

# 2 Arab Development Challenges

# Human Development and Human Poverty

# Human development gains, but HDI still low compared to income per capita

Using 1970 as the base year, the region appears to have improved human development, as highlighted in the 2010 Global Human Development Report. This is predictable, given the large investments in social services undertaken by most Arab governments since the 1970s and the extremely low starting values for all three components of HDI. While this is an achievement of which the region can be proud, regrettably, the rate of progress on human development slowed down noticeably since 1990 (see Table 1). The magnitude of this progress could have been greater, had the region adopted more effective policies for translating its material wealth into human welfare. This inefficiency manifests itself clearly when one compares performance on income per capita with changes in human development across countries.

HDI improvement Rank	Country Name	Non- Income HDI rank	GDP Growth rank	HDI improvement Rank	Non- Income HDI rank	GDP Growth rank
		1970-2010		1990-2010		
1	Oman	1	19	15	7	40
5	KSA	3	111	18	2	108
7	Tunisia	6	20	14	12	21
9	Algeria	5	100	30	19	98
10	Morocco	14	42	12	10	43
13	Libya	4	132	41	18	114
17	Egypt	25	39	21	28	32
19	UAE	24	38	103	88	118
34	Bahrain	21	104	94	93	67
43	Jordan	26	87	51	53	44
58	Qatar	73	121	104	104	58
67	Sudan	121	72	22	118	9
68	Kuwait	48	131	61	59	50
94	Lebanon	89	92	29	54	8
122	Djibouti	117	133	100	109	130

### Table 1: Ranking of Arab countries in terms of change in HDI, 1970–2010 and 1990-2010

Source: Human Development Report, 2010.

In Table 1 we see that, using 1970 as the base year, 4 of the top 10 movers were Arab countries. Comparatively, not a single Arab country is among the top 10 movers on HDI from 1990 onwards. However, three of the top movers in the earlier period, namely Oman, Saudi Arabia, and Tunisia, continue to make remarkable progress on HDI in the latter period, placing them among the top 20 movers, together with Morocco. Algeria demonstrates much slower progress in the second period, due to the effect of the prolonged internal strife the country experienced in the 1990s. Sudan, Kuwait, Lebanon, and Djibouti, on the other hand, show the slowest rates of improvement in HDI since 1970. Djibouti also shows consistently low rankings in terms of progress on both income and non-income components of HDI, and remains among the worst performers when one looks at the period since 1990. The poor performance of Lebanon since 1970 is largely due to the negative impact of the long-running civil war on both economic prosperity and provision of quality public services. Lebanon's relative performance has improved significantly since 1990, with the end of the civil war, which led to resumption of economic activities and improved access to public services. The low rank of Sudan comes as no surprise

given that the country was embroiled in civil war almost since its independence in the 1950s. Even when discovery of oil in the 1990s led to a substantially improved performance in GDP per capita, the Sudan's performance remained poor on nonincome elements of HDI because it experienced difficulties in translating gains in income into improved human security and provision of basic social services.





Source: Based on data from Human Development Report, 2010.

In Figure 1 we compare performance on income per capita with HDI across countries. All Arab countries except Tunisia, Jordan and Comoros lie below the regression line that separates countries that have a high GNI rank relative to HDI from countries that have a lower GNI rank relative to HDI. Most Arab countries, therefore, still lag behind on human development relative to their income levels. Simply put, most Arab countries could have attained higher levels of HDI had they been as effective as other regions in the developing world in implementing a human-centred development path.

This poor performance on human development, despite substantial investment in health and education, is arguably due to the impact of poor governance structures on the effectiveness of these expenditures. Poor accountability frameworks have led to high rates of corruption and disregard of quality issues. Ineffective or non-existent parent-teacher associations and limited provision of funding for operations and maintenance of public assets have undermined the quality of education services in particular. In fact, many school facilities have been left in dilapidated conditions and with insufficient supplies of teaching aids.

The evolution of the HDI gap between Arab countries and the more developed OECD economies is also relevant to any objective assessment of their human development gains. Table 2 shows this comparison. The first column shows the HDI Gap, which is measured by the ratio of the HDI of the developing country or region to the HDI of highest developed countries in 2010 (the latter is calculated as the simple average of the HDIs for the ten countries that have the highest HDIs in 2010). When this ratio is deducted from the corresponding ratio in 1970, a country/ region that is successful in closing the gap will show a positive percentage change. The second column reports this percentage change. The third column in the table ranks Arab countries and developing regions according to the progress achieved, or lack thereof.

5.5

Country/Region	HDI Gap	Δ HDI Gap	HDI Improvement Rank
Bahrain	0.91	14%	59
Kuwait	0.94	3%	79
Oman	0.87	88%	4
Qatar	0.93	6%	70
Saudi Arabia	0.88	49%	19
United Arab Emirates	0.93	23%	41
Djibouti	0.51	20%	44
Sudan	0.52	40%	27
Algeria	0.78	44%	24
Libya	0.89	29%	34
Morocco	0.68	54%	14
Tunisia	0.80	47%	22
Egypt	0.72	41%	26
Jordan	0.79	21%	43
Lebanon	0.84	3%	78
Arab countries	0.73	43%	3
East Asia & Pacific	0.78	69%	1
Europe & Central Asia	0.76	%-2	6
Latin America & Caribbean	0.84	14%	5
South Asia	0.62	50%	2
Sub-Saharan Africa	0.50	35%	4
Developing regions	0.70	38%	

#### Table 2: HDI gap between Arab countries and highly developed countries in 2010 and its percentage change, 1970-2010

Source: Authors' estimates based on data from Human Development Report, 2010.

Note: Refer to background paper "Arab Human Development: Phenomenal Progress or Mixed Results?" by Abu-Ismail, et. al. for further details on data and methodology.

Although all Arab countries were successful in closing the HDI gap, only Oman is ranked in the top ten HDI achievers worldwide. Morocco and Saudi Arabia rank fourteenth and nineteenth, respectively. Compared to other developing regions, Arab countries ranked third in terms of convergence with highly developed countries over the period from 1970 to 2010 and were outperformed by the East Asia and Pacific and the South Asia regions. These results indicate an average record of human development progress.

