national sector programs and cascading down to service delivery units remains a missing link. Under these circumstances, no commensurate effort is put into achievement of outcomes agreed at the national level. In addition, clients/citizens or even providers are in most cases not well aware of the standards of services that should be provided. The current funding bears little or no relationship to results/outcomes. Thus a critical step forward is to improve the focus on outcomes, in particular systems of accountability for results.

The importance of public accountability was well documented in WDR 2004, Making Services Work for the Poor. Greater public accountability is associated with open societies and greater transparency. This allows citizens to become more actively engaged in monitoring service delivery and influence policy change. Citizens also make service providers and government officials more accountable for quality of services and policies that benefit the citizens. Actions that have made a difference in other countries include: (i) regular dissemination to the public of performance on various indicators (say by district); (ii) have districts and facilities to analyze data to identify weak areas and focus their interventions accordingly – this would require some capacity building; (iii) more systematic monitoring and evaluation of new initiatives to improve service delivery. For example in Brazil, open comparison of states' performance created competitive pressure for improvement because the population pressured state governments to do better based on the information available from other states.

However, a clear framework is required to ensure that local government, and in turn facility managers and service providers are held accountable for results (within the resources provided) and that staff are held accountable for being present and doing their job, indicators are reliably monitored, and funds reach intended facilities and used to address citizen needs. The first step in improving monitoring and accountability should be setting clear goals, standards and measurable indicators to facilitate monitoring and dissemination.

c) Greater voice control in the management and oversight of service providers (client power). Not surprisingly, when the poor have no voice in setting policies, government programs do not meet their needs. Promoting citizen voice would therefore be a major step in improving service delivery. Citizens need the tools to hold service providers accountable for providing effective services. Benefits of decentralization will not be maximized unless citizens, communities and users of services are empowered to strengthen the accountability mechanisms. Uganda's decentralization framework acknowledges the crucial role of citizens in mobilizing their communities, holding local governments accountable, and in the democratization process. Despite this recognition,

citizen participation remains one of the weakest links in the service delivery chain in Uganda. Thus the process by which citizens or users of services hold service providers accountable for results is ineffective. While decentralization provides for institutional mechanisms for community involvement in service delivery (health management committees), education (school management committees), and water (water user associations) these have had limited effectiveness in giving citizens control in the management and oversight of service providers as well as in planning and monitoring of service delivery. While these committees are in place, their functionality is in question, and there is weak involvement of other associated groups like Parent Teacher Associations. There is little effective citizen power over school budgets, personnel selection or promotion. The major reasons for weak performance of these are poor governance, weak capacity of these committees and lack of knowledge of their roles. The result is inadequate accountability by facility management, high staff absenteeism, long periods when facilities have no staff due to slow recruitment. Moreover disbursed funds often do not reach the intended beneficiaries owing to leakages.

As a result of this weak involvement, monitoring mechanisms and participation in planning for service delivery is very limited resulting in poor services, particularly in rural areas. There is evidence both in Uganda and else where that huge gains in outcomes can be made if citizens are given more voice. The following mechanisms could help to improve citizen voice:

(i) Increasing accountability of policy makers and service providers to citizens (citizen voice) through information. International experience shows that making more information available to citizens about government service delivery can have a significant impact on increasing citizen pressures for improving services. This would happen by making resource allocation and service delivery outcomes available to the public. This can improve distribution of services within the population and lead to more rational resource allocation. Some countries like Colombia have made progress through regular monitoring and massive public campaign to monitor how various development objectives are being fulfilled. Indicators were established to cover various sectors including education, health and other public services. Results were published and broadcast on TV, in news papers and radio programs. Citizen Report Card (CRC) and Community Scorecard Process (CSC) also provide service providers with feedback from the community about the adequacy, efficiency and quality services, based on their experience.

(ii) Empower communities to provide feedback, and to take financial and operational control. This would involve empowering user groups / committees for schools, health and water facilities to provide feedback to service providers and, when feasible, to take financial and operational control over local facilities or monitor performance indicators that have been agreed upon. While these committees may not have executive powers, service providers / Government officials could involve them in the budget process and report to them on a regular basis. Government should also invest in building capacity of these user groups and also improve awareness of their roles - Community Development Officers would play a critical role in this regard. Over the long

term when capacity of these committees is stronger, Government could make them more accountable to the community by giving them the right to hire and fire facility workers. El Salvador's Community Management of Education Program provides a good example (Box 11)

Box 11. El Salvador's EDUCO—A Community-Managed Rural Education Program

El Salvador's EDUCO program, established as a pilot program in 1991, channels government education funds through parents organizations, focusing on the poorest communities. These community-level groups, empowered by the Ministry of Education to disburse public funds from the central education budget to hire teachers and cover basic operational costs, support the development of new educational services.

EDUCO has three goals to: (i) expand preschool and basic education in rural and poor communities; (ii) promote community participation in education; (iii) establish a curricular link between preschool and the first grades of basic education.

The success of the pilot prompted the Ministry of Education to institutionalize the program, which gradually became the model for expanding access to education in rural areas. In 2003 enrolment surpassed 362,000 students, more than 2,000 parents' organizations were managing rural schools, and more than 7,000 teachers had been hired. The parents' organizations administered approximately US\$50 million allocated to them—about 12 percent of the national education budget.

EDUCO's impact is evident in both efficiency and effectiveness: (i) Greater agility in creating services; (ii) Decentralized, community-level decision making; (iii) Improvements in teachers' and students' attendance, increasing learning time for students; (iv) Academic achievement that is at least as good as, and sometimes better than, the results in traditional public schools.

*Source: Summarized from EDUCO case study in "Reducing Poverty – Sustaining Growth: What Works, What Doesn't, and Why", World Bank conference, Shanghai, 2004,
<http://info.worldbank.org/etools/reducingpoverty/casestudy.asp?type=case>*

In order to strengthen the chain of accountability, local school boards can be empowered to authorize expenditures, hire teachers, and monitor school performance. Studies of similar systems in other countries show that local management increases teacher and student attendance, though evidence on overall student performance is not clear. Uganda already has school management committees and health committees, but because they lack power and financial control, they have not proven effective. However, there is need to also invest in capacity building for these committees. Cambodia's example highlights one way to devolve responsibility (Box 12).

Box 12. School Improvement in Cambodia

The Education Quality Improvement Project in Cambodia uses a participatory approach and performance-based resource management to improve school quality. Operating in three provinces, the project covers 23 percent of the primary school population. Local school communities identify their needs and make proposals for change and investment. The Ministry of Education then delivers funds directly to school clusters.

District-based “animators” support change management, drawing general lessons from the experience with the school’s quality improvement grants to advise the government on how to improve education policies. Supporting the animators is a network of local technical assistants, who provide pedagogical and organizational help.

