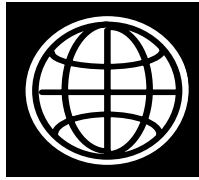**REPUBLIC OF YEMEN**

الجمهورية اليمنية

Poverty Assessment

تقييم الفقر

THE GOVERNMENT OF YEMEN, THE WORLD
BANK, AND THE UNITED NATIONS
DEVELOPMENT PROGRAM

YEMEN POVERTY ASSESSMENT

(IN FOUR VOLUMES)

VOLUME I: MAIN REPORT

NOVEMBER 2007

ACRONYMS AND ABBREVIATIONS

AIDS	Almost Ideal Demand System
CSO	Central Statistics Organization
DPPR	Development Plan for Poverty Reduction
EFARP	Economic, Financial and Administrative Reform Plan
GDP	Gross Domestic Product
GST	General Sales Tax
HBS	Household Budget Survey
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MENA	Middle East and North Africa
MIS	Management Information Systems
MOHPH	Ministry of Public Health and Population
MOPIC	Ministry of Planning and International Cooperation
MTEF	Medium Term Economic Framework
NGO	Non Government Organization
PRSP	Poverty Reduction Strategy Paper
PWP	Public Works Project
SAM	Social Accounting Matrix
SD	Standard Deviation
SFD	Social Fund for Development
SWF	Social Welfare Fund
TFYP	Third Five Year Plan
TVET	Technical and Vocational Training
UNDP	United Nations Development Project
UNICEF	United Nations Children Fund
YR	Yemeni Rial

v

TABLE OF CONTENTS

I INTRODUCTION

1.   **From what was historically known as "Arabia Felix" – a land of prosperity and happiness – Yemen has become the most impoverished among the Arab countries**. The government of the united Yemen, formed in 1990, has launched so far three five-year economic reform plans with the goal of restoring Yemen's prosperity. Have these efforts succeeded? What policies are needed to further reduce poverty? The Poverty Assessment report aims to answer these questions. This report measures poverty in Yemen in 2005/06, and evaluates the change in poverty compared to 1998, the two years for which comparable household budget surveys are available. The period between the two survey years (1998 and 2005/06), more or less overlaps the first two five-year economic plans and captures the effect of the economic reform programs launched since 1995.

2.   **In addition to measuring poverty, this report has three objectives**: evaluating the role of growth and past reforms on poverty, identifying better ways to target the vulnerable poor through public action, and an assessment of the poverty monitoring system. By examining the effect of the key policies on poverty, such as the petroleum price reform and the government's social protection mechanisms between 1998 and 2005/06, the study aims to equip policy makers and development partners with the knowledge needed to improve the effectiveness of their efforts to reduce poverty in Yemen.

MAIN FINDINGS

II EVOLUTION OF POVERTY

Figure E.1: Poverty declined between 1998 and 2005/06
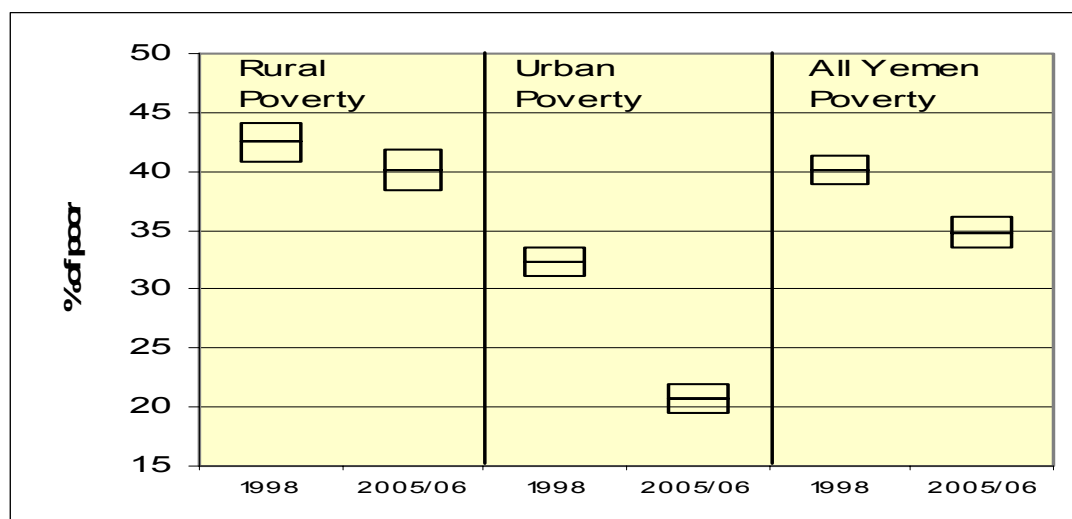
Note: The boxes around the mean show a 95% confidence level of the estimates. *Source*: UNDP (2007).

3.   **The main conclusion of the study is that poverty in Yemen declined.** Real GDP per capita grew, on average, by 2.1 percent per year between the two survey periods, while poverty (measured as the headcount ratio) declined by almost 2 percent on an annual basis. The percentage of poor declined from 40.1 percent in 1998 to 34.8 percent in 2005/06. The percentage of the poor declined in both urban and rural areas. However, due to continued high population growth, the absolute number of poor remained at around seven million, the same number as seven years ago. The pace of poverty reduction is modest compared to the MDG goal adopted by the government. The goal of reaching the first MDG (halving the percentage of poor) will require the quadrupling of the current one percent per year rate of growth in per-capita consumption achieved over the last seven years.

4.   **The urban areas of Yemen witnessed a remarkable decline in poverty.** The urban areas benefited remarkably from the predominantly oil-led growth, which resulted in the rapid decline in the percentage of urban poor from 32.2 percent to 20.7 percent, despite an increase in urbanization. Although poverty declined in four of the seven urban regions, poverty did not change in the remaining three.

5.   **The decline in national poverty for the rural areas is not robust to changes in poverty lines.** In rural Yemen, the percentage of poor declined from 42.4 percent in 1998 to 40.1 percent in 2005/06. However, unlike in the urban areas, this decline is not robust to alternative definitions of poverty line. If slightly higher poverty lines were used than the already chosen ones (higher by about 12 percent), the percentage of poor in the rural areas would have increased between 1998 and 2005/06. The decline in poverty as measured by the poverty gap and severity measures is also reversed at slightly higher poverty lines. However, examined at regional levels, the change in rural poverty becomes robust. In three of the seven rural regions where nearly 40 percent of the country's poor live (Central North, Central South and Eastern[1]), poverty unambiguously worsened by 10 to 15 percentage points.

6.   **The distributionally sensitive measures of poverty show a greater decline in poverty.** During 1998 to 2005/06, the poverty gap index declined at a greater rate than the headcount index, and the severity of poverty index fell at an even greater rate. This indicates that the ultra poor benefited even more than the average poor.

7.   **Despite the recent reduction, poverty in Yemen is deeper and more severe than in other MENA countries.** The poverty gap index is 8.9 percent, implying a monthly poverty deficit per capita of about YR 497. On average, a poor person should receive YR 1,431 per month to be lifted out of poverty[2] - about one-third of the mean consumption of the poor. Perfect targeting of the poor would require only about YR 124.4 billion per year (about 4 percent of GDP) to fill the gap between the actual spending of poor households and the poverty line, thus lifting everyone out of poverty. The severity of poverty index (which attaches greater weight to the poverty gaps of poorer families) at 3.3 percent is relatively high by MNA country standards (Figure E.2). The food poverty gap averages about YR 2,100 for the food-poor, some

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[1] These three regions comprise 12 of the 21 governorates of Yemen. <u>Central North</u>: Sana'a - Sadah - Mareb – Aljouf-Amran and Rimah; <u>Central South</u>: Albaida - Lahj – Abyn and Aldaleh; <u>Eastern</u>: Shabwah - Hadhramaut and Al Maharah.

[2] The per-capita poverty deficit is calculated for the population as a whole. While the per capita deficit per month is YR 497, the average deficit per poor person is YR 1,431.

75 percent of the average consumption of the food-poor. Meanwhile the government's cash-transfer program which targets the food-poor (the Social Welfare Fund) is inadequate as it currently has a benefit ceiling of YR 2,000 per family.

Figure E.2: Comparison of Depth and Severity of Poverty in Select MNA Countries
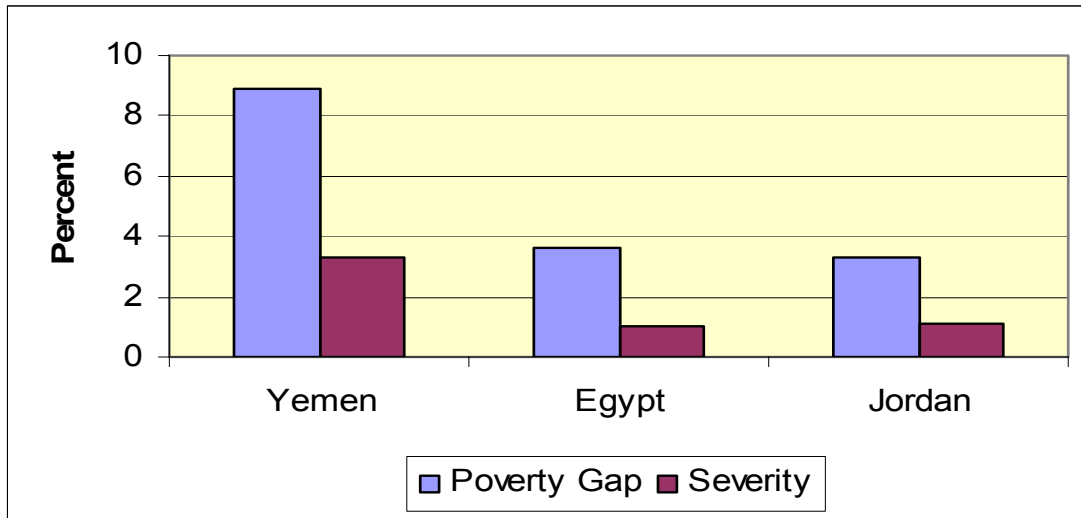
Source: World Bank staff estimates.
Notes: Based on the HBS for Yemen (2005/06), Egypt (2004/05), and Jordan (2002/03).

8. **Poverty differs considerably across regional dimensions.** For the first time for Yemen, utilizing the 2004 census data and the 2005/06 HBS, poverty at the district levels was projected with statistical precision. There are large intra-governorate differences in the incidence of poverty (Figure E.3). Poverty varied between 5.4 percent and 71 percent in 2005/06 among governorates. Poverty is highest in the rural part of the Amran governorate, where 71 percent of the population is poor. Amran is followed by Shabwah and Al-Baida (60 percent). The incidence of poverty is the lowest in the Al-Maharah and Sana'a City governorates. The ranking of governorates remains unchanged for other measures of poverty. Because of the faster reduction in urban poverty, regional differences in the rates of poverty have accentuated between 1998 and 2005/06.

Figure E.3: Percentage of Poor by Governorate, 2005/06
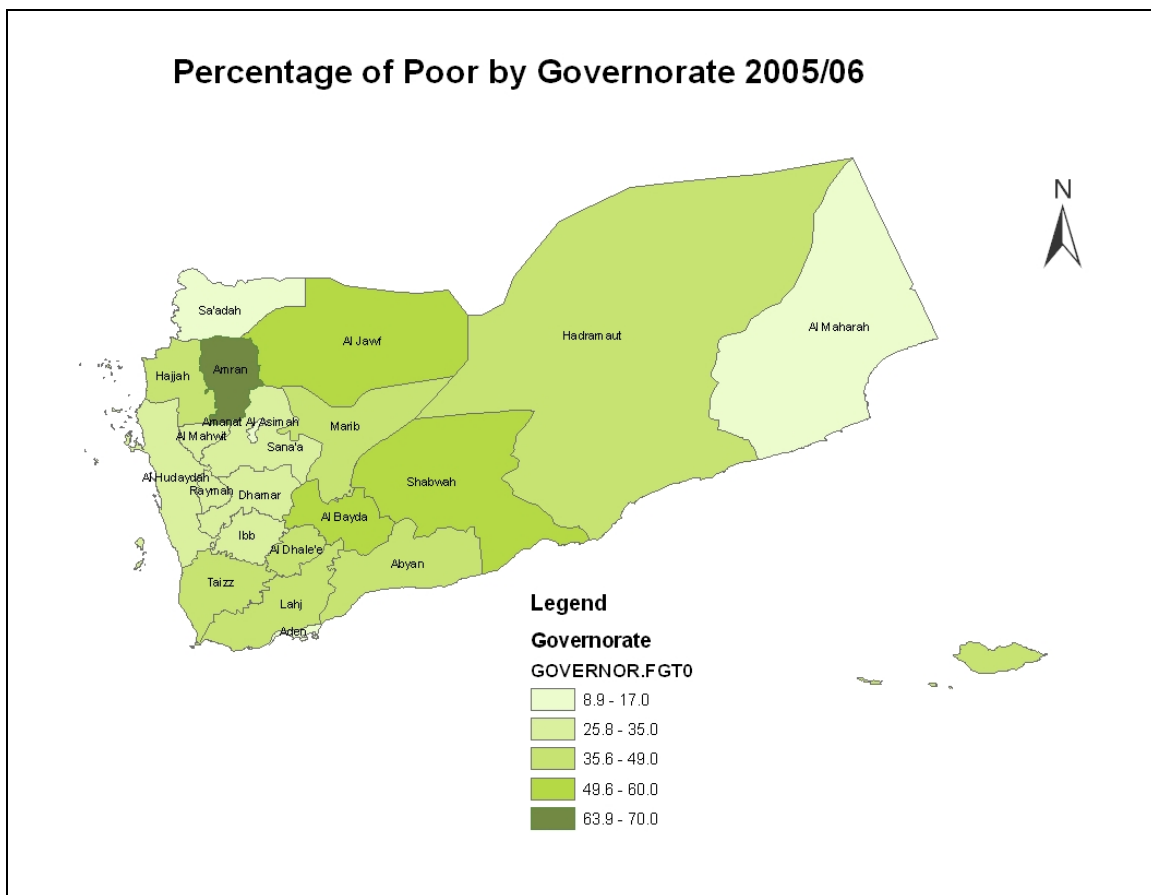
Sources: Data for the percentage of the poor are from poverty estimates calculated for this report.
Map of Yemen is provided by the Ministry of Public Health and Population
(hosted at http://envr.abtassoc.com/yemen/english/data.html).

III   CHANGES IN THE KEY CHARACTERISTICS OF THE POOR

9.   **Educational attainment of the poor has improved, and the poverty incidence has marginally declined among illiterate families.** The share of poor households headed by a person without any formal education declined from 86.8 percent in 1998 to 68.3 percent in 2005/06. The illiterate dominate among those without formal education. The incidence of poverty among families headed by an illiterate person declined from 47.3 percent in 1998 to 44 percent in 2005/06. The lowest poverty rate was found among households headed by persons with university degrees and above, although puzzlingly the difference between the poverty rates of university graduates in urban and rural areas is very large: 5 percent versus 29 percent. This difference could arise from inefficiencies of the labor market such as costs of job-search. Poor workers receive 10 percent less return on education than the non-poor as they probably cannot secure better paying jobs which require better social connections.

10.   **However, at a time of rapid surges in enrollment, poor children are falling behind.** The enrollment rates for children in the age group 6-14 in the poorest decile declined for both urban and rural areas by 5 percentage points, while the richest deciles increased enrollment by

1 percentage point in urban areas and by 21 percentage points in rural areas. Unavailability of schools and difficulty in commuting are the obstacles that keep children out of school. Other reasons given for non-enrollment include a lack of interest by the family, and/or having to work.

11.   **Poor families spend less on health expenditure as a share of their total expenditure compared to the non-poor.** Inability to pay and difficulty of access may be discouraging them from utilizing medical care. Out-of-pocket payments for health services as a share of total expenditure has increased between 1998 and 2005/06[3]. Households in the poorest quintile spend about one-half what the richest quintile spends as a share of their total consumption expenditure. This distinct pattern suggests that the poor in Yemen may be discouraged from utilizing medical care since they cannot afford it. The inability to pay may contain demand for medical care among the poor.

12.   **Children from poor families suffer more from malnutrition.** Child malnutrition remains a concern in Yemen, as nearly one-third of children between two and five years old are severely stunted[4]. Data on severe stunting shows a greater disparity between urban and rural children than other types of malnutrition (Table E.1). Poverty is clearly associated with the prevalence of severe stunting and underweight among Yemeni children[5]. Since the WHO guidelines for the international reference population changed, it was not possible to compare the prevalence of child malnutrition with the results of earlier health surveys. On the other hand, available data suggests that the prevalence of child malnutrition did not decline over the last few years.

Table E.1: Prevalence of Severe Malnutrition (%)

	National average	Poor	Non-poor	Urban	Rural	Boys	Girls
Severe stunting	27.5	31.7	26.0	23.5	33.2	29.2	25.7
Severe underweight	11.6	13.7	11.0	10.2	13.7	12.4	10.9
Severe wasting	10.2	9.6	10.4	10.0	10.5	11.0	9.4

Source: World Bank staff estimates from the 2005 HBS.
Note: Following the new WHO guidelines, prevalence of stunting and wasting was calculated for children between 2 to 5 years old. For underweight children, the relevant age group remained children under five years old.

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[3] A simple comparison of the HBS 1998 and 2005/06 suggests nearly a three-fold increase in aggregate as well as by expenditure decile. This trend appears to be at odds with other evidence in the HBS, as discussed in more detail in Volume II, Annex 6.
[4] Height-for-age, <3SD from the international reference median value. On a population basis, high levels of stunting are associated with poor socioeconomic conditions and increased risk of frequent and early exposure to adverse conditions such as illness and/or inappropriate feeding practices.
[5] Height-for-age, <3SD from the international reference median value.

13.   **More people are seeking medical treatment when sick, but the gap persists between the rich and poor**. In the 2005/06 HBS, the percentage of individuals who were ill during the preceding month of the survey and sought treatment ranged from 56.6 percent in the poorest quintile[6] to 79.7 percent in the richest quintile. Compared to the 1998 HBS, the 2005/06 HBS figures show that proportionately more of the poor population seeks medical care when ill; however, there still exists a persistent gap between the poor and the rich.

14.   **High health cost is the single most important reason why the poor do not seek care when they are sick.** For the poor, inability to pay for medical care is the most significant reason for not seeking treatment. Unavailability of needed medical service and difficulty in physical access were the second and third reasons for not seeking the medical care by the poor[7]. Inability to pay for medical care and unavailability of care become less significant barriers as the expenditure level goes up. In the richest quintile, the major reason for not seeking care is that the illness was considered too minor to receive the medical attention.

15.   **Using self-reported status, the poverty rate of female-headed households in Yemen is not significantly different from male-headed households.** Only 5 percent of the population in Yemen lives in households headed by a female. These households represent 8 percent of all households. While the mean poverty incidence for self-declared female-headed households is 32 percent versus 35 percent for male-headed, this difference is not statistically significant, as the sample of female-headed families produces a high standard error.

16.   **Among female-headed households, there is heterogeneity in risk of poverty.** Poverty incidence is highest among those female-headed households which have a spouse residing in the same household. In most cases these husbands are physically or mentally disabled. Next in incidence are the households where the husbands are away. Widows and divorced women-headed households rank next in poverty risk. The lowest risk (7%) is for households headed by single women who have never married.

17.   **Female-headed households allocate resources better than male-headed households.** Controlling for other factors in a typical demand system, the HBS data established that female-headed households (self-reported and de-facto) allocate resources better for current welfare *and* for the future. Households that are headed by women have lower shares of consumption on adult-consumption goods such as tobacco and qat, and spend more on education[8]. This applies both to households headed by single women, and households where the male head of the family is mostly absent. Having a female as head of household increases the share of expenditure on food by 1.2 percent, while the demand for non-essential goods such as tobacco and beverages declines by 10 percent.

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[6] Quintiles are defined by household expenditure divided by the total number of household members.

[7] The 2005/06 HBS did not assess how many minutes it takes to go to a nearby health facility.

[8] The positive effect on personal services (in which education is included) is not statistically significant. See Annex IV, Annex 11 on estimation of an AIDS demand system for Yemen using HBS 2005/06.

IV THE IMPACT OF GROWTH AND REFORMS ON POVERTY AND UNEMPLOYMENT

18.   **The decline in poverty rates observed in Yemen between 1998 – 2005/06 was largely a result of oil-driven economic growth.** However the oil sector employs few Yemenis, and fewer if any from the poor population[9]. The spending impulse from government expenditure expands mostly the service sector based in urban areas.

19.   **Oil-based growth does not benefit the poor, especially the rural poor.** Empirical evidence has shown that oil rents do not trickle down to most of the economy, in particular the poor. When income level is controlled, countries which have high levels of natural resource endowment tend to have higher rates of poverty and Gini coefficients than their non resource-rich peers[10]. The oil sector does not contribute to employment among the rural poor population, being a highly industrialized sector demanding skilled labor, which is mostly imported.

20.   **The direct impact of tariff cuts has been minimal.** Trade liberalization is generally considered to be beneficial for economic development due to long-term efficiency gains, but when applied to import-competing sectors, it can have immediate adverse effects on the poor. During the structural reform periods of the 1990s, Yemen's unweighted average tariff decreased from 20 percent in 1996 to 12.6 percent in 2003[11]. However, as Yemen is without a strong initial industrial base, the country is unlikely to have been adversely affected by import tariff cuts.

21.   **The devaluation has probably contributed the most to transitional adverse affects on the poor.** Between 1998 and 2005/06, the Yemeni Rial depreciated by 41 percent. International evidence points to an average pass-through coefficient of 0.7[12], implying that up to one-third of the observed price increase of 89 percent over the period could be explained by depreciation. But devaluation improves the incentives in the export-oriented sectors, and the expansion of these sectors *could* benefit the poor. Partly in response to the depreciation, non-oil exports in Yemen expanded more than two-fold in nominal US$ terms between 1998 and 2005.

22.   **The partial removal of petroleum price subsidies between 1998 and 2005 may have resulted in a cost of living increase of around 21 percent.** Petroleum prices have been highly subsidized in Yemen, the highest in the MNA region, representing up to 9 percent of GDP. Faced with the prospect of dwindling oil reserves, and thus declining fiscal revenues, the authorities decided to reduce petroleum sector subsidies. Increased disbursements from the Social Welfare Fund were meant to mitigate any adverse effects.

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[9] In 2003 the oil sector employed only 21,000 Yemenis, while at the same time 190,000 job searchers entered the market (Development Policy Review, WB, 2006).

[10] "*Economic Growth in the 1990's: Learning from a Decade of Reform*", WB, 2005.

[11] World Bank Trade Department cited in "*Economic Growth in the 1990's*", World Bank, p. 137.

[12] Source of pass-through coefficient: Goldfajn and Werlang, "*The Pass-Through from Depreciation to Inflation: A Panel Study*", April 2000.

Unemployment Rises, Particularly Among the Poor

23.   **The increase in the labor force out-paced the growth in jobs during 1999 - 2004.**
The labor force increased at a rate of 4.3 percent per year, while the number of jobs increased
by 3.7% per year. The labor force participation rate increased slightly from 38.5% to 39.2%
between the two reference years. Therefore the rate of unemployment increased slightly by 2.6
percentage points. Youth unemployment (ages 15 – 24) is considerably higher than the average
general population, at 28.3%.

24.   **Unemployment increased between 1999 and 2004.**   Unemployment in Yemen
(ages 15+) increased from 13.7 percent in 1999 to 16.3 percent in 2004, even though
there was a significant decline in poverty (from 40 percent to 35 percent
approximately)[13]. According to international evidence, there is no clear relation between
poverty and unemployment. While micro-economic analysis may show a positive
correlation between unemployment and poverty, from a macro-economic standpoint,
poverty is a household phenomenon and unemployment is related to the individual. An
unemployed individual may not be poor if there are other income earners in the
household. Moreover, poor households cannot afford to be unemployed, but likely earn
very low wages that perpetuates the cycle of poverty. Similarly, changes in policy can
cause divergent outcomes for poverty and unemployment. For instance, a significant
reduction in real wages may create more jobs, but lower incomes would create higher
poverty.

25.   **Unemployment rate among women has increased during 1999 - 2004.** This is in part
because female labor force participation increased from 7.0 to 9.6 during 1999 - 2004. The
female unemployment rate also increased from 25.4 to 39.5 percent in 2004. The high level of
female unemployment is slightly more evident in the urban areas, where nearly half the female
labor force is unemployed. In comparison, in rural areas, female unemployment is 33 percent.
There is also a large difference between male and female unemployment rates. The ratio of
male to female rate of unemployment is approximately 3:1, similar to that in Egypt (Figure
1.11).

V   SOCIAL SPENDING AND POVERTY

26.   **Social spending in Yemen has decreased in the recent past to 7 percent of GDP.**
Social spending, defined to exclude petroleum subsidies, has declined from 8.6 percent of GDP
in 2003 to 7 percent in 2006. Health spending is only about 2 percent of GDP. In fact,
petroleum subsidies alone equal or exceed total social spending.

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[13] A broad definition of unemployment (ages 15+) was used in Labor Force Survey of 1999 and the census
of 2004 – the unemployed are those without work, seeking work, and among those not seeking, those who
will accept work if offered. Based on this broad definition, the unemployment rate increased slightly from
13.7 percent in 1999 to 16.3 percent in 2004. It is possible to compare a narrow definition of
unemployment - the unemployed are those without work but seeking work – between the censuses of 1994
and 2004. By this measure, the unemployment rate has slightly increased from 9 percent in 1994 to about
10 percent in 2006.

27. **Although public recurrent education expenditure equally benefits all income deciles, the distribution is more unequal at higher educational levels.** The top decile gains 30 percent of public expenditure share at the university level and 17 percent at the TEVT (Technical Education and Vocational Training) level.

28. **Immunization coverage in Yemen has been improving over the last decade[14].** Nearly 100 percent coverage has been achieved for polio throughout different expenditure groups. No substantial disparity exists between the urban area and rural area, nor was gender disparity observed.

29. **For measles immunization coverage - one of the MDG indicators - the national average rate was less than 80 percent.** It appears that Yemen has a long way to go to achieve the MDG target. There was a 9 percentage point difference in measles immunization coverage between the richest quintile and poorest quintile. The gap between the urban and rural populations was further noticeable at 12 percentage points.

30. **Government health care service is not targeting the poor.** The National Health Accounts Study[15] found that government expenditure on health was 1.8% of Gross Domestic Product in 2003 and accounted for 32% of the total health expenditure of the country. Benefit Incidence Analysis shows that individuals in the poorest households do not necessarily receive their medical care from the public health facilities (Figure E.4). In the poorest quintile, more individuals sought care at private health facilities than public facilities. Private clinics were the most popular place to seek care when ill among the poor.

Figure E.4: Where Individuals Seek Medical Care – Public vs. Private
(% of individuals by quintile)
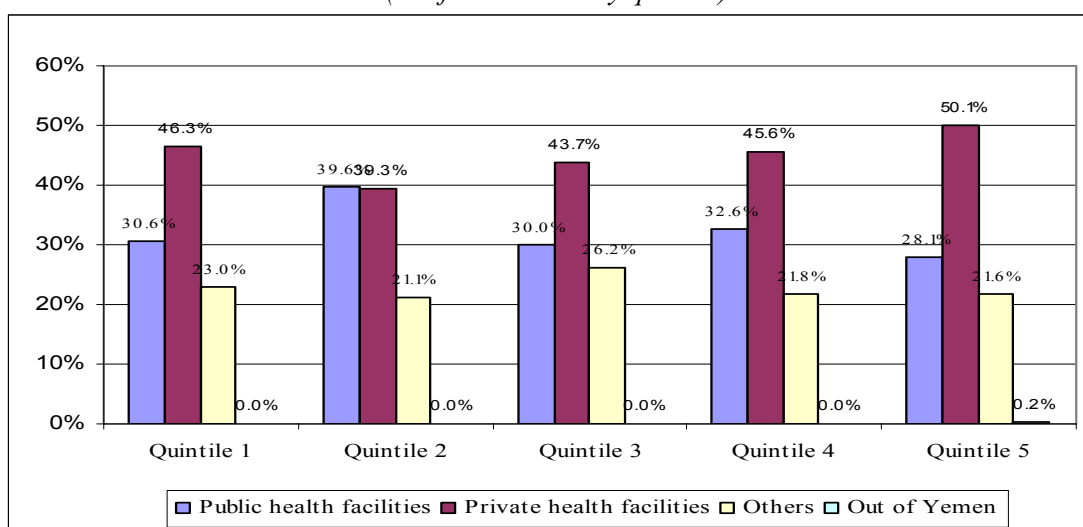
Source: World Bank staff estimates from the 2005 HBS.
Note: Public health facilities include public health centers and public hospitals. Private health facilities include private clinic, private hospital, private doctor consultation, and private consultation with a certified

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[14] WHO / UNICEF immunization coverage estimates.
[15] Yemen National Health Accounts: Estimate for 2003, National Health Accounts Team, Republic of Yemen, Partners for Health Reforms, June 2006.

health professional. "Other" includes pharmacy and traditional medicines. By disaggregating pharmacies between public and private, the percentage of the private facilities goes up.