# Human poverty reduction but HPI still high compared to income per capita

The Arab region has managed to register respectable rates of decline in human poverty, with the HPI index falling from 31 in 1997 to 23 in 2007. Interestingly, the rate of decline in both human and income poverty slows substantially from 1990 onwards, at the same point when structural reform policies began to take hold. Human poverty was reduced at an even lower rate for Arab LDCs, with the rate only falling from 40 in 1997 to 34 by 2007. The highest rate of reduction in the HPI was achieved by the GCC (45%) with remarkable progress achieved by Kuwait, Qatar, Oman and UAE. Among the more diversified economies of the Mashreq and Maghreb, Syria and Algeria were able to reduce human poverty at a more rapid pace.

A simple mathematical exercise assesses the extent to which increases in income have been translated into decreases in human poverty. We found the prevailing general relationship between income per capita levels and HPI and used this information to arrive at an estimate of the expected value of the human poverty index for any given GDP per capita. The expected values of HPI (HPI\*) were then compared with the actual HPI. If the ratio of the latter to the former was higher than one, this suggests the country or region had a higher than average level of human poverty than what one would expect, relative to GDP per capita. A summary of the results for Arab countries and developing regions is shown in Table 3.

Country/ Region	HPI (1997)	HPI* (1997)	HPI (2007)	HPI* (2007)	HPI/HPI* (1997)	HPI/HPI* (2007)	Change in HPI/HPI*
Egypt	33.0	23.4	23.4	15.8	1.4	1.5	0.1
Jordan	9.7	21.5	6.6	16.8	0.5	0.4	-0.1
Syria	21.1	22.4	12.6	17.8	0.9	0.7	-0.2
Lebanon	11.2	14.7	7.6	11.1	0.8	0.7	-0.1
Mashreq	28.9	22.8	19.9	16.1	1.3	1.2	0.0
Libya	18.1	13.7	13.4	10.2	1.3	1.3	0.0
Algeria	27.8	17.9	17.5	12.6	1.5	1.4	-0.2
Morocco	37.8	22.1	31.1	19.0	1.7	1.6	-0.1
Tunisia	23.6	15.9	15.6	12.8	1.5	1.2	-0.3
Maghreb	30.4	19.0	22.1	14.9	1.6	1.5	-0.1
Mauritania	48.3	33.0	36.3	31.1	1.5	1.2	-0.3
Sudan	36.6	34.7	34.0	29.7	1.1	1.1	0.1
Yemen	43.3	43.8	35.8	27.8	1.0	1.3	0.3
Comoros	32.3	35.1	20.4	39.7	0.9	0.5	-0.4
Djibouti	38.8	38.2	25.6	29.9	1.0	0.9	-0.2
LDCs	39.2	37.6	34.5	29.2	1.0	1.2	0.1
Bahrain	9.8	10.1	8.0	10.0	1.0	0.8	-0.2
Oman	33.2	11.2	14.8	10.1	3.0	1.5	-1.5
Qatar	14.0	10.1	5.0	3.3	1.4	1.5	0.1
KSA	18.8	11.1	12.0	10.1	1.7	1.2	-0.5
Kuwait	13.6	10.1	4.7	8.6	1.3	0.5	-0.8
UAE	17.6	10.1	7.7	7.5	1.7	1.0	-0.7
GCC	19.2	10.9	10.8	9.4	1.8	1.1	-0.6
AC	30.5	23.5	22.8	17.9	1.3	1.3	0.0
EAP	18.3	23.4	9.9	17.8	0.8	0.6	-0.2
LAC	12.8	15.1	8.7	12.5	0.8	0.7	-0.2
SAS	37.4	34.5	29.4	26.8	1.1	1.1	0.0
SSA	40.4	39.2	35.9	34.3	1.0	1.0	0.0
DR	27.0	27.9	20.0	22.2	1.0	0.9	-0.1

#### Table 3: Actual and estimated HPI for developing regions and Arab countries, 1997 and 2007

Source: Authors' estimates based on data from OPHI and Human Development Reports (1995-2010). Note: Refer to background paper "Arab Human Development: Phenomenal Progress or Mixed Results?" by Abu-Ismail, et.al. for further details on data and methodology.

We first observed that actual HPI for Arab countries is significantly higher than expected HPI compared to any other developing region. Second, within the Arab region, the actual-to-expected-HPI ratio is significantly larger for Maghreb countries. Third, the Arab region did not witness any change in the gap between actual and expected HPI over the period between 1997 and 2007, as indicated by the zero percentage change in the ratio of actual to expected HPI shown in the last column. Fourth, the stagnation of the HPI-to-HPI\* ratio was not uniform within the Arab region. The ratio declined significantly in GCC countries and marginally in the countries of the Maghreb and Mashreq. Arab LDCs witnessed an increase in the gap between actual and expected HPI, indicating a breakdown in human poverty reduction efforts.

An additional measure of human poverty is found in the recent Multi-Dimensional Poverty Index (MPI) produced by the Oxford University Poverty and Human Development Initiative (OPHI) and UNDP in 2010, which covers 104 countries (including 13 Arab countries). According to this methodology, a household is identified as multidimensional-poor if it is deprived in 3 of 10 indicators which, as in the HPI, are divided across three dimensions of deprivation (health, education and standard of living).

Using survey data, the OPHI calculated the MPI as the product of two numbers: the headcount ratio, or proportion of people who are multidimensional-poor, and the average intensity of deprivation, which reflects the proportion of dimensions in which households are deprived. The average intensity of deprivation for developing regions in the sample is 53.1%. Sub-Saharan Africa has the highest intensity (58.2%) while the lowest (42.1%) intensity occurs in Europe & Central Asia. The Arab region's average intensity of 49.3% is below world average. The region has an average value of MPI of 0.08, which is substantially less than the developing world average of 0.17. However, as argued in the background paper on human development by Abu-Ismail et. al., the MPI has difficulty in capturing extreme deprivation in middle income countries in general and in the Arab region in particular.<sup>8</sup> Neither the HPI nor the MPI are best suited to describe human deprivation as a result of occupation. Box 1 provides an example of the daily suffering of the Palestinians living in the Occupied Palestinian Territory.

Despite the positive image created by the MPI, the Arab MDG Report 2010 shows that the region is offtrack on particular MDG targets. Consistent with the uneven progress of Arab countries on HDI, the report points to a mixed performance with respect to MDG attainment since 1990. While the region has scored major achievements in education and gender equality, it still lags behind on many MDG targets, particularly on the percent of population with access to safe water, which is 38% below target. Performance on maternal mortality, under-five child malnutrition, access to sanitation, and infant and under-five mortality has not been flattering either.<sup>9</sup> These results confirm our earlier conclusion that the region has failed to transform its wealth into a commensurate improvement in human welfare.