The project has stimulated lively discussion at the school, cluster, and administrative levels on how to improve schools. It has also promoted changes in school administration and in teaching and learning practices. The result has been unprecedented responsibility devolved to school and local administrators.

Source: World Bank (2002b).

(iii) Improving accountability through School Management Committees (SMC)

SMC are a crucial part of the planning structure under the UPE program. However, their ability to deliver is influenced by several factors including the level of education of the members and exposure. The level of performance by these committees is mixed. The challenges arise from those who do not know their role and only want to be given favors owing to their privileged positions and those who have to be educated on their roles. Some of the members are primary school leavers or drop-outs, and lack the capacity to appraise the technical staff and in some cases they are easily manipulated into corruption. For example, some districts have organized workshops for SMC to train them on management of UPE funds and to plan for schools, and this has improved the situation.

However, community participation in managing and monitoring health facilities, though well intentioned, can also lead to inefficiency. In Rukungiri district, for example, a focus group reported that health workers take drugs for their personal benefit, and beneficiary communities hoard drugs by faking illness—to prepare for a possible sickness that comes when health units are out of stock.

(iv) Creating citizen report cards or community scorecards, to solicit public feedback to providers and highlighting service failures.

Citizen report cards can be an effective way of enabling citizens to monitor the quality of services and prudent and transparent use of resources (Box 13). Districts can use scores on the report cards, together with other sources of information, to enforce performance contracts on specific targets. However, increasing the involvement of users and clients in managing clinical health services can be problematic given the technical nature of services and the different problems facing each patient. Even so, it should be possible to organize user groups in each community to provide feedback on services and shortcomings and to participate, at an advisory level, in health-unit management. User groups can issue report cards on client satisfaction and monitor staff attendance to reduce absenteeism. Such involvement

can promote feedback in both directions, increasing provider responsiveness to client needs while alerting users and clients to the constraints facing local providers. Uganda currently lacks a mechanism for introducing, implementing and publicizing the results of report cards. A good starting point would be to build on the work that has been done on the citizen report card in Uganda.

Box 13. Using Citizen report Card in Health in Uganda

Results from a health care initiative in Uganda suggest that community monitoring can improve service delivery when traditional top-down supervision is ineffective.

To examine whether beneficiary control works, researchers conducted a randomized field experiment in 50 communities from 9 districts. Communities received baseline information on the status of service delivery, in absolute terms and relative to other providers and government standards. They were also encouraged to identify areas of concern in health provision and present proposals to address them with existing resources. The goal was to ease two constraints communities typically face in monitoring providers: inadequate local organizational capacity and lack of access to reliable and structured information. The results after a year indicate that:

- *Infant weights were up, and deaths among children under age 5 dropped by one-third in the treatment communities.*
- *Use of general outpatient services was 16 percent higher in the treatment facilities than in the control facilities.*
- *Gains were made in the number of deliveries at treatment facilities and in the use of antenatal care and family planning.*
- *Treatment practices improved significantly in the treatment communities, according to both perceptual and quantitative data, suggesting that the quality and quantity changes were due to changes in staff behavior.*

As the program progressed, treatment communities became more engaged in monitoring the health unit. Upper-level government supervision remained low in both the treatment and control groups, reinforcing the conclusion that better community monitoring was the key to gains in service delivery.

Martina Bjorkeman, and Jakob Svensson, 2009.

d) Establishing performance-based contracts for public providers, with clear and measurable indicators of desired performance and related to financial resources provided. This would improve accountability through increased focus on results. There is weak accountability by local governments to meet targets. Clear performance standards and accountability mechanisms should be put in place and enforced at all levels. Currently head teachers sign customized performance contracts, but enforcement mechanisms are very weak. In addition, contracting should be accompanied by a reasonable level of resources at service delivery units, which is not the case. For example, a hospital that requires UGX 1bn/= per year to effectively provide the needed services should not be expected to deliver the same services with one third of that required resources. With the implementation of the Poverty Action Fund in 2000 (Box 2.2), a large portion of subsector funding for rural water and sanitation has been

transferred directly to the districts as conditional grants.³¹ This decentralized administration leaves the central government as a policymaker, facilitator, and supervisor, with local governments as providers in rural areas. The key has been establishing sector targets and a performance-monitoring framework, as well as building local government capacity.³²

The VFM/tracking studies should be continued. Feedback mechanism (for example information to bidders) should be instituted to enhance transparency in procurement at the central government and in the districts. The procurement/contracts committee should undergo reorientation, trained regularly, and measures to improve quality assurance and supervision of contracts implemented.

e) Give sufficient authority to policy makers/managers to hold their staff accountable for failure to improve services. Aligning incentives with better outcomes involves evaluations and monitoring of performance of service providers either at facility or individual levels, and linking this to rewards. However, this can only work if providers are given sufficient autonomy in decision making and are held accountable.

The current directions and international experience support moving from pre specified processes. In this case, responsibilities are transferred from the center to service providers, including planning for provision of services, recruitment, supervision and evaluation of staffing, and in return for this autonomy, service providers are held accountable for results. However, not much of this happens at the service provider level, in Uganda and this is different from the private sector where service providers have autonomy to hire and fire.

Personnel management is weak and there is lack of clear authority to enforce sanctions for poor performance. Managers have little control over their staff since the hiring center is different. In some cases, politicians intervene in attempts to discipline poor performers. In many ways, problems like staff absenteeism – a major issue in health and education - are likely to worsen if there is no clear accountability between providers and local policy makers. With regard to recruitment, transfers and postings; centralization of powers to the district, and limited involvement from the facility level managers in this process weakens the accountability mechanism further, thus reducing the effectiveness of service delivery. Payroll management is centralized and this leads to many problems – staff transferred and it takes several months (at times a year) before the transfer is effected on the payroll - leaving the original facility without a replacement for months. In addition, there are no administrative measures taken against health workers or teachers with high levels of absenteeism. Managers complain about the disciplinary process being too bureaucratic, and that in most cases not worth the bother.

³¹ World Bank, “RWSS Budget Support in Uganda”

³² J. Pinfeld, “Uganda: Assessing Performance of the Water and Sanitation Sector” in OECD-DAC, Managing for Results: Sourcebook on Good Practice , <http://www.mfdr.org/sourcebook.html>; “Towards Better Integration of Water and Sanitation in PRSPs in Sub-Saharan Africa: Lessons from Uganda, Malawi and Zambia”, ODI-WPP Briefing Paper no. 5, November 2004.

Focusing recruitment at the facility level and improving incentives for better performance by for example making contract renewals for facility staff and other key officials involved in service delivery contingent on performance would send a strong message on focus on results. Streamlining the lines of authority and putting in place clear safeguards to ensure that staff hired are qualified and meet national standards would be helpful.

