

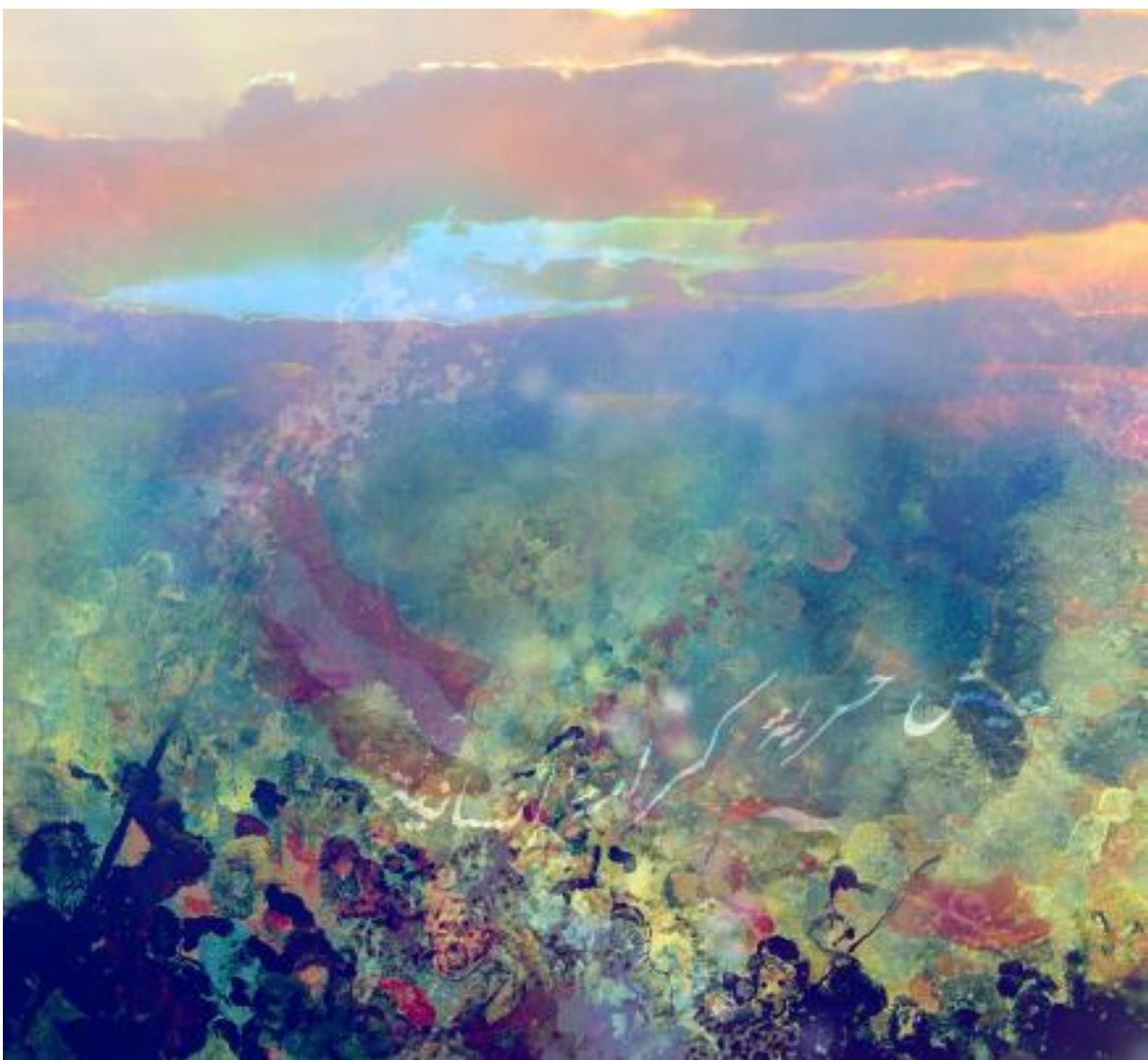


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Arab Development Challenges Background Paper 2011/13

The ADCR 2011: Poverty Dynamics in Yemen as a Representative Arab LDC

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The ADCR 2011: Poverty Dynamics in Yemen as a Representative Arab LDC

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Acronyms and Abbreviations

GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
HDI	Human Development Index
HPI	Human Poverty Index
IMF	International Monetary Fund
LDCs	Least Developed Countries
LSI	Living Standard Index
MDGs	Millennium Development Goals
NPS	National Poverty Survey
P0	Headcount Poverty
PAPFAM	Pan Arab Project for Family Health
UBN	Unsatisfied Basic Needs
UNDP	United Nations Development Programme

Introduction

Socio-economic development in Arab LDCs has been shaped in the context of the political economy of rentier states and a delayed demographic transition.

The tribal identity that defines these countries has been reinforced and mal-formed through patron-client relationships promoted by states using revenues from resource-based activities to accentuate tribal differences. Thus undermining a rule and merit based system for making decisions about the use of public assets and policy choices thus breaking traditional symbiotic relationships amongst different population groups, and rendering public investments ineffective, by using them as tools in the patron-client relationship. Private investment is also discouraged due to poor enforcement of contracts.

All the Arab LDCs are locked into a protracted initial period of the demographic transition, with population growth rates of around 3%. This has led to ever-larger numbers requiring access to basic social services and eventually jobs. Due to the inability to expand the provision of basic services and promote job-creating growth, these countries have not been able to benefit from the demographic dividend that a potential decrease in the dependency rate creates.

The above context can largely explain the following challenges that face these countries:

Persistence of generalized poverty, especially in rural areas

More than 50% of the population find themselves in conditions of abject poverty, with poverty more widespread in rural areas, implying failure of the development process to reach the bottom majority. Poverty limits the domestic market and negatively affects productivity of a large segment of the population that suffers from malnutrition and poor health. The countries have thus been frozen in a vicious cycle of low income, investment and productivity.

Poor progress towards MDGs and high levels of human poverty

The LDCs have not managed to make substantial progress in attaining the MDGs. The precarious nature of social peace and intermittent internal strife and conflict have even caused reversals in the limited gains made. The low level of human development has meant that their abundant labour resources have not been able to effectively participate in economic activities.

Environmental degradation

The persistence of high levels of poverty, combined with short sighted policies and use of resources by male dominated societies, has led to widespread mining of limited environmental resources. This has led to declining forest and water resources and soil fertility, leading to ever falling and less predictable rainfall and declining agricultural productivity. While the Arab LDCs were traditionally self sufficient in food, they are increasingly dependent on food imports, due to neglect of the agricultural sector by governments and subjecting it to the operations of a market system, which favoured a move away from food staples and accelerated rural exodus.

Gender inequality

All Arab LDCs do badly on specific gender MDG targets, such as high maternal mortality rates, as well as major gender disparities in terms of access to economic opportunities and political representation. Conditions of conflict have further marginalized women by giving greater prominence to the traditional role of males as warriors and reinforced male dominated tribal structures. The lack of women empowerment negatively impacts attainment of MDGs in general, through giving the primary role on how environmental assets and household income are used to the men, who are more selfish in the way they use such resources.