Box

Human deprivation under occupation: the case of the Occupied Palestinian Territory

Israeli policies and practices have led to pervasive in the OPT characterised, according to the UN Committee on Economic, Social and Cultural Rights , as " the sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political and social rights." (E/C.12/2001/10). As such, it cannot be readily measured by the HPI, MPI or the money metric national poverty line.

According to the IMF, Israeli imposed restrictions following the Second Intifada have restricted movement of people and goods and obstructed access for Palestinian agricultural or manufacturing produce to local, regional and international markets, causing the shares of manufacturing and agriculture to shrink from 33 percent in 1994 to 19 percent in 2010. Palestinian produce is also subjected to lengthy security checks that increase time and cost, further reducing its competitiveness in global markets.

Israel has also imposed access restrictions into and out of the Gaza Strip since the 1990s, forcing an almost complete blockade since June 2007 with a devastating impact on the economy and the 1.5 million Palestinians who live in Gaza. Since late 2008 Israel also imposed a 'buffer zone' that complicated access to agricultural land, education and essential health services for a significant portion of households. Moreover, a maritime blockade restricted access to the sea leaving Gaza's fishermen in dire poverty.

Harassment of Palestinian farmers and destruction of their property by Israeli settlers living in the West Bank has also impacted the ability of Palestinian farmers to engage in livelihood activities. In the first six months of 2010 alone, the United Nations reported that thousands of olive trees and crops had been damaged in settler-related incidents. In a recent study, the Israeli NGO Yesh Din did not find a single case where the Israeli authorities took action to bring those involved to court.

On 26 July 2010, settlers went on a day of rampage, burning several fields in the village of Burin, near Nablus. Even though the fields are in full view of the Israeli soldiers manning the Hawara checkpoint some 20 metres away, Yesh Din and the villagers say the army did nothing to stop the settlers. Burin is located in Area C of the West Bank (under full Israeli control), in a valley between two mountains, on top of which sit two Israeli settlements, Yizhar and Bracha. Ali 'ld, the head of the village council, says that settlers have caused the loss of 16,000 trees in Burin over the past years, and that violence flares each autumn during the olive harvest.

Mohammed Abu Najar lives in Burin, close to the Bracha settlement. He is 50 years old and married with eight children. He lives solely from farming, mainly olives. In June 2009, settlers began to attack Mohammed's land, cutting down and setting fire to his olive trees, as well as spraying chemicals on them. In a two week period around 400 of his trees were destroyed or severely damaged. Mohammed estimates that he used to produce on average around 100 containers (17 kg each) of olive oil from his trees and that each container could be sold for 400 ILS (\$105) in 2009. In July 2010, settlers once again attacked his land and cut down 75 more olive trees.

Source: OXFAM, 2011.



# **Money Metric Poverty and Expenditure Inequality**

# Low money metric poverty but high exposure to economic shock

Using the \$1.25 poverty line, the Arab region has virtually wiped out poverty, at 3.9% of the population, similar to the level for the much richer Latin American region. However, such a benchmark clearly fails to capture deprivation in either region. This poverty line translates into 3.5 Egyptian Pounds per day, which can barely buy enough subsidized food to keep the average Egyptian alive, let alone provide for public transportation, at 1 pound for a bus ride each way in Cairo. A person on this level of income cannot afford any paid lodging, even in the most run down parts of the city. But when we look at poverty against a higher benchmark of \$2.00, the Arab region has a 19% poverty rate, which is 60% higher than the rate for Latin America. As a result, increasing the value of the poverty line will increase the poverty rate by a considerably higher margin in the Arab region, compared to any other developing region (Figure 2).

# Figure 2: Proportion of people living on less than \$1.25, \$2.00 and \$2.75 a day in Arab countries and other developing regions and change in poverty rates (Percent), 2000-2009



Source: Authors' calculations and estimates based on World Bank POVCAL datasets (in 2005 PPP), UNDP Poverty Assessment Reports and HIES unit record data. Note: Arab countries included are Egypt (1991 and 2009), Syria (1997 and 2007), Jordan (1997 and 2006), Tunisia (1990 and 2000), Morocco (1991 and 2007), Yemen (1998 and 2005), Djibouti (1996 and 2002) and Mauritania (1996 and 2000).

The choice of a poverty line, therefore, while clearly affecting poverty rates in all regions, has greater effects on poverty rates in Arab countries. This is quite clear in figure 3, which plots poverty incidence curves over a range of poverty lines (ranging from \$0.20 to \$10 PPP). At any value lower than \$1.25, the Arab region has a very low poverty incidence (on par with Europe & Central Asia and lower than Latin America). However, poverty rates for the Arab region jump sharply at higher poverty lines so that, at a poverty line of approximately \$3 a day, the region's poverty rate is much closer to the average for all developing regions. Interestingly, this is not the case for other regions. South Asia and Sub-Saharan Africa are consistently poorer than other regions; East Asia is steadily within close range of the global average and Latin America and Europe have consistently less poverty than other regions (Box 2 describes the main approaches and measurements of absolute money-metric poverty).



# 8 2 Main approaches and measurements of absolute money-metric poverty

Money-metric poverty is calculated based on household-level data from income and/or expenditure surveys. In this report, the focus is on expenditure (or consumption) poverty, which is the most common and accurate measure of money metric poverty in developing countries. Expenditure poverty is affected by the average per capita consumption expenditure in a society (a higher expenditure decreases the poverty rate, ceteris paribus), the poverty line (a higher the poverty line increases the poverty rate, ceteris paribus) and the distribution of consumption expenditure (a higher inequality in distribution of expenditure increases the poverty rate, ceteris paribus).

At the national level, the poverty line is composed of two components: a food component and a non-food component. The sum of the two gives rise to the overall poverty line. The food component is usually calculated on the basis of WHO-FAO recommended dietary requirements of calories and protein intake for a normal functioning in a given environment. The food poverty line (FPL) typically takes into account the particular household minimum nutritional requirements, depending on its members' ages and gender composition. The FPL should also account for regional differences in relative prices, expenditure patterns, activity levels, as well as the size and age composition of poor households. This leads to a variation in the appropriate poverty line depending upon the location and composition of a particular household.