In education, the Education Service Commission (ESC) is responsible for recruiting secondary teachers, Ministry of Education and Sports deploys the recruited teachers, and the ESC is responsible for terminating teachers' services. The Education Standards Agency, whose role is to oversee school operations, cannot issue reprimands for teachers' wrong-doing, neither can the head teacher. Similarly, field visits established that when for example a District Education Officer tries to take action against a teacher, the teacher could seek protection from the Chief Administrative Officer (CAO), the personnel officer, or politicians at the district level. Effective accountability requires that there be better alignment between the authority to appoint and the power to make transfers, order deployment, or take disciplinary action. In some instances, there is need for clarification and assignment of responsibility on who to hire and fire staff (for example, between the Medical Superintendent and Hospital Administrator).

f) *Subcontracting to autonomous bodies, including community-based institutions, nongovernmental organizations, or private operators, under a performance-contract system.* Where performance monitoring is relatively easy, it might be cost-effective to turn programs over to nongovernmental organizations or private providers, provided that clear performance targets are agreed on and can be monitored. This could be done with nonclinical services such as immunizations, health education, AIDS awareness, and family planning. Subcontracting makes sense, however, only if private providers can provide services at reduced costs and if costs are not offset by the transaction costs of contracting and performance monitoring. Where the private sector or NGOs can carry some of the burden, for example for secondary education, more innovative ways, including tax incentives for the private sector to provide services to under served areas should also be sought. Ritva Reinikka and Jacob Svensson, 2009, in their study on not for profit NGOs health care providers in Uganda, found that financial aid led to more laboratory testing, lower user charges and increased utilization.

Other measures to improve service delivery

Paying attention to equity issues. Resources, including teachers and health workers need to be reallocated more evenly. Both the health and education strategies already focus on this issue. However, this needs to be more systematic and clearly reflected in resource allocation practices. A critical need is more staff housing, to retain personnel and possibly reduce absenteeism in rural areas. Salary incentives pegged to performance and other mechanisms to attract personnel to remote areas could help to attract personnel to rural areas. Resource allocation and policies also need to be flexible to reflect the local circumstances. For example, if many children are not attending school because they have to go fishing early in the morning and are back home by mid-morning - why not allow classes to start at a time that could accommodate them. It should be appreciated that

delivering services to the poorer segments of society, in particular those currently excluded from services like health and education would in most cases require higher unit costs in order to address the existing challenges.

Reducing the opportunity costs and empowering clients to enable them to decide which provider to use, thus creating competition among providers. Even if other challenges are addressed, achieving MDGs will not be feasible unless the huge opportunity costs facing poor households are removed or substantially reduced. These opportunity costs are evident in education where there is a tradeoff between income generating activities and attending school. This study found that despite UPE, many children are out of school or do not attend regularly because they are working for income or helping with domestic work.

The low levels of school attendance and completion often reflect low demand for education, high out-of-pocket costs, and the opportunity cost of not having children working. Working on the demand side, the government could consider introducing a targeted conditional cash transfer program that provides cash grants to poor families in return for school attendance and periodic visits to health centers for preventive health and nutrition. Box 14 gives an example of conditional cash transfers to improve school attendance.

Box 14. Conditional Cash Transfers to Improve School Attendance

Conditional cash transfer programs have proven successful in many countries because they use cash to offset the monetary costs of school supplies and uniforms and the opportunity cost of having children not working. They can be particularly effective for girls and at the secondary level, where opportunity costs are higher. Many also include targeted nutrition assistance, in both cash and food supplements, for infants, malnourished children, and pregnant and lactating women. The programs must be carefully targeted to the poorest families; otherwise, the budgetary costs could be unsustainable. But studies have shown that even a relatively small cash grant is sufficient to ensure participation.

The first step in developing a methodology is to identify the target group. Focusing on poor geographic areas, as in the Northern Uganda Social Action Fund model, is one way to begin. However, within target areas, focusing on the poorest households is necessary. The most common approach is using proxy means testing—identifying living standards through indirect means, household assets or housing quality are convenient and easy-to-measure proxies.

Such programs elsewhere have raised school attendance by offsetting the monetary costs of school supplies and uniforms and the opportunity cost of children not working. Box 15 describes such a program in Mexico. If the demand side is not addressed through policy, inequalities would persist and continue to slow down progress towards the MDGs.

Box 15. Mexico's Oportunidades Program

Mexico's Oportunidades program, a conditional cash-transfer program that combines incentives for education, health improvements, and nutrition, is based on the idea that poor families do not invest enough in the human capital of their children and thus become caught in a vicious circle of poverty transmitted across generations. Grants go to poor families with children enrolled in school between the third primary grade and the third year of high school. Grants increase as children progress to higher grades and are slightly higher for girls than boys because girls have a higher dropout rate.

The health component provides basic health care for the family, emphasizing preventive health care. The nutrition component includes a fixed monetary transfer for improved food consumption and nutritional supplements for infants and malnourished children ages 2–4, and for pregnant and lactating women. The program is geographically targeted and with proxy means tests based on household surveys, reaches about 4 million families and represents almost half of the government's antipoverty program.

Evaluations show that the program increased school attendance and improved health outcomes. Oportunidades girls were 20 percent more likely to enroll in secondary school and boys were 10 percent more likely to do so. Children ages 1–5 had 12 percent lower incidence of disease. Child growth was up and stunting down.

Oportunidades shows that targeted conditional cash transfer programs can reduce poverty and raise human capital on a very large scale, even in isolated areas of a developing country with a limited welfare state.

Source: Parker 2003

Focus on preventive health, including hygiene. Preventing disease is cheaper than treating it. But the gaps in preventive medicine in Uganda are large. According to the 2006 Uganda Demographic and Household Survey, only 46 percent of children ages 12–23 months were fully vaccinated (BCG, DPT3, polio and measles). Although outpatient data from the Ministry of Health shows that 40 percent of all patients in January 2005 were treated for malaria, only 34 percent of households have a mosquito net, half of them not treated with insecticide.³³ Only 22 percent of children under age 5 were reported to have slept under a mosquito net the night before the survey, and only 25 percent of pregnant women did so. While 64 percent of married women wanted to use family planning, only 24 percent were doing so due to services not being available.³⁴

Access to clean water is relatively high, but the danger of clean water becoming contaminated in the household is also high because people lack knowledge of good hygienic practices. A 1996 study suggests that among households with access to clean water, only 9 percent actually consume water of acceptable quality.³⁵ According to the Demographic and Household Survey, 25 percent of children suffered from diarrhea in the

³³ UDHS Preliminary Report, p. 13.

³⁴ The reasons for lack of use are not given and could be the result of various social and economic factors, other than pure lack of knowledge.