Rising unemployment

The combination of rapidly rising populations with job-less growth has led to ever-rising unemployment, particularly amongst youth and women, with general unemployment rates in double digits and those of youth and women upwards of 25%. The rise in unemployment translates into rising poverty and inequality and may undermine social stability, thus reducing the already limited private investment and sustaining a vicious cycle of jobless growth, leading to higher unemployment that in turn lowers growth by undermining effective demand and creating social instability, thereby leading to ever-lower levels of productive investment.

Poverty Profile and Trends in Yemen as a representative case for Arab LDCs:

Yemen can be taken as a representative country for the LDC group of Arab countries, given its size, socio-economic structure and availability of at least 2 comparable poverty surveys. Yemen is the Arab LDC with the highest values of per capita GDP in PPP of \$2335 and HDI of 0.575 in 2007, and as such represents the upper range of possibilities in terms of human and material welfare for the group.

Sudan completed a household budget survey in 2009 but the results have not been made public yet and in any event, the absence of an earlier similar survey makes it difficult to undertake a meaningful assessment of poverty dynamics over time. There are two poverty surveys for Mauritania for 2000 and 2004, which are used in terms of looking at characteristics of the poor. Yemen is the Arab LDC with the highest values of per capita GDP in PPP of \$2335 and HDI of 0.575 in 2007, and as such represents the upper range of possibilities in terms of human and material welfare for the group.

Ever since reunification of the country in 1990 its relative position on the HDI index has only improved marginally rising from 151 out of 174 countries for 1995 (HDI value 0.486) to 140 out of 182 countries in 2007, with very slow progress towards attaining the MDG goals. At 3.02%, the country has one of the highest population growth rates globally, with the population expected to double by 2030 to around 40 million. This increases the demand for educational and health services, drinking water and employment opportunities. Yemen faces a severe water shortage, with available ground water being depleted at an alarming rate. The Yemeni economy is caught in a jobless slow growth cycle leading to stagnant per capita incomes and rising levels of unemployment, particularly amongst the youth.

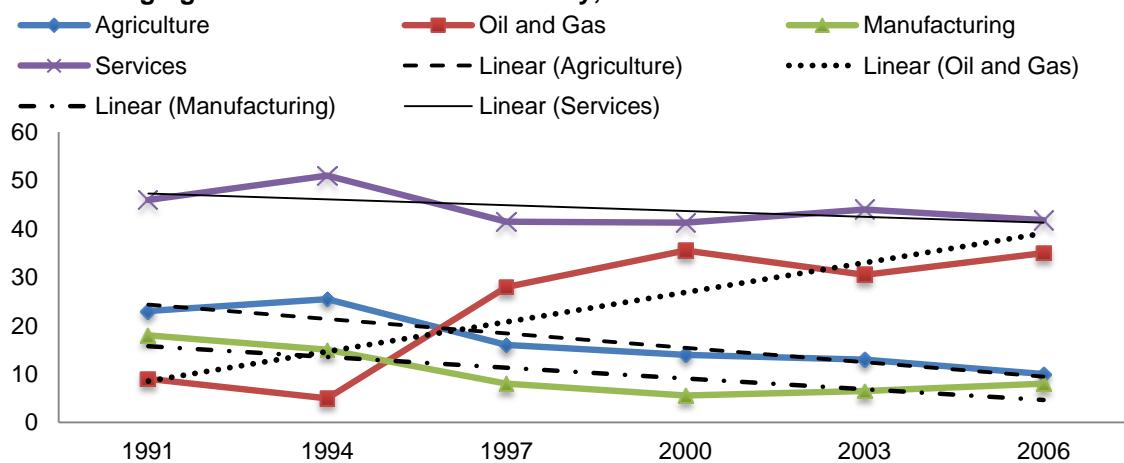
Social development indicators, such as child malnutrition, maternal mortality, and education attainment remain poor. The Household Budget Survey carried out in 2005-6 indicated that about 35% of the population lives below the national poverty line, with poverty more

widespread and persistent in rural areas. There are large gender disparities, with significant gaps in women's access to economic, social and political opportunities. Yemen's second Millennium Development Goals Report in 2010 concluded that Yemen is currently off track with respect to meeting the MDGs, with the possible exception of universal primary education, under-five child mortality and communicable diseases.

The birth of the unified country in 1990 was marred by the impact of the Iraqi invasion of Kuwait on Yemenis living and working in GCC countries. Up to one million were forced to return to Yemen, thus depriving the country of substantial annual flow of remittances and adding substantially to those who had to be provided with jobs, schooling, health and other basic social services. The country also had to absorb the costs of integrating two different civil service structures and economic systems. The decision made at the time to keep all civil servants serving for the pre-existing two governments and of applying the higher pay scale prevalent in the North to the unified civil service led to a substantial increase in the public sector wage bill. However, despite all the disruptions associated with unification and the civil war of 1994 and external shocks, official data show positive growth averaging 5.5% over the period 1990 to 1999, with no year of negative growth. The growth rate declined over the period since 2000 to around 4.5%. However, given the importance of oil revenues in the national economy and the particular nature of the oil industry in a country like Yemen, with the industry producing financial assets in terms of dollar revenues, rather than goods that enter the production cycle, the growth picture in terms of constant prices has to be interpreted with caution.

The structure of the economy underwent fundamental changes over the period from 1990 to 2006, with the share of key sectors in current prices changing substantially over the period. The share of agriculture declined from over 24% in 1990 to 10.5% in 2005, while the share of oil and gas increased from 11.8% to 35.6% over the same period. The share of manufacturing also declined from 19% in 1990 to a mere 7.1% in 2005. The service sector remains the most important sector in the economy, with its share rising slightly from 40.2% to 41.4%. However, the nature of the service sector changed over the period, from being mostly involved in supporting the productive sectors of agriculture and manufacturing in 1990, it has become an avenue through which oil revenues are distributed.

Figure 1: Changing structure of Yemen's economy, 1991-2006



Source: Central Statistical Organization, Sana'a, Republic of Yemen

Current Status of Income and Human Poverty

While nearly 40% of the population lived under conditions of extreme poverty, i.e., below the 'lower' poverty line,¹ in 1998, by 2006, headcount poverty was reduced to 34.8%. Although this is a significant reduction, rural poverty was reduced at a far slower pace (by 2.4% only). Table 1 shows the data for the upper and lower national poverty lines, as well as the \$1 and \$2 international poverty lines. It is noteworthy that based on the \$2 a day poverty line, rural poverty actually increases from 1998 to 2006.