Social Protection and the Poor

31. **Transfers play an increasingly important role in poverty alleviation in Yemen.** Public and private transfers (without petroleum subsidies), as identified in Table E.2, account for nearly 9 percent of household expenditure. Without public and private transfers to households (including petroleum subsidies), the number of the poor in Yemen would swell by 1.6 million, or 8 percent of population.

Table E.2: The Impact of Transfers on Poverty in Yemen, 2005

	Poverty Rate	Poverty Gap	Share of Total Consumption (population) (%)	Share of Total Consumption (beneficiaries) (%)	Average Transfer per Beneficiary Rials per year	Share of Transfer going to the Poor (%)
Poverty Without Transfers	43.8	14.1				
Social Welfare Fund	-0.3	-0.2	0.3	4.0	2552	52
Other Public Transfers[16]	-1.5	-0.9	1.8	8.6	8199	49
Petroleum Subsidies (direct)	-2.5	-0.7	1.2	1.2	389	23
Remittances Within Yemen	-1.9	-1.2	2.6	8.2	6604	45
Remittances From Abroad	-2.7	-2.3	3.9	27.7	2831	16
Poverty HSBS 2005/06	34.8	8.9				

Source: World Bank Staff Estimates based on Household Budget Survey, 2005/06.

32. **Direct public transfers are as important as private transfers in reducing the current level of poverty.** Public transfers (including petroleum subsidies) reduced poverty by 4 percentage points. The petroleum subsidy is the most important of the public transfers in terms of impacting poverty, closely followed by diverse sector-oriented programs and pensions.

33. **Half of the transfers from public programs targeting <u>poverty now</u> leak to the non-poor.** While some cash-transfer programs, such as the Social Welfare Fund, are able to disburse half their total benefits to the poor, only one-fifth of the benefits of the large, untargeted petroleum subsidies program reaches the poor. In most public programs targeting current poverty, transfer per poor beneficiary is less than that for the rich. Moving towards better social protection mechanisms that use proxy means testing, as being piloted by the authorities, is critical.

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[16] "Other Public Transfer" programs refer to transfers from seven different funds such as pension funds, income assistance from general authority for martyr's families, agriculture and fisheries production, etc.

34.   **The government's efforts to reduce <u>poverty in the future</u> by community driven programs – the Social Fund for Development and Public Works Project - perform better at targeting the poor.** Nearly 70 percent of the SFD resources go to the poorest three deciles. Available evaluation of the PWP indicates that 60 percent of the job opportunities created were taken up by the unskilled and presumably poor workers.

35.   **The rapid expansion of the Social Welfare Fund has come at a cost.** The Social Welfare Fund, the government's main cash transfer mechanism to alleviate <u>poverty now</u>, has expanded by nearly 9 times in as many years in terms of the number of beneficiaries, reaching nearly 1 million people in 2006. The program is currently able to reach 14 percent of the extremely poor (in 2005) and 13 percent of the poor. However at the same time, leakage to the non-poor increased. Over 45 percent of the beneficiaries were non-poor in 2005 compared to 40 percent in 1999. Non-poor beneficiaries absorbed 47 percent of all benefit payments. Despite the expansion, the SWF a had negligible positive impact in poverty reduction because the amount it transfers per beneficiary has been constant since 2000 in nominal terms, now amounting to at best 4 percent of poverty line, while the average income deficit of the poor is 27 percent.

36.   **The Social Welfare Fund has low coverage of the poor and most beneficiaries are the non-poor.** SWF transfers are collected by only 8 percent of those that satisfy its targeting criteria. Out of the population which receives transfers, 70 percent are not in the target group. Out of those untargeted beneficiaries, 75 percent are not poor. Overall, the program covers 8.4 percent of the population and 13 percent of the poor (Figures E.5 and E.6).

Figure E.5: SWF Targeting (1998 and 2006)   **Figure E.6: SWF Coverage (1998 and 2006)**
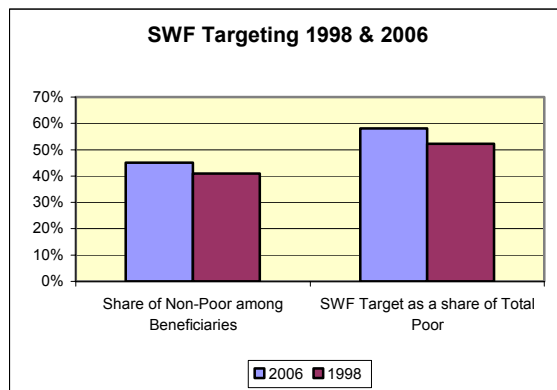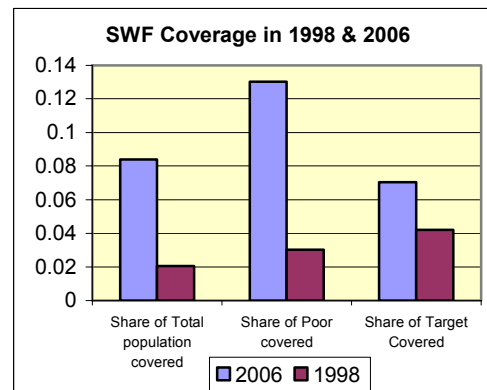
Source: World Bank Staff Estimates based on Household Budget Survey, 2005/06.

37.   **Though petroleum subsidies reduce poverty, much of the subsidy leaks to the non-poor.** Without the current petroleum subsidy (only taking into account the price increase on gas, LPG and kerosene), the poverty rate would have been roughly 2.5 percentage points higher. Interestingly, the impact would have been higher for urban areas, where poverty would go up by 3.6 percentage points, versus 1.5 percentage points for rural areas. Subsidies represent a higher share of the consumption budget of poorer deciles. For instance, this rate for the lowest decile is 1.9 percent of total household consumption, versus 0.9 percent for the higher decile. Still, the share of the total subsidy received by households is regressive across all deciles, with

almost half of the total subsidies going to the top 3 deciles of the population, while the bottom three deciles receive a mere 14 percent. The share of subsidies going to the poor is 22.9 percent, versus 77.1 percent going to the non-poor.

38. **When taking into account indirect effects, the poverty impact of petroleum subsidies is even higher.** Petroleum subsidies have a spillover effect through keeping the price of other goods down. When this indirect effect of petroleum subsidies is accounted for, the poverty rate without subsidies would be 8.2 percentage points higher. The rates are 6.6 percentage points for the urban areas versus 8.9 percentage points for rural. Therefore, accounting for indirect effects, the impact of the current petroleum subsidy removal will be higher on rural areas than urban. Thus current petroleum subsidies are keeping roughly 1.5 million people from slipping into poverty.

VI   POVERTY MONITORING

39. **A coherent and functional poverty monitoring system does not currently exist in Yemen, despite multiple donor efforts.** Most monitoring and evaluation is done in response to varying donor agendas. Moreover, the information is not available publicly. Competing demands for information exist under the PRSP, TFYP, and MDG frameworks, leading to poor formulation of objectives and indicators. Past inefficiencies exist in the system, such as the lack of coordination and duplication of work at various levels of MOPIC, which have hampered growth and poverty alleviation programs. Even after three years of initiating M&E, monitoring systems are still not completely functional. Discussions regarding the list of most important indicators are still ongoing, and progress is very slow. In addition, there are also concerns regarding implementation capacity.

40. **But, improvements to the monitoring system are planned**. A successful strategy for M&E must focus on the essential aspects of poverty monitoring and capture primarily the level of outcomes, as well as scrutinize the input side (the budget, its execution, and medium-term financial planning). It should include surveys that can assess the effectiveness of policy measures on the ground. It should be built upon the existing administrative information systems in the sectors, but it should also critically examine and validate their results. The new Third Five Year Plan (TFYP) recognizes these deficiencies and prioritizes poverty monitoring as a major objective under the TFYP. Proposed restructuring of MOPIC and reassessing the role of all stakeholders, including line ministries and donors, should lead to improvements in the monitoring and evaluation processes.

41. **Greater civil society involvement is the key to success in monitoring**. The involvement of the parliaments and civil society in the discussion about the achievements and successes in implementation of the PRSPs is so poor, that in effect, neither accountability nor dialogue is possible amongst the governments, the parliaments and the citizens. Since the objectives of the poverty monitoring process include a qualitative change in the political culture and a more intense dialogue between governments and civil society, considerable efforts are necessary in order to maintain the dynamics of participation that emerged during the formulation of the PRSP.

VII POLICY RECOMMENDATIONS

i. ***Crafting a growth strategy that enables rural Yemen to also participate in prosperity is vital for the success of poverty reduction.*** *A review of 14 countries, of which 8 were considered to be "successful" in implementing pro-poor growth strategies (Louis, 2007), reveals certain measures which are applicable across the board; including good economic policies, political stability and public investment in capital (both physical and human).*

ii. ***Besides, such a strategy needs to be tailored to suit the needs of Yemen's special socio-economic context.*** *Orienting development towards the rural areas and correcting policies such that the poor in rural areas are able to participate is essential. For example, innovations to connect the rural economy to vibrant sources of urban growth in the tourism sector could help greatly.*

iii. ***Managing well the transitional costs of reform on the poor is an important area of focus****. Though economic reforms will eventually benefit all, the transitional costs on the poor are to be offset in careful ways. Elimination of petroleum subsidies will bring sizeable benefits to the economy. However, a good part of the subsidies saved must be earmarked for programs that compensate the poor for the loss of welfare. Ad-hoc methods attempted in the past, such as expanding the leaky cash-transfer scheme, or doubling the salaries of the lowest paid civil servants (though justified because of the very low pay for civil servants affecting their morale) would not necessarily be the most effective system. The reform of the Social Welfare Fund by increasing the amount of assistance while improving the targeting method will help in protecting the vulnerable poor. In this regard, rolling out to all Yemen the pilot proxy means testing method experimented in three governorates in a short time-frame could save resources.*

iv. ***Orienting social spending in education and health sectors more to the poor.*** *Improving education and health outcomes of the poor will enable them to participate in the economic development that happens around them. The current backslide in the enrollment of the poor when public resources are successful in raising enrollment needs to be arrested. Though educational subsidies seem to be equally distributed across expenditure classes, the anti-poor bias of the subsidy for higher education needs to be corrected. Similarly, the gap in the access of the poor to public health needs to be closed. Without these corrections, pouring more resources into education and health alone will not help the rural poor.*

v. ***Redesigning the nearly non-functioning poverty reduction monitoring system towards best-practices will help.*** *Reliance on household budget surveys at five year intervals are too infrequent and too costly ways to monitor poverty and re-orient development. Instituting panel surveys to track the improvements in the livelihoods of the poor on a frequent basis would serve as a constant reminder about the effectiveness of the overall development strategy. Changing the business culture of the monitoring institution (MOPIC) by re-engineering to reward capacity and results appears to be key, in addition to several improvements in the process of indicator identification, collection, and dissemination to the public.*

42.   **Sharper analysis will require greater investment in data and tools.** The current study has built new data and tools to aid in the analysis of the impact of reforms on poverty for the first time for Yemen. An input-output table was updated, a social accounting matrix was constructed, and a full demand system was estimated. However, the use of the HBS data to map the origin of income by sectors to households in rural and urban areas has been problematic. The sharp rural-urban divide in poverty alleviation is not replicated well in the model. One household can derive income from several sectors and an individual can have many jobs. The allocation of time and income between different sources of employment is not gathered in the survey, preventing the precise allocation of income from sectors to households. Moreover, the treatment of the oil and gas sector in the input-output table and the allocation of trade and transport margins need greater accuracy. In future work and surveys, these deficiencies have to be more carefully scrutinized, and methods devised to capture flow of funds more accurately.

CHAPTER 1: POVERTY IN YEMEN: MAGNITUDE AND TRENDS

1.1 **This chapter presents new estimates of poverty based on the household budget survey of 2005/06.** Actual consumption is used as a measure of welfare to determine who the poor are. The first two sections of this chapter propose new poverty lines and provide estimates of poverty for Yemen. The next section compares poverty in 1998 and 2005/06 and explains the difference in terms of growth in consumption and changes in consumption inequality. The status of the poor in non-income dimensions, such as education and health are discussed in Sections 4 and 5 respectively. The risk of poverty for women as a vulnerable group is analyzed in Section 6. The role of qat in Yemen's economy is reviewed in Section 7, and the connection between unemployment and poverty is discussed in Section 8. In the last section, the connection between the trends in the determinants of poverty at the household level are analyzed using a regression model. The key messages from this chapter are:

- *Thirty-five percent of the population in Yemen is currently poor. The incidence of poverty in rural areas at 40 percent is nearly twice as much as in urban areas.*

- *Poverty has declined in Yemen between 1998 and 2005/06 in both income and non-income dimensions. The percentage of poor has fallen from 40.3 percent of the population in 1998 to 34.8 percent.*

- *In urban Yemen, poverty (the percentage of the poor) has declined dramatically from 32.2 percent in 1998 to 20.7 percent in 2005/06. This decline in urban poverty is robust to alternative definitions of poverty line.*

- *Rural Yemen has not seen any significant decline in the percentage of the population living under the poverty line. The percentage of poor has remained at about 40 percent. Moreover, even a slightly higher poverty line (5 percent higher than the chosen one) would indicate an increase in the percentage of poor. However, distributionally sensitive poverty measures, poverty gap and severity of poverty, show a significant but small decline in poverty in rural Yemen.*

- *Accentuation in regional differences in poverty is worrying. In three of the seven regions poverty is high, per-capita consumption has declined dramatically and poverty has worsened unambiguously.*

- *Though educational attainment of the poor has improved and the incidence of poverty among the illiterate has also declined, the poorest decile is enrolling fewer children in schools at a time when great strides are being made in school enrollment by the richer groups in rural Yemen.*

- *The poor are seeking medical care when they are sick more often than before and are increasingly using local health facilities. Still, the vulnerable groups among the poor – children and women – are at a disadvantage. Poor children are less often immunized against measles and hepatitis, and suffer more from malnutrition. Poor women are twice as likely as the rich to deliver babies unassisted.*

- *Female-headed households do not display any difference in poverty incidence compared to male-headed households. However, they exhibit different consumption patterns: when women are the heads of households, they spend proportionately less on adult consumption goods (such as tobacco and qat) and more on education than male-headed households.*

I   CONSTRUCTION OF NEW POVERTY LINES

1.2   **The method of estimating poverty lines has been changed to take into account household characteristics.** Earlier poverty estimates by the World Bank (2002) based on the 1998 HBS derived a national poverty line on the basis of a normative basket that would yield a daily per-capita intake of 2,200 calories. With the new anthropometric data available from the 2005/06 HBS on, it is possible to make the poverty lines better tailored to the actual household characteristics. The methodology for deriving poverty lines for Yemen was improved by using the concept of household specific poverty lines[17].

1.3   **There are four methodological differences between the previous and the present poverty assessment in defining the poverty line.**

- *The food bundle used to price food poverty in the previous report was normative, derived by a nutrition expert. The current study uses the HBS to calculate a food-bundle that is actually consumed by the households.*

- *While the previous study used a daily requirement of 2,200 K calories per person, in the current study the calorie needs of the households are age and sex specific. When averaged for all the individuals in the whole country, the daily requirement results in 2,193 K calories.*

- *In deriving the non-food poverty line, the previous study used a non-parametric approach by averaging expenditures on non-food items of those households whose total expenditure equaled the food poverty line. The present study uses a parametric approach that takes into account economies of scale.*

- *While the previous study used consumption expenditure as the welfare measure, the current study was able to use the reported actual consumption as the welfare measure because it was also collected in the HBS[18]. Actual consumption is estimated to be 4 percent higher than the reported consumption expenditure.*

1.4   **The new poverty lines for Yemen are household specific.** With the new anthropometric data available from the 2005 HBS, it is possible to make the poverty lines better tailored to the actual household characteristics. The new national averages for poverty lines in

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[17] Volume 4 provides a comprehensive discussion of key methodological issues in constructing poverty lines such as the concept of poverty, different approaches to poverty lines, the criteria to be met by absolute poverty lines, and choices in setting food and non-food poverty lines.

[18] Actual consumption can differ from consumption expenditure (purchases) because of the drawing-down on a build-up of stocks.

nominal terms are 70 to 80 percent higher for urban and rural regions respectively than the 1998 poverty lines[19]. The average consumption for Yemen as a whole is only 60 percent above the average poverty line, indicating low income levels in the country.

Table 1.1: Comparison of New and Old Poverty Lines in Current Prices
(Yemeni Rials per-capita per month)

	All Yemen		Urban		Rural	
	1998	**2005**	**1998**	**2005**	**1998**	**2005**
Total Poverty Line	3210	5456	3195	5667	3215	5377
Ratio of mean consumption to poverty line	1.3317	1.5679	1.6056	2.151	1.2498	1.3360
Food Poverty Line	2101	3765	2093	3581	2103	3694

Source: UNDP report based on HBS 2005/06 and World Bank (2002).
Note: As in the previous poverty assessment, expenditure on qat is included both in the poverty line and the measure of welfare.

1.5 **There is considerable regional variation in poverty lines among similar households.** To illustrate the effect of household composition and location, consider a household of four persons that spends YR 25,000 per month. If the household consisted of two adults and two children, this household would not be poor regardless of where it resides. However, if this household consisted of four adults, it would be poor if it resides in certain governorates (i.e. Abyan and Sana'a City), but not poor in other governorates (i.e. Al-Hodeida). Table 1.2 presents the poverty lines by family composition and by rural and urban location of different governorates.

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[19] Between 1998 and 2005, the consumer price index nearly doubled.

Table 1.2: Estimated Poverty Lines for 2005/2006, by Governorate *(YR per month)*

	Average per capita		Two adults and two children		Four adults		Two adults and five children	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Ibb	5178	5075	18014	17726	24398	24798	31195	29455
Abyan	5831	5799	21466	22282	26864	30270	35531	34236
Sana'a City	6009	6197	21019	…	28763	…	37632	42799
Al-Baida	5523	5465	19460	20370	…	25842	33782	33805
Taiz	5596	5267	19172	18523	26669	27289	33865	31388
Al-Jawf	5032	5428	17620	19698	…	28147	30493	33816
Hajja	5626	5401	19059	18651	23498	26569	32778	31098
Al-Hodeida	5020	4981	16973	18554	26931	29028	29694	29261
Hadramout	5667	5589	20966	20451	27917	29541	34401	31167
Dhamar	5737	5654	19627	21079	…	31538	34592	35028
Shabwah	5745	6372	19089		26422	27727	36722	38571
Sa'adah	5136	5111	18901	19429	…	27155	31646	31969
Sana'a Region	…	5339	…	18358	28326	…	…	31826
Aden	6079	..	20912	…	26885	…	34932	…
Laheg	5421	5404	19106	19567	26272	…	34728	31254
Mareb	5462	5836	18857	20901	…	26144	30370	36223
Al-Mahweet	5361	5199	18420	18164	27262	33080	31448	32200
Al-Maharh	5417	6302	19028	21360	28130	…	34865	37924
Amran	5802	5814	21793	22456	…	27805	35921	34692
Al-Dhale	5571	5533	19931	19339	…	27089	32993	34685
Remah	5519	5389	…	18821	27241	27491	…	30661
All Yemen	5667	5377	19939	19063	26467	26893	34399	31964

Source: UNDP based on HBS 2005/06.
Note: If a governorate does not have a rural or urban region, the poverty line is left blank.

1.6 **Comparison of poverty over time requires a regional approach.** Geographically, Yemen is composed of two purely urban regions and five regions which are divided into urban and rural areas (Table 1.3). In order to make valid statistical comparisons between the 1998 and 2005/06 HBS, this regional aggregation ensures representative results at the national, urban/rural, and regional levels. In addition, the 2005/06 HBS design allows for the estimate of poverty measures and other related indicators for every governorate in Yemen to be disaggregated into urban and rural areas.

Table 1.3: Governorates by Regions

	Urban	Rural
Central North	Sana'a - Sadah - Mareb – Aljouf-Amran, Rimah	Sana'a - Sadah - Mareb - Aljouf-Amran, Rimah
Central South	Albaida - Lahj – Abyn, Al daleh	Albaida - Lahj – Abyn, Aldaleh
Aden	Aden	…
South West	Taiz, Ibb	Taiz, Ibb
North West	Hajjah - Almahwet - Alhodeidah, Dhamar	Hajjah - Almahwet - Alhodeidah, Dhamar
Eastern	Shabwah - Hadhramaut, Al mahara	Shabwah – Hadhramaut, Al mahara
Sana'a City Region	Capital secretariat (Sana'a city)	…

II   POVERTY IN 2005/06

A   *Poverty in Yemen*

1.7   **In 2005/06, there were seven million poor people in Yemen.** Thus, almost 35 percent of the population in Yemen could not fulfill their basic food and non-food needs. Using the food poverty line, overall poverty is estimated at 12.5 percent, representing almost 2.9 million individuals who cannot even satisfy their basic food needs.

1.8   **Poverty in Yemen is deeper and more severe than in other MENA countries.** The poverty gap index is 8.9 percent, implying a monthly poverty deficit per capita of about YR 498. On average, a poor person should receive YR 1,431 a month to be lifted out of poverty[20]. Half of the poor are clustered 75 percent below the poverty line. With perfect targeting of poverty-alleviating transfers, it would require only about 124.4 billion YR per year (about 4 percent of GDP) to fill the gap between the actual spending of poor households and the poverty line in order to lift everyone out of poverty. The severity index at 3.3 percent is relatively high by the standard of MENA countries (Figure 1.1).

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[20] Per-capita poverty deficit is calculated for the population as a whole. While per capita deficit per month is YR 498, the average deficit per poor person is YR 1,431.

Figure 1.1: Comparison of Depth and Severity of Poverty in Select MNA Countries
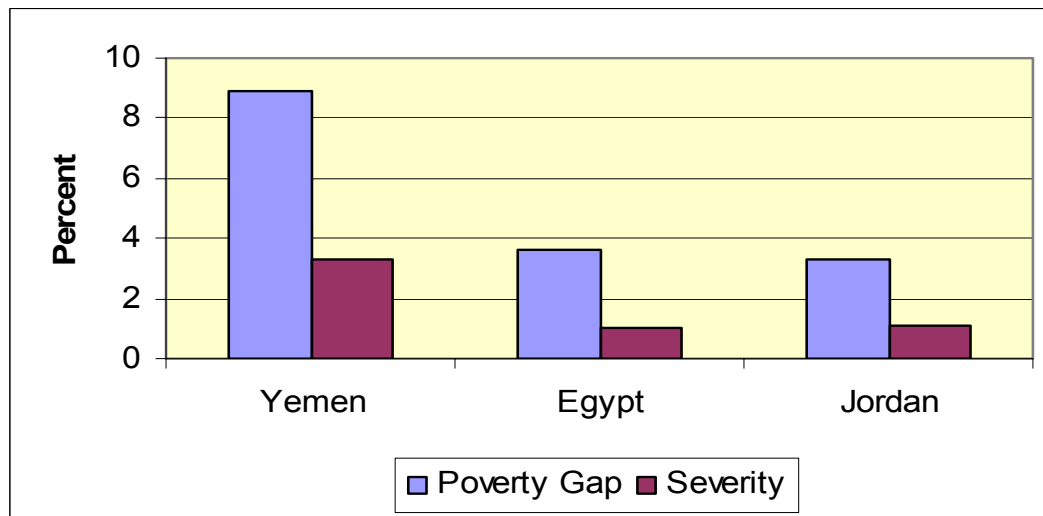
Source: World Bank staff estimates.
Notes: Based on the HBS for Yemen (2005/06), Egypt (1999/00), and Jordan (2002/03).

B   *Geographic Distribution of Poverty*

1.9   **Poverty and extreme poverty[21] are highly concentrated in rural areas.** Urban areas have 27 percent of the total republic population share, but account for only 16 percent of the poor. On the other hand, rural areas have 72.6 percent of the total population, but account for 84 percent of the poor. The risk of poverty for individuals in rural areas is double the poverty risk in urban areas: one out of every five persons is poor in urban areas, compared to two out of five in rural areas. In general, rural areas in all governorates have higher poverty rates than urban areas, and the gap between urban and rural areas is wider when using distribution sensitive indicators.

1.10   **The poor are overrepresented in rural areas of each governorate compared to the population share.** The governorates of Amran, Hajja and Taiz rural regions have the highest incidence of poverty. In fact, about one-third of the poor live in rural areas of three governorates, namely Hajja, Taiz and Al-Hodeida, while another 16 percent live in rural Ibb and Amran. Hence, any poverty alleviation programs need to design specific schemes for these areas. The existence of sizable differences in living standards across governorates means that regional policies in Yemen could play an active role.

1.11   **The regional dimensions of poverty differ considerably.**   There are large intra-governorate differences in the incidence of poverty (Figure 1.2 and Table 1.4). Poverty varied between 5.4 percent and 71 percent in 2005/06 among governorates. Poverty is highest in the rural part of Amran governorate, where 71 percent of Amran's rural population is poor. Amran is followed by Shabwah and Al-Baida (60 percent). The incidence of poverty is the lowest in Al-Maharh and Sana'a City governorates. The ranking of governorates remains unchanged for

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[21] Extreme poverty is defined as the condition when household expenditures are below the food poverty line.

other measures of poverty. This indicates that not only do poor households in Amran, Shabwah and Al-Baida governorates represent large proportions of their population, but that their expenditure level is far below the poverty line.

1.12 **The regional differences persist when using the notion of extreme poverty.** Rural parts of Amran, Shabwah and Al Baida have the greatest incidence of extreme poverty as well. One third of their population lives in extreme poverty. In addition, rural Shabwah has the deepest and most severe of poverty. Rural Shabwah also exhibits the highest level of inequality for the poor, as it has the highest poverty gap and severity indices.

1.13 **Combining the demographic census (2004) with the HBS (2005/06) makes it possible to project poverty at the district level with a measure of statistical reliability.** Following the small area estimation technique of Elbers, Lanjouw and Lanjouw (2002a), district level poverty estimates and maps have been prepared separately for the rural and urban areas. The detailed results and maps are presented in Volume 2 of this report. The detailed estimates provide updated information for geographic targeting used by Yemen's social protection programs, such as the Social Fund for Development and the Social Welfare Fund.

Figure 1.2: Percentage of Poor by Governorate, 2005/06
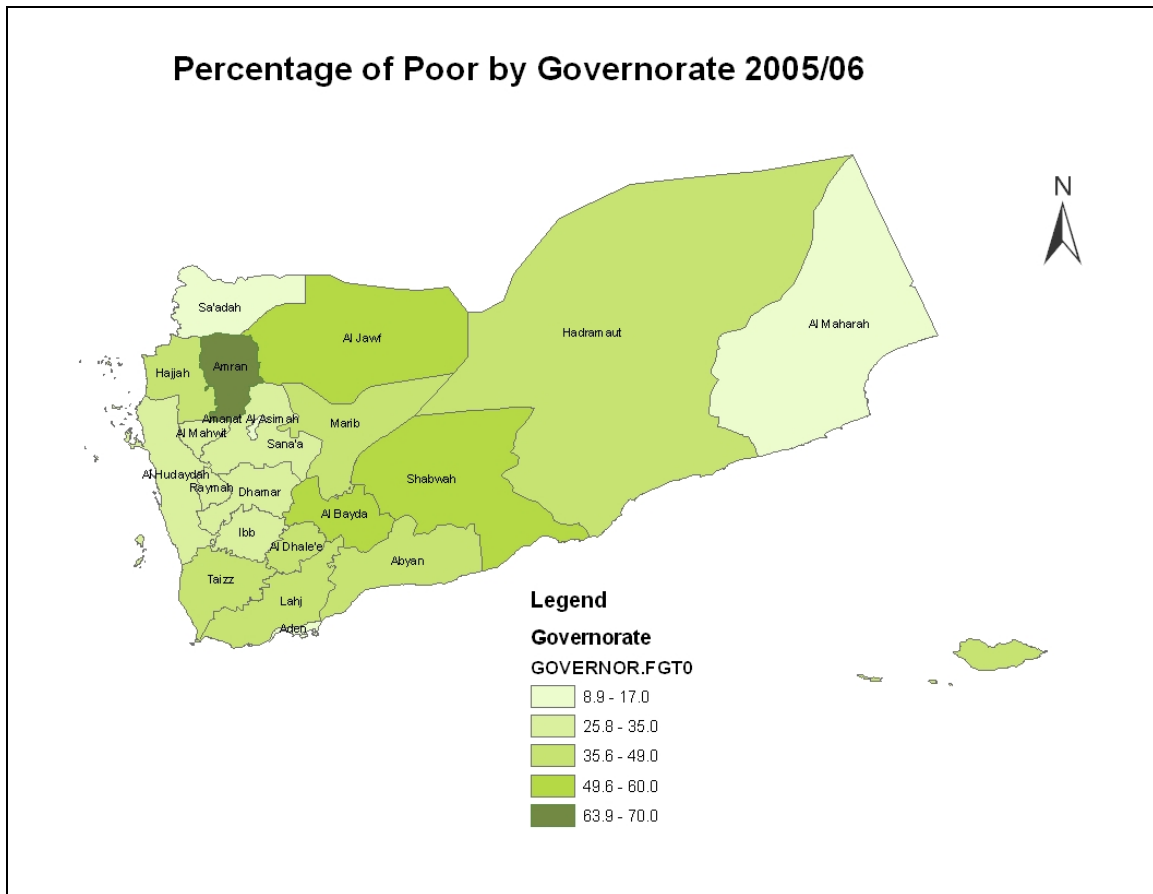
Percentage of Poor by Governorate 2005/06

N

Sa'adah

Al Jawf

Hadramaut

Al Maharah

Hajjah

Amran

Amanat Al Asimah

Al Mahwit

Marib

Sana'a

Al-Hudaydah

Raymah

Dhamar

Shabwah

Ibb

Al Bayda

Al Dhale'e

Abyan

Taizz

Lahj

Aden

Legend

Governorate

GOVERNOR.FGT0

- 8.9 - 17.0
- 25.8 - 35.0
- 35.6 - 49.0
- 49.6 - 60.0
- 63.9 - 70.0

Sources: Data for the percentage of the poor are from poverty estimates calculated for this report.
Map of Yemen is provided by the Ministry of Public Health and Population
(hosted at http://envr.abtassoc.com/yemen/english/data.html).