While the cost of the minimum food bundle is derived from estimated physiological needs, determining the minimum non-food bundle is less straightforward. However, the non-food allowance for each household is commonly estimated using the following two thresholds; (i) identifying the non-food share of households whose expenditure on food is equivalent to the food poverty line; or (ii) identifying the non-food expenditure for households whose total expenditure is equivalent to the food poverty line. Adding (i) to the FPL yields an upper poverty line (UPL), while adding latter to the FPL yields a 'lower poverty line' (LPL). In most countries, the national poverty rate based on applying the LPL.

The internationally comparable lines are useful for producing global aggregates of poverty. In principle, they test for the ability to purchase a basket of commodities that is roughly similar across the world. The \$1.25 a day poverty line corresponds to the value of the poverty lines used in some of the poorest countries. An important step in the process of compiling global poverty estimates is the conversion of the \$1.25 a day international poverty line into respective national currency units. PPP exchange rates, such as those from the International Comparison Program or the Penn World Tables, are used because they take into account the local prices of goods and services not traded internationally. Although PPP rates were designed for comparing aggregates from national accounts, they were not intended for making international poverty comparisons. PPPs are based on prices of goods and services that may not be representative of the consumption baskets of the poor, so they may not fully reflect the relative price level faced by very poor consumers. As a result, there is no certainty that an international poverty line measures the same degree of need or deprivation across countries. Hence, as argued in this report, a more sensible approach will allow the poverty line to vary in accordance to the standard of living.

Source: UN Statistics Division (http://unstats.un.org/unsd/mdg/Metadata.aspx?IndicatorId=1), El Laithy and Abu-Ismail (2005).

With a large proportion of the population clustered between the \$1.25 and \$2.75 lines, any small shock to disposable income or income distribution can produce a significant impact on poverty in the Arab region. The 2010 Global Monitoring Report by the World Bank and the IMF also confirms this, projecting that the Arab region, while it has been the least affected by the global financial crisis so far, may suffer more than any other region if growth falters.

The main question, however, is not which of these fixed poverty lines is more relevant for Arab countries, but rather whether fixing a poverty line across countries will lead to a meaningful comparison. The fixed international lines used for producing global aggregates of poverty in principle test the ability to purchase a basket of commodities that is roughly

similar across the world. But such a universal line is generally not without major perils (see for example Reddy and Minoiu [2007] and Reddy [2009]). In this report, we argue that an appropriate poverty line should be based on the development level of the country presented by the per capita consumption expenditure (PCE). We estimate new poverty lines (RPLs) by regressing the NPL for developing regions on the average PCE (in PPP 2005) (See Box 3 for details).

### Estimate of internationally comparable poverty lines

Despite its many problems, the World Bank used the national poverty lines of the poorest countries as a basis for establishing its \$1.25 poverty line. It relies on the PPPs to equate the cost of the same bundle of goods and services that can be purchased with \$1.25 in the World's poorest countries. However, this argument can be strongly contested for a variety of reasons. First, comparisons of countries at different levels of development pose a potential problem because of differences in the relative importance of consumption of nonmarket goods. Moreover, although PPP exchange rates such as those from the International Comparison Program or the Penn World Tables, take into account the local prices of goods and services that are not traded internationally, they were designed for comparing aggregates from national accounts, not for making international poverty comparisons. PPPs are also based on prices of goods and services that may not be representative of the consumption baskets of the poor, so they may not fully reflect the relative price level faced by very poor consumers. As a result, there is no certainty that an international poverty line, when applied, will measure the same degree of deprivation across countries.

In this report we suggest an alternative method to construct more relevant international poverty lines. At the outset, it is important to note that we accept the World Bank's basic idea of relying on national poverty lines to construct a globally comparable poverty measure. However, we reject the assumption that this measure should be a fixed one, or that it should be based on the national poverty lines of the poorest countries. Rather, we argue that international poverty lines should be based a priori and on already well-established stylized facts regarding the relationship between national poverty lines and the average per capita expenditure (in 2005 PPP). Fortunately, the recent spur in the number of country surveys available on the World Bank website allows us to examine the relationship between those indicators across a large number of household surveys (372) and developing countries (107).



Several specifications have been tried to estimate relationship between the national poverty lines (NPL) and per capita consumption expenditure (PCE), which is plotted in the figure above (PCE on the horizontal axis). We kept the one with the best fit which is based on a non-linear relationship (polynomial function). Accordingly, the estimated regression takes the following form:

#### $ln(NPL) = \beta_0 + \beta_1 PCE + \beta_2 (PCE)^2$

The statistically significant estimated parameters are then used to estimate the regression-based poverty lines (RPLs), given the PCE level for each country.

Source: Abu-Ismail, Ramadan and Abou Taleb, 2011.



Figure 3: Poverty rates for Arab countries and developing regions across a range of poverty lines (in 2005 PPP based on most recent surveys), 2000-2009

Source: ibid

BOX

Note: Arab countries included are Djibouti, Comoros, Egypt, Jordan, Mauritania, Morocco, Tunisia and Yemen



For the Arab region, Latin America, Sub-Saharan Africa and South Asia in the 1990s, Table 4 shows our estimated RPLs are within close range of the national poverty lines. Our estimated poverty lines (RPLs) and PL/PCE ratios are found to be least consistent with the national poverty lines in East Asia & Pacific. This is understandable, given that China tends to significantly underestimate the value of its national poverty line (NPL). While our estimated poverty lines for SSA are close to the World Bank \$1.25 line, they are significantly higher for developing regions as a whole. The exercise thus implies that the \$1.25 is far too low as a benchmark for global poverty measurement and that if we decided to use a fixed global poverty line to monitor extreme poverty in developing countries -despite the strong reasons why we should not- the \$2.00 per day line would be a more appropriate benchmark.

This exercise also clearly indicates the need to use a variable poverty line over time, even if we should decide to use some common yardstick to compare poverty across countries. The monetary value of the poverty line will increase over time as societies grow richer and the cost of the minimal basket of goods that can meet survival needs increases. This feature is retained by most national and estimated poverty lines based on regressions.