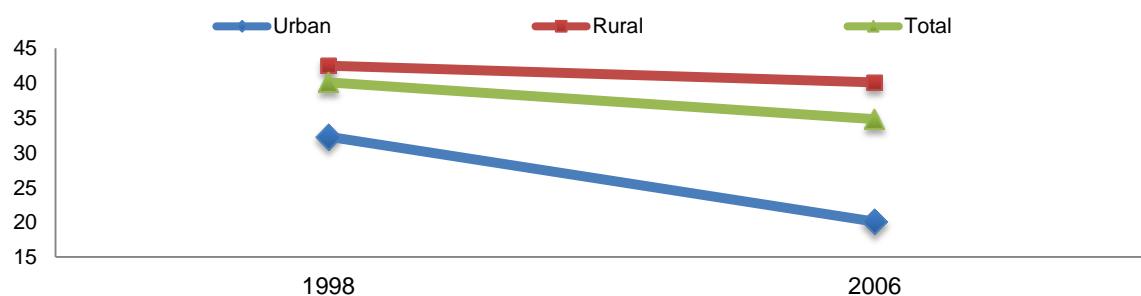
Table 1: Headcount poverty in Yemen, 1998 and 2006

	1998		2006	
	National Lower Poverty line	National Upper Poverty Line	National Lower Poverty line	National Upper Poverty Line
National	40.13	64.83	34.78	59.76
Urban	32.29	58.83	20.7	48.62
Rural	42.49	66.64	40.09	63.96
	Using 1\$ a day	Using 2\$ a day	Using 1\$ a day	Using 2\$ a day
National	13.12	52.84	10.15	51.02
Urban	7.39	43.87	4.17	34.68
Rural	14.84	55.53	12.41	57.19

Source: UNDP Staff estimates based on 1998 and 2005-06 HIES

With respect to the upper poverty line, defined as the value of the basket of goods and services actually consumed by households whose food and energy intake is equal to the minimum requirement of 2200 calories per person per day, 59.7% of the population is classified as poor at the national level. It is interesting to note that while the lower poverty line declined by over 11% in urban areas, the rate of decrease of the upper poverty index was less, at just over 10%, while in rural areas the inverse relationship holds with upper poverty line showing a greater percentage decrease than the lower poverty line. This confirms that while in urban areas the poorer segments experienced a proportionately greater decline in their numbers than the near poor, in rural areas the dynamics of poverty reduction tended to benefit the near poor more than the poor. The differential experience of rural and urban areas with respect to increases in employment opportunities can largely explain this dichotomy.

Figure 2: Headcount poverty (based on the lower national poverty line), 1998 and 2006



Source: UNDP (2007) and Author's estimates

Other direct and indirect measures of poverty also highlight the condition of generalized poverty in Yemen. According to the findings of the National Poverty Survey 1999 (NPS 99), more than 58% of the population belong to households who considered themselves either poor or extremely poor. Non-income indicators of poverty, such as health and educational indicators, which are close correlates with income poverty, also highlight the state of mass poverty in Yemen. The Unsatisfied Basic Needs study carried out by the Arab League and PAPFAM in 2008 considers 70% of Yemenis as in a low status overall, and suffering from

generalized deprivation on account of economic wellbeing, education and home necessities. Adjusted HPI values calculated based on information available from the 2005-2006 household survey shows that 52% of the national population can be considered as suffering from human poverty, with the rate close to 62% in rural areas.

The decline in poverty was accompanied by a decrease in the severity and depth of poverty with the poverty gap ratio declining from 10.7 in 1998 to 8.9 in 2006. During the same period the unemployment rate doubled from 8 to 16%. Sub-national survey data confirm a weak poverty-employment nexus with poorer governorates not necessarily the same as those with the highest rates of unemployment.

On the malnutrition front, due to stagnating per capita income levels and worsening nutritional patterns (e.g. rising consumption of junk food and qat) the situation has got worse over time, with the proportion of under five children who are underweight rising from 30% in 1992 to 46% by 1997/8 and remaining at that level through 2003. This rate is substantially higher than the rate for other countries at similar levels of GDP per capita and relates largely to problems associated with qat consumption by the male head of household and the lack of voice of women in the way household income is used, which leads to diversion of resources that would normally be earmarked for food to qat and tobacco.

Table 2: Distribution of expenditures, 2005-06

Population deciles	Cumulative percentage of total expenditures	Percentage of total expenditures (Poorest to richest)
1	3.05	3.05
2	7.46	4.41
3	12.78	5.32
4	19	6.22
5	26.2	7.2
6	34.47	8.28
7	44.05	9.57
8	55.49	11.45
9	70	14.51
10	100	30

Expenditure classes	Cumulative percentage of total expenditures	Percentage of total expenditures
Bottom 60%	34.47	34.47
Middle 30%	70	35.53
Top 10%	100	30

Source: Yemen Poverty assessment Report 2007

The above table confirms a relatively unequal distribution of expenditure, with a Gini index of 35.9, when using nominal per capita expenditure and 36.6 when adjusting expenditure at Sana'a City prices.

Although urban areas have a higher per capita expenditure, they exhibit larger inequality compared to rural areas (41.1 compared to 31.6). Inequality in expenditure distribution in wealthier governorates is more pronounced than poorer governorates, with Sana'a city having the second largest Gini index (42.1) and rural areas in Amran the lowest (21.9). The lower inequality levels observed in the more rural areas is largely due to the importance of traditional forms of community managed social solidarity arrangements, whereby the relatively better off segments provide regular support to the consumption of the poor. The same phenomenon can be observed in other Arab LDCs as well given the strength of traditional social solidarity arrangements in what are typically tribal societies with a keen appreciation of the basic principles of Islamic charity.

At least some of the progress attained on income poverty between 1998 and 2006 is likely to have been reversed by the impact of the recent increase in global and local food prices,

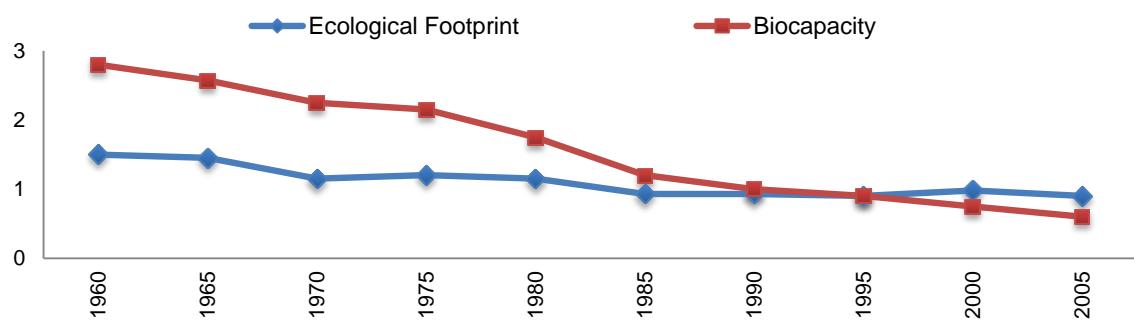
against a backdrop of stagnant incomes for farm workers and unskilled labour in urban areas. A simulation exercise carried out by inserting 2008 prices of food staples into raw consumption data for 2006 and assuming unchanged incomes, indicated that food poverty in 2008 afflicted about 27% of the population, more than reversing the decline experience between 1998 and 2006 during which period the rate had fallen from 20% to 12.5%. The persistence of higher food prices, which, while peaking in 2008, remain close to the average, reached in 2007-2008, risks maintaining large numbers in abject poverty.