Table 1.4: Poverty Measurements (percent) by Governorate, for 2005-2006

	Incidence of poverty			Poverty Gap Index			Severity of Poverty Index		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Ibb	16.36	32.84	30.07	3.56	8.17	7.40	1.18	2.92	2.63
Abyan	31.37	50.44	45.68	8.17	14.52	12.94	3.23	5.73	5.11
Sana'a City	14.98	0.00	14.89	3.39	0.00	3.37	1.09	0.00	1.09
Al-Baida	16.72	59.76	51.85	4.14	21.28	18.13	1.35	9.61	8.10
Taiz	23.66	41.51	37.80	5.41	10.96	9.80	1.96	4.08	3.64
Al-Jawf	32.57	52.63	49.58	5.94	14.78	13.44	1.61	6.02	5.35
Hajja	20.90	50.02	47.53	4.64	14.41	13.57	1.63	5.83	5.47
Al-Hodeida	21.58	36.43	31.72	4.78	8.85	7.56	1.62	3.21	2.70
Hadramout	31.45	39.17	35.59	4.97	8.15	6.67	1.21	2.39	1.84
Dhamar	29.73	25.28	25.84	7.53	5.75	5.97	2.96	2.01	2.13
Shabwah	39.44	56.80	54.13	8.97	19.61	17.97	3.01	9.58	8.56
Sa'adah	18.18	16.23	16.55	3.60	3.56	3.57	1.08	1.09	1.09
Sana'a Region	…	28.13	28.13	…	7.02	7.02	…	2.29	2.29
Aden	16.88	…	16.88	3.08	…	3.08	0.84	…	0.84
Laheg	22.90	49.49	47.20	4.53	14.70	13.82	1.36	6.16	5.75
Mareb	17.95	50.05	45.88	4.28	19.20	17.26	1.53	9.07	8.09
Al-Mahweet	21.90	31.48	30.75	4.55	6.29	6.16	1.39	1.79	1.76
Al-Maharh	11.40	6.29	8.85	2.78	0.81	1.80	1.12	0.20	0.66
Amran	33.93	70.60	63.93	9.17	17.82	16.24	3.34	6.13	5.62
Al-Dhale	28.15	46.37	44.24	6.57	8.99	8.71	2.43	2.61	2.59
Remah	5.38	35.32	34.07	2.58	8.19	7.96	1.24	2.75	2.68
All Yemen	20.70	40.09	34.78	4.48	10.60	8.93	1.47	4.02	3.32

Source: UNDP based on HBS 2005/06.

1.14 **The special problems of the marginalized people in Yemen are beginning to be addressed**. The most marginalized communities in Yemen are, labeled variously as *akhdam*, *ahgur* or *abid* [22]. Although their population size is not known, by some sources it could be sizeable[23]. The largest concentration of the Akhdam population lives in the peripheries of the towns of Taiz, Aden, Zabid, Sanaa and Hoddeidah, but a smaller number is also found in rural areas of the Tihama and southern highlands. They work as menial laborers, street sweepers, cobblers and construction workers. Women and children are engaged in begging. In rural areas, they also work as entertainers during life cycle events (wedding ceremonies or births). The illiteracy rate among this population is around 90 percent, although no national data is available. Moreover, the group has no political representation at the national level and suffers from extreme levels of social stigma and discrimination, which exacerbate their socioeconomic exclusion and poverty. However, there is growing activism among members of this group to improve their socioeconomic status. In the Taiz governorate, for instance, there are 5 NGOs addressing social, economic and cultural issues of this community. Members of this population are represented in some local government councils: 5 in Aden, 1 in Sana'a, and 1 in Taiz.

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[22] *Yemen Country Social Assessment*, The World Bank (2007).

[23] The *Oxfam Socio-Economic Study*, 1997, is quoted by UNDP: http://www.undp.org.ye/Inequalities.php.

III   TRENDS IN POVERTY AND THE CONTRIBUTION OF GROWTH AND DISTRIBUTION

1.15 **Availability of comparable surveys makes it possible for the first time to measure changes in poverty in Yemen.** The availability of governorate-specific market and unit prices of every food item consumed in 2005/06, as well as the consumer price index makes it possible to calculate the cost of the food basket (used to draw food poverty line) for 1998 and 2005/06. For comparability, non-food component of the poverty line was re-estimated for 1998 using the same methodology as 2005/06. The real value of the poverty line was therefore maintained constant across regions and over time (controlling for inter-regional differences in the cost of living and for intra-regional temporal changes in the cost of living). Thus, poverty can be measured consistently.

1.16 **Poverty declined in Yemen between 1998 and 2005.** At the national level, all three measures (poverty headcount, gap and severity) showed a decline during the period between the HBS 1998 and HBS 2005/06. The percentage of the population with consumption below the recommended poverty line fell from 40.3 percent in 1998 to 34.8 percent in 2005/06 (Table 1.5). Reduction of poverty in urban areas is five times the observed decline in rural areas (-11.6 and -2.4 percentage points, in urban and rural areas respectively). Moreover, during the time period between 1998 to 2005-2006, the poverty gap index declined at a greater rate than the headcount index, and the severity of poverty index fell at an even greater rate. This indicates that the ultra poor benefited even more than the average poor during the period under investigation. It is reassuring that the decline in poverty is not the result of change in methodology outlined above. Even if one were to use the old methodology used in World Bank (2002), the decline would persist.

Table 1.5: Changes in Poverty Measures, 1998 to 2005/06

	1998			2005/06			Test for diff.
	Mean	95%ci		Mean	95%ci		T values
	Urban			Urban			
Head-count	32.29	33.46	31.11	20.70	21.86	19.54	13.74
Pov. Gap	8.67	9.09	8.25	4.48	4.79	4.16	15.59
Severity	3.32	3.53	3.10	1.47	1.61	1.33	14.08
	Rural			Rural			
Head-count	42.49	44.08	40.90	40.09	41.78	38.40	2.03
Pov. Gap	13.11	13.78	12.45	10.60	11.19	10.01	5.53
Severity	5.70	6.09	5.31	4.02	4.32	3.72	6.67
	All Yemen			All Yemen			
Head-count	40.13	41.39	38.87	34.78	36.06	33.50	5.84
Pov. Gap	12.09	12.61	11.56	8.93	9.37	8.48	9.05
Severity	5.15	5.46	4.85	3.32	3.55	3.10	9.45

Source: UNDP report.
Note: "ci" refers to the confidence interval.

1.17 **The decline in rural poverty was small compared to the urban regions.** The decline in the percentage of the poor in rural areas was small. Though significant decline is noted in the poverty gap and severity measures, these are small compared to the urban regions.

1.18 **Except for the rural region, the decline in poverty between 1998 and 2005 is robust to alternate poverty lines.** To assess robustness of the poverty measurements to the poverty lines used, and to examine whether or not the same conclusions are obtained if the poverty line is changed, first order dominance tests of the two expenditure distributions were carried out[24]. The dominance test indicated that regardless of the poverty line chosen, the national poverty has declined during the period 1998 and 2005. Besides, higher order dominance tests indicate that other national poverty measures (poverty gap, severity) in 2005 will show an unambiguous improvement over 1998. Poverty unambiguously declined in urban areas regardless of the poverty line chosen. Rural poverty would also show slight decline for all poverty lines up to 5 percent higher than the current one. For poverty lines over 5 percent higher than the current one, the rural poverty would have slightly increased. During the period 1998-2005, the poverty reduction in urban areas compensated for the increase in poverty in rural areas at higher levels of poverty lines, resulting in a decline in overall poverty regardless for the poverty line chosen.

1.19 **Among governorates, special attention needs to be paid to those regions with higher poverty rates and negative per-capita consumption growth over the last seven years.** These areas include the Central North, Central South, and Eastern regions. If the current trend of declining consumption growth is allowed to continue, the problem of poverty in these governorates could become even more acute. The problem of insecurity felt in some of these places may be a factor in perpetuating weak income growth and high incidence of poverty.

1.20 **The overall decrease in poverty between 1998 and 2005/06 was driven by growth in per capita expenditure.** There are three distinctly different regional patterns in terms of the distribution of this change in expenditures, causing the large differences in poverty outcomes among regions.

    i. **The first pattern occurs when the impact of change in per capita expenditure and of changes in inequality work in opposite directions.**

        (a) The most common pattern is that positive growth has been accompanied by increasing inequality, yet the increase in per capita expenditures outweighed worsening of the income distribution. In urban areas non-poor individuals (above the third decile in the expenditure distribution) benefited proportionally more than the poor from economic growth. Correspondingly, the Gini coefficient increased quite significantly from 35.7 to 41.1. Thus, with the observed rate of growth, poverty could have dropped by 11.6 percentage points had the distribution of income remained unchanged. However, the reduction in poverty resulting from growth was slightly hampered by an increase in inequality (0.82 percentage points). This pattern of change is found in Aden, Sana'a City and in urban areas of Eastern region.

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[24] Curves for poverty incidence were plotted using a wide range of values for the poverty line (10 percent to 150 percent of poverty line). The X-axis has alternative poverty lines and the Y-axis measures the cumulative percentage of people who would become poor at any poverty line read off of the X-axis. These curves were used to rank poverty levels for the years 1998 and 2005/06, for a range of poverty lines. For the whole population of *Yemen* the distribution for 2005 is consistently below and to the right of the distribution for 1998.

(b)   In both urban and rural areas of Central North region and in rural areas of Central South region, negative growth was accompanied by improvements in income distribution, but distribution effect was not large enough to compensate the negative impact of declining expenditure on poverty, resulting in increasing poverty rates. This pattern prevailed in aggregated rural area for the whole republic.

***ii.*   The second pattern occurs when increase in per capita expenditure is combined with better income distribution, ultimately leading to a decrease in poverty**. Both urban and rural areas of North West and South West regions exhibited this pattern. This pro-poor growth pattern was especially marked in urban areas of South West region, where poverty declined by 15.7 percentage points, growth contributed by 14.5 points, while 1.2 points were the result of distributional improvement.

***iii.*   The third pattern occurs when a decrease in per capita expenditures is combined with a worsening of the income distribution.** In this case both factors worked at the same direction, contributing to worsening of poverty levels. This patter in observed in rural areas of Eastern region

1.21   **The overall decrease in poverty between 1998 and 2003-2004 was driven by growth in per capita expenditure.**   Although the growth was not pro-poor, it was large enough to outweigh the adverse effect of the worsening distribution of income.

Figure 1.3: Changes in Poverty and its Components
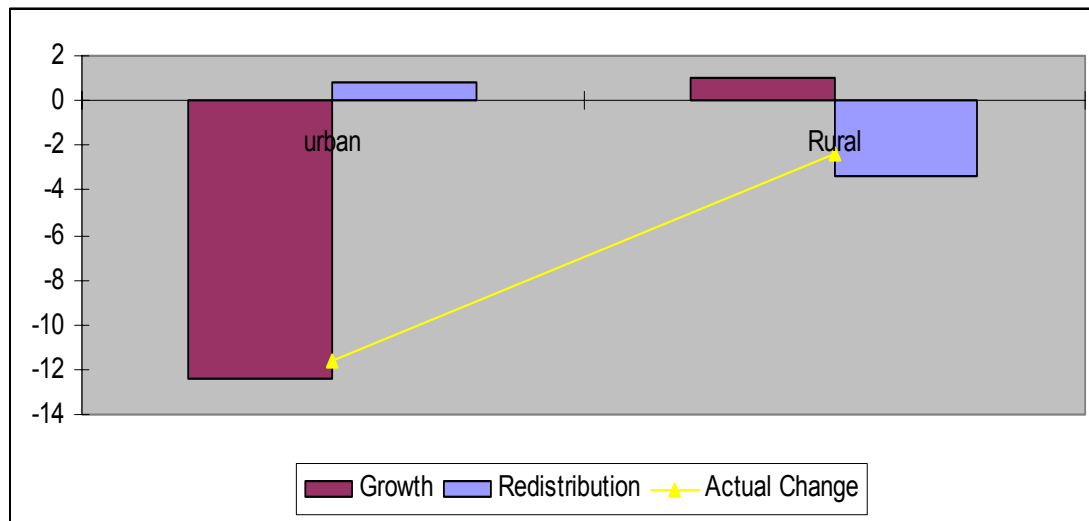
Source: "Poverty, Growth, Employment and Income Distribution in Yemen, 1998-2006", UNDP report (forthcoming).

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Table 1.6: Poverty Rate (Headcount Ratio), Growth and Redistribution Decomposition for Poverty Changes by Regions between 1998 and 2005/06

Region	Urban				Rural			
	Poverty Rate	Growth	Distribution	Actual	Poverty Rate	Growth	Distribution	Actual
Central North	26.4	3.93	-2.71	1.22	40.1	10.77	-2.45	8.32
Central South	24.7	8.75	-12.86	-4.12	51.4	25.96	-12.28	13.68
Aden	16.9	-22.90	1.76	-21.15	37.2	…	…	…
South West	20.5	-11.50	-0.09	-11.60	36.9	-12.22	-2.61	-14.84
North West	22.9	-14.54	-1.18	-15.72	45.3	-5.22	-2.73	-7.96
Eastern	31.1	-8.16	2.05	-6.11	…	5.17	4.33	9.51
Sana'a City	15.0	-16.22	5.88	-10.34	…	…	…	…
All Yemen	**20.7**	**-12.40**	**0.82**	**-11.58**	**40.1**	**1.00**	**-3.40**	**-2.40**

Source: "Poverty, Growth, Employment and Income Distribution in Yemen, 1998-2006", UNDP report (forthcoming).

IV   EDUCATION AND THE POOR

1.22 **The incidence of poverty among the illiterate has declined marginally.** According to the 1998 HBS, the poverty rate for households headed by an illiterate person was 47.3 percent nationally - 48.8 percent in rural areas and 39.9 percent in urban areas. These rates declined to 44 percent nationally - 47 percent in rural areas and 34 percent in urban areas, respectively. The lowest poverty rate was found among households headed by persons with university degree and above, although the difference between the poverty rates of university graduates in urban and rural areas is very large - 5 percent vs. 29 percent . (Figure 1.4).

Figure 1.4: Poverty Rates by Level of Education
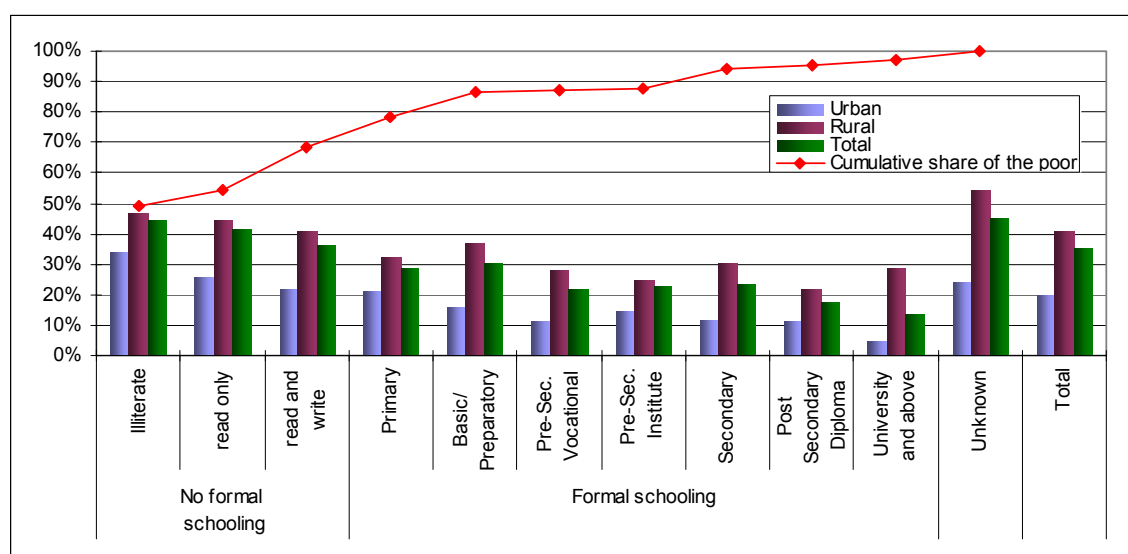
Source: World Bank staff estimates based on HBS 2005/06.

1.23 **The share of poor families with no formal education declined.** The share of poor households headed by persons without any formal education is 68.3 percent (Table 1.7), decline from 1998, when the cumulative share of this category was 86.7. Still, out of all the poor households, 49 percent are headed by illiterate persons.

Table 1.7: Educational Attainment for the Poor and Non-Poor by Urban-Rural Status

		Non-poor			Poor		
		Urban	Rural	Total	Urban	Rural	Total
No formal schooling	*No formal education Total*	*35.9*	*58.2*	*50.7*	*59.9*	*69.9*	*68.3*
	Illiterate	21.6	39.3	33.4	43.5	50.1	49.1
	read only	2.3	4.7	3.9	3.2	5.4	5.1
	read and write	12.0	14.2	13.4	13.3	14.4	14.2
Formal schooling	*Formal education Total*	*61.8*	*40.3*	*47.6*	*37.2*	*27.4*	*29.0*
	Primary	14.2	13.1	13.5	14.9	9.1	10.0
	Basic/ Preparatory	11.9	9.7	10.5	8.7	8.3	8.4
	Pre-Sec. Vocational	0.9	0.6	0.7	0.5	0.3	0.3
	Pre-Sec. Institute	0.7	1.7	1.4	0.5	0.8	0.7
	Secondary	14.0	9.6	11.1	7.6	6.1	6.3
	Post Secondary Diploma	3.6	2.2	2.7	1.8	0.9	1.0
	University and above	16.5	3.5	7.8	3.3	2.0	2.2
	Unknown	2.3	1.5	1.8	2.9	2.6	2.7
	Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: World Bank staff estimates from the 2005 HBS.

1.24 **The gap in enrollment rates between the poorest and the richest deciles has widened.** The enrollment rate decreased for the poorest decile and increased for the richest decile. In 2005, among the children aged 6-14 in the poorest decile, 64 percent of boys and 37 percent of girls are enrolled, which is lower by 6 and 4 percentage points respectively than in HBS 1998. On the other hand, 86 percent of boys and 78 percent of girls in the richest income decile are enrolled, lower by 3 and 26 percentage points respectively than in HBS 1998.

1.25 **The supply-side issues are still major reasons for non-attendance in rural areas. For both** poor and non-poor, the share of supply-side reasons (no schools, no teachers, no female teachers, no sanitary facility) in rural areas are very large for both boys and girls. More than 35 percent of boys and about 50 percent of girls in rural areas do not attend school for supply-side reasons. On the other hand, in urban areas the non-enrollment is mainly due to attitudinal factors (no interest in schooling by children or family) and other family-specific reasons.

1.26 **Public education expenditure subsidies favor the rich.** Although public recurrent education expenditure flows fairly equally to each income decile, the distribution is more unequal at higher educational levels. Benefit incidence analysis was conducted for the education sector, where the education categories were defined as basic, secondary, TEVT[25], and university levels. Due to the fact that more children in the richer deciles go to private schools, the public recurrent expenditure at basic education levels flows in favor of the poorer to middle classes. However, the distribution favors the richer deciles at higher educational levels. The top decile gains 30 percent of public expenditure share at the university level and 17

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[25] TEVT level includes 2 year and 3 year secondary level vocational training, informal vocational training (usually shorter than 1 year), post-secondary vocational training, and community colleges.

percent at the TEVT level. The Gini coefficients for each educational level are: basic -0.03, secondary 0.13, TEVT 0.20, university 0.39, and all educational levels 0.07.

Figure 1.5: Number of Out-of-School Children by Income Decile
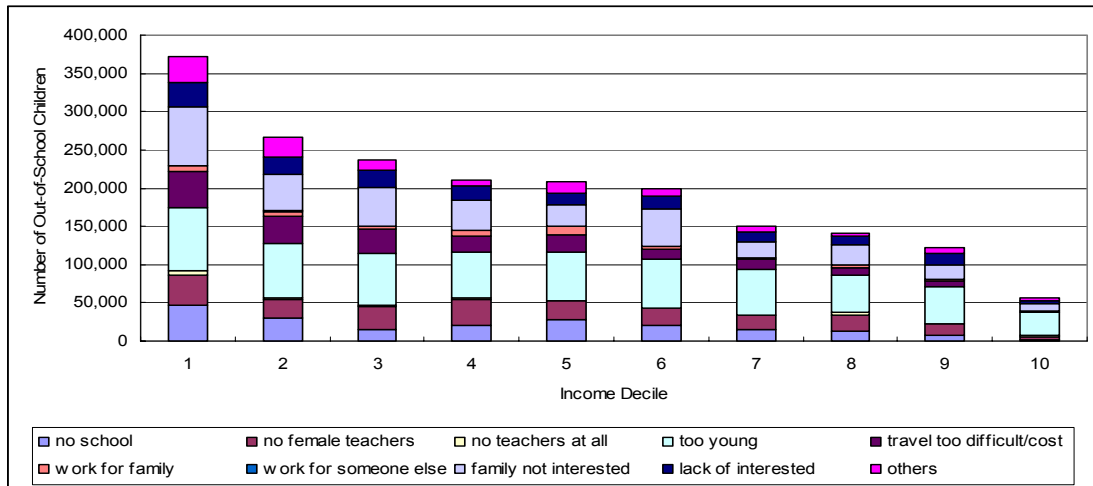
Source: World Bank staff estimates from the 2005 HBS.

Figure 1.6: Benefit-Incidence Analysis of Public Education Expenditure
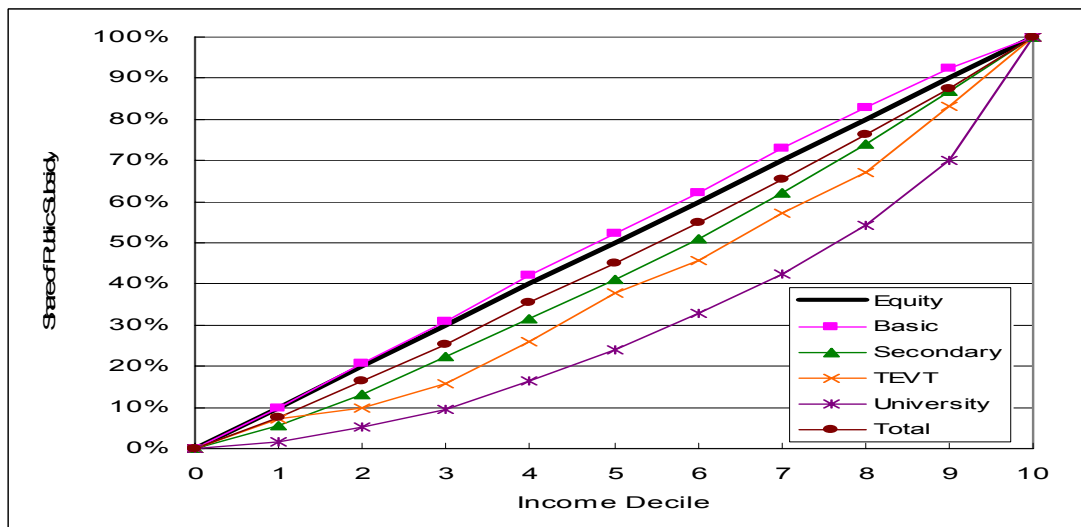
Source: World Bank staff estimates from the 2005 HBS.

1.27 **The poor benefit less in absolute amounts of subsidy per child than the non-poor.** When the total subsidy flowing into each decile is calculated by basic school-aged child (6-14), the poorest receives only YR 12,098 while the richest decile receives YR16, 443 (Figure 1.7). The gap is even wider for university education, where a university-aged person in the poorest decile receives only YR 2,268 of subsidy, while one in the richest decile receives fourteen times as much.

Figure 1.7: Per Student Subsidy (YR)

Per person subsidy (YR) by Income Decile. Legend: per capita; school age child (6-21); basic education age cohort (6-14); secondary education age cohort (15-17); university age cohort (18-21).
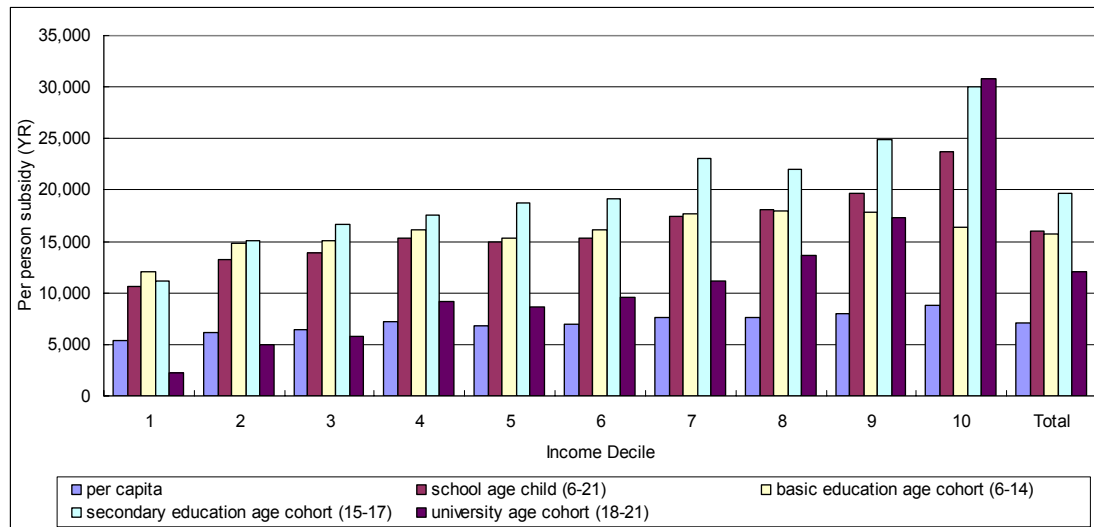
Source: World Bank staff estimates from the 2005/06 HBS.

1.28 **Workers from poor households tend to receive lower rater of return on education than the non-poor.** Analysis on the rate of return using the Mincerian earnings function revealed that workers who belong to poor households receive 10 percent less income than workers who belong to non-poor families, controlling for age, urban-rural, gender, year of schooling (and schooling-poverty interaction term), working hours and job category. Each educational level of attainment yields the following returns compared to the non-educated workers: Basic 16.2%, Secondary 24.4%, TEVT 25.6%, Post secondary 27.5%, and University 54.7%. Rate of return to education for females is much higher than that for males, especially for females having graduated from secondary education or TEVT.

V HEALTH AND POVERTY

1.29 **Even for a poor country, public health care is under-funded in Yemen.** The National Health Accounts Study[26] found that Government expenditure on health was 1.8 percent of Gross Domestic Product in 2003 and accounted for 32 percent of the total health expenditure of the country. Per capita public health expenditure was only US $11. Government spending on health was 4.9 percent of total government expenditure. Compared to other countries with similar per capita income levels, the proportion of government expenditure on health is much lower in Yemen.

1.30 **More people are seeking medical treatment when sick, but the gap between the rich and the poor persists**. In the 2005/06 HBS, the percentage of individuals who were ill and sought treatment during the preceding month of the survey ranged from 56.6 percent in the

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[26] Yemen National Health Accounts: Estimate for 2003, National Health Accounts Team, Republic of Yemen, Partners for Health Reformplus, June 2006.

poorest quintile[27] to 79.7 percent in the richest quintile. Compared to 1998, the 2005 HBS figures show that the poor are now more likely to seek medical care when ill; however, there still exists a persistent gap between the poor and the rich.