# Table 4: National poverty lines and UNDP estimated regression-based poverty lines (RPL) (2005 PPP per capita, per day) for developing regions and Arab sub-regions, 1990-1999 and 2000-2009

	PCE per capita per month	NPL per day	PR based on NPL	RPL per day	PR based on RPL	NPL/PCE	RPL/PCE				
	Sub-Saharan Africa (11)										
1990-1999	48	1.2	52.89	1.1	54.02	0.73	0.72				
2000-2009	58.8	1.3	45.75	1.3	47.26	0.65	0.66				
	South Asia (6)										
1990-1999	48.9	1.1	36.88	1.2	39.42	0.69	0.71				
2000-2009	55.2	1.1	28.37	1.2	37.02	0.59	0.67				
			East Asia	& Pacific (9)							
1990-1999	59.6	0.8	10.89	1.3	35.95	0.4	0.65				
2000-2009	102.4	0.8	5.55	1.8	28.10	0.24	0.54				
	Arab countries* (8)										
1990-1999	117.9	1.9	20.3	2	23.32	0.49	0.52				
2000-2009	130	2.1	18.1	2.2	21.46	0.5	0.51				
			Europe & Ce	entral Asia (9)							
1990-1999	167	3.2	32.75	2.7	22.80	0.59	0.5				
2000-2009	257.2	3.3	14.67	3.8	20.27	0.39	0.45				
	Latin America &Caribbean (16)										
1990-1999	254.3	3.9	42.88	3.9	41.95	0.47	0.46				
2000-2009	323.2	4.3	34.14	4.2	32.43	0.41	0.39				
			Developing	regions (59)							
1990-1999	87.1	1.5	26.92	1.6	37.09	0.52	0.57				
2000-2009	121.1	1.5	19.67	2	31.76	0.39	0.5				

Source: ibid

Notes: 1) Refer to background paper "Towards more Sensible Poverty Measurement" by Abu-Ismail, et. al. for further details on data and methodology. ) 2) Arab countries included are same as figure 2.

Even though the weighted average poverty line for the Arab region, whether based on national poverty lines or regression, is close to the \$2.00 per day, these country specific poverty lines better reflect the reality, as they allow for different lines from one country to another. In figure 4, we compare the poverty reduction experienced by the Arab region and other developing regions using the standard \$2.00 per day and the regression-based estimated poverty lines. The reduction in poverty for the Arab region is 24% if we apply the same line for all countries in the region, but declines to only 8% when we apply the more reasonable variable rate. Compared to most other developing regions, the Arab world has relatively low levels of poverty; however, the progress achieved in reducing poverty has been among the slowest globally and is not sufficient to make a major dent in poverty in the near future.



#### Figure 4: Poverty rates for the \$2.00 (A) and RPL (B) lines in 2005 PPP, 1990-2009



### The enigma of inequality

Gini coefficients indicate relatively moderate income inequality. However, they are estimated based on consumption surveys that tend to exclude the top 5% of the income stream. This aberration explains the argument that the purported low levels of inequality in the Arab region result from redistributive policies followed by Arab governments. The Arab social contract requires citizens to tolerate limitations on their political freedoms in exchange for material benefits offered by a provident state. Evidence from household budget surveys for countries like Yemen indicate that the observed moderate levels of consumption inequality can be due to the operation of informal, socially organized protection plans, notably the Islamic zakat system.

There is something discomforting about these empirical results. Given the obvious and rising inequality in expenditure and the concentration of wealth in many Arab countries since the 1990s, one would expect a more significant rise in inequality. This would be more consistent with the reality in many Arab countries, where slum dwellings have proliferated alongside new enclaves of gated communities for the rich, as well as other symptoms of 'conspicuous consumption'. The reality is rising social exclusion and inequality in wealth and expenditure, which is difficult to square with stagnant values of the Gini coefficient.

One plausible explanation for this enigma is that the expenditure of the (actual) highest percentiles, which is difficult to capture in household surveys, witnessed significantly higher than average growth. If so, reported inequality measures are underestimated. The large and increasing difference between household expenditure reported by surveys and national accounts lends credibility to this hypothesis.

The results in Table 5 confirm that the estimates of household expenditure from national accounts are higher than those reported from household surveys for most countries (the exceptions are Djibouti and Morocco in the 1990s) and that the discrepancy for Arab countries is quite high by developing country standards. This is particularly the case for Egypt, where the ratio of per capita consumption reported by the household survey to the national account estimate was only 0.39 in 2009. The ratio also decreased for Tunisia, Syria, Morocco and Djibouti, which suggests a rise in inequality in these countries. In the case of Egypt, based on Egyptian government official statistics, the data confirm that the country was experiencing real growth rates in excess of 5% in the 2000s, but per capita consumption levels (as revealed by household budget surveys) actually stagnated or declined.

Country	HCE 1990s	HCE 2000s	HCE* 1990s	HCE* 2000s	HCE/HCE* 1990s	HCE/HCE* 2000s	Δ HCE (%)	Δ HCE* (%)
Djibouti	150.5	93.5	90.6	119.5	1.66	0.78	-0.076	0.05
Mauritania	78.7	88.3	98.8	97.3	0.80	0.91	0.029	0.00
Yemen	82.6	84.0	128.5	110.1	0.64	0.76	0.002	-0.02
Morocco	155.4	161.4	150.1	181.1	1.04	0.89	0.002	0.01
Tunisia	151.3	182.4	213.6	278.0	0.71	0.66	0.019	0.03
Egypt	100.9	121.1	219.2	312.8	0.46	0.39	0.010	0.02
Jordan	151.6	210.1	231.3	315.2	0.66	0.67	0.037	0.03
Syria	129.8	125.5	200.3	212.3	0.65	0.59	-0.003	0.01
Arab countries	117.9	130.0	189.4	247.1	0.62	0.53	0.102	0.30

 Table 5: Per-capita Household Consumption Expenditure (HCE) derived from household surveys and national income accounts (HCE\*) (in 2005 PPP) and their annual percentage change for Arab countries, 1990-1999 and 2000-2009

Source: ibid

This anomaly in per capita consumption levels implies that either growth has been slower than believed, or consumption surveys are missing the highest percentiles. The first explanation is unlikely, given independent corroboration of significant components of GDP by international sources, based on revenues from natural resources, exports of manufactured and agricultural goods, and tourism receipts. The more likely explanation is that actual consumption levels are underestimated in household budget surveys. The surveys are likely excluding the top 5% of income earners, and the value of the Gini index must be seriously underestimated.

### High regional disparities in money metric and human poverty in Egypt and Yemen

While it is difficult to generalize about the extent and direction of change in regional disparities in the Arab region because comparable assessments of poverty over time are lacking, the experience of countries like Egypt and Yemen indicate widespread regional disparities in terms of both money metric and human poverty. Worse, there has not been any noticeable improvement in disparity over time.