The persistence of a high population growth rate that continues to exceed 3% and is not expected to decline radically in the near future means that the increase in population absorbs around $\frac{3}{4}$ of the 4% annual increase in consumption levels registered in the period since 2000, thus only allowing for a 1% increase in per capita consumption levels. This is clearly insufficient to bring about a meaningful reduction in poverty rates in the medium term. A high rate of population growth is also symptomatic of other Arab LDCs, which means that per capita incomes for most of them only grow at a snail's pace.

Environmental Constraints

All Arab LDCs, including Yemen, have to meet the poverty challenge while suffering from multiple environmental constraints, which are summarized in a country's bio-capacity. Environmental constraints are known to be fuelling conflict in Sudan and Somalia and risk undermining social stability in Yemen, Djibouti and Mauritania. Yemen's low rate of increase in per capita income is reflected in a marginal increase in the ecological footprint of Yemenis, i.e. the average per person resource demand; while Yemen's bio-capacity, or per person resource supply, is sharply declining. Figure 3, which plots these two variables against each other, suggests that Yemen is on the verge of an environmental crisis that reduces possibilities for growth and development. The decline in bio-capacity is due to poor ecosystem management, agricultural practices (such as fertilizer use and irrigation), and climate change.

Figure 3: Yemen's bio-capacity and footprint, 1960-2005



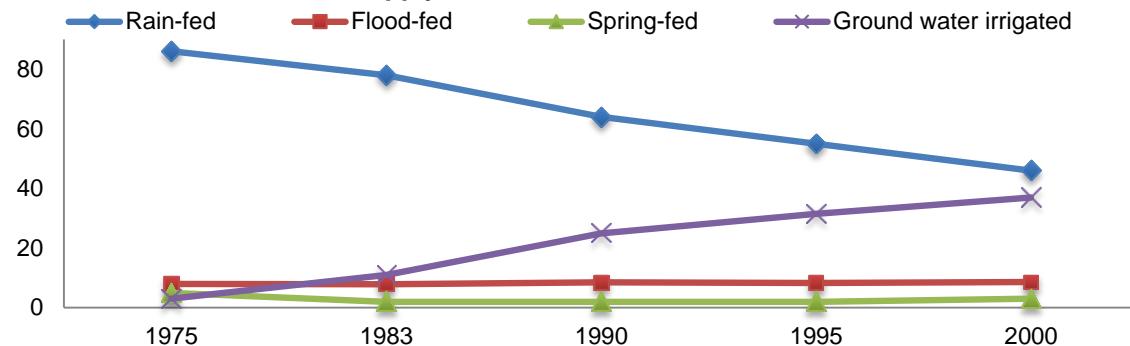
Source: Global Footprint Network

In the rural economy, the most binding constraint is water. Average annual rainfall is low and the per capita share of water resources is considerably below the water poverty line. Moreover, water is an overwhelmingly rural issue, in that 90% of the water used in the Yemeni economy is used in the rural sector.²

As is clear in figure 4, importance of rain-fed water supply has declined since the mid-1970s, with the area irrigated by lift-pump wells accounting for 32% of the farmed area by 2000. Moreover, reliance upon the rains is correlated with poverty and food insecurity, in that small landholders in the rain-fed areas of the Highlands in particular face wide variability in rainfall and thus frequent climatic shocks, in the form of drought. The general neglect of the rain-fed sub-sector has led to degradation of terraces, deforestation and non-maintenance of

traditional water-harvesting systems. The result is the erosion of traditional water management systems – with negative effects on land cultivation and rural productivity, particularly in the Highlands.³ This phenomenon can largely explain the increase in poverty in these areas, at a time when poverty at the national level declined appreciably.

Figure 4: Trends in farm water supply, 1975-2000



Source: Al-Ghory 2004.

The government strongly supported the expansion of the irrigated area through providing a myriad of subsidies and loosely enforced water extraction regulatory framework. As a result, water prices only covered between one-fifth and one-third the cost of extraction⁴ – leading to considerable water waste and excessive mining of available water resources. As a consequence, water tables have fallen, often dramatically.⁵ At the present rate of consumption, groundwater will be depleted in less than a decade.⁶ In addition, there is widespread pollution and salinization. As a consequence of these interventions water withdrawal now far exceeds annual groundwater recharge. This suggests that the growth of Yemeni agriculture in its current form is ecologically unsustainable and cannot be relied upon to deal with the problem of rural poverty.

The inequitable distribution of water and concentration of the most productive irrigated lands in the hands of rural elites partly explains the persistence of mass rural poverty. In some areas, powerful individuals are using modern drilling and pumping equipment to capture the bulk of available water resources. Indeed the allocation of subsidized lift-pump credit may have exacerbated land-holding inequalities.

Growth Dynamics

Growth since 1998 has been largely driven by oil revenues that in turn financed increases in public and private services. This is clearly shown in figure 1, which depicts a substantial increase in the share of oil and services in GDP. The main components of the services sector are trade, transport, and government services, all of which depend on and are fueled by oil income. The growth of the transport sector is linked to subsidized fuel and public investment in the sector; the trade sector grows as the country absorbs more imports, while government services are expanded thanks to rising oil revenues. Thus, oil revenues and fuel subsidies have mainly benefited the urban dwellers and largely account for the observed reduction in urban poverty.

This is an important factor in explaining changes in poverty in Yemen, including the discernable gap between decreases in urban and rural poverty. The rising level of current public expenditure, particularly in view of the large share of salaries in the total and subsidies explains the reduction observed in urban poverty.

Fiscal Space and Social Policies

Yemen emerged as a unified country in May 1990, and integrated two different socio-economic systems, with the North having a free market tradition with fairly limited provision of basic social services, while the South had a socialist approach with a reasonably well developed structure for public provisioning of basic social services. Hence, while the North had a higher GDP per capita, the South boasted higher levels of literacy and better health indicators.

Unification of the country increased the public wage bill, as civil servants from the previous two civil services were all retained while the pay rate was adjusted to the higher level prevailing in the North. This extra financial burden, compounded by the 1994 civil war, reduced the funds available for meeting the MDGs, while the demand on basic social services increased due to the large influx of Yemenis returning home from GCC countries following the 1990 Gulf War.