1.31 **High health cost is the single most important reason why the poor do not seek care when they are sick.** For the poor, inability to pay for care is the most significant reason for not seeking the medical care (Figure 1.8). Unavailability of needed medical service and difficulty in physical access were the second and third reasons for not seeking the medical care[28]. This pattern changes as the household expenditure increases. Inability to pay for medical care and unavailability of care become less significant barriers as the expenditure level goes up. In the richest quintile, the major reason for not seeking care is that the illness was considered too minor to receive the medical attention.

Figure 1.8: Reasons for Not Seeking Medical Care (%)
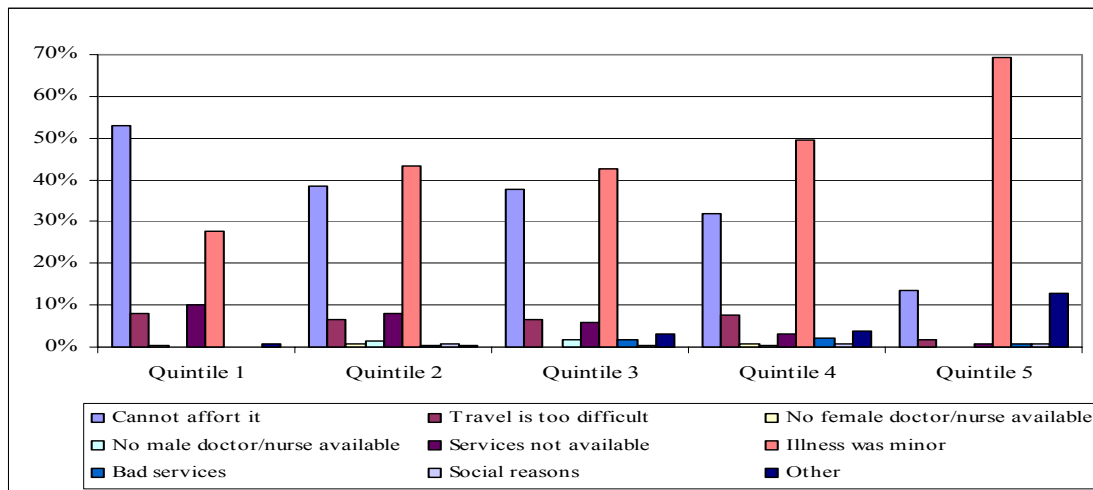
Source: World Bank staff estimates from the 2005/06 HBS.

1.32 **This finding coincides with the result of the recent Bank-financed qualitative research study, "**Qualitative Assessment of Community Based Health Related Programs: Five Programs and Six Locations in Yemen". The study found twenty four focus groups with community members who were beneficiaries of existing community-based development projects financed by different types of donors. The qualitative study indicates that the focus group participants raised concerns over lack of access or difficulties to access health centers, lack of quality health services and financial barriers. The poor seem to have more difficulties in accessing health care, due to the cost-sharing schemes which were introduced in the early 1990s.

1.33 **In spite of the fact that more individuals seem to seek medical care when ill, the percentage of women who received assisted delivery remain very low in Yemen.** Less than one-third of women who delivered a child did so with some form of medical assistance

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[27] Quintiles are defined by household expenditure divided by the total number of household members.
[28] The 2005 HBS did not assess how many minutes it takes to go to a nearby health facility.

(Table 1.8). The percentage varies from 19 percent in the poorest deciles to 40 percent in the richest. The geographical gap between the urban and rural population is also noticeably large, with 13 percentage points difference. A comparison with the 1997 PAPCHILD data implies that there has been some improvement, in particular, in the poorest segments of women. Illiteracy among Yemeni women may limit their utilization of the assisted delivery. Low perceptions of risk during the periods of pregnancy, birth and postpartum decrease the tendency to seek health care. Access to assisted delivery is further impeded by lack of a physical facility or by financial barriers. There was a noticeable disparity among the governorates (See Volume 4: Annex 6).

Table 1.8: Assisted Delivery by Expenditure Quintile (% of women)

	National average	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Urban	Rural
1997	21.7	6.8	13.2	15.6	28.7	49.7	n/a	n/a
2005	29.4	19.8	23.5	27.1	32.8	40.3	49.9	21.2

Source: PAPCHILD 1997 and HBS 2005.
Note: The PAPCHILD figures represent percentages of delivery by a medically trained person. The questionnaire of HBS 2005 did not clearly distinguish if the question meant to ask about delivery by a doctor, midwife or a medically trained professional.

1.34 **Children from poor families suffer more from malnutrition.** Child malnutrition remains a concern in Yemen, nearly one third of children between two and five years old were severely stunted[29]. Data on severe stunting shows a greater disparity between the urban and rural children than other types of malnutrition. Table 1.9 shows that poverty is clearly associated with the prevalence of severe stunting and underweight among Yemeni children[30]. Since the WHO guidelines for the international reference population changed, it was not possible to compare the prevalence of child malnutrition with the results of earlier health surveys. On the other hand, available data indicates that the prevalence of child malnutrition has not been reduced over last few years. Severe stunting was more prevalent in certain governorates.

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[29] Height-for-age, <3SD from the international reference median value. On a population basis, high levels of stunting are associated with poor socioeconomic conditions and increased risk of frequent and early exposure to adverse conditions such as illness and/or inappropriate feeding practices.
[30] Height-for-age. <3SD from the international reference median value.

Table 1.9: Prevalence of Severe Malnutrition (%)

	National average	Poor	Non-poor	Urban	Rural	Boys	Girls
Severe stunting	27.5	31.7	26.0	23.5	33.2	29.2	25.7
Severe underweight	11.6	13.7	11.0	10.2	13.7	12.4	10.9
Severe wasting	10.2	9.6	10.4	10.0	10.5	11.0	9.4

Source: World Bank staff estimates from the 2005 HBS.
Note: Following the new WHO guidelines, prevalence of stunting and wasting was calculated for children between the ages of 2 to 5 years old. For underweight children, the relevant age group remained children under five years old.

1.35 **Immunization coverage in Yemen has been improving over the last decade[31].** Nearly 100 percent coverage has been achieved for Polio throughout different expenditure groups (Table 1.10). No substantial disparity exists between the urban area and rural area, nor was gender disparity observed.

Table 1.10: Immunization Coverage by Expenditure Quintile (%)

	National average	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Urban	Rural
Polio	99.1	98.9	99.2	99.0	99.0	99.2	99.0	99.1
DPT3	86.4	84.0	85.2	85.9	87.7	89.0	91.2	84.3
Measles	74.9	69.6	72.5	77.2	76.5	79.7	83.4	72.0
Hepatitis	63.1	55.8	61.4	63.6	64.4	71.8	77.5	58.1

Source: World Bank staff estimates from the 2005 HBS.

1.36 **On a national average, nearly 86 percent of one-year olds were covered by DPT3 and the disparity of the difference in coverage between the richest and the poorest was only 5 percentage points.** The disparity of the coverage between the urban and rural children was also small. The coverage of Measles immunization is one of the MDG Indicators. According to the 2005 HBS, the national average was less than 80 percent and it appears that Yemen has a long way to go to achieve the MDG target. There was a 9 percentage point difference of Measles immunization coverage between the richest quintile and poorest quintile. The gap between the urban and rural was also noticeable at 12 percentage points.

1.37 **Hepatitis vaccine coverage is the most worrisome among the four vaccination types discussed in this section as the national average was only 63 percent.** There were significant gaps between the richest and the poorest (8 percentage points) and between urban and rural areas (19 percentage points). It appears that the coverage of Measles and Hepatitis vaccinations is more closely correlated to the geographic location of the governorate than the expenditure level of the household.

1.38 **Poor families spend less on health expenditure as a share of their total expenditure compared to the non-poor.** Inability to pay and difficulty of access may be discouraging

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[31] WHO / UNICEF immunization coverage estimates.

them from utilizing medical care. Out-of-pocket payments for health services as a share of total expenditure have increased between 1998 and 2005[32]. Households in the poorest quintile spend about one-half what the richest quintile spend as a share of their total consumption expenditure. This distinct pattern suggests that the poor in Yemen may be discouraged from utilizing medical care as that they cannot afford. The inability to pay may contain demand for medical care among the poor.

1.39 **The poor spend proportionately more on medicine, whereas treatment abroad is the largest spending item for the richest.** For the poorest households, medicine and prescription drugs absorb the highest share of health care expenditure (47.2 percent). This trend of large expenditure on medicine and prescription drugs, holds true throughout the expenditure groups with the exception of the richest quintile. This indicates a serious need for functional public drug program that would ensure access to medicine among the poor. On the other hand, the most evident spending pattern of the richest is a significantly high proportion of medical costs of treatment abroad.

1.40 **Government heath care service is not targeting the poor.** Benefit Incidence Analysis shows that individuals in the poorest households do not necessarily receive their medical care from the public health facilities. In the poorest quintile, more individuals sought the care at private health facilities than public facilities. Among the poor, private clinics were the most popular place to seek care when ill.

1.41 **There is no discernible link between level of government spending on health, incidence of poverty and utilization of services.** There is a large difference in the per capita public health expenditure by governorate. This indicates a lack of equity consideration in allocating the public health budget. There are significant differences in incidence of poverty, the percentage of assisted deliveries, the Measles immunization coverage, and the prevalence of severe underweight children under five years old, among the governorates with comparable per capita public health expenditure. This suggests that there are large differences among governorates in the effectiveness and efficiency of basic health services, and the planning and implementation capacity for these services.

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[32] A simple comparison of the HBS 1998 and 2005/06 suggests nearly a three-fold increase in aggregate as well as by expenditure decile. This trend appears to be at odds with other evidence in the HBS, as discussed in more detail in Volume II, Annex 6.

Figure 1.9: Where Individuals Seek Medical Care – Public vs. Private
(% of individuals by quintile)
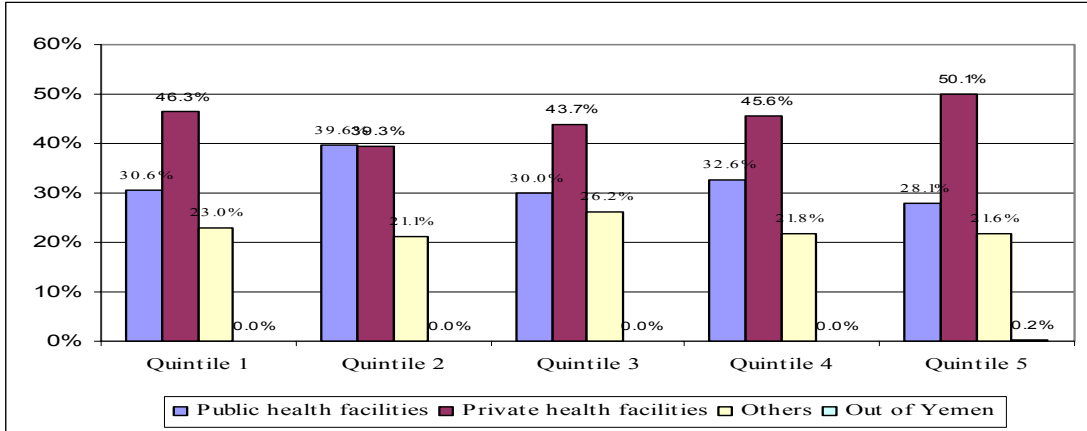
Source: World Bank staff estimates from the 2005/06 HBS.
Note: Public health facilities include public health centers and public hospitals. Private health facilities include private clinics, private hospitals private doctor consultation, and private consultation with a certified health professional. Other includes pharmacy and traditional medicines. If we can disaggregate pharmacies by public or private pharmacies, the percentage of the private facilities will go up further.

Figure 1.10: MOHPH Spending by Governorate and Incidence of Poverty
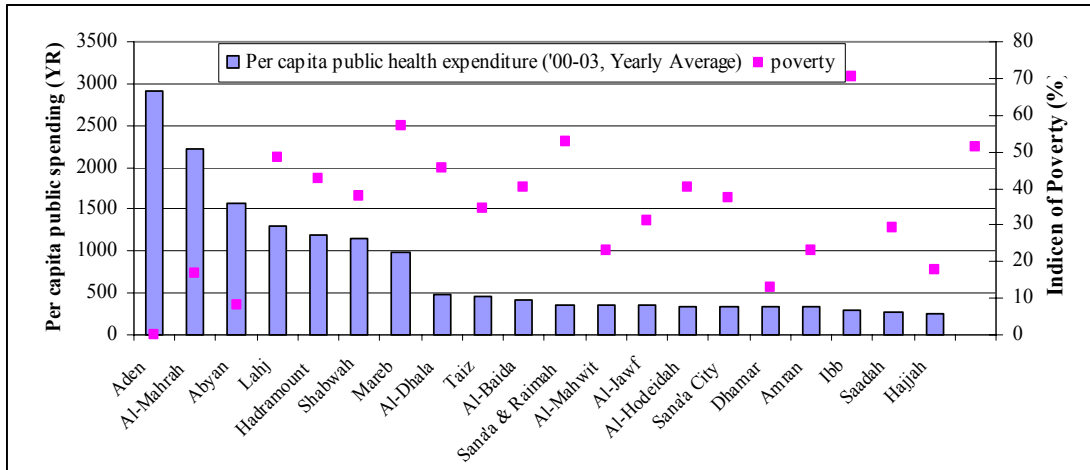
Source: PER for Health Sector 1999-2003, World Bank staff estimates from the2005 HBS.
Note: Per capita MOHPH spending is only the allocated amount to respective governorates, excluding the MOHPH central spending.

Box 1.1: Disability and Poverty

Estimates for the number of disabled people in Yemen vary, from 1.9% (2004 Census) to 6.5 percent as reported in the 2005 HBS. According to the 2005/06 HBS, the gender mix of disabled persons is evenly shared, with slightly more disabled persons living in urban areas than rural areas, and the majority of disabled people falling in the age range of 18 – 45 years (38 percent). Regional incidence of disability varies greatly by governorate, although the more urban governorates, such as Aden, Sana'a and Taiz have the highest rates of population with disabilities, probably given the proximity to better health care and social services. Estimates suggest that access to services or health care for disabled persons in rural areas is almost non-existent, with services reaching only 1.5 percent of the rural disabled population. A publicly-financed Disability Fund exists, granting those with disability free access to health care, but physical access to the health care centers is difficult for those in rural areas and targeting is weak. Preliminary analysis of the 2005 HBS shows little difference in disability prevalence across income deciles, contrary to popular belief that poverty may predispose one to disabilities and illnesses. This trend may be due in part to underreporting of disabilities (cultural bias) or the higher mortality rate of disabled persons in low-income countries. Further examination of the 2005 HBS reveals however that self-declared female headed households bear a higher burden of disabled family members, with 15 percent of such families contained disabled persons, compared to 6.5 percent for male household heads.

VI   ROLE OF GENDER IN POVERTY AND WELFARE

1.42 **Are females at greater risk of poverty than males?** In principle, gender inequities in households, markets and society are the causal factors that prevent women from realizing their income potential in the present and also build potential for future income[33]. Better education and labor force participation could raise family income to reduce poverty in the present. Improved control over household decision-making results in enhances health and educational outcomes for children who can become more productive adults for future poverty reduction.

1.43 **It is difficult to generate gender-specific poverty rates from household budget survey data.** While distribution of resources within household can be very different, resulting in different welfare level of individual members (whether by gender, age or other characteristics) – it is difficult discern this distribution from the household level consumption data. Thus this analysis looks at the welfare effect of the fact whether households are headed by male of female.

1.44 **Using self-reported status, poverty rate of female-headed households in Yemen is not significantly different from male-headed households.** Only 5 percent of the population in Yemen lives in households headed by a female. These households represent 8 percent of all households. While mean poverty incidence for self-declared female-headed households is 32 percent versus 35 percent for male-headed, this difference is not statistically significant since the small sample size of female-headed families results in high standard errors. This is consistent of the previous poverty assessment for Yemen and the majority of such studies reported in Buvinic and Gupta (1997).

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[33] World Bank (2007) Global Monitoring Report.

Table 1.11: Gender, Marital Status and Incidence of Poverty in Yemen

		Female Headed				Male Headed			
		Share	Poverty Rate	95% confidence interval		Share	Poverty Rate	95% confidence interval	
1	Married, residing together	2%	54.4	32.9	76.0	94.5%	34.6	32.4	36.7
2	Spouse does not reside in the HH[34]	15%	29.0	20.4	37.6	0.5%	15.0	1.1	28.8
3	Spouse mostly away	69%	42.3	37.8	46.9	…	…	….	…
4	Single	1%	7.0	-2.5	16.5	3.0%	37.5	29.6	45.4
5	Divorced	1%	26.1	8.0	44.2	0.4%	23.6	5.9	41.4
6	Widow / widower	13%	34.0	26.0	42.0	1.6%	36.8	25.5	48.1
7	Total	100%	39.0	35.3	42.8	100%.0	34.5	32.4	36.6

Source: World Bank Staff Estimates, HBS 2005/06.

1.45 **Correcting for "de-facto" female headship does not show greater incidence of poverty either.** Out of households that were declared in the survey as having a male head, 12 percent have a male head who is absent for over six months out of the year. When these households are re-classified as de-facto female-headed, the share of female-headed households amounts to 18 percent of total households, which accounts for 16 percent of the population. When these households are re-classified as female-headed, poverty rates for female and male households becomes 39.0 and 34.5 respectively (row 7 in Table 1.11). This difference is also not statistically significant, and, in any case, has to be treated with caution, as the fact that one household member is mostly absent results in understating per-capita expenditure and overstating the poverty incidence. From these, 69 percent are families where the spouse is away for over 6 months, while 15 percent are the families where the spouse does not reside in the household.

1.46 **Comparison of households similarly placed in marital status does not indicate any difference in poverty incidence across gender.** Table 1.11 summarizes the poverty incidence by marital status of male and female headed households. Comparing incidence for any given marital status (read across a row in the table), shows that there is no statistically significant difference between male and female-headed households, except for single, never married category (row 4 in Table 1.11), where poverty rate for females is significantly *lower* than that of men (7% and 37.8% respectively).

1.47 **Among female-headed households, there is heterogeneity in risk of poverty.** The poverty incidence is highest among those female-headed households that have a spouse residing in the same household. In most cases these husbands are physically or mentally disabled. Next in incidence is the households where the husbands are away (already discussed). Widows and divorced women headed households rank next in poverty risk. The lowest risk (7%) is for households headed by single-women, never married.

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[34] Includes households where the head has indicated that his or her spouse does not reside in the same household. The absent spouse is not included in the household headcount. This may include polygamous marriages and families of migrant workers.

1.48 **Female-headed households allocate resources better than male-headed households.**
Controlling for other factors in a typical demand system, the HBS data established that female-headed households (self-reported and de-facto) allocate resources better for current welfare *and* for the future. Households that are headed by women have lower share of consumption on adult-consumption goods such as tobacco and qat, and spend more on education[35]. This applies both to households headed by single women, and households where the male head of the family are mostly absent. Having a female as head of household increases share of expenditure on food by 1.2 percent, while the demand for non-essential goods such as tobacco and beverages declines by 10 percent.

VII QAT AND YEMEN'S ECONOMY

1.49 **Qat plays a major economic and social role in Yemen, and deserves special mention.**
Qat chewing is pervasive in Yemen, affecting every demographic group to varying degrees. Currently, it accounts for 6% of GDP, 10% of consumption, 1/3 of agricultural GDP and provides greater employment than the public sector, employing about 500,000 people (or 1 of every 7 Yemenis[36]). Despite the significant economic opportunities for qat producers and suppliers, the net effect of qat consumption is negative for Yemen's economic development.

1.50 **Qat impacts the economy in a negative manner through the opportunity cost of lost savings as well as lost work-hours[37]** (although qat chewing is banned in government buildings during work hours, estimated lost work-hours reached as much as 25% in 2000[38]). Regular qat consumption also implies additional health and medication costs and reduced quality and composition of food nutrition (due to decreased outlays for food in exchange for qat purchases).

1.51 **Expenditure on qat, as a share of household expenditure, has declined by 1.5%** since the 1998 HBS[39] (10.8% in 1998 compared to 9.3% in 2005). The share of the population which chews qat is similar in urban and rural areas. The share of qat expenditure for the poorest decile represents 7% of household expenditures, compared to 9.4% for the highest income decile, which has more disposable income.

1.52 **Although the authorities have developed public awareness campaigns, citing the drawbacks of qat consumption (a national conference took place in 2002), discouraging qat consumption is a complex and difficult task.** It is far too well integrated into the Yemeni economy and social structure to be eliminated on a short-term basis without adverse effects. Therefore the authorities and other stakeholders in the development community need to set up a campaign and rehabilitation policy which would help the country develop to its fullest potential.

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[35] The positive effect on personal services (in which education is included) is not statistically significant. See Volume 4: Annex 11 on the estimation of an AIDS demand system for Yemen using HBS 2005/06.

[36] Yemen – Towards Qat Reduction, 2007, WB.

[37] A 2006 survey on qat revealed that 22% of respondents spend more than 6 hours per day chewing qat.

[38] Yemen Comprehensive Development Framework, 2002.

[39] Yemen Poverty Update, 2002.

VIII POVERTY AND UNEMPLOYMENT

1.53 **Unemployment increased between 1999 and 2004.** Unemployment in Yemen increased from 13.7 percent in 1999 to 16.3 percent in 2004, even though there was a significant decline in poverty (from 40 percent to 35 percent approximately)[40.]. It is not uncommon to find unemployment and poverty moving in opposite directions (Box 1.2).

Box 1.2: Relationship between poverty and unemployment

> **According to international evidence, there is no clear relation between poverty and unemployment**. While micro-economic analysis may show a positive correlation between unemployment and poverty, from a macro-economic standpoint, poverty is a household phenomenon and unemployment is related to the individual. An unemployed individual may not be poor if there are other income earners in the household. Moreover, poor households cannot afford to be unemployed, but likely earn very low wages that perpetuates the cycle of poverty. Similarly, changes in policy can cause divergent outcomes for poverty and unemployment. For instance, a significant reduction in real wages may create more jobs, but lower incomes would create higher poverty.

1.54 **The increase in the labor force out-paced the growth in jobs during 1999 - 2004.** The labor force increased at a rate of 4.3 percent per year, while the number of jobs increased by 3.7% per year. The labor force participation rate increased slightly from 38.5% to 39.2% between the two reference years. Therefore the rate of unemployment increased slightly by 2.6 percentage points. Youth unemployment (ages 15 – 24) is considerably higher than the average general population, at 28.3%.

Table 1.12: Labor Force Participation and Unemployment

Region	Labor force participation		Unemployment rate	
	1999	2004	1999	2004
Urban	40.0	47.8	15.8	18.8
Rural	48.3	36.9	10.0	14.7
Total	45.9	40.4	11.5	16.3

1.55 **Unemployment rate among women has increased during 1999 - 2004.** This is in part because female labor force participation increased from 7.0 to 9.6 during 1999 - 2004. The female unemployment rate also increased from 25.4 to 39.5 percent in 2004. The high level of female unemployment is slightly more evident in the urban areas, where nearly half the female

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[40] A broad definition of unemployment (ages 15+) was used in Labor Force Survey of 1999 and the census of 2004 – the unemployed are those without work, seeking work, and among those not seeking, those who will accept work if offered. Based on this broad definition, the unemployment rate increased slightly from 13.7 percent in 1999 to 16.3 percent in 2004. It is possible to compare a narrow definition of unemployment - the unemployed are those without work but seeking work – between the censuses of 1994 and 2004. By this measure, the unemployment rate has slightly increased from 9 percent in 1994 to about 10 percent in 2006. It is possible to calculate unemployment rates also from the HBS 2005/06, though the questions are not exactly identical to the Census 2004. Using a definition closer to the broad definition, the CSO calculates the unemployment rate from the HBS 2005/06 at 16.1 percent. However it is not possible to compare unemployment rates from the HBS 1998 with this because of the change in definition.

labor force is unemployed. In comparison, in rural areas, female unemployment is 33 percent. There is also a large difference between male and female unemployment rates. The ratio of male to female rate of unemployment is approximately 3:1, similar to that in Egypt (Figure 1.11).

Figure 1.11: Unemployment by Gender2004
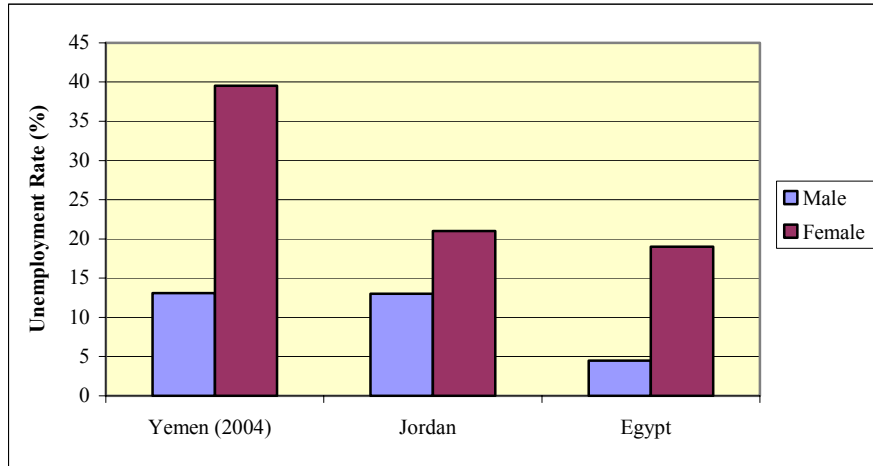
Sources: Yemen Census (2004), Jordan Poverty Assessment (2003), Poverty Reduction in Egypt (2000).

IX   DETERMINANTS OF POVERTY

A   Regression Results

1.   ***Household Size and Composition.*** Household size has a significant negative coefficient; the elasticity of welfare measure to household size is about -0.5. However, given the adopted household specific approach for estimating the poverty line and distinguishing between the poor and non poor, and taking the economies of scale into account, the inverse relation between welfare levels and household size is the pure impact of household size regardless of household age and gender composition as well as location. In other words, when household size increases by 1 percent log welfare will decline by -52 percent in urban areas and -5.21 in rural areas. The turning point for this monotonic increase occurs at household size of 16 persons in urban areas 18 persons in rural areas.

2.   ***Age***. The age of the head of household has a significant negative effect on living standards. Given other determinants, female headship has a significant negative effect on household living standards. Household composition also matters. Welfare decreases by -4.7 as the dependency ratio increases by 1 percent, in urban areas and due to dominant agriculture activities in rural areas, welfare increases by 11 percent as dependency ratio increases by 1 percent.

3.   ***Education***. Educational variables are the strongest determinants of living standards. Education variables have higher impact in urban areas than in rural areas. Keeping household size constant, the number of persons who have no education or who have below than secondary level of education have significant negative impact on welfare, where as the number of persons who have secondary education or higher has significant positive effects on welfare level; the implied rate of return of larger number of secondary degree holders on log welfare measure are 0.05 which increases to 0.179 for university degree holders.

4.   ***Employment***. The number of workers to the family size helps understand the dependency level on the employed persons in the family. Economic activity is also important to household welfare. In part, they reflect wage and productivity differentials across the sectors. Keeping household size and other characteristics constant, the households with larger number of unemployed members, larger number of wage workers in agriculture or in non agricultural activities, are more likely to be poor, where there are significant negative impacts of these variables on household welfare. Consistent with descriptive poverty profile, working in government decreases the likelihood of being poor, as keeping household size constant, log welfare increases as the number of workers in government increases by 0.025. Households receiving remittances have higher welfare level than those who do not.

5.   ***Location.*** As expected, living in urban areas of Sanaa City, Mareb, Al-Maharh and Remah increases welfare levels, as well as living in Al-Hodeida, Hadramout, Dhamar, Sa'adah, Sana'a Region, -Maharh and Remah which also increases welfare levels.