³⁵ World Bank 2004, p. 68.

two weeks before the survey. Although treatment was sought for 70 percent of them, only 43 percent were given oral rehydration therapy, either from packaged salts or home remedies. But inexpensive oral rehydration therapy can have a major impact in reducing infant and child mortality. Hand washing, another simple means of preventing the spread of disease, is not widespread, according to a 2003 survey of eight districts by the United Nations Children's Fund. The percent of caregivers who reported that they always washed their hands with soap after using the toilet was only 30 percent, and only 9 percent did so before food preparation.³⁶

Adapt a social marketing approach. Focus on information, education and communication about hygiene and the link between water and sanitation (IEC). This would create awareness among clients about for example the quality of services and their capacity to pressure for change. There is also need to document and disseminate good practices within Uganda. Some key actions for improving education, health, nutrition, population and water and sanitation outcomes, can be accomplished through public information campaigns. For example, child health outcomes could be substantially improved by providing nutrition information to mothers or helping households to understand the value of boiling water, or hand washing.

Information is also essential for assessing the performance of service providers and the actions of politicians and policy makers. It helps individuals to make decisions about health, education, and water and sanitation. Two key determinants of child health outcomes are maternal knowledge and access to information. Analysis for this report indicates that a literate mother can reduce her child's malnutrition by about 30 percent relative to illiterate mothers. Evidence suggests that a combination of factors affect child nutrition in Uganda. Improvement in child nutrition is partly linked to improvement in mothers' education and nutrition. Field interviews also indicate that child nutrition is affected by mother's knowledge about better feeding practices. Some also referred to the benefits of an earlier World Bank intervention that taught parents about feeding practices. More attention is needed on hygiene education through schools and public media. In addition, social marketing can be the starting point for a public-private partnership in sanitation. Campaigns to increase hand washing, for instance, can be developed in collaboration with soap suppliers. Estimates based on worldwide studies suggest that hand washing alone can reduce diarrheal diseases by 35–50 percent.³⁷ People in Uganda, as in many countries, do not associate hand washing with disease prevention—a water and sanitation survey of 500 Ugandan households showed that only 32 percent washed hands after using the toilet and only 18 percent when preparing food. Soap was used less than half the time.³⁸

The private sector can use its marketing skills to increase demand while disseminating an educational message. The same approach can build demand for improved latrines and for preventive health and family planning, covering contraceptives, antiseptics, or mosquito

³⁶ World Bank 2004, p.48, and calculations from UNHS 2005/06.

³⁷ Shordt 2006, p.2.

³⁸ New Vision 2007.

nets. Another option is targeted subsidies for poor families to promote the use of these products.

Action by communities drives the process once the messages are understood. Community Led Total Sanitation (CLTS) approach which started in South Asia (Box 16, relies on creating competition between villages through a system of rewards instituted by the state and national governments, in Bangladesh, it relies on shaming as a motivator for collective action. However, at its core, there is a shift away from government supply driven hardware subsidies to a bottom up, community led approach focusing on long term behaviour change.

Box 16. Community Led Total Sanitation—An example from Indonesia

Kenongo was the first village in Indonesia to have declared itself free of open defecation in just 10 weeks. Nine other communities followed suit 6 months later and one year later (March 2006) another 20 communities were on their way. This was a remarkable improvement given that since 1985 sanitation coverage had been stagnant at 38 percent.

Conventional programs to date have had little success in changing behavior. Program strategies had included building free latrines for villagers, or distributing subsidized latrine construction materials or loans. Too often free or subsidized latrines were captured by the well-off people in each village, since project funds could never serve all households. The majority of the poor inevitably failed to gain access to sanitation.

Indonesia then decided to use the community-led total sanitation approach, which included empowering communities to take collective action, with the government and other agencies performing a facilitating role. This community mobilization and hygiene education approach involves virtually no subsidy to users. Within weeks of the program being launched whole communities were seen digging toilet pits in their backyards, building their own low-cost household toilets and influencing their neighbors to do the same. Informal neighborhood committees drew up community maps and marked houses for monitoring progress. A variety of locally produced toilet designs emerged, reflecting both the limited range of sanitation supplies available in local markets and peoples' unlimited creativity. The quality of the toilets varied, but did meet the basic criteria of preventing contact between human excreta and flies, at a cost of between US\$14-US\$28. As 'open-defecation free status was achieved' the village would publicize the achievements and other villages followed suit. This approach has been successful because it focuses on outcomes rather than inputs:

- *Collective action: mobilizing communities and not simply targeting some households*
- *Local technology: providing access to local and affordable solutions and technologies*
- *Institutional clarity: by giving local governments a central role in scaling up.*
- *Incentives: directing incentives to the community and rewarding outcomes, not subsidizing household toilets.*
- *Supporting the market: promoting the availability of sanitary materials and allowing private suppliers to respond to demand.*

Source: (Mukherjee, 2006)

Water's impact on health and sanitation has as much to do with quality as with quantity. Where access to water is limited because of distance and time needed for collection, water use is less than optimal, reducing the health benefits. A 2004 Ministry of Health report suggests that water use is only half the recommended amount.³⁹ In addition, clean water can easily be contaminated, either during the journey from the water point or because of poor hygiene in the home. Putting clean water in a dirty vessel or storing it improperly can result in contamination and squander the gains of having clean water available. Improper disposal of excreta, failure to wash hands and food utensils with soap, improper food storage and preparation, and other unsanitary practices can counteract physical improvements in water and sanitation.

Address the high unmet need for contraception. Family planning uptake, which measures contraceptive use, increased from 234,259 in 2005 to 309,757 in 2006, with district coverage ranging from a mere 19 in Katakwi to 37,241 in Mubende in 2006. An investigation of the extent of the need and demand for family planning among married women, found that 64% of married women aged 15-49 years demand for family planning services, but only about 37% of that demand is satisfied nationally. Again the regions of Northern Uganda exhibit the lowest rates of satisfied demand for family planning—19% in the North and 22% in West Nile. Furthermore, women in Karamoja show the lowest levels of met needs—only 2%. However, this particular rate should be interpreted with caution given that only 24% of the married women indicate demand for similar services. Improvement of family planning services should be made an explicit objective for the health sector and should be monitored closely. Promoting involvement of men, who are the key decision makers, to be supportive of contraceptive use through targeted campaigns and social marketing with a clear focus on consequences of high population would help to improve the situation. Analysis done for this report confirms the importance of female education to reduction of the population growth rate, meaning that efforts focusing on female education should be stepped up. Raising female literacy from its present rate of 59 percent to 100 percent would reduce Total fertility Rate (TFR) by 2.6 to 4.5.

Overall, better funding, pro poor targeting, improvement of monitoring and accountability, and resource use in delivering social services, are critical to improving Uganda's human development indicators. This is in addition to better coordination among the key public and private players and more community participation in service delivery. More effective community participation requires communities and households to live up to their responsibilities. Local governments could help by enacting and enforcing relevant ordinances, requiring nongovernmental organizations to align their interventions with government programs to maximize the synergies, work more closely with beneficiaries to address their needs and involve them in monitoring services.