Figure 5 depicts levels of money metric and human poverty for different governorates in Yemen, broken down into rural and urban areas. Though a few governorates exhibit low levels of both money metric and human poverty compared to the national average, the scatter diagram shows that most governorates experience high money metric or human poverty, with a significant number suffering from both. It also shows higher levels of money metric and human poverty in rural than in urban areas. This reflects the urban bias of the development process, which brought about a substantial decrease in money metric poverty in urban areas while rural poverty stagnated. The diagram clearly demonstrates the difficulty Yemen has had in making progress against either money metric or human poverty, with equally high average levels of poverty (money metric and human) of around 35%. Money metric and human poverty levels do not appear to be linked; governorates that are at vastly different levels of money metric poverty exhibit similar levels of human poverty. This could be a reflection of inadequate public expenditure on social services that has resulted in low quality health and education services in nearly the whole country. Total public expenditures on health and education in unified Yemen never exceeded 7.5% of GDP and have averaged around 6% since 1991, while a substantial amount of money was wasted on fuel subsidies that mostly benefited wealthier portions of the population.<sup>10</sup>



#### Figure 5: Headcount poverty and the Human Poverty Index for Yemen, 2006

Source: El-Laithy and Abu-Ismail, 2008

Note: Red points represent urban areas, green ones represent rural areas, while blue diamonds represent governorates at the national level

The observed differences between governorates would have been even higher had these regions not managed to safeguard their traditional social solidarity mechanisms, which translate into much lower levels of expenditure inequality in poorer rural governorates compared to the richer, urban ones. We can also observe 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 money metric poverty, continue to suffer from human poverty, while urban areas, as a rule, exhibit lower rates of money metric and human poverty. Given the critical contribution state intervention makes to reducing human poverty, this confirms the urban bias of state action.



Figure 6: Headcount poverty and the Human Poverty Index for Egypt, 2008

Egypt's experience also confirms the existence of large intra-governorate disparities with respect to both money metric and human poverty, with only a few major urban agglomerations, such as Cairo and Alexandria, exhibiting low levels of both money metric and human poverty. On the other hand, most of Upper Egypt experiences high levels of both money metric and human poverty. The economic development process bypasses largely rural upper Egypt, leading to the rapidly declining contribution of agriculture to GDP over time while the share of population engaged in agriculture declined at a much slower pace. As a result, the per capita income in rural areas declined substantially compared to income in urban areas. Neither was the pattern of public expenditure particularly pro-poor, with health and education accounting only for an average of 5.7% of GDP over the period of 1990-2008<sup>11</sup>, reaching a peak of 6.9% in 2002. Egypt has also been spending substantial amounts on food and fuel subsidies, which are known not to be effective in improving the diet of the poor and to disproportionately benefit the wealthy (particularly in the case of fuel subsidies).

The much stronger relationship between money metric and human poverty in the case of Egypt reflects inequalities in the way the national support for public health and education services is divided among governorates. Figure 6 illustrates the significance of moving away from averages that can be misleading and the need to dedicate attention to the issue of regional disparities.

# **Growth and Structural Transformation**

### Volatile and oil-led growth perpetuate structural retardation

In this section we discuss issues related to sectoral economic growth and long-term structural transformation. A central puzzle that emerges from the data on human development and poverty is that despite being healthier and more educated today than they were in the 1990s, Arab men and women have not utilized their enhanced capabilities to reduce money-metric poverty.

Although necessary, economic growth by itself does not lead to a 'healthy' structural transformation that alleviates poverty, reduces inequality and creates decent jobs. The literature on structural transformation considers an economy as having undergone structural transformation if the performance of different economic sectors is in line with the historical experience of developed countries as enumerated below:

- 1. The share of agriculture in GDP declines over time as real per capita GDP increases.
- 2. The share of industry in GDP increases over time and reaches a maximum when real per capita incomereaches about \$13,500 (in 2005 constant prices), at which point countries enter a post-industrial phase.
- 3. The share of services in GDP increases over time and reaches a maximum when real per capita income reaches about \$9500 (in 2005 constant prices).
- 4. The share of manufacturing increases over time without necessarily reaching a turning point in terms of real per capita income.
- 5. The share of manufacturing employment in total employment increases over time.

Using GDP per capita in 2005 constant prices, average annual real GDP per capita growth rates over the period of 1970-2009 reached 2% per annum for the Arab region, excluding OPT, Somalia, Iraq and Yemen. The first three countries are excluded on account of exceptional conditions related to protracted civil war and occupation, while Yemen only came into existence as a unified country in 1990. Only Syria, Tunisia, Oman, and Egypt achieved above-average growth, while 6 countries registered negative growth during this period. Included among this group are UAE and Qatar, which had some of the highest total GDP growth rates, approaching 7%. The negative per capita growth registered in these cases is in the nature of a statistical aberration because of a substantial increase in their resident populations due to oil-related prosperity.





Source: Authors' estimates based on UNSD online datasets.





The region went through a difficult period in 1981-1990, following the peak of oil prices in 1980, with an average real GDP per capita growth of only 0.1%. The number of countries recording negative average annual real per capita GDP growth rates reached 14, with only Oman, Egypt, Tunisia and Morocco registering positive growth. The Arab region has, however, experienced a period of relatively stable high GDP per capita growth since 1991, averaging 2.4%, with only Comoros experiencing negative growth.

Relatively high volatility is one of the major features of the Arab growth process. Egypt is the only country whose growth is characterized by low volatility over the entire period of 1970-2009. Only Tunisia, Oman and Algeria record low-volatility growth since 1991.

Figure 8 summarizes the growth-volatility performance of Arab countries and compares it to the performance of the developing world and its major subdivisions. The Arab region appears to have the highest volatility, while it achieves a respectable overall growth performance above that of Latin America and Sub-Saharan Africa. While the region has had substantially lower levels of volatility since 1991, the graph shows that a drop in the average growth rate of GDP per capita has accompanied this change.

# Figure 8: Distribution of Arab countries versus rest of the world according to volatility (Standard Deviation) and Average annual real per capita GDP rates of growth, 1970-2009



Source: ibid.

Note: Refer to background paper "Structural Retardation of Arab Economies: Symptoms and Sources" by Von Arnim, et. al. for further details on data and methodology.

Two high-income countries have the highest rates of volatility: one an oil-rich country (Kuwait) and one an oil-poor country (Lebanon). However, the high volatility of Kuwait is due to the impact of the Iraqi invasion in 1990 and its aftermath, while Lebanon's can be ascribed to the impact of a protracted civil war that started in 1975, as well as many years of Israeli occupation in parts of the country. Overall, we find a clustering of oil-rich countries in the group with high volatility, with Algeria being the only oil-rich country that exhibits medium volatility.