Table 1.13: Regression for Determinants of Poverty

Variables	Urban		Rural	
	B	Std. Error	B	Std. Error
(Constant)	1.635	0.005	0.762	0.003
ABYAN	-0.354	0.005	-0.248	0.002
SANA_CITY	0.026	0.003	0.259	0.012
AL_BAIDA	-0.062	0.005	-0.248	0.002
TAIZ	-0.195	0.003	-0.071	0.001
AL_JAWF	-0.200	0.007	-0.255	0.002
HAJJA	-0.072	0.005	-0.016	0.002
AL_HODED	-0.114	0.003	0.010	0.001
HADRAMOT	-0.251	0.003	0.043	0.002
DHAMAR	-0.288	0.004	0.115	0.002
SHABWAH	-0.178	0.006	-0.141	0.003
SAADAH	-0.048	0.005	0.138	0.002
ADEN or SANA_REGION	-0.092	0.003	0.056	0.002
LAHEG	-0.218	0.006	-0.249	0.002
MAREB	0.105	0.009	-0.091	0.003
AL_MAHWT	-0.239	0.008	-0.024	0.002
AL_MAHAR	0.223	0.008	0.502	0.006
AMRAN	-0.360	0.005	-0.379	0.002
AL_DHALE	-0.256	0.007	-0.106	0.002
REMAH	0.063	0.012	-0.021	0.002
Household Size	-0.126	0.001	-0.109	0.000
Household Size * Household Size	0.004	0.000	0.003	0.000
Number of household members work in government jobs	0.025	0.001	0.109	0.001
Female Head of Household	-0.061	0.002	-0.022	0.001
Age of Head <35	-0.073	0.003	0.051	0.001
Age of Head 35-45	-0.103	0.003	-0.007	0.001
Age of Head 45-60	-0.116	0.002	-0.055	0.001
Dependency ratio	-0.159	0.005	0.210	0.003
Wage worker in agriculture	-0.090	0.002	-0.086	0.001
Wage worker not in agriculture	-0.010	0.001	-0.065	0.001
self employed in agriculture	0.082	0.002	0.057	0.001
self employed not in agriculture	0.086	0.001	0.075	0.001
Other work	0.083	0.003	0.074	0.002
Unemployed	-0.045	0.001	-0.091	0.001
number of illiterate persons >= 15 years in household	-0.122	0.001	-0.013	0.000
number of household members >= 15 years who read & write	-0.037	0.001	0.033	0.001
number of household members >= 15 years had main education	-0.006	0.001	0.079	0.001
number of household members>=15 years had diploma	-0.005	0.001	0.041	0.001
number of household members >=15 years had secondary	0.050	0.001	0.076	0.001
number of household members >=15 years had intermediate	0.043	0.002	0.142	0.002
number of household members >=15 years had university	0.179	0.001	0.132	0.002
Household received remittances	0.111	0.001	0.024	0.001
R Square	0.348	…	0.270	…
Sample Size	8273	…	4863	…

*Dependent variable : The dependent variable is log welfare.

Welfare = Total actual expenditure/lower poverty line.

CHAPTER 2: IMPACT OF GROWTH AND REFORMS ON POVERTY

2.1   **Analysis in Chapter 1 of this report shows that poverty in Yemen declined between 1998 and 2005.** During this period, most of the growth in Yemen was driven by increasing revenues from exports of oil. Rising international oil prices more than offset the slowing domestic oil production resulting in higher export revenues. During this period of buoyant revenue inflows, the implementation of structural reforms slowed for most of the period until mid 2005. Continued donor pressure for reforms and the plateauing of domestic oil production led the government to revive momentum for the reforms. The partial lifting of subsidies on domestic prices of petroleum products in July 2005 was a major price reform that occurred during the period of HBS 2005/06. A major concern surrounding the subsidy price reform is the potential adverse effect on the poor. This chapter analyses the increase in oil revenue accruing to government and key reforms undertaken between 1998 and 2005 in terms of their effect on poverty in Yemen. Section I reviews the link between growth and poverty in Yemen between 1998 and 2005 in terms of its overall characteristics. Section II shows that the observed pattern of sectoral growth in this period is driven mainly by government spending of oil revenues. It also analyzes the poverty implications of these sectoral growth rates. Section III traces the welfare and poverty impacts of petroleum subsidy removal. The last section suggests ways of stimulating more pro-poor growth in Yemen.

- *The decline in poverty rates observed in Yemen between1998 - 2005 was largely a result of oil-driven economic growth. However, the oil sector employs few Yemenis, and fewer if any from the poor population[41]. Although the rate of poverty reduction in Yemen is weak in relation to GDP growth, poverty in urban areas declined at a higher rate than in rural areas.*

- *Economic growth in Yemen was not pro-poor, despite an overall increase in real per capita consumption and decline in poverty rate. The poor in Yemen do not benefit from growth as much as the non-poor.*

- *The challenging petroleum product subsidy reduction carried out in July 2005 has resulted in a net welfare gain of 3 percent of GDP in terms of reduction in dead-weight loss. The near doubling of petroleum prices has had the effect of increasing the cost of living by 10 percent. If the subsidy saved by the government is distributed, even as an untargeted subsidy, the increase in cost of living would not aggravate poverty as long as the administrative cost of transfer is less than a third of the transfers. As the poor have little protection against inflation, without recycling the saved subsidy to the population, poverty (the percentage of poor) would worsen by 8 percentage points.*

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[41] In 2003 the oil sector employed only 21,000 Yemenis, while some 190,000 job seekers entered the labor market (Development Policy Review, WB, 2006).

I   THE LINK BETWEEN GROWTH AND POVERTY WAS WEAK IN YEMEN

2.2   **Poverty reduction in Yemen between 1998 and 2005 was only 5 percentage points, because of the weak relationship between growth and poverty in Yemen.** Real GDP per capita increased, on average, 2.1 percent per year between the two survey periods, while poverty (headcount ratio) declined by almost 2 percent on an annual basis. The observed growth elasticity of poverty at unity is on the low side of international experience. A survey of 114 episodes of poverty reduction in 50 countries by Bourguignon (2003) found a mean elasticity of 1.6. However, this elasticity is an increasing function of the level of development of a country and a decreasing function of prevailing inequality. Using HBS 2005/06 data and poverty lines (thus accounting for Yemen's level of development and inequality), the simulated elasticity for Yemen is 1.8, assuming that incomes of all households increase proportionately and the inequality did not change. In reality though, all household incomes do not rise proportionately as the sectors from which the households draw their income grow at different rates and income inequality changes partly as a result.

2.3   **The pattern of sectoral growth during 1998 and 2005 was not conducive to the reduction in rural poverty.** Trade and transport sectors dominated sectoral GDP growth between 1998 and 2005. Agricultural growth was relatively weak. Poverty incidence in rural areas is twice as high as in urban areas. Although all three measurements of poverty (poverty headcount ratio, poverty gap and severity) show decline, the poverty reduction is consistently larger in urban areas than in rural areas.

2.4   **In some regions[42] rural poverty actually increased while urban poverty decreased.** The weak link between growth and poverty reduction in rural areas could be correlated with a worsening inequality between the HBS periods. However worsening inequality is not all that uncommon during periods of economic growth. While faster urban growth than rural may be an inevitable fact of economic development (see Box 2.1 for more details[43]), absolute rural stagnation as observed in Yemen, is not. Prolonged periods of stagnant rural growth would be inimical for social cohesion. Table 2.1 shows differences in the Gini coefficient between the two survey periods by regions. In the rural areas the Gini coefficient remained constant or improved, in contrast to most of the urban areas, where it mostly worsened.

2.5   **Poverty in most urban areas of Yemen declined remarkably despite increasing urbanization.** Urban poverty dramatically declined from 32.3 percent in 1998 to 20.7 in 2005/06. During the same period the proportion of people living in urban areas increased from 23 to 27 percent with an apparent growth in population of urban areas of about 6 percent per year, twice the national growth rate. This reduction in urban poverty is widespread in all regions except the central north where it marginally increased. Aden (commercial capital) and Sana'a (administrative capital) witnessed large reduction in percentage of poor.

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[42] Hajja, Lahlei, and Al-Mahweet, for example.
[43] Cord, L. and Besley, T, "*Delivering on the Promise of Pro-Poor Growth: Insights and Lessons from Country Experiences*:, WB 2007.

Table 2.1: Inequality Remained the Same or Worsened in Rural Areas

HBS region	2005/06		1998		Actual Change (Differences)	
	Urban	Rural	Urban	Rural	Urban	Rural
Sana'a - Sadah - Mareb – Aljouf-Amran and Rimah	35.72	30.42	32.48	30.74	3.24	-0.32
Albaida - Lahj – Abyn and Aldaleh	33.54	33.29	40.13	38.18	-6.58	-4.90
Aden	35.94	…	31.64	…	4.30	0.00
Taiz and Ibb	39.39	32.20	35.25	35.27	4.14	-3.06
Hajjah - Almahwet - Alhodeidah, and Dhamar	40.71	31.10	34.28	31.32	6.43	-0.22
Shabwah - Hadhramaut and Almahara	31.70	29.84	33.71	32.42	-2.01	-2.58
Sanaa City	44.56	0.00	36.75	0.00	7.81	0.00
All Yemen	41.08	31.59	35.71	33.72	5.38	-2.13

Source: HBS, 1998 and 2005.

2.6 **Poverty reduction in Yemen has an extreme urban bias.** Figure 2.2 depicts countries which have been successful in overall poverty reduction, as measured by the poverty gap index[44], with either an urban or rural bias (i.e. percent change in urban poverty exceeds percent change in rural poverty, or vice versa). Countries which fall to the left of the line reflect an urban bias and those on the right reflect a rural bias. Yemen is the only country in this sample, aside from Cambodia, which experienced little poverty reduction in rural areas while a large reduction in urban poverty took place.

Figure 2.1: Per Capita Consumption Barely Increased in Rural Yemen
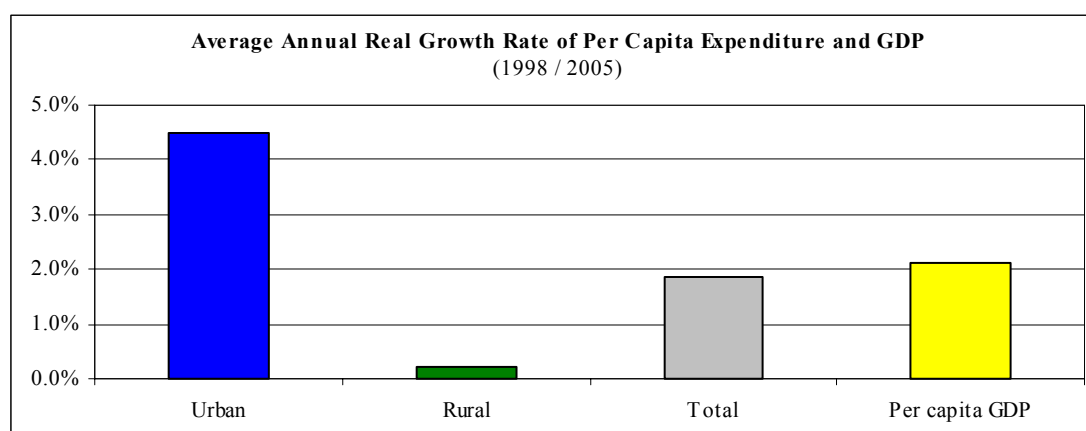
Source: HBS, LDB.

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[44] The Poverty Gap index is used instead of the Headcount Ratio as it gives greater weight to the relative income deficit of the poor.

Figure 2.2: Urban versus Rural Bias in Poverty Reduction
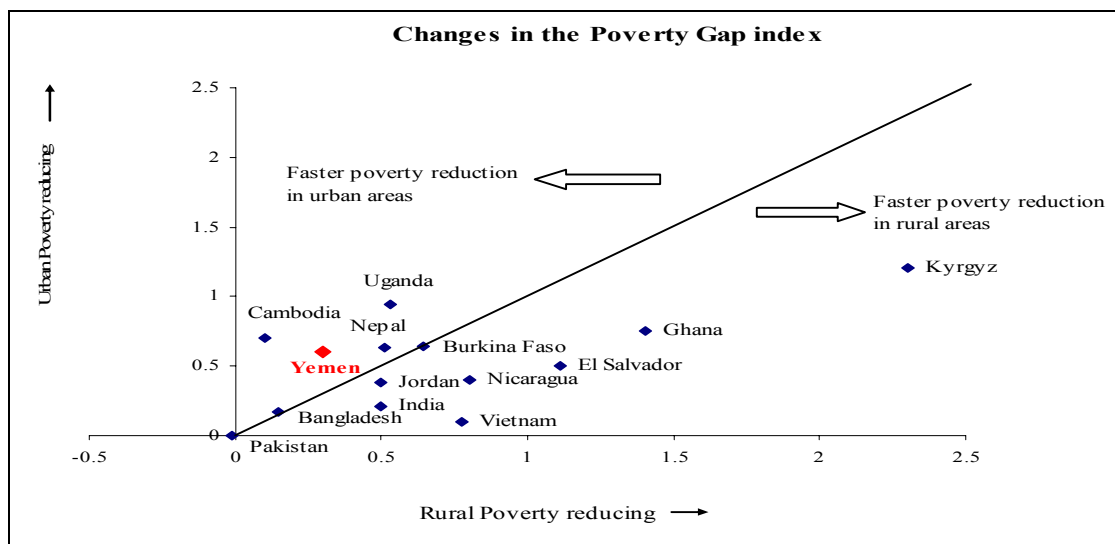
(1995 – 2005; reference period varies by country)
Source: WB calculations, country poverty assessments/updates.

Box 2.1: Is urban bias inevitable?

Theories surrounding urban bias have been debated by development economists for a long time. In the 1950s and 1960s, an apparent bias in favor of urban-industrial models of development was justified through economic analysis. W. Arthur Lewis (1954) proposed that there is disguised unemployment, or under-employment, in rural areas of poorer countries with a lower marginal productivity of labor, which has led urban migration. Hans Singer (1950) and Raoul Prebisch (1950) further argued that there is a long-term tendency for the terms of trade to move against primary goods, and urban planners claimed that cities benefited from economies of scale.

In the 1960s, more public policy-induced biases were debated. Michael Lipton (1968) proposed an urban bias thesis (UBT) based on the premise that there is distributional urban bias: rural areas suffer from too little spending on education and health care and such inequalities pull many elites in rural areas to the cities. He further posits that urban bias is most damagingly evident in a series of government-imposed 'price twists' that causes inputs into rural areas to be overpriced when compared to market norms, and which causes outputs from rural areas to be correspondingly under priced. This view found support in the World Bank's 1981 report on "*Accelerated Development in Sub-Saharan Africa*". Criticisms challenging the UBT have also emerged. For instance, views such as "not all bias is bad" are supported by Overman and Venables (2005) claiming that "an urban bias in public expenditure and provision may be an efficient allocation of resources," considering the higher returns-to-scale and spillover effects. Also, some argue that urban cities are growing faster supported by commitment to economic innovation and the production of dynamic growth clusters, and not to the detriment of rural populations or as a result of the activities of rent-seeking politicians.

While a faster urban growth than rural is an inevitable fact of economic development, absolute rural stagnation as observed in Yemen is not. Prolonged periods of stagnant rural growth would be inimical for social cohesion.

2.7 **Relative to the average, income of the poor increased less.** Ravallion-Chen's measure of pro-poor growth (Box 2.2) suggests that growth was not pro-poor in the aggregate and in the urban areas, while pro-poor in the rural areas. Though this sounds surprising for the rural areas where the *percentage* of poor did not decline, it is true that mean of the growth rates of the poor at a 1 percent annual growth rate was higher than the zero mean growth rate for the whole rural Yemen.

Table 2.2: Pro-Poor Index

	Urban	Rural
Growth rate in mean (%)	3.48	-0.6
Mean percentile growth rate (%)	2.04	0.4
Headcount ratio 1998 (%)	31.45	42.9
Rate of pro-poor growth at Headcount	2.88	1.35

Source: HBS, 1998 and 2005/06.

Box 2.2: Measuring Pro-poor Growth

Ravallion-Chen (R-C) Measure

Starting off with two requirements for the pro-poor growth index: (i) it should be consistent with the direction of change in poverty and (ii) the implicit measure should satisfy axioms for poverty measurement, Ravallion and Chen propose that the rate of pro-poor growth is "*the actual growth rate multiplied by the actual change in Watts index to the change that would have been observed with the same growth rate but no change in inequality*". This is the same as the *mean growth rate* for the poor identified in the initial year. It is useful to remember the difference between the *mean growth rate* for the poor and *growth rate in the mean* for the poor. The former is the average of the growth rates for the various percentile groups of the poor whereas the latter is the growth rate for the mean for the poor as a group. In practice, growth is judged to be pro-poor if the mean of the growth rates for the poor exceeds the growth rate in the mean for the entire population.

Growth Incidence Curves between the 1998 and 2005 HBS

Figure 2.3: All Yemen　　　**Figure 2.4: Urban Areas**　　　**Figure 2.5: Rural Areas**
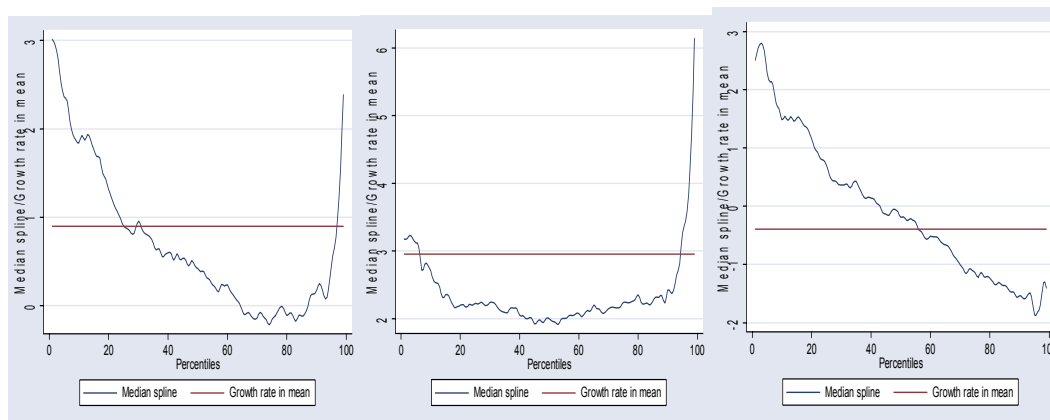
2.8　**The growth incidence curves in the figures above illustrate the Ravallion-Chen measure of pro-poor growth.** The first graph, representing all of Yemen, demonstrates that growth in Yemen was not pro-poor, as the average growth in most of the population is below the mean growth rate in consumption. A similar trend is reflected in the urban graph, although the mean growth rate is twice as high as for the whole country. The rural graph depicts growth rates higher than the mean in just over half the population, however, the mean

consumption growth rate is zero. Even the highest rates of growth, which are experienced in the lowest deciles, are still at or below the mean consumption growth for all of Yemen. At around the 60th percentile, growth declines into negative rates, aside from the very highest decile.

II   ACTUAL AND SIMULATED SECTORAL GROWTH FROM OIL REVENUE SPENDING

2.9   **Production declines in some areas of the agriculture sector may help explain the stagnation in poverty reduction in the rural areas.** The agriculture sector, historically a sector of high growth and one with strong linkages to the rural poor, has slowed in growth in recent years. Cereals production, a particularly important agricultural product (representing a one-third share of agriculture production in 1998), declined in production by 33 percent compared to 2005.

Figure 2.6: Yemen: Real GDP Growth Rate
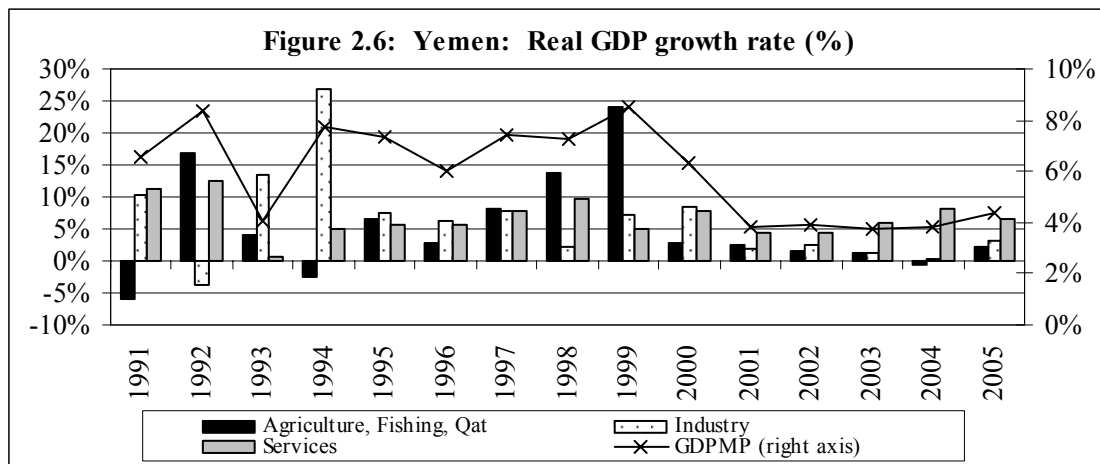
Source: National Accounts, CSO.

2.10 **The high pace of population growth in Yemen diminished the effects of income growth.** Population growth reached 4.3 percent on average over the 1990's and 3.2 percent on average between 2000 – 2005, rendering the per capita GDP growth rate in the first half of 2000 barely positive. With the prospect of oil reserves running dry in the next decade, sustaining GDP growth will be challenging.

2.11 **Services has replaced agriculture as the main driver of GDP growth.** As seen in Figure 2.6, services sector has emerged as the main driver of growth since 2000, coinciding with the drop in agriculture growth and the decline of its contribution to GDP. Services represented 43 percent of GDP on average between 2000 – 2005, with the "transportation, storage & communications" and "government services" groups contributing the largest services share to GDP.

2.12 **The oil sector is most important to the external and fiscal accounts.** Over the 1990 – 2005 period, the share of oil sector in nominal GDP has fluctuated due to price volatility,

but the overall trend has been positive (the share of GDP in 1990 was 14% compared to 36% in 2005). Oil revenue and oil exports remain the main component of total revenue and total exports (76% and 87% respectively for 2005). The strong possibility of declining oil revenues in the future may force authorities to limit additional public resources targeted to the poor.

2.13 **Oil based growth does not benefit the poor, especially the rural poor.** Empirical evidence has shown that oil rents do not trickle down to most of the economy, in particular to the poor. When controlling for the income level, countries which have high levels of natural resource endowment tend to have higher rates of poverty and high Gini coefficients than their non resource-rich peers[45]. The oil sector does not contribute to employment among the rural poor population, being a highly capital-intensive sector and often employing skilled expatriates.

2.14 **Oil based growth helped the urban areas more.** Utilizing the SimSIP SAM model, Yemen's windfall of high oil exports driven by sustained high international oil prices can be modeled. The value of oil exports increased from US$1,229 million in 1998 to US$5,926 million in 2005 (the increase in government's share of oil exports is valued US$2.6 billion). The impact of the increase in oil prices was transmitted through the model in several steps. The government and capital accounts, which are traditionally exogenous accounts in the model, were made endogenous in order to replicate the distribution effects of higher spending related to higher oil revenues. Next, a small production increase was factored into the model (6.3%) between the two reference periods as oil refinery activities expanded. The net increase in the government share of oil exports was reallocated through the SAM accounts which receive funds from the government account (for example, Other Services, such as materials and supplies, Public Administration, an increase in overall Subsidies, and development expenditures). As a result, an additional YR261,000 of Subsidies and YR160,000 of Investment Expenditures was factored into the model. The remaining "windfall" balance of YR85,350 was reallocated through the Services account (YR1,364) and directly to Households (YR4,526 to Urban Households and YR15,730 to Rural Households). As seen in Table 2.4, the sectoral growth rates resulting from the model are close to the actual results in the key sectors (Agriculture, Mining, Oil Refineries, Trade) and to the overall GDP growth rate.

<div align="center">

Box 2.3: Using the SimSIP SAM tool to analyze Yemen's National Accounts

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A SAM-based model can be used to further explain why oil based growth has not benefited the rural areas. The SimSIP SAM tool was populated with a Social Accounting Matrix (SAM) for Yemen, using data from the 2005 National Accounts and 2005 Household Budget Survey from the Central Statistical Organization (CSO). There are 25 activities and a corresponding number of commodities, 4 labor categories, 1 type of capital owner, 2 types of households (urban and rural), 4 government accounts, 2 types of capital accounts and an export account (ROW). A detailed description of the SAM can be found in the Annex.

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[45] *"Economic Growth in the 1990's: Learning from a Decade of Reform"*, WB, 2005.

Table 2.3: Comparison of Actual GDP Growth Rates versus Predicted, 1998-2005

(percent change over the period)

Economic Activity	Real Growth Rate	
	National Accounts	SimSAP SAM
Agriculture	36.3	36.2
Mining and quarrying	15.0	15.0
Food (processing)	…	41.4
Beverage and tobacco (processing)	…	37.6
Oil refineries	5.9	6.3
Electricity, Water and Gas	53.8	55.0
Construction	47.0	64.0
Manufacturing	39.1	52.2
Trade	114.5	114.6
Restaurants and Hotels	15.4	42.5
Transport, Storage & Communications	76.1	43.2
Financial Institutions & Real Estate	21.0	40.7
Real Estate & Business Services	18.4	47.0
Other services	…	79.6
Public administration	39.9	53.4
Overall	**40.0**	**44.1**

Source: CSO National Accounts and WB calculations.

2.15 **The simulated sectoral growth profiles are close to the actual sectoral growth in incomes**. When these incomes were mapped to households by the main sector of employment of the head of the household, the predicted poverty rates were reasonably close to the actual rates. Table 2.4 shows the actual changes between 1998 and 2005 in the National Accounts compared to the sector effects from the model. The urban bias is confirmed in these calculations, driving mainly by the higher per capita consumption in the urban compared to the rural region.

Table 2.4: Predicted Private Consumption After Increase in Oil Revenue

Baseline Consumption Per Capita		New Consumption Per Capita		Average Annual % Change
Urban	143,297.3	Urban	200,727.7	4.9%
Rural	83,740.0	Rural	101,563.1	2.8%
Total	**100,048.2**	**Total**	**128,716.7**	**3.7%**

Source: WB calculations from HBS and SAM.

III   IMPACT OF REFORMS AND POLICIES ON POVERTY IN YEMEN

2.16 **International experiences shows that reforms and policies can impact the poor in various ways**[46]**.** Stemming from the main reforms which affected, or will affect Yemen (subsidy removal, tariff reduction, devaluation, and GST implementation), several main transmission channels can be identified by which selected reforms may affect the poor in a positive, negative, or, at times, neutral manner. The transmission channels include employment, prices (factor or retail), transfers, and assets. The resulting impact of the reforms depends on various household characteristics, such as consumption behavior and income sources. The reforms can have beneficial effect on poverty, for example through contributing to the long run macroeconomic stability of the economy (i.e. removal of subsidies), shifts in production towards labor-intensive industries (i.e. tariff reduction) and the reduction in volatility in the economy and increased investment (i.e. devaluation). However the reforms can also have a negative effect on the poor, who are less likely to be able to adapt to changes, such as possible price increases in related sectors (oil subsidy removal), overall price increases (GST implementation, which may more adversely affect the poor) and a non-response by the private sector to a devaluation, leading to an increase in poverty.

Past Reforms

2.17 **The direct impact of tariff cuts has been minimal.** Although trade liberalization is generally considered to be beneficial for economic development due to efficiency gains for example, trade liberalization can have an adverse effect on poverty reduction for the poor, especially if the tariff reduction is applied to an import-competing sector. During the structural reform periods of the 1990s, Yemen's unweighted average tariff weight decreased from 20 percent in 1996 to 12.6 percent in 2003[47]. However, without a strong initial industrial base, Yemen is less likely to have been adversely affected by import tariff cuts.

2.18 **The devaluation, which took place in 1994, has probably contributed the most to transitional adverse affects on the poor.** When comparing the two reference periods, the Yemeni Rial depreciated by 41 percent. International evidence points to an average pass-through coefficient of 0.7[48], implying that up to a third of the observed price increase of 89 percent over the period could be explained by depreciation.

2.19 **The partial removal of petroleum price subsidies between 1998 and 2005 may have resulted in a cost of living increase of around 21 percent.** Petroleum prices are highly subsidized in Yemen, the highest in the MNA region, representing up to 9 to 10 percent of GDP. With the prospect of dwindling oil reserves and thus declining fiscal revenues, the authorities are faced with the hard decision of reducing the petroleum sector subsidies. The most recent revision in petroleum prices were administered in July 2005. However the government also increased the allocation of funds to the Social Welfare Fund to soften the adverse effect on the poor.

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[46] "*Analyzing the Distributional Impact of Reforms*", World Bank. For a pictorial diagram of the transmission channels, see Annex III.
[47] World Bank Trade Department, cited in "*Economic Growth in the 1990's*", World Bank, p. 137.
[48] Source of pass-through coefficient: Goldfajn and Werlang, "*The Pass-Through from Depreciation to Inflation: A Panel Study*", April 2000.

Table 2.5: Petroleum Product Price Increases

Effective Price Increases from Subsidy Removal (Yemeni Rials per liter)			
	1998	**2005**	**% increase**
Gas	35	65	86%
Diesel	10	45	350%
Kerosene	15	45	200%
LPG*	200	400	100%

Source: ESMAP/WB

 * LPG measured in 12.5 kg cylinders.

2.20 **In order to simulate the price increase shock in the SimSAP SAM model, the consumption shares of gas, diesel, and kerosene were pro-rated by the increase in prices.** The weighted increase of 250 percent was applied to the Oil Refineries account (the shares of gas, diesel and kerosene are 34%, 60%, and 6% respectively). As petroleum prices are an administered price, the price increase of 250 percent was "constrained" in order to prevent further price increases to the sector via spill-over price effects from other sectors. In addition, the share of LPG in the Electricity/Water/Gas account was estimated at 33 percent, which was the weighted increase applied to the sector. Interactive effects from other sectors of the economy increased the effective increase to the Electricity/Water/Gas account to a 100 percent increase.