The Government initially tried to cope with the extra burden through resorting to substantial deficit financing. However, as the higher deficit led to inflationary pressures, the Government was forced to accept IMF advice and implement a structural reform programme starting in 1995, including removal of food subsidies, that brought about a substantial reduction in the public deficit by 1997. As a result, the provision of public services suffered, with the pace of improvement in social indicators slowing down in the period since 1997, compared to the first 7 years of Yemen as a unified country. The removal of food subsidies also made the poor more vulnerable to food price shocks.

Table 3: Government expenditure on selected sectors as share of total public expenditure, 1991-2008

	1991	1994	1997	2000	2003	2006	2008
Defence	23.3	39	18.2	16.8	18.2	14.9	13.2
Health	3.7	4.1	3.3	4.1	4	3.9	3.1
As share of GDP	1.1	1.2	1.2	1.4	1.4	1.2	1.1
Education	15	21.6	15.2	18	17	13.6	13
As share of GDP	4.4	6.1	5.3	5.9	6.1	4.3	4.7
Subsidies	6.4	10.1	29.3	28.7	14.6	29.4	41.8

Source: Bulletin of Government Finance Statistics, Ministry of Finance, Sana'a, Republic of Yemen

The above table shows that despite fairly substantial increases in allocations to health and education in nominal terms, their share of GDP only increased from a combined total of 5.5% of GDP in 1991 to 5.8% by 2008, with their share in total government expenditure showing a decrease from 18.7% in 1991 to only 16.1% by 2008. It is interesting that in the intervening period, the share of health and education in total public expenditures peaked at 25.7% in 1994 and after reaching another high point in 2000 at 22.1% has been on a downward trend, reducing to around 16% in 2008.

The substantial increase in allocation of public funds to health and education as a share of GDP over the period 1991 to 2000, from 5.5% to 7.3% is associated with sizeable improvements in health and education indicators over the period. The declining rate of public allocations to health and education since 2000, with their combined share decreasing from 7.3% in 2000 to 5.8% in 2008, is associated with more modest improvements in the health and education indicators since 2000. This is reflected in a relatively high value of the human poverty index for Yemen, despite a respectable increase in GDP per capita during the same period, thanks to rising oil incomes.

The tax effort of the Government has been fairly limited, with the share of taxes (both direct and indirect) in total government revenues falling from the 40-50% range in the period 1990-

1995 to just over 18% by 2006, at the same time as the share of oil and gas revenue in public revenues rose from the 30% range in the early 1990s to over 70% in the period since 2000. The share of total taxes to GDP fell substantially over the period from 10% in 1992 to a mere 7.5% by 2006. This is due to a drastic reduction in indirect taxes, from 7.5% of GDP in 1991 to a paltry 3.8% by 2006. This decline is expected to be partially reversed once a VAT system is fully introduced. Direct taxes on the other hand have shown a steady increase from a mere 2.5% of GDP in 1991 to 3.7% by 2006 and can be expected to continue to grow at the same pace into the future. However, the overall tax effort has been fairly modest and as such neither had much impact in terms of improving income distribution nor imposed a huge burden on the poor through hefty consumption taxes. Private transfers, however, have had a redistributive impact and managed to partially smooth out expenditures by allowing the bottom deciles of the population access to a minimal level of consumption.

Major characteristics of the poor

Poverty affects mostly specific groups of the population, whose ability to participate in economic activities is limited. Education, employment, and earnings opportunities are key determinants of poverty risks. Education is the single characteristic with the strongest correlation to poverty risk. Amongst the occupational groups, agriculture workers have the highest poverty rates. The poor do not necessarily suffer from unemployment, as they cannot afford being without jobs or income. Rather, their main problem is underemployment, low wage rates, bad working conditions in both formal and informal sectors, and a lack of insurance and security. Finally, poor individuals in Yemen tend to have specific demographic characteristics. Thus, correlates to poverty can be grouped into three areas: education, employment, and demography.

Education and Poverty

Table 4: Percentages of deprived households in Yemen, in connection with the various living standard indexes, according to the education level of the head of household, 2005-06

Head of household education level	Education	Household economic situation	General LSI
Illiterate	94.3	80.6	84.3
Can read and write	80.6	70	69.1
Primary education	77.4	73.9	69.5
Intermediate education	59.3	63.4	51.3
Secondary education	36.6	63.2	42.7
University and higher	22.8	53.2	25.1
All levels	78	73.2	70.1

Source: Yemen Poverty Assessment Report 2007

Education played a more important role for poverty risks in urban areas and for obtaining an adequate income and thus averting poverty. Poverty was highest, deepest, and most severe for illiterate individuals and for those with illiterate household heads in both urban and rural areas. Poverty risks (incidence) for the illiterate individuals exceed the average by almost 6% in urban areas and by less than 1% in rural regions. This relationship between education and poverty is more pronounced for the education levels of the head of household. In urban areas, poverty incidence falls continuously, from illiterate household heads (32% poverty headcount) to very low levels for university and post-university graduates (4%). This suggests the important impact that human capital accumulation has on individual earnings and on shielding households from poverty. In rural areas, households with illiterate household heads were more likely to be poor than the general population by more than 5%. Data from the UBN study confirms this link, by showing a decline in the proportion having a low economic status from 80% for households headed by an illiterate person to 53% for households headed by a person with a University degree. However, education appears to

impact more decisively the non-income dimensions of welfare, with the percentage of deprived households with respect to overall living standards index declining from 84% for an illiterate head of household to 25% for a University educated head of household.

The table below indicates that University graduates suffer from high unemployment, whether they are poor or not. However, one poor university graduate out of two (aged 15-24) is unemployed, compared to one non-poor university graduate out of four. Thus, the unemployment rate of non-poor educated persons is half the rate of the poor. It seems that even if a poor person were able to break the vicious circle of education and poverty and complete his education, due to the low quality of his education, and lack of connections, he is more likely to join the ranks of the unemployed.