Conclusions

The report demonstrates that some progress has been realized in the areas of education, health, water and sanitation: Most children access primary education – and soon to be

³⁹ World Bank 2004, p. 68.

made compulsory; more are getting opportunities to continue to secondary education and learning outcome are beginning to improve. For health, more children are immunized, fewer children are likely to die and maternal mortality rate is improving although not fast. Infant and child mortality are half the 1990 level, less die key health outcomes; more people access to clean water and sanitation. The report also documents several reforms in the three sectors, ranging from increasing resources, providing free services, decentralization and citizen participation. However, gaps exist in service delivery: education indicators are compromised by high drop out rates, low learning achievement, high repetition rates, teacher pupil absenteeism, inefficiency in resource use, and inequality in certain aspects

Past and ongoing reforms in service delivery have focused so much on inputs and little on motivating actors involved and enhancing public accountability. These deficiencies threaten progress in service delivery. The report recommends paying attention to: (i) incentives to promote better performance and responsiveness from service providers; (ii) accountability to ensure that services are provided to all citizens in particular the underserved; (iii) increased use of IEC; (iv) meeting contraceptive demand.

Improving expenditures in service delivery would require more innovative approaches, to take into consideration multiple challenges and specific local circumstances in different areas. For example, the education problems in Kalangala (geographically isolated, sparsely populated and where the opportunity cost of schooling can be significantly high) would not be solved using the same strategies as those for Kampala. In addition, it should be understood that increasing enrolment in such areas like Kalangala would require a higher unit cost than other areas (due to the specific nature of challenges) and this should be factored into resource allocation.

Many countries world wide are now depending more on incentives to service providers to improve service delivery and many have also put in place incentives to attract and deploy qualified personnel to schools and health units, particularly in hard to reach areas. Other options would include non public provision, greater autonomy and accountability.

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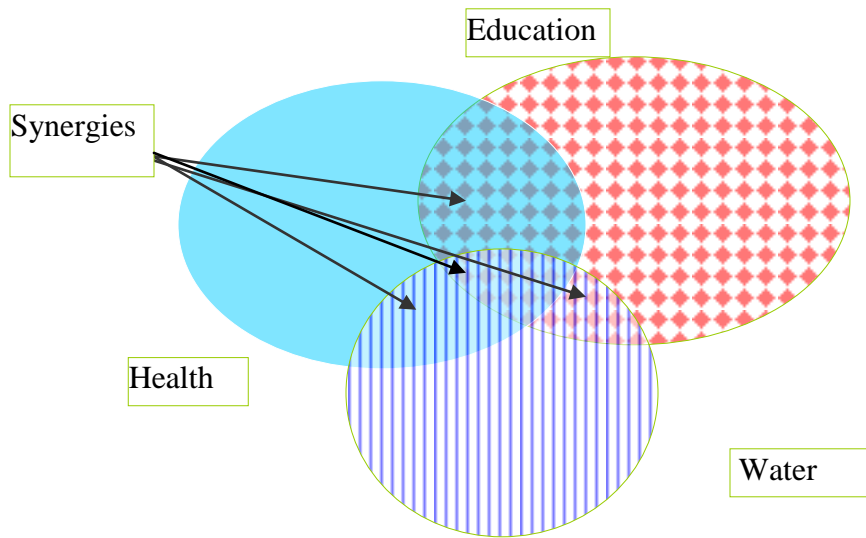
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Annex A Interactions and Synergies

Interactions and Synergies

Synergies among sectors can multiply the benefits from efficiency gains in one area (figure 4.2). Better education can improve health and hygiene and reduce the incidence of disease. Deteriorating water supplies, however, can undermine health interventions and lower school attendance. Table 4.1 identifies such synergies, both positive and negative, across five key sectors: education, health, water, sanitation, nutrition, and gender.

How Synergies Can Multiply the Gains from Interventions in One Sector



Source: Based on analysis described in text.

How powerful are these synergies? Multiple regression techniques and analyses of interaction effects using data from the National Household Survey 2005/06 and the 2002 census produce mixed results. But the centrality of education is clear.

- Education has the strongest influence over health outcomes, although access to water, sanitation, and health facilities are also important.
- Education, including the education of the household head and that of the household head's mother and father, is also the key determinant of per capita consumption, a measure of overall welfare.
- Education is positively associated with fertility, though fertility drops with higher income and urbanization.

The matrix (Table 3) shows some of the possible interactions between sectors that have been identified in recent years. Looking at six major sectors, (education, health, water and sanitation, nutrition and gender) there are 30 possible intersections for interactions (eliminating interactions between the same sectors). Of the 30 possible interactions, Table 3 shows identified interactions in 24 cases (some interactions are unlikely, e.g., while water and sanitation impact on health, health status does not affect water and sanitation).

Interactions Among Human Development Sectors

Change	Effect					
	Education	Health	Water	Sanitation	Nutrition	Gender
Education	n.a.	General and specific education on health and hygiene can reduce disease incidence.	General and hygiene education are important for handling water, preventing contamination, and reducing health care costs.	Education teaches hygiene—the link between sanitation and good health, hand washing, and so on.	Education is essential to understanding good nutrition, food preparation hygiene, and food selection.	A better education system will give women more voice, knowledge, and power.
Health	Healthy students learn better and have lower absenteeism. Healthy teachers are more likely to be in the classroom.	n.a.	—	—	Better health care improves metabolism from a given food intakes.	Improved health care particularly affects women of childbearing age and promotes family planning.
Water	Availability of clean water improves health, reduces collection times, and allows children to go to and stay in school.	Clean water reduces water-borne diseases and improves health status, productivity, and school attendance.	n.a.	More widely available water improves sanitation, cleanliness, hand washing, and so on.	Clean water allows for better and safer food preparation.	Improved water systems give women more free time for productive activities.
Sanitation	Good sanitation improves health and school attendance. School sanitation facilities are important for school attendance, especially for teenage girls.	Good sanitation is critical for good health and prevention of diarrhea and other diseases.	Bad sanitation can contaminate water, obviating the health benefits of clean water.	n.a.	Improved sanitation prevents dysentery and other debilitating diseases that foster stunting and wasting.	—
Nutrition	Better nutrition improves learning abilities.	Improved nutrition increases	—	—	n.a.	—

			immunity to disease.				
	Attention to gender issues	Reaching male-female enrolment parity depends on making schools attractive for female participation.	Health services need to focus on maternal and child health issues to be effective.	Education on household water use, especially by women, can multiply the effects clean water on health.	Sanitation arrangements have to be sensitive to privacy issues, especially for women.	Because women do most of the food selection and preparation, educating women is key to good nutrition outcomes.	n.a.

n.a. is not applicable.

— indicates no interaction.

While it is relatively easy to identify possible interactions or synergies, the scope of these interactions is more difficult to quantify. For instance, can health outcomes be improved more efficiency, in terms of resource use, by building health facilities, providing more education, or through a focus on water and sanitation? In most countries, these questions are answered more by feel than by hard data on effectiveness.