2.21 **The new price vector obtained from the oil price increase shock is then further decomposed through the equivalent variance calculation to obtain the net result of the shock on urban and rural households.** This methodology allows for the simulation of substitution effects on the cost of living increase, by urban and rural households, as seen in Table 2.6 below.

Table 2.6: Equivalent Variation After Oil Price Shock, 1998-2005

Direct Effect Only	Poverty Incidence		
	Non-poor	*Poor*	*Total*
Urban	1.08	1.08	1.08
Rural	1.12	1.12	1.12
Total	**1.11**	**1.12**	**1.11**
Direct and Indirect Effect Without Substitution	Poverty Incidence		
	Non-poor	*Poor*	*Total*
Urban	1.22	1.23	1.22
Rural	1.22	1.23	1.23
Total	**1.22**	**1.23**	**1.23**
Direct and Indirect Effect With Substitution	Poverty Incidence		
	Non-poor	*Poor*	*Total*
Urban	1.20	1.21	1.20
Rural	1.21	1.22	1.22
Total	**1.21**	**1.22**	**1.21**

Note: The number in the table shows the increase in cost of living with base period indexed to unity.

Future Reforms

2.22 **A significant hike in petroleum product prices was implemented in July 2005, but the subsidy was subsequently partially reinstated due to civil unrest.** The government has recognized the need for eliminating petroleum subsidies as recognized in the PRSP (2005-10). But pending the reform of the Social Welfare Fund to improve its effectiveness, the petroleum subsidy reform is more likely to happen in the right political economy context.

2.23 **Full implementation of GST is planned.** GST implementation is another reform geared at increasing non-hydrocarbon revenues. The reform entails the implementation of an increase in GST , from 5 percent now to 10 percent by 2010. Parliament approved the GST with very few exemptions in 2005, but its implementation has been somewhat delayed.

2.24 **Yemen needs to plan for a future without oil resources.** As the prospects for new oil discoveries are uncertain, policies need to be implemented to stimulate non-oil sector growth. Potential expansion sectors in Yemen include the fisheries sector and tourism sector[49]. Although fisheries sector represents only 5 percent of total agriculture, regulation and modernization efforts in the sector have led to the increased production through higher quality control. Expanding the tourism sector requires significant investment in infrastructure, but would create job growth in the services sector such as in hotels, restaurants, and other related services. However, security situation currently dampens prospects of a significant expansion of the tourist sector. Even with modest assumptions in non-oil sector final demand, gains can be translated into GDP growth by several percentage points. A minimum increase of 6 percent in non-oil sector (excluding public administration) would be necessary in order to increase the

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[49] More detailed discussion on the prospects for non-oil growth can be found in the Yemen Development Policy Review, WB, 2006.

overall GDP growth rate to 7 percent. Historically, non-oil growth has been below these figures.

Table 2.7: Yemen SAM-Based Model Simulations

Overall increase of 6% on Non-Oil Sector Activities	
Amount of shock in Millions of Rials (2005 prices)	**177,440**
Size of External Shock	6.0%
Change in GDP growth (%)	7.0%
Employment (number of jobs)	597,677
Employment effect (% change)	11.0%
Impact on income distribution (% change)	**7.1%**
Urban HH with main employment in public sector	3.0%
Rural HH with main employment in public sector	2.7%
Urban HH with main employment in private sector	9.6%
Rural HH with main employment in private sector	9.6%
Impact on Household Income Overall	**6.0%**
Urban Households	5.6%
Rural Households	6.2%

Source: WB calculations from HBS and SAM.

2.25 **While simulating expansion of the tourism and fisheries sectors, even if the expansion is modest, GDP growth does increase, along with job creation.** As might be expected, private incomes benefit the most, having closer interactions with the tourism activities and related indirect sectors than the households deriving income from public sector, as the civil service participation in tourism activities and fisheries is limited.

IV LESSONS FROM PRO-POOR GROWTH EXPERIENCE

2.26 **In some respects, a pro-poor growth strategy differs little from an overall growth strategy.** The basic "ingredients" remain the same – measures which ensure sustainable and rapid economic growth. The measures include, among others: macroeconomic stability, clearly defined property rights, trade openness, a healthy investment climate, an attractive incentive framework, well-functioning factor markets and broad access to infrastructure and education[50]. Even if many of these measures are attained, the main challenge is to sustain long-term solid growth independent of short-term factors. In order for growth to benefit the poor it is important to implement policies that extend and enhance the capacity of poor people to participate in, as well as contribute to, growth.

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[50] Cord, Louise, 2007 "*Pro-poor Growth in the 1990s: Lessons and Insights from 14 Countries*".

2.27 **Governments need to provide enabling environment growth in regions where the poor live.** These measures do not happen by chance – they need to be well-designed, as the conditions necessary vary from country to country and possibly even by regions within the same country. Since Yemen depends highly on agriculture, authorities should ensure that the incentive framework for agriculture delivers efficient market signals and does not discriminate against the poor. Property rights, which are often disputed in Yemen , need to be protected , especially for the poor, who often bypass the usual judicial channels due to illiteracy.

2.28 **The Development Plan for Poverty Reduction (DPPR) for Yemen, which covers the period 2006 – 2010, aims to raise the standard of living through a series of planned goals and objectives.** The DPPR continues the focus of the earlier national Poverty Reduction Strategy (2003 – 2005). The DPPR reflects the following national development priorities:

- *achievement of a steady increase in economic growth rates;*

- *raising the standard of living;*

- *improving the quality of life;*

- *promoting good governance; and*

- *broadening participation in development.*

2.29 **The poverty reduction strategy, as identified in the national PRS, and accompanying required measures have been incorporated into the DPPR**. The DPPR also includes measures necessary for economic reform, under the Economic, Financial and Administrative Reform Program (EFARP). Two main themes are central to the DPPR plan – acceleration of economic growth and employment generation, as well as an intensification of poverty reduction efforts. However the program also acknowledges the mix of structural challenges which face Yemen and detract from income growth. In addition, national poverty reduction efforts suffer from under-funding, due to lack of local resources and limited foreign assistance.

2.30 **Common themes surface from cross-country analysis.** A review of 14 countries, of which 8 were considered to be "successful" in implementing pro-poor growth strategies (Ibid, 2007), reveals certain measures which are applicable across the board:

- *Good economic policies;*

- *Political stability; and*

- *Public investment in capital (both physical and human).*

2.31 **The common themes were integrated in some form or other in all of the "successful" countries, leading to facilitating private initiatives and investments among the non-poor, but also importantly, among the poor.** As might be expected, the types of political regimes and institutional quality also had an effect on outcomes, but their linkages with impacts on growth and poverty reduction is less clear and harder to measure. The variety of countries studied also revealed that growth can take place under a variety of contexts, even under unfavorable initial conditions (for example, the cases of Bangladesh, Indonesia and Uganda). The examination and comprehension of initial conditions, prior to the design of pro-

poor policies, is an important step towards a successful pro-poor growth strategy. It is important to remove the country-specific constraints that prevent the poor from participating in growth.

Box 2.4: Pro-Poor Growth Can Be Achieved in Different Ways

Tunisia: An Overall Success Story

The fact that Tunisia's growth history can be considered "pro-poor" did not happen by accident – it was based on a growth strategy which was accompanied by corresponding social policies. Contained within Tunisia's growth strategy were programs designed to develop and modernize the agriculture sector, as well as increase female participation in the labor market. Part of Tunisia's success can be attributed to a solid stable average growth rate (5% over the reference period, as well as over the longer-term period between 1960 and 2000). Inequality improved or remained constant, as in the table below. Historically the GDP growth rate was strongly driven by agriculture, which was volatile and subject to periods of drought. The private sector thus became an important contributor to growth as well as poverty reduction. Jobs were created outside of the agriculture sector, such as in manufacturing and tourism sectors. Tunisia was also aided by a windfall period of oil revenues, although the country later successfully diversified its economy away from oil. Four main factors have been credited to aiding in Tunisia's poverty reduction[1]: 1) Macro-economic stability and trade; 2) Agricultural policies; 3) Labor markets and migration; and 4) Public expenditure oriented towards social development.

Tunisia	1995	2000	1995	2000
	Headcount Ratio*		Gini Coefficient	
Total	8.1	4.1	0.417	0.409
Urban	3.2	1.7	0.389	0.391
Rural	15.8	8.3	0.353	0.358

Lower Poverty Line

Brazil: High Growth and High Inequality

In contrast to Tunisia, poverty reduction in Brazil is largely credited to be a "by-product" of economic growth. Additionally, Brazil is considered to have high and persistent inequality. Although poverty fell dramatically during the high growth period of the 1970's (extreme poverty dropped by almost half), dramatic regional differences occurred, as well as between rural and urban areas. During the 1980's poverty reduction stagnated or even slightly worsened, due to rising inequality, hyperinflation and lackluster growth, and subsequently started to improve again during the 1990's. However, Brazil's poverty rates are still high by international standards, when compared to countries with similar GDP per capita. Although growth was credited with almost all of the poverty reduction observed in Brazil, the high overall level of inequality hindered what might have been faster reductions in poverty[2]. When decomposed by state (26 states, over 5 regions), the response in poverty to growth varied by the level of inequality and initial levels of income. Growth elasticity analysis by state also revealed that growth alone was more effective in reducing extreme poverty, compared to changes observed in moderate poverty reduction. Overall, urban areas were move responsive to poverty reduction than rural areas. Studies have pointed to education, or the lack-thereof (mostly in rural areas), contributes the most to the inequality observed in Brazil. In recent years, social programs have advanced enrollment rates in schools, especially in secondary education. Policy makers are paying closer attention to education targeting in vulnerable areas, with the aim of reducing the pervasive and high levels of inequality.

[1] Cord, Louise and Besley, Timothy, *Delivering on the Promise of Pro-Poor Growth,* WB, 2007.
[2] Ibid.

CHAPTER 3: THE ROLE OF PUBLIC AND PRIVATE TRANSFERS IN POVERTY ALLEVIATION

I   CONTEXT

3.1   **In Chapter 2, the focus was on how external shocks and structural reforms affected poverty in Yemen**. The planned reforms such as eliminating all petroleum subsidies and the introduction of value added tax have the potential to affect the poor adversely. Therefore, the functioning of the existing public action programs to attack poverty merit a careful review for their effectiveness. The ability to take corrective action to ameliorate the adverse effects often dictate whether the reforms take place, and, if they do, their pace and sustainability. In this context, this chapter reviews the roles of public and private transfers in combating poverty in Yemen to protect the poor. The public transfers to the poor can be grouped under two broad categories based on the time they take to help reduce poverty: programs alleviating poverty now and programs that reduce poverty in the future. Examples of the former are the cash-transfer schemes and subsidies. For the latter, the examples are the community-driven social funds and public works project.

3.2   The key messages from this review are:

- *Without public and private transfers to households (including petroleum subsidies), the number of the poor in Yemen would swell by 1.8 million or 9 percent of population.*

- *Public and private transfers (without petroleum subsidies) account for about 9 percent of household expenditure, 1.3 percentage points more than the rate observed in 1998*

- *Direct public transfers are as important as private transfers in reducing current level of poverty. Public transfers (including direct effect of petroleum subsidies) reduced poverty by 4.3 percentage points. The petroleum subsidy is the most important of public transfer in terms of impact on poverty headcount rate, closely followed by diverse sector oriented programs and pensions.*

- *While various cash-transfer programs such as the Social Welfare Fund are able to disburse half their total benefits to the poor (Table 3.1), only a fifth of the benefits of the large, untargeted petroleum subsidies program reach the poor. Also, the transfer per poor beneficiary is less than that for the rich.*

- *The Social Welfare Fund, the government's main cash transfer mechanism to alleviate <u>poverty now</u>, has expanded by nearly 9 times in as many years in terms of the number of beneficiaries reaching nearly a million in 2006. The program is now able to reach a 14 percent of the extremely poor in 2005 and 13 percent of the poor. The expansion has come at a cost – the leakage to the non-poor increased. Over 45 percent of the beneficiaries were non-poor in 2005 compared to 40 percent in 1999. Non-poor beneficiaries absorbed 47 percent of all benefit payments. Despite the expansion, the SWF had negligible positive impact in poverty reduction because the amount it transfers per beneficiary has been*

constant since 2000 in nominal terms, now amounting to at best 4 percent of poverty line while the average income deficit of the poor is 8.9 percent.

- *The government's untargeted petroleum subsidy program, another public attempt to address <u>poverty now</u>, absorbs nearly 8 percent of GDP, dwarfing the total annual budget of the three key public programs (Social Welfare Fund, Social Fund for Development and Public Works Program) by seven to one. Nearly 77 percent of the subsidies go to the non-poor. However, by keeping the cost of living lower than otherwise, the petroleum subsidy protected 8.2 percent of the population from becoming poor (through both direct and indirect effects). A quick end to the program of petroleum subsidies will immiserize the poor because the government's cash-transfer program does not target or reach the poor well.*

- *The government's efforts to reduce <u>poverty in the future</u> by community driven programs – the Social Fund for Development (SFD) and Public Works Project (PWP) are better at targeting of the poor. Nearly 70 percent of the SFD resources go to the poorest three deciles. Available evaluation of the PWP indicates that 60 percent of the job opportunities created was taken up by the unskilled and presumably poor workers.*

Table 3.1: The Impact of Transfers on Poverty in Yemen, 2005[51]

	Poverty Rate	Poverty Gap	Share of Total Consumption (population) (%)	Share of Total Consumption (beneficiaries) (%)	Average Transfer per Beneficiary Rials per year	Share of Transfer going to the Poor (%)
Poverty Without Transfers	43.8	14.1				
Social Welfare Fund	-0.3	-0.2	0.3	4.0	2552	52
Other Public Transfers[52]	-1.5	-0.9	1.8	8.6	8199	49
Petroleum Subsidies (direct)	-2.5	-0.7	1.2	1.2	389	23
Remittances Within Yemen	-1.9	-1.2	2.6	8.2	6604	45
Remittances From Abroad	-2.7	-2.3	3.9	27.7	2831	16
Poverty HSBS 2005/06	34.8	8.9				

Source: World Bank Staff estimates based on the Household Budget Survey, 2005/06.

3.3 **Despite being a poor country, Yemen has a number of social protection programs in the area of social security, social assistance and labor markets**. Table 3.2 summarizes the current public safety net programs. The focus of this chapter is on the four public programs: the

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[51] Estimates of poverty with and without transfers do not take into account any behavioral response from the household or multiplier effects in the economy as a result of changes in transfers/subsidies.

[52] "Other Public Transfer" programs refer to transfers from seven different funds such as pension funds, income assistance from general authority for martyr's families, agriculture and fisheries production, etc.

Social Welfare Fund, Petroleum subsidies, the Social Fund for Development, and the Public Works Program.

Table 3.2: Poverty and Safety Net Programs in Yemen

Public Sector Transfers	Intended Beneficiaries	Form of benefits	Poverty Targeting
Social Welfare Fund	The poor and unable to work; women and the disabled.	Cash Transfer	Geographical and categorical
Petroleum subsidies	All consumers	Administered price	none
Social Fund for Development	Poor communities; vulnerable and disadvantaged women and children.	Community Development; Facilities, infrastructure and social services development	Geographical
Public Works Project	Poor communities, Unemployed	Employment, facilities and Infrastructure development	Geographical
Agricultural and Fisheries Promotion Fund	Poor farmers and Fisherman	Agricultural Production Promotion	Geographical
Civil and Military Pensions	Retirees	Cash Payments	No

Source: Development Plan for Poverty Reduction (2006-10), Government of Yemen, 2006.

3.4 **The three key public action programs - SWF, SFD and PWP - complement each other.** The Social Welfare Fund (SWF) offers cash assistance to the poor, orphans and widows, focusing on poverty reduction now. The other two programs are designed less as income transfer mechanisms but as means to build assets of the poor to reduce poverty in the long-term. The Social Fund for Development (SFD) is a community driven program improving the infrastructure for education, health, water supply, etc. The Public Works Program (PWP) is intended employment opportunities attempting to maintain the assets created by SFD.

3.5 **Both SFD and PWP provide indirect support to productive employment and building of social capital.** They do so through establishment of small public projects for basic social and physical infrastructure, which are labor intensive and provide public social services, especially in poor areas[53]. In the Household Budget Survey of 2005/06 there are not enough observations to allow for the analysis of the poverty impact of the Social Fund for Development and Public Works Program. Therefore the chapter draws on secondary sources that evaluate the programs.

3.6 **Private transfers are as important as public transfers for their impact on poverty in Yemen.** Both domestic remittances and remittances from abroad are an important source of income for the poor. Without private internal and external transfers, poverty rate would have been roughly 5 percentage points higher.

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[53] Poverty Reduction Strategy Paper (2006-10).

II   PUBLIC TRANSFERS AND POVERTY

A.   *Programs for Reducing Poverty Now*

Oil Subsidies

3.7   **Petroleum consumption subsidy is large and has grown in recent years.** Yemen subsidizes domestic consumption of petroleum. It is true that Yemen is not unique in subsidizing domestic consumption of petroleum products. Most oil exporters subsidize domestic consumption[54], particularly diesel and residential fuel oil, motivated by a desire to share the oil wealth among wider population. Subsidy for diesel in Yemen is the fourth highest in the world. Another notable feature, however, is that because of limited refining capacity and because the output (product slate) of the refinery does not match the profile of domestic demand, Yemen imports 55 percent of diesel and 90 percent fuel oil needs[55] at international prices but sells them at lower, administered prices. Estimates of petroleum subsidies for January 2007 are shown in Figure 3.1. The total petroleum subsidy amounts to nearly 10 percent of GDP.

Figure 3.1: Petroleum Subsidies in Yemen, January, 2007
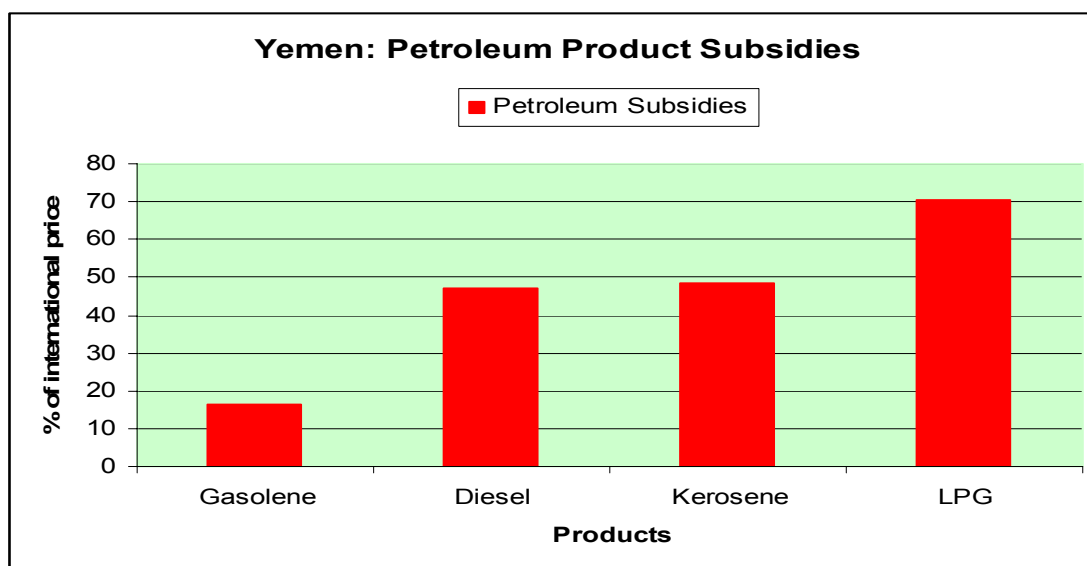
Source: World Bank Staff Estimates.

3.8   **Though petroleum subsidies reduce poverty, much of the subsidy leaks to the non-poor.** Without current petroleum subsidy, (only taking into account the direct effect of the price increase on gas, LPG and kerosene) the poverty rate would have been roughly 2.5 percentage points higher. Interestingly, the impact would have been higher for urban areas, where poverty would go up by 3.6 percentage points, versus 1.5 percentage points for rural

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[54] In 1999, average petroleum subsidy in major oil exporters was 3.5 percent of GDP(IMF, 2003).

[55] Based on Oil, Gas and Mineral Statistics, Annual Bulletin 2002.

areas. Subsidies represent a higher share of consumption budget of poorer deciles (Table 3.3). For instance, this rate for the lowest decile is 1.9 percent of total household consumption, versus 0.9 percent for the higher decile. Still, share of the total subsidy received by households is regressive across all deciles, with over half of the total subsidies going to the top 3 deciles of the population, while the bottom three deciles receive a mere 14 percent (Table 3.3). The share of subsidies going to the poor is 22.93 percent, versus 77.07 percent going to the non-poor.

3.9   **When taking into account indirect effect, the poverty impact of petroleum subsidies is even higher.** Petroleum subsidies have a spillover effect through keeping the price of other goods down. When this indirect effect of petroleum subsidies is accounted for, the poverty rate without subsidies would be 8.2 percentage points higher. The rates are 6.6 percentage points for the urban versus 8.9 percentage points for the rural. Therefore, accounting for indirect affect, the impact of current petroleum subsidy removal will be higher on rural areas than urban. Thus current petroleum subsidies are keeping roughly 1.5 million people from slipping into poverty.

Table 3.3: Distribution of Petroleum Subsidies by Decile of Per-Capita Consumption

	Average Share of Petroleum Subsidies in Total Consumption by Deciles (%)			Share of Total Subsidy Received by Deciles (%)	Mean Petroleum Subsidy Per Capita per Year (RY)
Total	Urban	Rural	Total		
1	2.02	1.84	1.86	3.6	617
2	1.57	1.72	1.7	4.7	789
3	1.4	1.66	1.61	6.1	904
4	1.31	1.57	1.52	6.4	982
5	1.32	1.48	1.44	7.4	1,069
6	1.18	1.43	1.37	8.0	1,153
7	1.14	1.37	1.31	10.0	1,275
8	1.09	1.29	1.22	10.7	1,416
9	1.01	1.2	1.12	14.3	1,632
10	0.87	1.01	0.92	28.9	2,466
Total	1.15	1.5	1.41	100	1,230

Source: World Bank Staff estimates based on Household Budget Survey, 2005/06.

Social Welfare Fund

3.10 **The Social Welfare Fund is the government's main targeted social assistance program.** The objectives of the SWF are to support poor individuals and families with cash in order to improve their standard of living. The SWF provides two types of assistance – permanent social assistance and temporary relief. The groups targeted for the permanent assistance include orphans, widows and divorced women, single women, and permanently disabled, if they do not receive income from other sources, such as pensions or the Martyr's Fund. Groups targeted for the temporary relief include the temporarily disabled, and families with a missing or jailed head of household, jobless ex-prisoners who have spent at least three months in prison. In principle, the recipient has to be without income, or without income earning potential. At the end of 2006, nearly three-fourths of the one million beneficiaries were in the "permanent" category absorbing about 80 percent of the budget[56]. The dominance of "permanent" category beneficiaries creates a risk of none graduating from the program. Since inception, the SWF has eliminated about 113,000 cases as ineligible.

Figure 3.2: Expansion of Social Welfare Fund
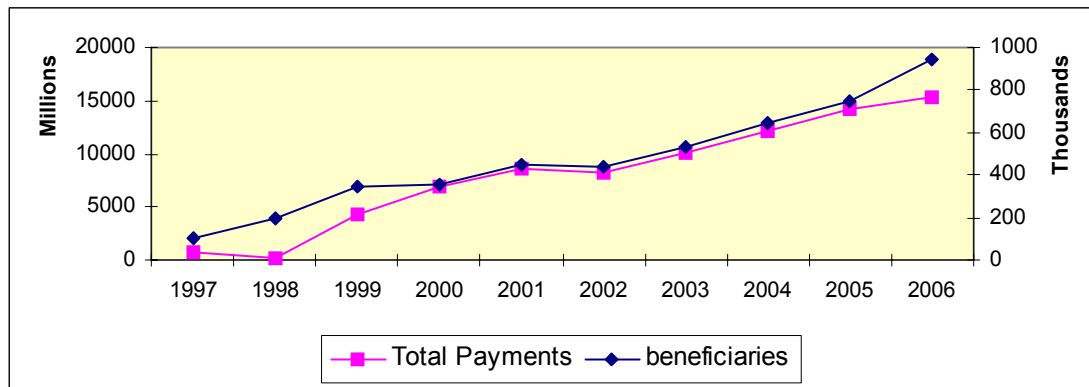
Source: Ministry of Social Development

3.11 **Since its creation, the number of beneficiaries steadily grew, in line with the increase in the social payments budget**. The social payments budget of the SWF grew from YR 820 million at its creation in 1997 to YR 15,879 million in 2006. The number of SWF cases has increased from 102,000 in 1997 to 943,668 in 2006. Average transfer per beneficiary household has stayed roughly constant in nominal terms since 2000. Figure 3.2 shows the trend in total distribution and total number of beneficiaries from 1997 to 2006. As total payments are presented in nominal terms, while the average annual inflation rate during the period was about 9 percent, the real transfer per beneficiary has declined. The operating budget in 2006 amounted to 5.4 percent of the social payment budget. It is not unusual for the household budget survey to underestimate the number of beneficiaries (for example, the Jordan Poverty Assessment); this was also the case in Yemen. The Household Budget Survey (HBS) of 2005/06 identifies only 221,856 SWF beneficiary households, versus 746,000 claimed by SWF. Similarly, the Household Budget Survey estimated YR 4.3 billion as total annual SWF

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[56] Per the Social Welfare Fund documentation.

receipts, versus 14.2 billion claimed by SWF. Estimates of per-capita SWF transfers from HBS are about the same as reported by SWF.

3.12 **The distribution of SWF benefits follows a three-stage targeting approach.** At the first stage, the number of "cases" is allocated among governorates based on food-poverty estimates of 1998-99. At the second stage targeting is based on estimates of district level food-poverty[57]. In the third stage, within a district, applicants are evaluated according to fifteen criteria measuring their degree of deprivation. Those that score over 21 (on the scale 0 to 26) are automatically selected, while those that score below 12 are automatically disqualified. The local elected councils decide on the cases that fall in-between. The maximum amount paid to beneficiaries is YR 1,000 per month for an individual and YR 2,000 per month for a family, levels unchanged since 2000.

3.13 **The SWF allocates "cases" to governorates on the basis of 1998-99 food poverty.** Averaging the governorate level estimates of the food-poor by the 1998 HBS and 1999 National Poverty Survey, the SWF proportionately distributes the new cases each year. Therefore SWF allocation of cases to governorates should show a perfect correlation with the distribution of extreme poor in 1998-99.

3.14 **The distribution of assistance by the SWF to the governorates shows correlation with the level of poverty in 2005.** Figure 3.3 shows the share of each governorate of total poor, and the corresponding share of SWF expenditures. A simple rank correlation coefficient is positive (0.58), and statistically significant[58]. To the extent food-poverty estimates differ between 1998-99 and 2005/06, the weak correlation of SWF distribution of funds with governorate poverty level is not surprising. Figure 3.4 compares the distribution of food-poor (1998-99) used in SWF allocation to the new estimates in 2005/06. The 2005/06 share of food-poor is much higher in Hajja, Amran, Al-Baida and Mareb.

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[57] The district level poverty estimates for the 1998 HBS are not representative.
[58] The correlation between Social Welfare Payments and poverty distribution in Jordan was 0.75.

Figure 3.3: Performance of Geographic Targeting of SWF
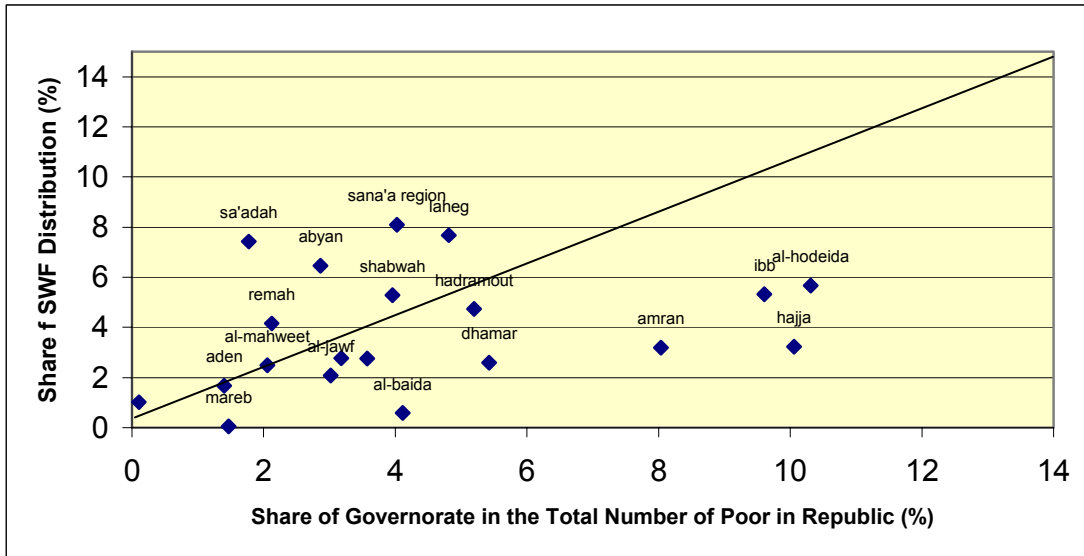
Source: World Bank Staff Estimates based on Household Budget Survey, 2005/06.