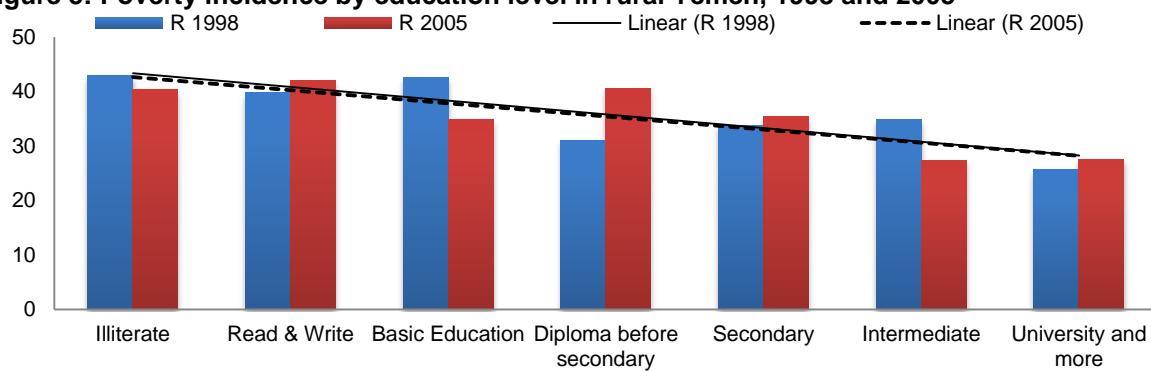
Table 5: Unemployment rate by age, educational status, and poverty, 2005-06

	Age 15-24 years		Age 25 years and above		Total	
	Non poor	Poor	Non poor	Poor	Non poor	Poor
Illiterate	18	32.7	26.1	27.3	25.3	28.1
Read and write	12.6	20.5	9.6	9.3	10.8	14.8
Main Education	12.5	14.9	5.1	7	7.3	10
Diploma before Secondary	12.7	16.8	4.4	1.3	9.1	13.9
Secondary	18.4	27	5.6	9.8	10.9	18.9
Intermediate	26.4	44.3	2.5	11.8	5.9	17
University and more	22.8	53.5	5.1	12.3	6	16.7
Total	15	23	13.8	18.4	14.1	20

Source: ibid

The following table shows that while poverty does indeed decline as the level of education increases in rural areas, the levels of poverty and the rate of decline have remained more or less constant from 1998 to 2006. This indicates that the rural population continues to have problems in translating higher levels of education into higher incomes due to limited opportunities for using the knowledge gained through formal education in income earning activities, whether as a wage worker or on own account.

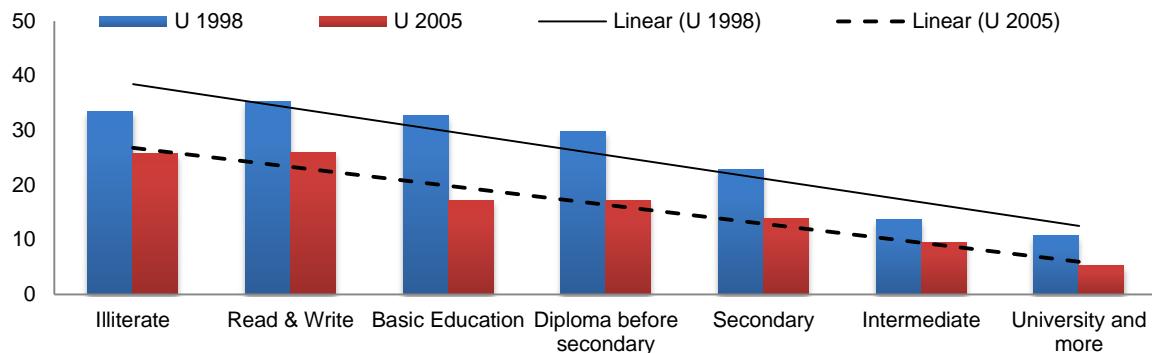
Figure 5: Poverty incidence by education level in rural Yemen, 1998 and 2005



Source: ibid

While education continues to make a major contribution to reducing poverty in urban areas, the gap between the incomes of the less and more educated has narrowed over time, indicating somewhat of a declining return to education. This is partly due to the nature of the growth process in Yemen that is not able to generate knowledge intensive jobs and partly due to falling quality and relevance of education, with educated people having less relevant skills. On a positive note, poverty shows substantial decrease across all levels of education.

Figure 6: Poverty incidence by education level in urban Yemen, 1998 and 2005



Source: ibid

Employment

The rural areas exhibit consistently lower unemployment rates than urban areas, despite having higher poverty rates. This dichotomy is essentially due to the greater prevalence of low quality jobs in rural areas and the inability of the rural poor to remain unemployed even if rewards to labour are very low. However, it is interesting to note that rural areas have experienced a larger increase in unemployment than urban areas. The effect was more pronounced for the non-poor, who started with significantly lower unemployment rates than the poor, but experienced a rapid rate of relative increase. For the non-poor in urban areas, unemployment rates went from 9.9% in 1998 to 17.7% in 2005-06, as compared to a slower pace of increase for the poor from 21.2% to 24.9%. The corresponding figures for the rural non-poor rose from 5.7% in 1998 to 12% in 2005-06, and from 7.8% to 19% for the rural poor. The poor to non-poor unemployment ratio decreased in urban areas but increased in rural areas, which could explain the better performance on poverty reduction in urban areas.

Table 6: Unemployment and participation rates, 1998 and 2006

	Participation rate			% of working individuals			Unemployment rate		
	1998	2006	% change	1998	2006	% change	1998	2006	% change
Urban									
Extremely poor	36.9	44.4	7.5	29.3	33.4	4	20.6	24.9	4.3
Poor	37.3	44.3	7	32.1	34.3	2.2	13.8	22.5	8.6
Better off	40	47.2	7.2	36.7	40	3.3	8.3	15.3	7
Total	38.5	45.8	7.4	33.4	37.1	3.7	13.2	19.1	5.9
Rural									
Extremely poor	39.5	43.5	4	36.5	35.3	-1.2	7.7	19	11.2
Poor	38.4	43.9	5.5	36.2	38	1.8	5.7	13.5	7.8
Better off	36.8	44	7.3	34.7	39.2	4.5	5.6	11	5.4
Total	38.1	43.8	5.7	35.6	37.3	1.7	6.5	14.7	8.2
All Yemen									
Extremely poor	39	43.7	4.7	35	34.9	-0.1	10.2	20	9.8
Poor	38	44.1	6	34.8	36.8	2	8.5	16.5	8
Better off	37.6	45.2	7.6	35.2	39.5	4.3	6.3	12.7	6.4
Total	38.2	44.4	6.2	35.1	37.3	2.2	8.2	16.1	7.9

Source: ibid

Notes: Labor participation rates were calculated as a percentage of individuals in the labor force to adult population. Unemployment rate was calculated using the standard ILO definition of open unemployment.

These trends also explain to a large extent the reason why employment may have been the vehicle for transferring many of the urban poor in 1998 into the near poor category in 2006. Employment generation was less than commensurate to the rise in participation rates across all income categories in both rural and urban areas but for the rural poor the share of

working individuals actually fell alongside the increase in participation rate, leading unemployment to rise by 11.2%.

Rising Unemployment

One striking feature of the rise in unemployment in Yemen is that the increase is broadly based, cutting across urban and rural areas and for the poor and non poor over the survey period. To address the rising employment challenge we must first understand *why unemployment has risen over the period from the 1996-2006 despite poverty reduction and growth.*

A significant part of the answer to this question has been already provided in UNDP's (2006) analysis of the implications of oil-led growth in Yemen, which is summarized below. The growth has been driven by the oil sector, which provides little direct employment and an overcrowded service sector that could not generate enough jobs to accommodate the increase in labour supply. The agricultural sector, which provides over 50% of employment opportunities and employs most of the rural poor, is unable to generate additional employment due to serious capacity constraints, related to adverse environmental conditions. Public-sector employment, once able to absorb excess labor, has been stagnating.