Annex c: Data Sources and Issues

To make a more quantitative judgment on synergies, an analysis was undertaken using data from various sources, principally the National Household Survey 2005/2006 (NHS) and the Census for 2002. Both sources are useful, but have deficiencies. For health, for instance, we would like to measure infant mortality and maternal mortality, but these cannot be usefully measured at the household level since they are rare events. The NHS gives data on days ill, but “illness” is self-defined and not related to specific diseases. We supplement the NHS data in some cases by drawing on data from the Ministry of Health on out-patient treatments, but this too is questionable, since many illnesses are not treated by the health system.

The NHS does measure consumption, which has been transformed into a consumption aggregate by the Bureau of Statistics. The Census, however, has no measure of income or consumption, although it does calculate female fertility on a district basis (but not child or maternal mortality). Indirectly, one can measure welfare in the Census by the level of household assets (toilet, radio, clothes, etc.). In both cases, it is difficult to define an overall measure of human development. Weighted combination indices (such as the UN’s HDI) do not offer much help, since they hide many important interactions. For instance, combining per capita consumption, health and education indicators in one variable (as done in the HDI) obscures the interactions between health, education and income/consumption levels.

The approach used here starts by looking at health status in the NHS data, and using this as an overall human development measure. Thus, for the health equation, the following variables are defined from the data⁴⁰:

- *daysnowork*: Number of days person was incapacitated, and had to cease normal activities due to illness or injury in the past 30 days (average for all household members), taken as an indicator of health status;
- *healthdist*: distance to place of treatment for this illness;
- *watergood*: water supply is from a protected source, pipe or borehole;
- *toiletgood*: toilet facilities are covered pit latrine, VIP, or flush toilet;
- *heduc*: education level of household head, in years of schooling, taken as a general indicator of education in the household;

⁴⁰ Access to the NHS data obtained through the kind cooperation of the Uganda Bureau of Statistics (UBOS), For a summary, see “Report on the Socio-Economic Module- Uganda National Household Survey 2005/2006”, UBOS, December, 2006.

- *spouseeduc*: education level, in years, of spouse of household head (normally a wife), an alternative education indicator.

Taking *daysnowork* as a dependent variable reflecting health status, a multiple regression was run using the remaining variables as independent variables, using either *hheduc* or *spouseeduc* as the education variable. The results are shown below, giving estimated coefficients, standard errors and t-ratios⁴¹. (See Annex A for a more complete description of the results).

The results using *hheduc* are as follows:

Equation No. 1

Dependent variable: *daysnowork*

Independent variables:

	Coefficient	Standard Error	t-ratio
healthdist	.0269736	.004878	5.53
watergood	-.4217977	.0841047	-5.02
toiletgood	-.2025334	.0899691	-2.25
watertime	.0000833	.0002506	0.33
hheduc	-.0849278	.0087274	-9.73
constant	3.108923	.101368	30.67

Number of observations (n) = 5304

Adj R-squared = 0.0339

On the plus side, the model shows significant association between almost all the variables and *daysnowork*. Days incapacitated rises as the distance to health treatment goes up, and declines with good water sources, good toilet facilities, and better education. Only the variable measuring access to water (*watertime*) is not significant. The problem with this variable is that people with low distance can be those living close to a protected source, or those with house connections, or those buying water from a truck or vendor. While the first two are likely to consume more water because of the ease of access, the later is likely to consume much less water. In theory, it is the both the quality and volume of water that improves sanitation and health. Of the four variables that are significant, the most important is education, followed by access to health services variable and the quality of water. Using spouse education as the education indicator produces similar results, although the education indicator is slightly less robust. Overall, while the model exhibits significant coefficients (at the 95% level or better) for most variables, it explains

⁴¹ The t-ratio is the ratio of the coefficient to the standard error. T-ratios higher than 2.0 are significant at the 95% level of confidence; values greater than 2.3 are significant at the 98% level. The adj. R² shows the percentage of total variance in the dependent variable explained by the equation.

very little of the variance in incapacity, as shown by an adjusted R^2 of only .034; in other words, the model explains only 3.4% of the total variation in the health indicator.

Toiletgood and *watergood* are dummy variables, having a value of one if facilities are safe and clean, and zero if otherwise. Hence, having a clean/safe toilet or latrine would reduce the number of days incapacitated by .2, or about a 10% reduction (given that mean days incapacitated is 1.88). A clean source of water would have a somewhat bigger impact, reducing mean days incapacitated by .4, or about 20%. Raising the education level of the household, as measured by the mean years of schooling of the household head, has a major impact. Five years more of education reduces time incapacitated by about 23%.

In equation no. 2, interaction variables were added to test for synergies between the water, toilet and education components. The variables were defined as:

$$\begin{aligned} inter1 &= watergood \times hheduc \\ inter2 &= toiletgood \times hheduc \\ inter3 &= watergood \times toiletgood. \end{aligned}$$

Unfortunately, none of these produced statistically significant coefficients, even at the 10%, suggesting low levels of synergies between sectors (at least in so much as we can measure them here).

Equation No. 2

Dependent variable: *daysnowork*

	Coef.	Std. Err.	t
healthdist	.0270329	.0048808	5.54
watergood	-.4626636	.1779818	-2.60
toiletgood	-.0934139	.1779915	-0.52
watertime	.0000879	.000251	0.35
hheduc	-.0901241	.0263784	-3.42
inter1	.0198617	.0209349	0.95
inter2	-.012209	.0232831	-0.52
inter3	-.0802236	.190958	-0.42
constant	3.100136	.1584354	19.57

Number of obs = 5304

Adj R-squared = 0.0336

All regression estimates have to be viewed somewhat skeptically, since they depend very much on the survey quality and data definitions. A study by Ssewanyana and Younger, for instance, attempts to explain the determinants of infant mortality, using data from the Demographic and Health Surveys, 1974-1999. They find no significant association between toilet and water facilities and infant mortality, but a significant association

between mother's education, vaccinations, the level of household assets and mother's age⁴².

Impact on Welfare

Human capital improvements can have important impacts on raising welfare, both directly and through higher productivity. Determining the route of causality, however, is not quite clear. Does higher income cause people to “buy” more health, education and sanitation, and/or do these in turn raise welfare?

A regression drawn on the household survey shows the importance of education and health variables on determination of welfare. The variable *lnwelfare*, is the log of per capita consumption, *hheduc* is the education level of the household head in years, *dadeduc* and *momeduc* is the average level of education of the parents of household members either deceased or not living in the household. In this way, the education variables are not apt to have been influenced by present consumption levels. We also put in two health variables in the interest of completeness: *daysnowork*, and *daysill*. The latter is simply the average days in the last month each member of the household was ill, whereas *daysnowork* is the number of days when the illness was such as to prevent normal activities.