Figure 3.4: Distribution of Food-Poor in 1998-99 and 2005/06
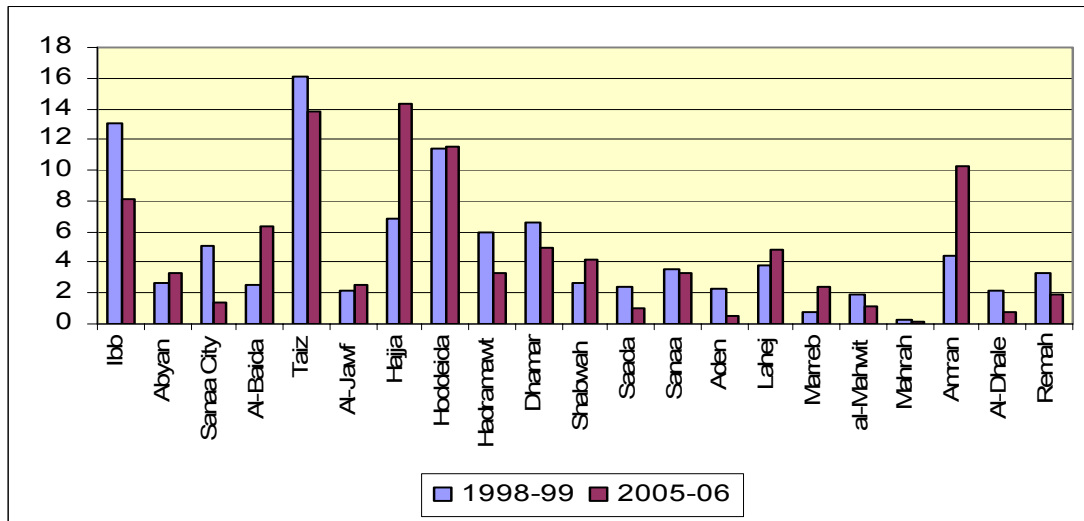
Source: World Bank Staff Estimates based on Household Budget Survey, 2005/06 and HBS 1998.

3.15 **Roughly half of the SWF budget is reaching the poor.** Approximately twice as much of the Social Welfare Fund transfers go to the bottom three deciles compared to the top three. Also, the share of population that receives SWF transfers is approximately twice higher in lower three deciles versus the top three (Figures 3.5 and 3.6). The share of total payments that are going to the poor is 52% percent. As the poverty rate is 34.7%, this suggests a reasonably functional benefit targeting (share of total benefits going to the poor).

Figure 3.5: Mean Per Capita Transfer Per Consumption Deciles

(in Rials per person per month)
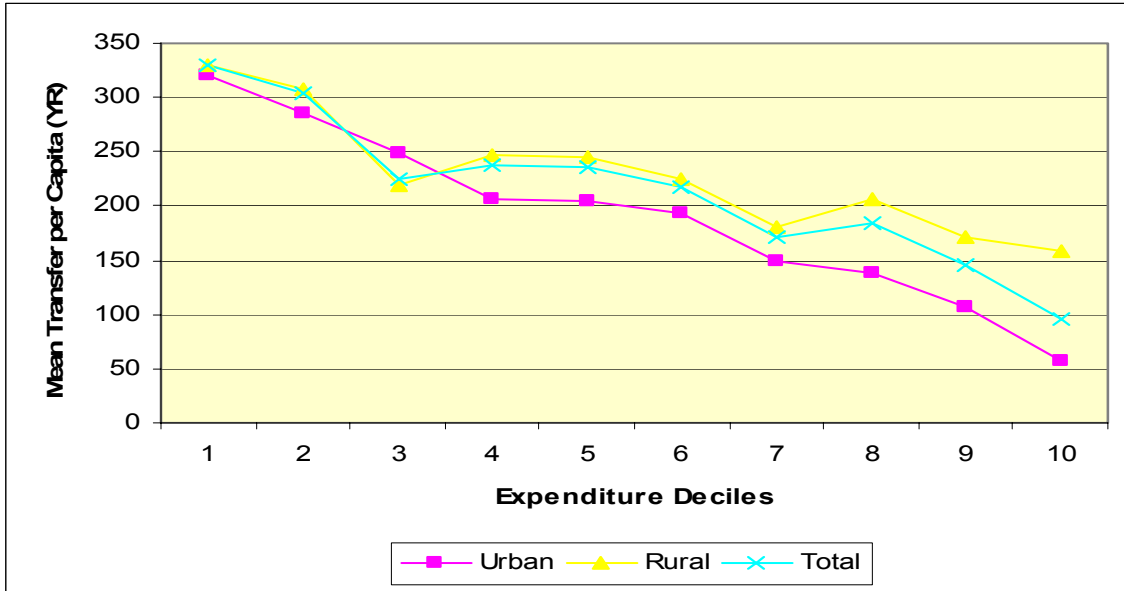
Source: World Bank Staff Estimates based on Household Budget Survey, 2005/06.

Figure 3.6 Percentage of Population Receiving SWF transfers by Expenditure Deciles
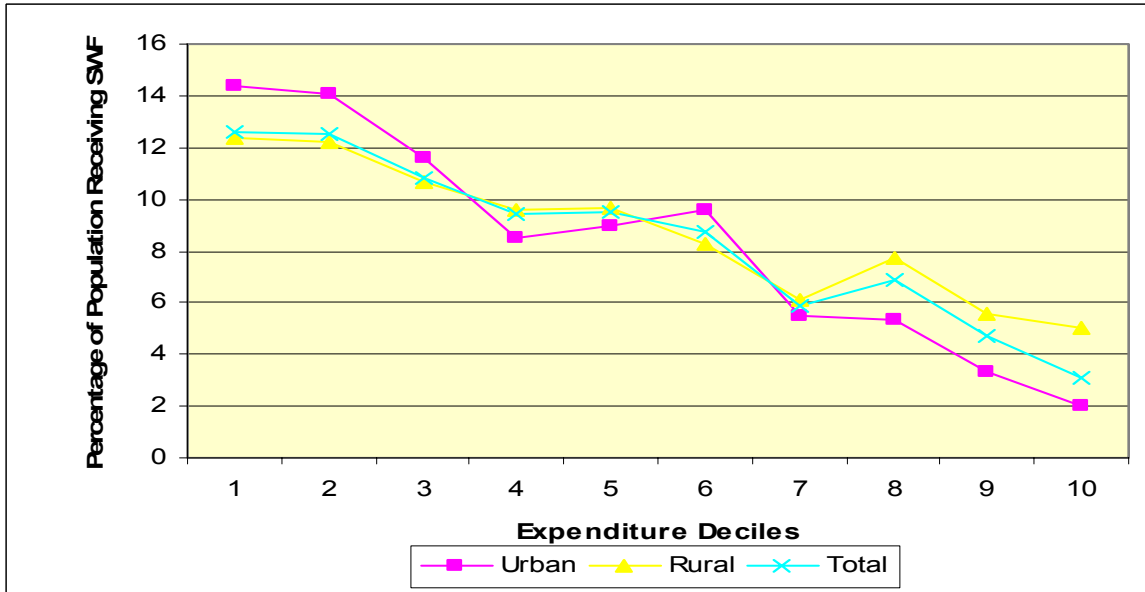
Source: World Bank Staff Estimates based on Household Budget Survey, 2005/06.

3.16 **The Social Welfare Fund has low coverage of the poor and is handicapped by leakage of benefits to the non-poor.** SWF transfers are collected by only 8 percent of those that satisfy its targeting criteria. Out of everybody that receives transfers, 70 percent are not in the target group. Out of those untargeted beneficiaries 75 percent are not poor. Overall the program covers 8.4 percent of the population and 13 percent of the poor (Figures 3.7 and 3.8)[59].

Figure 3.7: SWF Targeting (1998 & 2005/06)   **Figure 3.8: SWF Coverage (1998 & 2005/06)**
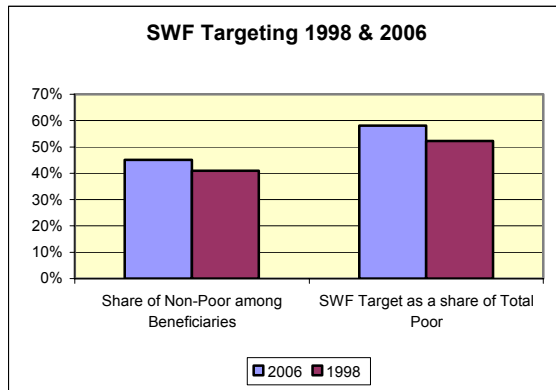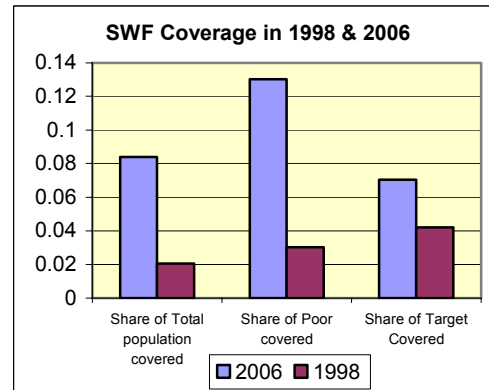
Source: World Bank Staff Estimates based on Household Budget Survey, 2005/06.

3.17 **For SWF recipients in lower deciles, SWF income represents a considerable source of income, matching or exceeding the share of private transfers**. The relative share of SWF transfers to income is progressive across deciles. Lowest deciles deceive a higher share of SWF total transfers. However there are beneficiaries in all deciles (Table 3.4).

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[59] Estimated SWF target population and coverage in 2005/06 (%)

	Targeted (poor)	Not Targeted		Total
		poor	not poor	
SWF Beneficiaries	1.48	0.85	2.50	4.83
Not SWF Beneficiaries	19.48	14.24	61.45	95.17
Total	20.96%	15.09	63.95	100.00

Table 3.4: Distribution of SWF Assistance as a Share of Household Budget

Total	Average Share of SWF Transfers in Total Consumption of Beneficiaries (%)			Share of Total SWF Budget (%)
	Urban	Rural	Total	
1	7	10	10	15
2	5	6	6	14
3	4	5	5	10
4	5	4	5	12
5	4	4	4	11
6	3	4	4	10
7	4	4	4	7
8	3	3	3	8
9	3	3	3	7
10	2	2	2	4
Total	4	5	5	100

Source: World Bank Staff Estimates based on Household Budget Survey, 2005/06.

3.18 **The SWF scale is not enough to make any sizable impact on poverty.** The budget is too low to reach all targeted beneficiaries, who number at around 4 million people. Even assuming all of the current budget were to reach all intended beneficiaries, it would amount to only around YR 277 transfer per capita per month, or 5 percent of the average poverty line. Still, that scenario would leave around 40 percent of the poor, or around 3 million people, without coverage.

3.19 **The SWF has difficulty in applying income criteria for determining and targeting the poor.** Proper targeting is complicated by the fact that the large number of the poor is dispersed in extremely remote areas that are difficult to reach. Besides, the SWF excludes broad groups of poor from qualifying for benefits because of its categorical targeting.

3.20 **The need for speed in reforming the SWF is urgent.** An eight-point reform agenda was identified by the Bank in 2002:

- *Introduce finer geographical targeting coupled with the status indicators already used;*

- *Establish targeting indicators on the basis of poverty data that are more easily verified and transparent as well as difficult to manipulate;*

- *Drop the income and asset tests because they are easy to manipulate, hard to ascertain and highly variant over time;*

- *Decentralize beneficiary selection and final approval to the governorates or even to the district level to speed up the application process;*

- *Review mechanisms to deliver transfers. Since most of the poor are located in remote areas and have no access to post offices or Bank branches, other mechanisms need to be considered (i.e., working through schools);*

- *Set up local women's councils in the targeted communities. Since many correlates of poverty will be public knowledge in the communities, a local women's councils could better tap into this knowledge and avoid relying solely on Sheiks;*

- *Add a school attendance requirement for school-aged children of recipients as a condition for receiving payments; and*

- *Obtain more budgetary resources. With some redesigning the SWF could perform an extremely valuable role in Yemen's safety net, but the targeted amounts are currently far too small to make much difference to the most needy.*

3.21 **The EU-supported program to reform the SWF has been underway since 2002.** Following on the World Bank recommendations, the EU built reform around three pillars: organization, policy and legislation. A new simplified application form for beneficiaries was successfully piloted in Aden governorate in December 2005 - April 2006. Phased implementation of the new approach is underway in two other governorates now. A new law on the SWF is awaiting approval in the parliament[60]. The new law covers the first five of the recommendations of the Bank. A conditional cash-transfer is being piloted in Lahej governorate. The priority should be to complete the legislative framework and complete the implementation of the new procedures for beneficiary identification quickly to all the governorates. In the absence of such measures, the poor in Yemen are left with inadequate protection when price and structural reforms hit them.

B.   Programs for poverty reduction in the future

Social Fund for Development

3.22 **The program has three principal components: Community Development, Institutional Support and Capacity Building, and Small Scale Enterprise Development.** The SFD has operated in three phases to date. The first phase (1997-2000) had a total investment of US90 million, and the Second Phase (2001 – 2003) amounted to US$175 million. The SFD now is in its Third Phase (2004-2008).

3.23 **The SFD has directly benefited an estimated 7.1 million people, around half of which are women.** Projects of the SFD created about 11.3 million job opportunities, with six thousand full-time jobs. During the period 2001 – 2005, the SFD completed 3,888 projects at a total cost of $US 343.5 million. Educational projects represent the largest share of the SFD's total investment commitment (54 percent), followed by water projects (11 percent), health projects (7.5 percent) and roads (7.6 percent). Environment and roads have the highest number of beneficiaries per project. Health and water often target women and hence benefit the highest

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[60] It is not known at this stage if this law is passed yet and what are the hurdles.

proportion of women. Direct beneficiaries account for 71 percent of the total beneficiaries. Education, health, roads and water projects generate 73 percent of all direct beneficiaries.

3.24 **A high proportion of SFD resources are benefiting the poorest households in Yemen.** Forty-two percent of SFD funds go to the poorest decile, 59 percent to the poorest quintile, and 69 percent to the poorest three deciles. Only 3 percent of the resources are received by households in the top decile.

Public Works Project

3.25 **The Public Works Project (PWP) provides employment opportunities through infrastructure development.** The Public Works Project carried out 1,270 projects during 2001 – 2005 at the rate of achievement of 67 percent. About 7.4 million people benefited from the projects, 67.1 percent of which were female. The project provided 5.3 million jobs, 1.4 percent of which are full-time. Of the jobs provided, employment of unskilled labor was 60 percent.

3.26 **Cost effectiveness ratio of the PWP is in line with what has been observed in public works programs in other parts of the world.** The cost-effectiveness of the program, as calculated by the share of the wage bill in total costs, is approximately 40 percent. If a second round of employment effects and distributional impact of assets is considered, the benefit-to-cost ratio of the program is 1.35 (benefits exceed costs by 35 percent). This rate by far exceeds the opportunity cost of capital, which is considered in this case as 12 percent[61].

3.27 **The SFD and PWP, even if ideal in the sectors in which they apply, are often operating without clear linkages to each other**. Their policies are designed in isolation rather than in integrated framework. There is duplicity of objectives and activities due to the similarity of the nature of the activities, in light of the lack of one institutional umbrella under which these programs work. The programs increasingly look alike, and there is a significant overlap in their spheres of action.

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[61] Updated Project Information Document (PID), The World Bank.

III   PRIVATE TRANSFERS

3.28 Private transfers are as important as public transfers for poverty elimination. Without remittances both within Yemen and from abroad, the poverty rate would have been higher by 4.6 percent.

Table 3.5: Share of Remittances in Household Expenditure

Deciles	Share of Domestic Remittance (%)			Share of Foreign Remittances (%)		
	Urban	Rural	Total	Urban	Rural	Total
1	4	6	5	2	5	5
2	2	4	4	3	3	3
3	2	3	3	4	4	4
4	2	3	3	4	4	4
5	2	2	2	4	2	3
6	1	2	2	4	3	4
7	1	2	2	3	6	5
8	2	2	2	3	4	4
9	1	2	2	4	4	4
10	1	1	1	5	4	5
Total	2	3	3	4	4	4

Source: World Bank Staff estimates based on Household Budget Survey, 2005/06.

3.29 Remittances represent an important source of income both for poor and non-poor, in both rural and urban areas. Over one-quarter of the poor have access to remittances from outside the republic. The rates are 22 percent of the urban poor and 29 percent of the rural poor. Twelve percent of the poor are receiving internal transfers. The rates are 10 percent for urban and 13 percent for rural poor. The share of foreign remittances is progressive for both the urban and rural populations.

3.30 Worker remittance inflows from abroad are diminishing as a source of support for the poor. Worker remittance inflows (through official channels) have remained stable around $1.2 billion in the last 8 years, some 8 percent of GDP in 2005 while at the global level remittance inflows have steadily grown at around 8 percent a year. With a population growth of about 3 percent a year, the per-capita worker remittance inflows would have declined at 3 percent a year. After the widely quoted estimate that 800,000 Yemenis returned from abroad after the Gulf war in 1991, it is not known if the workers have since returned to the host countries. The current promise of Yemen-GCC integration holds the promise that at some later stage (end of the next 10 years) at least labor market integration could improve worker remittance inflows. The HBS estimate of the share of remittance inflows to total expenditure at 2 percent is probably one-fifth of the macroeconomic estimate, with the lower deciles reporting a larger share.

3.31 The impact of foreign remittance on poverty in Yemen is very slight compared to international experience. Adams and Page (2005) estimate based on a cross-section of 71 countries for which a 10 percent increase in per-capita official remittance would reduce percent

of poor (under $1 per person per day poverty line) by 3.5 percent. However, in Yemen, even doubling of foreign remittance would lead to a negligible 4 percent reduction in the percent of poor. This difference could arise because the share of foreign remittance going to the richer household is larger than average.

CHAPTER 4: RENEWED COMMITMENT TO POVERTY MONITORING

I. BACKGROUND

4.1 **The progress report prepared by the government on the implementation of first PRSP (2003-05) indicated the inadequacy of poverty monitoring and evaluation as one of the major weaknesses of the PRSP.** The Government established a comprehensive monitoring mechanism in 2002 following approval of the PRSP. Despite multiple donor efforts supporting it, there still is no coherent and functioning monitoring and evaluation (M&E) system. M&E instruments may have been viewed more as an obligation towards donors than as part of a process of policy planning and adjustment. Deficiencies are especially apparent in the decisive areas of summary analysis and feedback into the political processes and policy decisions. Nonetheless, there is increasing recognition among policy makers that the success of public policies and programs depends on proper monitoring of their implementation in order that appropriate and timely adjustments can be made.

4.2 **In 2002, a Technical Committee was set up comprising 26 members – later expanded to 50 members and renamed Policy Committee – representing ministries, public agencies, donors, private sector and civil society groups**. It oversees implementation of the PRS, and is itself supervised by a Ministerial Committee. In early 2004, the PRS Follow-up and Monitoring Unit (PRS FMU) was set up in MOPIC. Its main tasks are to coordinate PRS follow-up and monitoring activities and to prepare Annual Progress Reports (APRs). It also created M&E subunits in line ministries and governorates, some of which have not been operational. The PRS FMU is supervised by the Technical Committee. Whereas during the PRS years 2003-2005 the Ministerial Committee was largely ineffective, the Technical Committee played an active role in policy formulation and supervision. However, it was primarily government-driven and hardly in a position to represent the interests of other main actors in the M&E process. Apart from the M&E arrangements in MOPIC, a separate Poverty Information and Monitoring System (PIMS) was set up in the Central Statistical Office (CSO), with support from UNDP, with the objective of carrying out frequent surveys to help the continuous monitoring of poverty.

4.3 **This chapter presents** (i) an assessment of the performance of existing M&E arrangements; (ii) a review of donor efforts to address weaknesses in the system; and (iii) recommendations for a practical and systematic approach to poverty monitoring based on international best practice.

II. PERFORMANCE OF THE M&E SYSTEM

4.4   The performance of the M&E system has suffered due to problems of a conceptual nature, institutional issues, and weaknesses in implementation.

A. Conceptual issues

4.5   The existence of different medium term planning and policy frameworks, such as the five-year plan, the PRSP and the framework for achieving the MDGs, and the lack of clear links between them, has complicated monitoring efforts. Objectives and the proposed means to achieve them are often vague, which makes it difficult to establish monitoring indicators. Objectives can be contradictory too. The SFYP reflected medium-term programs, with specific goals such as achieving average GDP growth of 5.6 percent and 8 percent for the non-oil sectors. The PRSP targeted an overall GDP growth of 4.7 percent and 6.3 percent for the non-oil sectors respectively. In parallel, the report on the Millennium Development Goals (MDGs) estimated that achieving the goal of halving poverty by 2015 required attaining a real GDP growth rate of 8 percent per annum. Analytical and methodological issues also cloud the establishment of a set of indicators and their timeframe to monitor implementation of the PRS. In this respect there are often contradictions between meeting donor demands and PRS goals.

4.6   A major accountability issue arises with respect to linkages between resource allocation and PRS implementation. The medium term expenditure program in the first PRSP was broadly consistent with the PRS priorities and grounded in an explicit macroeconomic framework. The link with the second PRSP need to be further refined. A mechanism needs to be created to ensure a link between PRS priorities and the budget process.

4.7   To conclude, the information requirements placed on the TFYP-PRSP monitoring system are not determined by objective, technical criteria, but instead arise from the information needs of the actors involved. The information generated by a monitoring system is not neutral. That is why it makes a significant difference who receives information, whether this information is made available in a timely manner, and what the recipient is likely to do with it. These conceptual weaknesses resulted in a weak institutional structure. As MOPIC is promoting the TFYP M&E system as a single strategic planning framework that encompasses competing frameworks, it will require a compatible institutional structure to ensure effective and objective monitoring.

B. Structural weaknesses

4.8   What follows is an assessment of the present institutional structure, and proposed structure for an integrated PRS M&E system. Best practice suggests a monitoring structure comprising the following building blocks:

Monitoring Structure: Common Building Blocks

Steering Committee: Political support and oversight
Coordination Unit: Convening meetings, managing process, drafting reports for dissemination;
Inter-Agency Committee: Promote dialogue, Inclusive membership, debate results;
National Statistical Institute: Key data producer plus technical assistance role, data collection and analysis;
Line Ministries: Liaison point (M&E unit or individual).

4.9   **There is no universal blueprint for the institutional structure of a Poverty monitoring system in Yemen**. The current Poverty M&E institutional structure at MOPIC reflects a mix of roles, functions, and responsibilities, particularly with respect to the tasks of policy formation and follow-up. As a result, the Policy Committee cannot guarantee objective monitoring of implementation. In the absence of an official document, the organizational diagram below is indicative of the existing set-up.
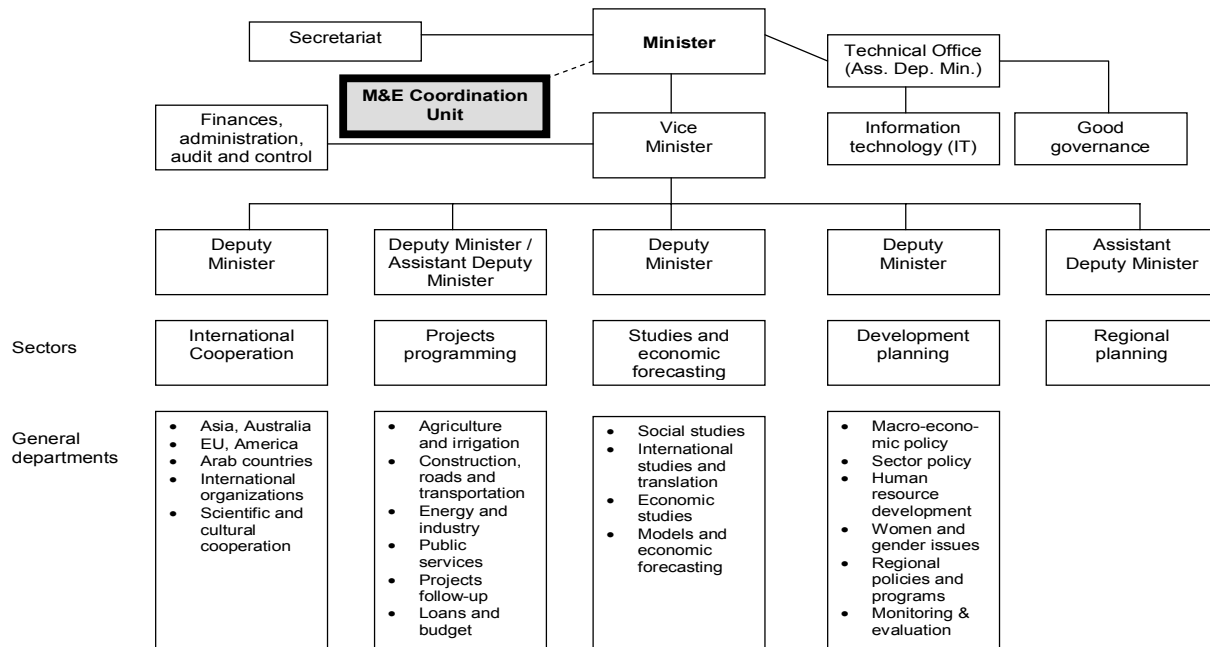
4.10 **Most departments in MOPIC have monitoring functions but without clear delineation of responsibilities, resulting in inefficiencies**. International Cooperation monitors the activities of foreign donors, Projects Programming monitors government and donor-supported projects in all sectors and regions, and Development Planning monitors achievement of the macroeconomic objectives. All of these structures can contribute to the M&E of the PRS, but there is duplication and overlap of responsibilities. If a tight meshing of the processes cannot be achieved, inefficiencies result. The current problem is compounded by inadequate coordination among MOPIC, line ministries, and donors for control purposes, by multiple reporting requirements for government agencies due to lack of harmonization or to serve particular interests, and by the generation of data that is never analyzed.

4.11 **The responsibilities of and relationships between government and line ministries in the collection, analysis, and utilization of relevant data is ambiguously defined**. While institutions usually are assigned areas of responsibility, the actual delineation and coordination of tasks often receives little attention. MOPIC has set up a special M&E department, however without concrete guidance on how its work interfaces with the CSO, line ministries, research institutions, NGOs, donors and other specialized agencies. Almost all the line ministries have established their own monitoring system, though they may not be fully operational. The M&E units have relatively low status within the line ministries, and, although they formally report to their respective ministries, the real recipients of the information are outside agencies and donors. As a result, M&E units do not yet have much impact on policy formulation within their ministries. The main institutional actors proved dysfunctional due to the design flaw of combining responsibility for implementation and monitoring. Though the machinery necessary for the functioning of poverty monitoring is in place, the actual operation of the system suffers from gaps in organizational arrangements and considerable capacity constraints.

Implementation weaknesses: developing indicators, data collection and responsibilities

4.12 **The question of what information the poverty monitoring system should provide, as well as how when and how, has not yet been answered.** There is renewed interest in the monitoring of poverty outcome and the corresponding data collection. But inputs, and especially intermediate implementation issues, are less emphasized. Vital questions about the usefulness of different data sources could be overlooked as a result. A similar bias characterized the approach to indicator selection, with indiscriminate listings of standard indicators taking the place of careful thinking about the steps needed to be taken to reach poverty reduction goals. New mechanisms for encouraging information use are becoming apparent, but thinking on this is still at an early stage.

4.13 **The program lacks coherence between indicators and does not distinguish between important and less important indicators.** The information and indicators to be reported for poverty monitoring are not streamlined and important findings tend to get lost in a profusion of details. The limited understanding of data affects the choice of monitoring indicators. The final and intermediate indicators in the sector strategies are relatively clear, but there has been limited guidance as to what the sector strategies should report. Few processes have been initiated to adapt what is measured to what needs to be monitored. Experience suggests that the emphasis should be on a short list of outcome and impact measures, but the response of line ministries has been erratic. In ministries that are more experienced with M&E activities, such as the Ministry of Education, the intermediate indicators selected are more relevant for poverty reduction and more closely related to the final indicators. Other ministries report on too many indicators (emphasizing input indicators), lack a baseline, and have little control over the accuracy of administrative data. Indicators are reported that are not specific, measurable, attainable, relevant, or time bound.