Grouping countries by income levels appears to be more useful in understanding trends. The MICs, led by Egypt and Tunisia, recorded the highest growth rate (2.45%) and lowest volatility (Standard deviation of 4.6). LICs showed the lowest growth rate (1.55%) and high volatility (Standard deviation of 7). The high-income group of countries includes Kuwait, with a very high level of volatility and as a group they demonstrate low per capita growth because they import labour in ever increasing numbers that over time swells their resident populations.

The overall growth pattern of the region is clearly influenced by oil price shocks. The entire region suffered from an oil price decline in the 1980s and benefited from more stable and upward-moving oil prices since 1991. This is reflected in the region as a whole, showing a substantial decline in volatility in the latter compared to the earlier period, by moving away from a position close to high volatility to one close to low volatility. Thus, it is correct to characterize the growth process as oil-dependent.

Typically, structural transformation processes are accompanied by sustained increases in per capita real GDP, which would lead to the exclusion of countries that failed to increase per capita GDP of their resident populations because of substantial inflows of foreign labour, as has been the case for major Arab oil-rich countries. Here we relax the requirement of substained increase if GDP per capita for this particular group and review the experiences of UAE and Qatar, given their high total GDP growth. Data on share of manufacturing in total employment is only available for the period up to 2004 for all countries and is thus only used as a secondary criterion to understand, to the extent possible, the depth of transformation. All Arab countries have seen the share of agriculture in GDP decline since 1970, except for Syria. Thus, we focus on identifying countries that have seen the shares of manufacturing and services increase noticeably over time.



#### Figure 9: Economic transformation in Oman (A), Tunisia (B), UAE (C) and Qatar (D), 1970-2009

Source: ibid.

Oman and Tunisia have managed to maintain high growth rates of GDP per capita, though growth has been more volatile in Oman. Both countries have witnessed substantial increases in the shares of manufacturing and services in GDP and have therefore undergone a successful structural transformation. While the share of manufacturing in total employment increases noticeably for Tunisia, we are unable to assess what has happened to this feature of the classical transformation process because of a lack of data on sectoral shares of employment for Oman over an extended period. The UAE also exhibits features of classical structural transformation over the period of 1970-2009. The success of the UAE on this front is largely due to the Emirate of Dubai's choice to become a major regional commercial hub—and the eventual emulation of this model by the richer, oil-producing Abu Dhabi Emirate. Qatar is still very much driven by an oil and gas sector that continues to dominate the economy and is largely responsible for Qatar's high rate of growth. The country has managed to noticeably expand its service sector, but growth in manufacturing has been gradual. The development model adopted in this case has put the emphasis on high-end services, including higher education, similar to economies of high-income developed countries. However, it is unclear whether the economy has undergone a structural transformation, even though there is a promising trend in the rates of change.

Egypt suffered from an incomplete manufacturing transformation in the sense that, despite the classical trend in the GDP shares of the three major production sectors, the share of the manufacturing sector only increased marginally in constant prices over the period in question. However, the same share declined in current prices, as did the share of manufacturing in total employment. The growth engine of the Syrian economy was the mining sector, whose revenues were used to support the agricultural sector. Hence, the shares of mining and agriculture show an upward trend, with manufacturing declining in importance over time. The Syrian situation is nuanced, however, as data from UNIDO adding different sub-sectors of manufacturing actually shows an upward trend for the share of manufacturing in GDP. Definitive judgment about Syria would be ill advised until more country-specific work is undertaken.

Tunisia has achieved the most meaningful structural transformation, whereby shares of manufacturing and services have increased and manufacturing has made an average contribution of 20% of GDP in the 2000s. This was achieved largely through use of windfall oil profits in the 1970s and 1980s to build up the country's productive infrastructure.

Figure 10 contrasts the experiences of Egypt, Syria and Tunisia with respect to shares of employment in agriculture and manufacturing over the period of 1975-2010, using national data. We observe that while the share of manufacturing increases over time for Tunisia and Syria to reach peaks of 21% (in 2001) and 16.6% (in 1984), respectively, in the case of Egypt the share declines during the period, which is consistent with the small decline observed in the share of manufacturing in GDP. The rate of decline in agriculture is substantially higher for both Tunisia and Syria, so that by 2004 it is less than manufacturing, while for Egypt the share continues to dwarf manufacturing throughout. Syria might have experienced a structural transformation, despite the heavy weight of the oil sector for most of the period.



#### Figure 10: Shares of employment in agriculture (A) and manufacturing (B) for Egypt, Tunisia and Syria, 1975-2010

Syria Tunisia Egypt 25 Ž1 20 20 19 19 16<sup>18</sup> 18 20 16 12<sup>13</sup> 13 13 15 12 13 10 5 0 1975 1989 2002 2004 1984 2007 2008-2010

**(B)** 

Source: National datasets from Statistical Offices and UNSD datasets.

As depicted in figure 11, the noted trends yield a regional structural transformation pattern that contrasts sharply with other developing regions. Herein lies the Arab structural economic problem: stagnating shares of agricultural and manufacturing sectors (albeit with a slight increase in the latter due to a rise in contributions from the manufacturing sector, particularly petrochemical industries in GCC), a rapidly expanding service sector (concentrated mainly in low value-added activities), and a still leading, though declining, oil sector.

Figure 11: Economic transformation in Egypt (A) and Syria (B), 1970-2009



Source: ibid

Oil revenues have supported a service-led pattern of economic development at the expense of productive sectors, which renders the region as the least industrialized among developing regions, including Sub-Saharan Africa. The Arab region, along with Latin America, did not experience much transformation relative to the three other developing regions. Latin America's economic transition started much earlier and had already matured by the early 1970s, and the contribution of agriculture to GDP had already reached a minimum. The more erratic shape of the Arab economic transformation during the early period is symptomatic of the large boom in service and construction sectors that ensued in the late 1970s and early 1980s, driven by the massive wealth accumulated as a result of rising oil prices.