Equation No. 3

Dependent variable: *lnwelfare*

	Coef.	Std. Err.	t
<i>hheduc</i>	.0451279	.0018142	24.88
<i>momeduc</i>	.2228864	.0133401	16.71
<i>dadeduc</i>	.0734355	.010331	7.11
<i>daysnowork</i>	.0189703	.0039837	4.76
<i>daysill</i>	.0037746	.002579	1.46
constant	9.575725	.0229738	416.81

Number of obs = 6969

Adj R-squared = 0.2245

All the education variables are highly significant, and the equation explains 23% of the household variation in per capita income. A one year increase in education for the household head would raise per capita consumption for the family by about 4.3%. Education of mothers seems to be a stronger determinant of household income than of fathers (of the household adults). The health variables are either not significant and/or have the wrong sign. The *daysnowork* has a significant positive correlation with welfare. Our more general health indicator, *daysill*, is also positively associated with consumption,

⁴² Ssewanyana, S. and S Younger, “Infant Mortality in Uganda: Determinants, Trends, and the Millennium Development Goals”, January, 2005.

but not significant at the 10% confidence level. Clearly, education is a prime determinant of consumption levels. The impact of improved health, however, may be more complex. It is also not clear the path of causality; better health might be both a result of higher incomes, as well as a cause of higher income. However, using an instrumental variables approach (two-stage least squares) does not seem to solve this problem (see Annex A).

Population Growth

The demand for children we know is affected by a number of important factors. Fertility is generally shown to be related to health conditions, female education, income, and urbanization. Families have fewer children when the opportunity cost of the mother being pregnant is high, when the economic value of children is low, or when the cost of their education rises. Fertility generally declines, therefore, with higher education in the family, higher levels of urbanization, higher levels of income, and improvements in health that increase the survival rate of children.

To test whether this is true in Uganda, we use the household survey data as before. However, there are no data on total fertility rates in this survey, or birth rates. Rather, we have information on the number of children in the family (*childcount* = sons and daughters living in household). This number is apt to be lower in younger families, higher in middle age families, and then lower again in older families where children have become adults and are no longer in the household. Therefore, we relate the number of children in the family to the age of the spouse and household head (*agespouse*, *agehhead*), as well as the square of the age of the spouse and household head (*agespousesq*, *agehheadsq*), plus a categorical variable that takes a value of one if the household is located in an urban setting, and zero if rural (*urban*). Also included are variables for education of the spouse and household head, the log of household per capita consumption (*lnwelfare*) and the *daysnowork* variable to define health conditions.

Equation no. 5

Dependent variable: *childcount*

	Coef.	Std. Err.	t
<i>agehhead</i>	.2153671	.0160815	13.39
<i>agehheadsq</i>	-.002071	.0001587	-13.05
<i>agespouse</i>	.3100167	.0177623	17.45
<i>agespousesq</i>	-.0037404	.0002063	-18.13
<i>lnwelfare</i>	-.4218021	.0515448	-8.18
<i>daysnowork</i>	-.0452895	.0139578	-3.24
<i>urban</i>	-.3182141	.0811248	-3.92

spouseeduc	.0191091	.0091698	2.08
hheduc	.0264067	.008277	3.19
constant	-2.9232	.5710485	-5.12

Number of obs = 4775
Adj R-squared = 0.2744

The results show a significant association between the *child count* variable and the age and age squared variables, indicating the kind of quadratic relationships expected: the number of children in the family rises with age of the parents, but then declines after point. In the equation, the maximum family size is reached when the household head reaches 52, and when the spouse reaches 41. In 93% of the cases, the spouse is female and the household head is male, but 27% of households are headed by females. The number of children clearly declines with income, a 10% increase in income reduces the number of children by .04. Being in an urban setting reduces family size, but by a small amount, .3 children less.

Surprisingly, education is positively related to family size, particularly the education of the household head. Ten years of education added to the household head adds about .3 children to the family, while ten years of spouse education adds .2 children. Perhaps education, because it permits greater understand of sanitation, disease and child care increases the survival rate of children, and this factor is not completely offset by the ability to take other measures to reduce family size. Finally, health status as measured by *daysnowork*, is negatively related to family size. That is, better health, i.e. fewer days incapacitated, reduces the number of children in the family.

This regression using the household survey is somewhat approximate, since the dependent variable, *child count*, is only indirectly a fertility measure. The other source of data is the 2002 Census, which includes data on the total fertility rate (TFR), as well as information on literacy, household facilities, urbanization, school enrolment, etc.. Unfortunately, it does not include information on income. To compensate for this deficiency, a proxy variable for wealth was constructed using an average of the number of households that own radios, own a means of transport, and those being able to meet their basic necessities.⁴³ The total fertility rate is assumed to be a function the wealth index (*wealth*), female literacy (*femlit*), total literacy (*literacy*), access to health facilities (*health5km*), and the degree of urbanization (*urban*). The results are given below, along with the means and standard deviations of the variables.

The variables *femlit* and *urban* are significant at the 98% level, and show a clear negative association. More female education reduces fertility, as one would expect, and

⁴³ Basic necessities are defined by the Census as including soap, sugar, two sets of clothing and a pair of shoes for each family member, and a blanket for every child. For transport, the most common item owned is a bicycle. See “2002 Uganda Population and Housing Census” Analytic Report, UBOS, October 2006, p. 95.

somewhat in contradiction to the earlier results. However, overall literacy of the adult population has a positive association with fertility, that is significant at the 95% level. However, in this sample the data are for female literacy, not the total number of years of education as in the household survey data. As before, more urbanization reduces fertility (although this could also be a proxy for higher income). The wealth variable is positive, but not significant. This is the opposite of what was found with the household survey, which showed a negative association between income and children in the family. Likewise, the presence of a health center within 5 km has a negative effect on fertility, but the association is not statistically significant.

Equation No. 6
 Dependent Variable: TFR (total fertility rate)

	Coef.	Std. Err.	t
Wealth	.0247439	.0131489	1.88
Femlit	-.0633521	.0209115	-3.03
Literacy	.0517748	.0225818	2.29
health5km	-.007309	.0066304	-1.10
urban	-.0126453	.0041304	-3.06
constant	7.208224	.6810138	10.58

Number of obs = 54
 Adj R-squared = 0.3376

Overall, the estimated equation explains only about 34% of the variance in fertility between districts. Furthermore, the impact of each of the variables is small. At present the average level TFR is 7.1.⁴⁴ Raising female literacy from its present rate of 59% to 100% would reduce TFR by 2.6 to 4.5. However, since this would also raise the overall literacy rate, this would be offset by an increase of 1.1, so the net effect would be a drop of only 1.5.⁴⁵ The mean urbanization rate of the districts is 11%. Raising that to 100% would only reduce the TFR by 1.1. The average for those living within 5 km of a health post is 71%. Raising that to 100% would lower TFR only by .2.