4.14 **While final outcome/impact monitoring is getting much needed increased attention, there is a case for emphasizing intermediate outcomes, and for exploiting more fully the potential of different forms of input monitoring.** As the multi-dimensionality of poverty is being recognized, there is some commitment to goals additional to a reduction in the

percentages under the monetary poverty line. Intermediate performance indicators are most useful in providing a quick feedback on poverty reduction performance needed for learning and accountability purposes. The reason for stressing the importance of intermediate outcomes is to underline the need to develop intermediate monitoring tools to show what is and is not working, and to adopt measures to rectify any problems.

Box 4.1: Best Practice: Developing Core Indicators Corresponding to Policy Objectives

The basis for monitoring the first PRSP in Burkina Faso was formed by the 14 indicators drawn up in 1997 in the framework of the new conditionality in the sectors of primary education, health and budget management. In June 2002, the debate intensified around the policy objectives, and at an ONAPAD seminar, a list of 191 indicators, intended to cover seven sectors, was approved. In April 2003, the STC-PDES summarized relevant indicators in a list of 85 indicators that were to be attached to the revised PRSP 2. Then in June 2003, under the leadership of ONAPAD in Tenkodogo, a joint conference was held of all institutions involved in monitoring as well as civil society representatives. It drew up a compressed and manageable list of 33 indicators for a total of 12 sectoral areas on the basis of a joint list of 181 indicators compiled from the ONAPAD and STC-PDES lists.

At the same time, a group of Canadian experts was commissioned to critically reevaluate this list and to develop a draft for the core indicators of the second PRSP, which is now found in the annex of the much criticized PRSP 2. The Canadian mission revised this list again and examined to what extent the indicator list could document the 10 primary dimensions of poverty. It then compiled a list of 28 minimum indicators, of which 13 correspond to the Millennium Development Goals (MDGs) and eight implicitly focus on gender aspects. These 28 minimum indicators were supplemented with 19 additional sector-specific performance indicators, so that the present, though not yet functional, PRSP 2 monitoring system encompasses 47 indicators, which are named in the annex of the draft document.. Currently, this list of indicators forms the common basis for monitoring the second PRSP.

The list of core indicators is differentiated according to the place of data collection (rural / urban) and gender aspects. Administrative responsibilities are listed and the date of data availability and frequency of compilation are stipulated. This was a decisive step in the right direction. Nevertheless, this minimum list has still not been implemented in PRSP 2 monitoring, because the new institutional structure is not yet functional. The indicators have sensibly been limited to a minimum number, but the problem of the "missing middle", i.e. the timely tracking of implementation measures, remains unresolved. The minimum list encompasses 28 indicators, which are divided into two categories: a) poverty indicators (23) and b) sector performance indicators (5). The poverty indicators are subdivided into 10 areas: income with a focus on rural households (2); education differentiated according to gender aspects (4); health (3); nutrition (2); water / sewage (2); employment (2); living space / habitat (2); access to means of production (3); market access (1); participation / social inclusion (1). The sector performance indicators are subdivided into three categories: macroeconomy and budget (3); private sector and competitiveness (1); and good governance (1).

4.15 **Deciding *what* to monitor has some immediate implications for *how* to do it, in the sense that some instruments are more suitable for meeting the kind of priority information needs than others**. For example, if the reach of essential services is the key question, surveys that cover the base populations are attractive compared to facility-based reporting. Yet, getting the right information for PRSP monitoring is not just a matter of the suitability of different instruments. There is also the question of performance, and whether it is realistic to expect this to improve. Emphasis should be placed on monitoring intermediate outputs and outcomes, which suggests a role for routine administrative data and management information systems. However, a common problem with these is reliability. What to do about such problems is as important as getting the right combination of different instruments.

4.16 **The battle to get the multidimensional concept of poverty accepted for operational planning purposes is not entirely won.** This is due to the different status accorded to instruments for assessing poverty outcomes, especially household consumption surveys and participatory poverty assessments. Distrust of survey data persists. Officials criticize the inability of the Household Budget Surveys (HBS) to produce relevant data, which suggests a lack of understanding of the purpose surveys. Dissemination seminars tend to be attended by junior staff rather than decision-making senior staff. The information contained in the HBS has been under-utilized despite its accessibility.

4.17 **There are also problems with the data sources.** For example, certain marginal groups (homeless persons, institutionalized persons) escape major surveys and there are issues of coverage and comparability: the recent HBS (2005/06) covers 298 out of 334 districts, whereas the previous HBS (1998) covered all 228 districts existing at the time. Some administrative borders may have been redrawn, and some rural districts may have been reclassified as urban. These and other factors may lead to distortions when comparing the results of the two surveys. Hence, great care should be taken to ensure appropriate comparisons and interpretation of data.

4.18 **Most of the information used by line ministries derives from administrative data collected by the statistical departments or other technical departments in ministries.** The sophistication of these systems varies, and there are concerns about their quality and relevance for policy purposes. Often, activities of M&E units include responsibility for project monitoring, which involves the provision of data on inputs and, to a lesser extent, outputs and outcomes. Multiple donor reporting requirements are also a concern, as they divert staff resources. Due to the weak statistical and analytical capacity in MOPIC and the line ministries, the focus is on the reporting rather than the analysis of data. The reports are thus of limited use in guiding policy. Most M&E units do not engage in policy analysis.

4.19 **Monitoring for whom and for what?** Much of the reporting in Yemen is done for the World Bank and the IMF, as disbursements tend to depend on reports on the implementation of the PRSP in a broader context, without focusing on poverty reduction. Dissemination of reports in a form appropriate for target audiences is neglected and versions understandable to the general public are not produced. Hence, public discussion on poverty reduction has practically no influence on policy. This could be influenced by the way formal institutions for poverty monitoring are set up, as discussed in the PRSP Institutionalization Study[62]. There are examples of two divergent approaches in Uganda and Tanzania. In both countries, a network of interested institutions (data suppliers and users) has been established to coordinate poverty monitoring.

Box 4.2: Best Practice: Setting up Monitoring Structures for Effective Utilization of Information

In Uganda, the Poverty Monitoring and Analysis Unit both serves as a secretariat for the Network, and plays an active role on its own account, benefiting from a strategic location within the Ministry of Finance, Planning and Economic Development. Over a number of years, this set-up has proven friendly to the integration of NGO-managed PPAs and statistical data from all sources. It has also helped to facilitate the relatively frank and extensive dialogue between government and NGOs that has been a feature of the PEAP process. In Tanzania's Poverty Monitoring Master Plan, a relatively elaborate networking arrangement has been mapped out, which is formally very inclusive. No empowered secretariat is visualized, however, and there is a seemingly deliberate effort to disperse initiative and authority away from any single centre. The Ministry of Finance appears as one actor among several, in spite of its lead role in the MTEF and PRSP processes.

As argued in the Tanzania chapter of the Institutionalization Study, the Tanzanian proposals could be seen as cumbersome, and pose the risk of a vacuum of authority and initiative. A more specific danger is that the opportunities that may arise for beginning to stimulate and then "feed" new information demands arising from the MTEF process will be missed. A final question is whether, despite being more open and inclusive in principle, the network arrangement will in practice be more conducive to engaging with stakeholders from the wider society, and campaigning organizations in particular. We can speculate about the possible implications of these polar types, as well as other variants that may appear. However, the actual developments in Tanzania and Uganda deserve to be watched closely, and firmer conclusions drawn after a reasonable period of implementation.

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[62] Booth, David and Associates, "PRSP Institutionalization Study: Final Report", submitted to the SPA, October 2001.

4.20 **NGOs can play a useful role in making use of monitoring data to influence policy.** The poverty monitoring process itself should mobilize stakeholders, and even create "new" stakeholders, that require and are capable of using information for policy improvement. Advocacy-oriented NGOs can be useful intermediaries in this respect. NGO monitoring of PRSP implementation can be more or less formalized, and parallel to the official monitoring arrangements. The range of feasible options will depend a great deal on the degree to which the stakeholders are able and willing to engage within the institutional framework for centralizing and disseminating relevant information.

Box 4.3: Best Practice: Incentives to Promote Effective Use of Poverty Information

A principal finding of the PRSP Institutionalization Study is that the "implementability" of a PRSP depends crucially on the stage reached in introducing results-oriented public management reforms, and particularly those focused on public expenditure management and the budget. Outcome-oriented budgeting or program budgeting, within a medium-term framework, promises to make a big difference. This could affect, among other things, the use they make of poverty information. There is some suggestion from the countries covered in the Institutionalization Study that the PRSP process may provide a boost to otherwise flagging public financial management reforms. In the meantime, we have to fall back on the example of Uganda's PAF – which, to recall, is not a special fund but a section of the budget that gets special protection whenever disbursements fall short of allocations.

The effect of PAF protection on the Budget Framework Papers submitted by ministries has been significant, as previously noted, prompting new efforts to demonstrate how program proposed for funding might be considered relevant to poverty reduction. The additional observation to be made here is that these efforts depend on the availability of relevant and reliable information. Following a period in which the Ministry of Finance itself was the principal source of demand for poverty information, line ministries are now approaching the Poverty Monitoring and Analysis Unit, and the Uganda Bureau of Statistics, with requests for data or studies, the result of which might help to justify a more poverty-focused budget bid. Similar things may occur at the district and sub-district levels in Uganda within a few years, if recent proposals are implemented.

A more current example of comparable developments at the local level would be the operation of Ghana's decentralized budget centers in Health. These have been operating activity based budgets for a number of years, and some are linking their budget submissions to relevant information, some of it drawn from a low-cost community based health reporting system.

4.21 **Unclear mandates, weak capacity and poor communications affect not only the M&E function but the performance of MOPIC as a whole.** Skills vary a great deal within the institution. Some sophisticated IT applications have been introduced, but are not effectively used. Numerous M&E training seminars have been held, but with limited effect on performance. Within MOPIC there is a serious lack of communication and coordination between directorates. The culture of information sharing is weak, not just within MOPIC, but also between the ministry and other agencies.

4.22 **There is currently no unit within MOPIC responsible for internal monitoring and evaluation (in the sense of technical auditing).** The Ministry is faced with many challenges, e.g. timely production of the National Plan for 2006-2010, preparation of the decree to define the mandate of the Ministry, strengthening of decentralized units, etc. A strong internal M&E unit may help the Ministry to meet these challenges. MOPIC's in-house capacity to coordinate regional and local M&E, including related capacity building, are also weak and spread across two organizational units (sectors). The proposed M&E Coordination Unit can hardly be expected to fill these gaps. Apart from consolidation and strengthening of MOPIC's existing

capacities in the area of regional planning, delegation of M&E tasks to regional or local NGOs should be considered.

III.   THE ROLE OF DONORS

4.23 **Donors have underestimated the difficulties of poverty monitoring.** Not until implementation of the first PRSP did they start to focus on M&E. They are now convinced that monitoring of progress with the PRS, and more specifically of poverty reduction, is a high priority.

4.24 **Donors have been supporting a wide range of poverty related monitoring activities,** including: **(i)** budget reform/public expenditure management; **(ii)** public expenditure reviews; **(iii)** sector information systems; **(iv)** local government information systems; **(v)** qualitative/ participatory methods; **(vi)** surveys; **(vii)** analysis/dissemination of results; and **(viii)** poverty and social impact analysis. It includes the establishment of PIMS (Poverty Information and Monitoring System) in the CSO, and the seconding of long term advisors to MOPIC to support the establishment of effective monitoring institutions and the transfer of skills and experience. GTZ has taken the lead in assisting MOPIC in developing the M&E Strategy for the TFYP.

4.25 **Donors' wide-ranging support for poverty monitoring is thought to have been largely driven by their need for accountability to partner countries and their own constituencies.** Furthermore, most donors tend to develop and apply their own specific M&E systems for monitoring their programs. Despite general agreement on the objectives and conditions of the Declaration of Paris (2005), the donors' will to align their contributions with national priorities (e.g. through SWAPs, program assistance and direct budget assistance) and to harmonize their procedures with each other is still weak. MOPIC's AHA Unit has been given a mandate to coordinate these processes and to monitor ODA, in particular through introduction of a central ODA database.

Donor Harmonization

4.26 **The PARIS21 Declaration commits donor agencies to "Implement, where feasible, common arrangements at country level for … monitoring, evaluating and reporting to government on donor activities and aid flows."** Such actions are deemed necessary because of the high costs of meeting the requirements of multiple donors. Yemen seems to provide a 'worst-case' scenario in terms of the lack of harmonization between donors. While there is considerable willingness on the part of donors to fund monitoring activities, "different donors are picking and choosing M&E activities, a problem that may further contribute to the fragmentation of the poverty monitoring system". However, these are essentially isolated activities – 'monitoring projects' – not components of an integrated monitoring program. There is "no pooling of resources to support the poverty monitoring system." The lack of coordination is seen not only as an inefficient use of resources, but also as potentially failing to deliver intended results because of the de facto interdependence of the various components and levels of information systems.

Box 4.4: Best Practice in Donor Harmonization

The Uganda case study provided a detailed consideration of the obstacles to improved coordination and possible approaches to overcome these obstacles. Though there are still around 500 donor-funded projects, all with their own monitoring systems, "involvement of donor advisers in the development of sector strategies has increasingly been linked to contributions to sector funding through the central budget". The government has now determined that, over a limited time period, all external funding of sectors and districts should be included within the Medium Term Expenditure Framework. The case study argues that this "seemingly technical requirement has the potentially transformative effect of equalizing the incentives facing ministries and departments between funding. However moving away from a long history of project funding is a difficult task. DFID, a leading proponent of the move to program and budget support ,is apparently still initiating around 1,000 projects each month.

4.27 **A genuine harmonization of approach by donors should provide the basis for addressing the evident "***data-gaps, duplication and waste***" in the system**.   One component of such a transformation is for donors jointly to determine realistic objectives to be achieved over a given period. A second component is simply restraint. The physicians' maxim 'first do no harm' is highly applicable to the development of PRS monitoring systems. The 'overload' issues associated with donor supported surveys have been discussed above. Similar concerns relate to the funding of 'new and better' approaches to routine data systems. These tend to rapidly eliminate activities which, with all their shortcomings, may have been delivering reasonably reliable data on a regular basis. By supporting, strengthening and coordinating those elements of existing systems which appear to function at least adequately, it will often be possible to compile reasonably reliable monitoring data while more general capacity building takes place and new systems are developed.

IV   THE ROAD AHEAD: CONCLUSIONS AND RECOMMENDATIONS

4.28 **With the merging of the TFYP/PRS and the new financing support pledged at the London Consultative Group meeting, a new urgency to strengthen the M&E system can be felt**. The success of planning, implementation and follow up of not only the PIP, but also the wider objectives of the TFYP / PRSP, crucially depends on a comprehensive and systemic approach to monitoring and evaluation with specific focus on poverty monitoring. MOPIC, in its capacity as the main government coordinator and agency responsible for successful implementation, has taken the lead in establishing a comprehensive system that covers all relevant sectors and levels of government with regard to the production of relevant information for better decision making. To be able to fulfill this function, MOPIC is requesting harmonized support from key players such as GTZ, the UN and the World Bank for the new TFYP M&E system, with particular focus on poverty monitoring. MOPIC is in the process of developing the M&E strategy with support from GTZ. In particular, the analysis underlines the need for significant capacity building, structural reorganization and improved communication and coordination among all involved parties. The main outputs of the M&E system will be (a) well-founded and timely Annual Progress Reports (APRs); (b) standardized internal progress reports; (c) competent advisory and capacity-building services provided to concerned public and non-public bodies; and (d) effective communication of relevant information to stakeholders and the public.

4.29 **MOPIC has already taken the lead to establish a comprehensive strategy for M&E**. The Strategy foresees the creation of an M&E Coordination Unit (MECU), thematic Working Groups (WG) and a National Committee (NC). The MECU will coordinate the M&E process, ensuring adequate M&E of relevant policies, programs, projects and resources, promoting human resource development and providing technical support for M&E, developing Management Information Systems (MIS) and ensuring appropriate dissemination of TFYP-related information. The MECU will aim to ensure solutions to problems using a participatory approach. The approach will be applied (a) in the context of thematic *Working Groups (WG)*, to be organized and coordinated by the MECU in line with identified needs and established priorities; (b) through M & E capacity building measures and technical support for both public and non-public bodies involved in TFYP implementation and M & E; and (c) through creation and promotion of a *National Committee (NC)* to review and advise on the quarterly and annual reports before their presentation to Cabinet and to initiate and steer independent evaluations of progress in TFYP implementation and related processes. Membership in the NC should include representatives of all main involved public and non-public bodies, and should give a strong voice to civil society actors.

4.30 **As part of the above plan, the creation of an M&E Coordination Unit (MECU) within MOPIC has been proposed**. This unit will be placed under the direct supervision of the Minister and mandated to coordinate the M&E process and to carry out the above-mentioned activities. At the same time, in order to avoid overlapping and redundancies, care will be taken to ensure that this unit does not assume responsibility for M&E tasks assigned to other organizations. Instead, the MECU will provide advisory services and carry out capacity building measures to support these structures.

4.31 **Many M&E tasks are already within the mandates of existing MOPIC departments.** To some extent, capacities can be strengthened through in-house advisory services and capacity building measures, such as those that might be provided by the MECU. Their impact, however, is likely to be limited, given the weak structure and organization of MOPIC. A general re-structuring of MOPIC has been proposed. The timeframe for such re-structuring has not yet been established, but once the restructuring exercise has been effectively launched, the existence and mandate of the MECU will also be open to review. Hence, the proposed creation of this unit may be seen as a necessary, but temporary, response to the immediate challenges of monitoring and evaluating the implementation of the TFYP.

Box 4.5: Summarizing Key Elements of the Proposed MOPIC M&E Strategy

- A new M & E unit set up within MOPIC that elevates the M&E function above sector level and a new M&E coordinator directly answerable to the minister himself, but working with all resources available for monitoring and evaluation within MOPIC and with its partners

- An M & E help desk and secretariat to support this new function; a pooled expertise approach where people will join forces regardless of their institution, position and rank in the exiting institutional set up

- A network philosophy with standing working groups to create interfaces with power agencies (like Finance or the President's Office) on the one hand, and line ministries on the other (implementation responsibility and with it the relevant specific knowledge reside in the sectors and line ministries predominantly)

- Shared responsibility between central, sector and regional entities, held together at the center by the MOPIC coordinator - (i) a new partnership between MOPIC and the CSO for data production and quality control - a social partnership approach (e.g. a wider stakeholder table) for data demand and interpretation in the spirit of full and equal participation; (ii) a national M & E council that brings together all ministries, government and non-government stakeholders for steering the process on the highest level

- A public relations campaign which explains the issues to a wider interested public and receives their voices and criticisms

- A precise timeline to manage the process from start-up and over the first year until final evaluation, to be held at the end of implementation of the Plan

Conclusion - Lessons for Success

4.32 **A number of key lessons have emerged from the assessment of Yemen's Poverty Monitoring System against international best practices.**

- *Amy assessment of the role of the government administration in poverty monitoring faces special problems. Better concepts, instruments, and related indicators are needed to do this.*

- *A key problem will be ensuring a regular flow of meaningful information from the sectors into a comprehensive M & E system.*

- *As the poverty monitoring process requires a qualitative change in the political culture and a more intense dialogue between government and civil society, efforts are needed to regain the dynamics of participation achieved during the formulation of the PRSP.*

- *The strategy must not only focus on the level of outcomes, but also scrutinize the input side (the budget, its execution, and medium-term financial planning) and assess the effectiveness of policy measures on the ground. It should build on the existing administrative information systems, but critically examine their results.*

- *To ensure accountability, there has to be a meaningful dialogue between the Government, Parliament and civil society.*

- *The reporting to donors should also inform the public discussion.*

4.33 **To maximize the developmental impact, the form of reporting should match the needs of users, which requires differentiation.**   This leads to the following recommendations:

- *The processing and disseminating of monitoring results should receive more attention.*
- *The information and indicators that are to be reported must be streamlined so that important findings are not lost in a profusion of non-relevant details.*
- *Better outcome indicators of pro-poor growth and good governance are needed.*
- *The satisfaction of beneficiaries with public services should be assessed systematically.*
- *The selection of indicators is itself a political process, and therefore must be carried out as openly as the formulation of the PRSP.*
- *Parliament should become the most important target group for poverty monitoring and should be involved to a much greater extent.*
- *A diversity of information channels and multiple occasions for analysis impede political blockades and therefore should be included in the plan.*
- *Special surveys, such as impact monitoring on the ground, can enrich the public discussion and should be encouraged.*

4.34 **The following recommendations are directed specifically at donors:**

- *PRSP monitoring should be used to identify systemic weaknesses in the implementation of the PRS and to adjust donor interventions accordingly.*
- *Opportunities should be sought specifically to support parliament and civil society in the utilization of monitoring results within the political process.*
- *The contributions of independent research institutions to poverty monitoring can foster relevant public discussion. Support for qualified institutes should be stepped up.*
- *The statistical departments of sector ministries and administrative offices are crucially important to meaningful poverty monitoring. They should be targeted for support, especially in key sectors.*
- *Traditional project monitoring has little to contribute to poverty monitoring. However, projects can use their monitoring experience to support the sectoral monitoring systems at a higher level.*
- *Although donors should not over-load a monitoring system with new and costly methods, the principle of financial sustainability should not be over-emphasized as long as the donors are making a significant contribution to the implementation of the strategy for poverty reduction. Cost effectiveness and political usefulness are more important criteria.*

4.35 **Adherence to the new approach very much requires a mind change at MOPIC.** Given the record to date, the risks of non performance are real and the cost of such failure prohibitive for all sides involved.

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الإستنتاجات الرئيسية

II   تطور ظاهرة الفقر

الشكل E.1: إنخفاض طفيف للفقر بين عامي 1998م و 2005/2006م
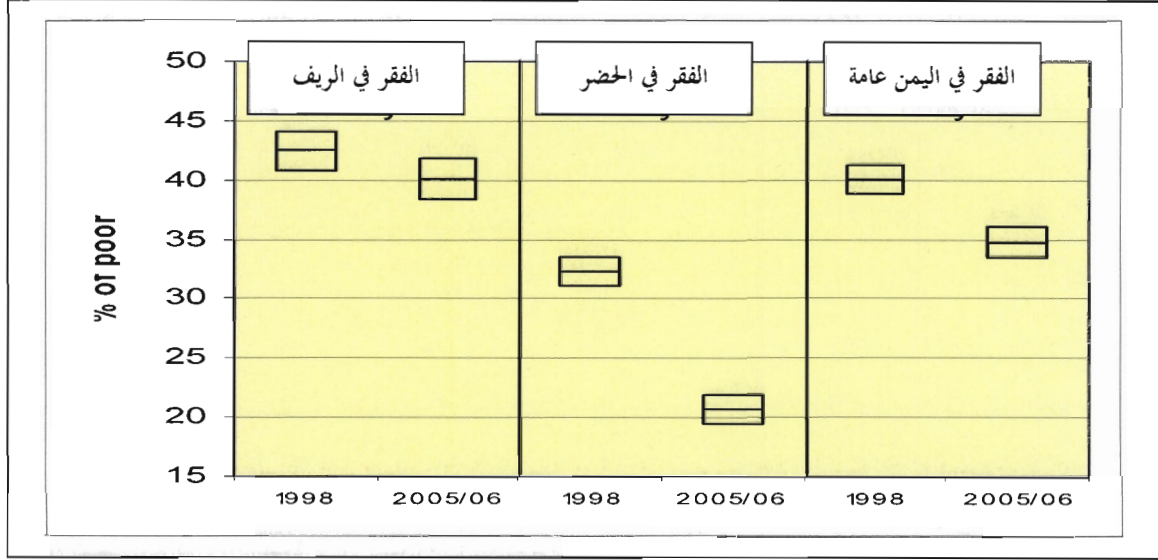
ملاحظة: المربعات حول الوسيط تعطي معامل ثقة للتقديرات بمقدار 95% . المصدر: البرنامج الإنمائي للأمم المتحدة (2007م)

3.   **يتمثل الإستنتاج الرئيسي للدراسة في إنخفاض الفقر في اليمن**. لقد ارتفع معدّل النمو الحقيقي لنصيب الفرد من إجمالي الناتج المحلي بنسبة سنوية تقارب 2.1% خلال كل عام من أعوام الفترة 1998-2006م، أي مابين فترتي تنفيذ مسح ميزانية الأسرة، بينما تناقص الفقر (بحسب عدد الفقراء) بمعدل يساوي تقريبا 2% سنويا. لقد تناقصت النسبة المئوية للفقراء من 40.1% عام 1998م إلى 34.8% عام 2005/2006م، وشمل النقص كلا من مناطق الريف والحضر. ومع ذلك، وبسبب إستمرار معدل النمو السكاني المرتفع، فإن عدد الفقراء قد ظل ثابتا عند ما يقارب سبعة ملايين نسمة منذ سبع سنوات تقريبا. إن مستوى تناقص الفقر يظل متواضعا إذا ما قورن بأهداف التنمية للألفية، والتي تبنتها الحكومة اليمنية. إن تحقيق أول أهداف الألفية، والمتمثل في تخفيض عدد الفقراء إلى النصف يتطلب رفع معدل النمو السنوي في إستهلاك الفرد ـ والمقدر بـ 1% خلال السنوات السبع الماضية ـ إلى أربعة أضعاف هذا الرقم.

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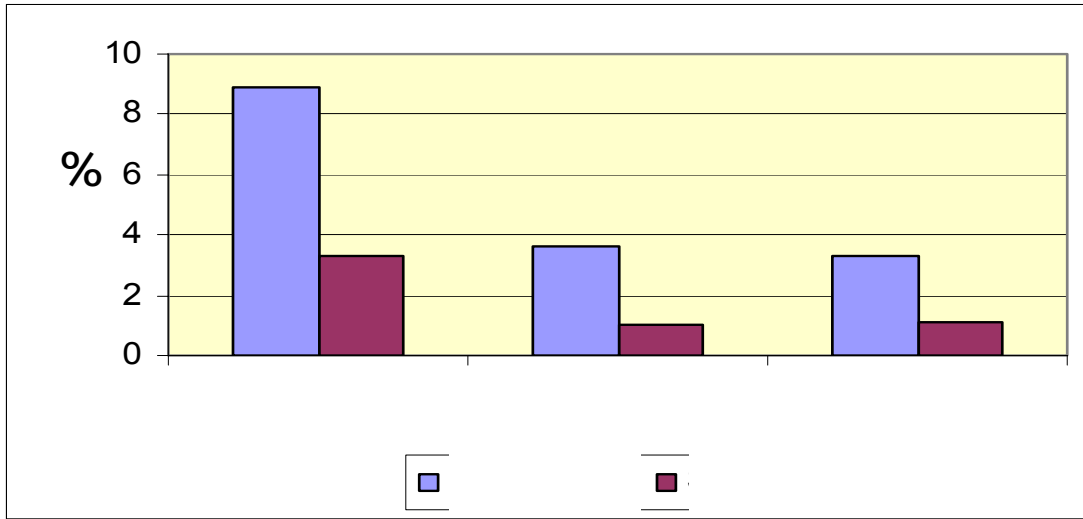
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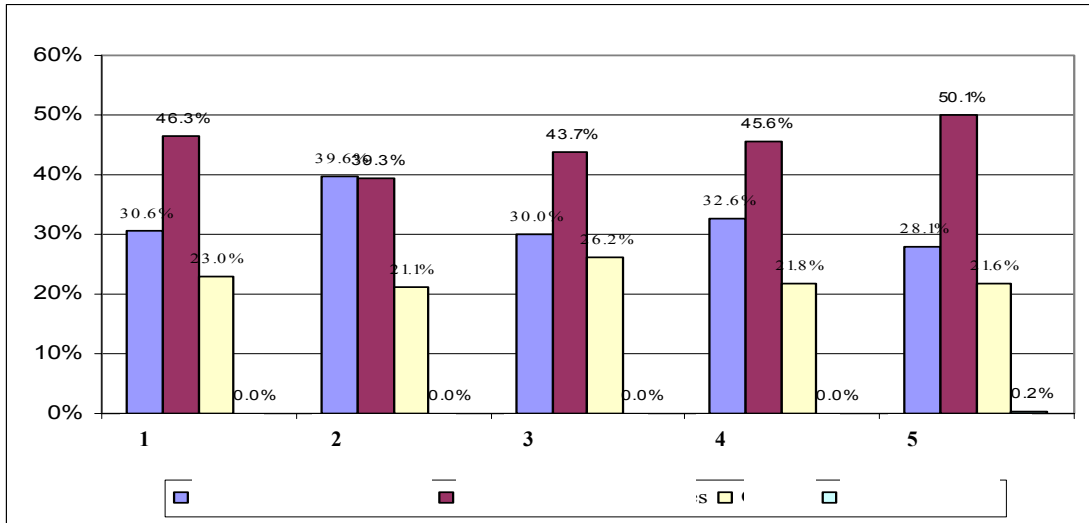
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