An additional factor is that women are joining the labour force in increasing numbers. Table 6 indicates that the increase in participation has hovered around 6.2% for the country. However, this increase has been more pronounced for the urban areas and better off segments. Growth has created few employment opportunities while the number of workers continually multiplies. Under these circumstances, many workers have had to resort to low-paying and irregular informal-sector jobs. Hence, the numbers of the 'working poor' have been on the rise.

Table 7: Poverty rates by employment status of household head and by area, 2005-06

	Wage worker in agriculture	Wage worker not in agriculture	Self-employed in agriculture	Self-employed not in agriculture	Other work	Unemployed	Total
Urban	44.5	19.6	20.3	18	29	26.9	20.7
Rural	49.5	41.1	38.2	32.5	44.2	49.3	39.8
All Yemen	49	32.6	37.6	26.5	40.8	40	34.7

Source: *ibid*

The table below shows the changing structure of poverty in rural and urban areas based on whether the head of household was employed by the Government, public enterprises or the private sector.

Table 8: Poverty measures by sector of employment for wageworkers, 1998 and 2006

	Rural		Urban		Total	
	1998	2006	1998	2006	1998	2006
Government	36.8	27.9	24.6	12.1	31.5	20.9
Public Enterprise	38.3	35.1	23.4	11.7	29.8	19.4
Private Sector	43.9	49.3	29.2	24.9	41.4	41.5

Source: *ibid*

The table clearly indicates the main source of reduction in poverty as being the change in the poverty status of government employees particularly in urban areas, where the rate was cut by half between 1998 and 2006. While there was a 20% decline in poverty amongst

urban employees of the private sector, who are mostly engaged in the service sector, the poverty rate amongst wage earners in agriculture actually increased during this period. The latter is consistent with a pattern of declining labour productivity in the agricultural sector, which is still faced with the problem of having to absorb surplus labour without the possibility of raising production either at the intensive or extensive margin.

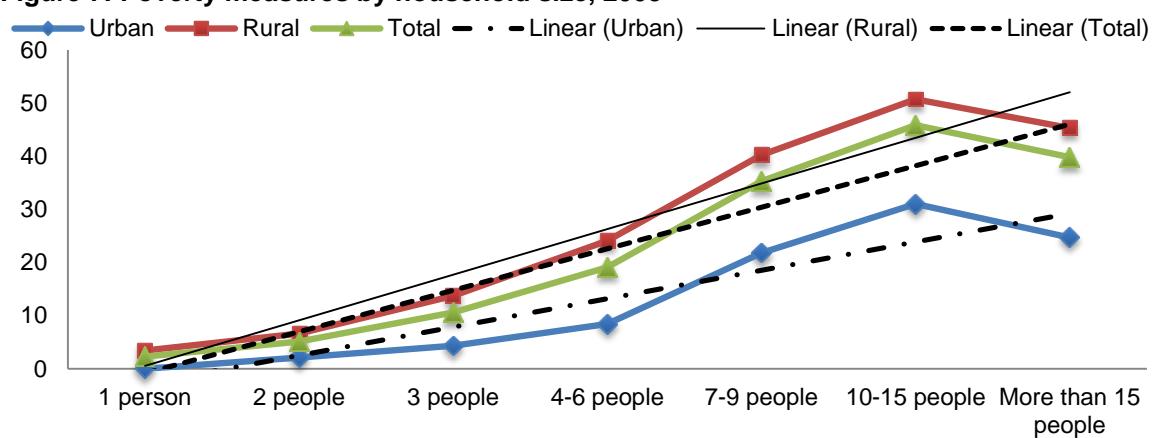
The private sector seems to be the only sector of employment for the poor, as it provides jobs to the uneducated and unskilled- main characteristics of the poor. Employment in the private sector was more prevalent in rural areas, where large agricultural operations employ local residents, (63.9% of all employment in rural areas, and 47.4% in urban areas). By contrast, urban areas had the highest share of government and public sector work: 47.9% of all employment. The poor are more represented in the private sector in both urban and rural areas, where two poor employed persons out of three work in the private sector in urban areas and three rural poor employed persons out of four work in this sector.

The poor work more hours and days per week, on average, especially in urban areas, and face a lower return from their labor. They obtain a lower income per unit time for their labor, as wages of a poor person represent about 73% of the wages of a non-poor person, (71% for urban areas and 74% in rural areas). Low wages and associated low productivity are major causes of poverty.

Demographics

Poverty rates increase as the household size increases. The majority of the poor live in households with 10 to 15 people (44.7%), while the non-poor live in smaller households with poverty practically non-existent in single person households. In urban areas, slightly more than one quarter (26%) of the non-poor households have 10-15 members, while this percentage increased to 45% among poor households. In rural areas, 27.4% of non-poor households have six or fewer members, while 12.5% only of poor households in rural areas have six or fewer members and 78% have 7-15 members.

Figure 7: Poverty measures by household size, 2005



Source: World Bank

The above graph clearly indicates the potential contribution of an active population policy to dealing with the poverty problem. The proportion of the households with up to 6 members that fall below the lower poverty line is less than 25% in rural areas, less than 10% in urban areas and averages to less than 20% for the country, while the respective rates double for households between 10 and 15 members.

Sub-National Disparities

Disaggregated data reveal wide regional disparities and challenges remain in reducing income poverty and achieving the MDGs at the sub-national level. The 3rd National Human Development Report of 2004 found that the Human Development Index (HDI) varied from 0.364 in Dhamar to 0.623 in Aden. While per capita consumption as a money metric measure of welfare and HDI values are consistent in some governorates such as Sana'a City, Aden, Ibb and Amran, human development indicators lag behind per capita consumption levels in other governorates. In the case of Maharh, while per capita consumption and GDP are higher than in Aden, its HDI is only .494 compared to .623 in Aden.

The dimensions of poverty differ considerably between regions. There are large differences in levels of poverty across regions in Yemen, as shown in table 2. These differences show that extreme poverty is relatively low in the two pure urban regions (Aden and Sana'a City) where 11.3% of the population resides, yet only 5% of the poor live in these regions. The poor are over represented in all rural areas, especially in the Central North region (Sana'a – Sa'adah - Mareb – Al-Jouf), Central South region (Al-Baidha - Lahj – Abyan) and Shbwah-Hadramaout and Mahara region. These regions are also the ones that show an increase in the poverty rate between 1998 and 2005-6, with the increase limited to the rural areas for Shbwah, Hadramaout and Mahra and the Central South region but across the board for the Central North region. The decline in poverty between 1998 and 2005-6 beyond having a clear urban bias has a regional dimension as well, with three of the five rural regions registering an increase in poverty, while the other two rural regions and the urban regions achieve substantial reductions in poverty of between 9.4 to 21.1%, versus a national average of 5.3. The most noticeable reduction in poverty occurred in the urban Aden region, which managed to largely plug the gap with Sana'a city, with poverty rates falling to less than half the levels registered in 1998. Poverty in the South West region (Taiz and Ibb), in the North West region (Hajjah - Mahwet - Hodeidah, and Dhamar) and in the Sana'a City region declined by 10% or more.