Conclusions The evidence on synergies is mixed. Clearly, education has a profound effect on health performance, although education of females may be more important in this regard, particularly when related to child and infant health. While the impact of good water and sanitation facilities is also positive, the evidence here weaker. Interactions between water, sanitation and education cannot be verified with the data available. The

⁴⁴ This is the mean of the district data, not the national mean. The Census gives a TFR of 7.0, while the 2006 DHS gives a figure of 6.7.

⁴⁵ Assuming the population is 50% female, adding 41 years to the female literacy rate would raise the overall rate by 20.5. Multiplying by the literacy coefficient of .05177, yields an increase of 1.066 years.

results for fertility are also mixed. Clearly, more urban families seem to consistently have smaller families, and this is verified by both the household and Census (district) data. Children may have a lower potential for income earning in urban areas, and may require more education. These two factors raise the cost of children, and lower their (economic) benefits. In addition, the unmet need for family planning services appears to be higher in rural areas.⁴⁶

Parents may demand more children as their income goes up, but the opportunity costs of having children also rise if the mother cannot work. Thus, it is not surprising to find mixed results in the relationships with income/wealth. Income seems to be associated with reduced family size/fertility in the household survey data, but the impact of wealth in the Census data is weakly positive. Likewise, education seems to have a positive effect on family size in the household data. In the Census data, female literacy is associated with a reduction in fertility, while overall literacy with an increase. However, these inconsistent findings could be traced to differences in the definition of variables found in each survey.

Table A 1: Determinants of primary school enrolment for children aged 6-12 years, 2005/06

Model variable	Model (1)	Model (2)	Model (3)
Child's age	0.303 (14.84)**	0.301 (14.82)**	0.300 (14.84)**
Child's age squared	-0.014 (12.15)**	-0.014 (12.14)**	-0.014 (12.15)**
Child's male dummy	-0.005 (0.67)	-0.005 (0.63)	0.578 (2.56)*
Biological child of the head dummy	0.028 (2.56)*	0.029 (2.66)**	0.030 (2.75)**
<i>Marital status of the head (married male)</i>			
- Unmarried female	0.032 (2.50)*	0.031 (2.42)*	0.031 (2.41)*
- Married female	0.021 (1.63)	0.021 (1.61)	0.020 (1.54)
- Unmarried male	-0.043 (1.45)	-0.045 (1.49)	-0.043 (1.44)
Ln(Education) of the head	0.035 (6.64)**	0.035 (6.50)**	0.035 (6.52)**
Ln(Income)	0.048 (2.39)*	0.049 (2.46)*	0.076 (3.41)**
Number of children (<=5 years)	0.001 (0.28)	0.001 (0.29)	0.001 (0.30)
Number of children (6-12 years)	-0.001 (0.36)	-0.001 (0.39)	-0.001 (0.41)
Number of children (13-17 years)	-0.002 (0.36)	-0.002 (0.38)	-0.002 (0.38)
<i>Orphan hood (ref: Both parents alive)</i>			
- Only mother dead	-0.025 (1.63)	-0.024 (1.57)	-0.024 (1.58)
- Only father dead	0.029 (1.18)	0.029 (1.21)	0.029 (1.21)
- Both parents dead	0.023	0.024	0.024

⁴⁶ DHS 2006 Preliminary Report, p. 11.

Model variable	Model (1)	Model (2)	Model (3)
	(1.04)	(1.06)	(1.07)
Child living with disabilities dummy	-0.132 (6.48)**	-0.132 (6.50)**	-0.131 (6.45)**
Urban dummy	-0.007 (0.48)	-0.007 (0.46)	-0.007 (0.44)
<i>Regions (ref: Central region)</i>			
Eastern region	0.034 (2.74)**	0.030 (2.34)*	0.030 (2.31)*
Northern region	-0.013 (0.82)	-0.017 (1.04)	-0.016 (1.02)
Western region	-0.014 (1.04)	-0.014 (1.08)	-0.015 (1.14)
Ln(distance to primary school)	-0.020 (2.34)*	-0.019 (2.25)*	-0.019 (2.29)*
Ln(distance to secondary school)	-0.006 (1.15)	-0.004 (0.72)	-0.004 (0.70)
Proportion of qualified teachers		0.061 (1.95)	0.061 (1.96)*
Interacting child gender and income			-0.051 (2.58)**

Sources: Preliminary regression results

Notes: All coefficients are marginal effects evaluated at the regressors' means. Robust z-statistics in parentheses and are adjusted for clustered survey design, and * significant at 5%; ** significant at 1%

Table A 2: Determinants of lower secondary enrolments for children aged 13-16 years, 2005/06

Variable	Model (1)	Model (2)
Ln(Child's age)	0.647 (11.36)**	0.641 (11.33)**
Child male dummy	-0.029 (3.28)**	-0.010 (0.93)
Biological child of the head	0.028 (2.67)**	0.027 (2.61)**
<i>Marital status of the head (married male)</i>		
- Unmarried female	0.012 (0.79)	0.011 (0.78)
- Married female	0.009 (0.53)	0.009 (0.54)
- Unmarried male	-0.010 (0.51)	-0.010 (0.53)
Ln(Education) of the head	0.026 (3.85)**	0.026 (3.88)**
Ln(Income)	0.050 (3.97)**	0.050 (4.01)**
Number of children (<=5 years)	-0.087 (2.36)*	-0.085 (2.32)*
Number of children (6-12 years)	-0.032 (0.95)	-0.032 (0.95)
Number of children (13-17 years)	-0.033 (0.69)	-0.032 (0.68)
<i>Orphan hood (ref: Both parents alive)</i>		
- Only mother dead	0.029 (1.83)	0.028 (1.79)
- Only father dead	0.007 (0.31)	0.005 (0.23)
- Both parents dead	0.020 (1.05)	0.018 (1.01)
Child living with disabilities dummy	-0.019 (1.04)	-0.018 (1.01)
Urban dummy	0.013 (1.03)	0.012 (0.98)
<i>Regions (ref: Central region)</i>		
Eastern region	0.003 (0.28)	0.003 (0.23)
Northern region	-0.050 (3.95)**	-0.050 (3.97)**
Western region	-0.028 (2.58)**	-0.028 (2.62)**
Ln(distance to primary school)	-0.018 (1.86)	-0.018 (1.89)
Ln(distance to secondary school)	-0.040 (6.32)**	-0.040 (6.36)**
Household head in agriculture	-0.020 (1.80)	-0.004 (0.34)
Interactions between gender and head in agric		-0.031 (2.18)*

Sources: Preliminary regression results

Notes: All coefficients are marginal effects evaluated at the regressors' means. Robust z-statistics in parentheses and are adjusted for clustered survey design, and * significant at 5%; ** significant at 1%