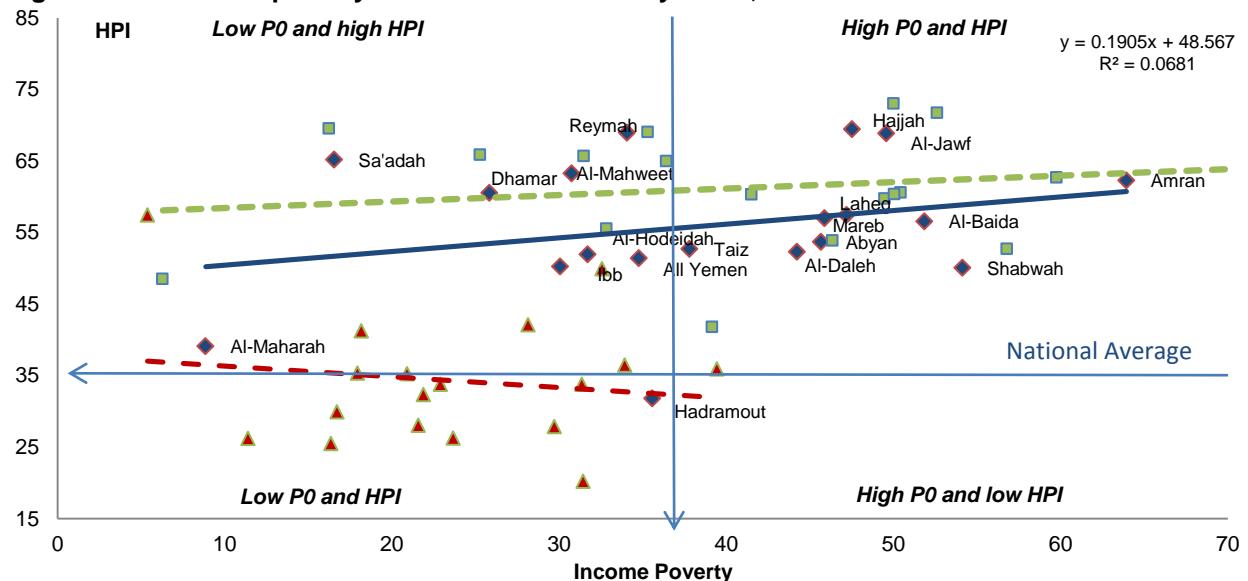
Table 9: Poverty measurements (percent) by region, 1998 and 2006

Governorates	Urban		Rural		Total	
	1998	2006	1998	2006	1998	2006
Sana'a - Sa'adah - Mareb - Al-Jawf - Amran - Raymah	25.18	26.4	31.74	40.06	31.29	38.61
Baidha - Lahj - Abyan - Al-Dhaleh	28.8	24.68	37.73	51.41	36.63	47.4
Aden	38.03	16.88			38.03	16.88
Taiz - Ibb	32.1	20.5	52.03	37.19	48.91	34.05
Hajjah - Mahwet - Hodeidah - Dhamar	38.63	22.91	44.82	36.86	43.68	34.25
Shbwah - Hadramaout - Mahara	37.19	31.08	35.75	45.25	36.12	40.03
Sana'a city	25.32	14.98			25.32	14.89
Total	32.29	20.7	42.49	40.09	40.13	34.78

Source: Yemen Poverty Assessment Report 2007

At the governorate level, large **differences between governorates** in the incidence of poverty can also be observed. Poverty varied between 8.9% in Al Mahrah and 63.9% in Amran in 2005-06. There are similar disparities on the food poverty line. Rural parts of Al Baidha, Shbwah, and Mareb have the greatest incidence of abject poverty at one third of the population. In Amran, although 70.6% of rural population live in poverty; only 24% live in abject poverty. Rural parts of Al Baidha and Shbwah exhibited the highest poverty gap index and severity of poverty index pointing to high inequality among the poor. There are governorates where almost all rural residents are either poor or near poor, e.g. rural area of Amran where 92% of the population fall below the upper poverty line (70.6% below the lower poverty line and an additional 21.4% between the lower and upper poverty lines).

Figure 8: Headcount poverty and the Human Poverty Index, 2006



Source: *ibid*

Finally, a comparison between headcount poverty (P_0 as defined by the upper poverty line) and a Human Poverty Index (HPI) constructed based on various human poverty indicators derived from the household surveys in figure 2 clearly portrays regional disparities and particularly the rural-urban poverty divide. A strong correlation between expenditure-based and deprivation-based poverty is expected *a priori*. The scatter diagram plots both measures across rural and urban governorates (the former are depicted by the blue markers). The figure is split into four quadrants separated by the overall average HPI and P_0 for the country. Thus, governorates located in the upper right quadrant are in the worst position with a high P_0 and HPI while and those located in the lower left quadrant are in the best location with a low P_0 and HPI.

The above confirms that all rural areas, with the exception of Hadramout, suffer from above average human poverty. On the other hand, all urban areas have below average human poverty, with the sole exception of Aljawf, which is only marginally above the average. This means that rural areas, even where they manage to overcome income poverty, continue to suffer from human poverty, while urban areas as a rule exhibit low rates of income and human poverty. Given the critical contribution state intervention makes to reducing human poverty, the above confirms the urban bias of state action.

What is interesting is that the above graph also shows much greater variability in terms of income poverty for the same range in human poverty for rural areas compared to urban areas, indicating the greater difficulty experienced in rural areas to translate increased incomes into an overall improvement in human welfare.

Endnotes

¹ The lower poverty line is defined as the value of the basket of goods and services which is equal to the cost of the food bundle that can afford the minimum energy intake of 2200 calories per person per day, plus a minimum allowance for non-food expenditure which is equal to the average spending on such items by households whose total expenditure is no more than the value of the minimum food requirements.

² The World Bank 1999

³ The water regime in a given watershed has historically been a balance between the control of land and water in the upper catchment area and the resulting flow of water in the major wadi systems descending to the productive coastal plain (Varisco 1991). The use of terraces arrayed in clusters facilitated a gravity-flow sequence that irrigated the system as a whole through a common set of channels that carried the excess flow. The erosion of

terraces thus results not only in direct loss of the terrace but also threatens irrigated land in the upper and middle reaches of major coastal wadis.

⁴ Lofgren and Richards 2003

⁵ Liechtenthaeler and Turton 1999

⁶ UNDP, 2006

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