Figure 12: Economic transformation in Arab countries (A), Sub-Saharan Africa (B) and East Asia & Pacific (C), 1970-2009



Source ibid

Note: Arab countries included are Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia and Yemen

Oil resources have delayed the normal process of economic transformation in the Arab region, leading to retarded productive capacities and to a more rudimentary economic structure relative to what one would expect for the level of GDP per capita. Figure 13 reports average annual growth rates of value-added industries, broken down into the contributions of broad sectors. These broad sectors are (1) agriculture, hunting, forestry, and fishing, (2) mining, (3) manufacturing, (4) construction, and (5) services. Services and manufacturing are the main contributors to growth for all developing countries, with 2.3 and 1.1 percentage points, respectively. In Arab countries, 1.7 percentage points of growth comes from services and only 0.4 percentage points from manufacturing. Mining, on the other hand, added 1.3 percentage points to growth in Arab countries, compared to only 0.3 percentage points in developing countries as a whole. Agriculture makes an insignificant contribution to growth in the Arab region and the larger group of developing countries.



Figure 13: Sectoral composition of growth rate of value-added for the developing regions, 1970-2009

Source: ibid.

Note: Arab countries included are same as figure 12.

Fluctuations in the price of oil have driven the mining sector and defined the growth performance of Arab countries. In the 1970s, the mining sector alone accounted for 4.3 percentage points of the total growth of 8%. In the GCC, the mining sector accounted for almost half of the 11% economy-wide growth during that period. The situation reversed sharply in the 1980s when the collapse of oil prices caused a contraction in the mining sector's output.

As these trends illustrate, dependence on oil revenues has left Arab economies structurally weak, exposed as they are to the vagaries of international oil markets. Consequently, for the last four decades, economic growth has been more erratic than for other developing regions. The highest source of growth volatility originated from the mining sector, followed by agriculture, construction, and service sectors. The high volatility of agriculture is not surprising, given its reliance on erratic rainfall. Construction and services are volatile due to their dependence on oil revenues in most Arab countries.





Source: Authors' estimates based on ILO, Global Employment Trends (GET) Model and National accounts-UNSD for output. Note: Includes all Arab countries except Djibouti and Occupied Palestinian Territory.

Incomplete structural transformation and oil-led patterns of development of the Arab region have created a situation in which high productivity jobs have been scarce. Figure 14 shows the output shares and contribution to employment of key economic sectors for the Arab region both with and without the GCC. Even though the economies of non-GCC countries are less dominated by oil and gas, mining and utilities still account for 31% of GDP while only providing jobs for 1% of the population. At the same time, manufacturing remains very much marginal, only contributing 10% of GDP and employing 8% of the workforce. One tragedy is the limited contribution of agriculture (12%) to GDP while the sector continues to employ around 30% of the population. This reflects the technological stagnation of the sector, which leads to lower productivity per person.

Many Arab countries are increasingly becoming import-oriented and service-based economies, with services accounting for the highest share of GDP in the region (42%), excluding the GCC, and generating the major share of employment at 52%. The types of services found in Arab countries fall at the low end of the value chain, contribute little to local knowledge development and lock countries into inferior positions in global markets. This trend, which has been at the expense of Arab agriculture and industrial production, is therefore concerning. The following section highlights this further by focusing on trade and industry.

# Production and exports concentrated in low value-added goods and services

Trade is integral to the economies of the Arab region. According to data from the World Bank and UNSD, the ratio of trade (exports plus imports) to GDP of the region<sup>12</sup> averaged 84% in the 2000s, one of the highest ratios among developing regions and was significantly higher than the early 1980s (approximately 60%).<sup>13</sup> Since the 1980s, most Arab countries initiated trade reforms that boosted non-oil exports. However, the increased market access benefited mostly industries with static comparative advantage, particularly those closely linked with petroleum. The increased intensity of trade has not been indicative of a successful integration into the global economy. The Arab region continues to host a rather primitive export structure, predominantly composed of primary products (fuel exports comprise 70% of exports). This is in contrast to the import structure, which has remained diversified by comparison (Figure 15).





#### Figure 15: Structure of merchandise imports (% of total merchandise imports) for Arab countries, 1995-2009

Source: Authors' estimates based on data from WDI, UNSD and WTO datasets. Notes: 1) Arab Countries included are Egypt, Jordan, Kuwait, Morocco, Oman, Saudi Arabia and Tunisia. 2) Refer to background paper "Is there Space for Development Friendly Trade and Industrial Policies in Arab Countries" by Abu-Ismail, et.al. for further details on data.

For the majority of oil-rich countries, fuel exports account for well above 80% of total merchandise exports. Oman has the lowest share of fuel exports at 81%, and a relatively diversified structure of non-oil exports, including machinery and transport equipment, consistent with its signs of a positive structural transformation. As reflected in Figure 16, the export structure of oil-poor countries is more diversified, yet dominated by textiles and clothing up to 2005. The subsector has witnessed declining exports since 1998, largely due to the phasing out of preferential trade arrangements, such as the multi-fibre agreement. Major divergences among different members of this group have marked the evolution of trade. For example, while Egypt experienced the steepest plunge, Jordan witnessed an increase in its share of textile and clothing exports, most likely as a result of the Qualifying Industrial Zones (QIZ) agreement with the U.S. The relative demise of textiles and clothing is not in itself cause for alarm. What is more worrying is the structural retardation of the region, reflected in the very slow rate of increase in high value-added exports, such as machinery and equipment.



#### Figure 16: Structure of commodity exports for oil-poor countries, 1995-2009

Source: Authors' estimates based on data from UN Comtrade dataset. Note: Oil-poor countries included are Jordan, Egypt, Morocco and Tunisia Tunisia has the highest share of machinery and transport equipment exports (including telecommunications equipment, automatic data processing machines, electrical machinery, etc.). Morocco, despite being a latecomer, has also achieved a significant increase in the share of this technology-intensive sector in total merchandise exports, from 3% in 1995 to 19% in 2009. Despite some fluctuations, Jordan's share of machinery, transport, and merchandise exports has remained rather stagnant since 1995. This trend was far less pronounced in Egypt, with the economy being more heavily based on petrochemical and chemical industries. Egypt's export structure is clearly less diversified today than many of the smaller Arab non-oil economies that looked to it as a model for industrial development during the 1960s and 1970s. Figure 17 compares the commodity export structures of Egypt and Tunisia.





Source: ibid.

Underlying the generally weak trade performance of the Arab region is a weak manufacturing sector. As noted earlier, the region is the least industrialized in the world, with industry accounting for a meagre 12% of the region's GDP, the lowest among all developing regions. Moreover, this small share is heavily concentrated in the production of lower value-added petroleum-related products, food, chemicals, and rubber and plastic products, which together make up nearly 60% of the total manufacturing output of the region <sup>14</sup> (Figure 18).



Figure 18: Structure of manufacturing for oil-poor (A) and oil-rich countries (B) in 1990s and 2000s

Source: Authors' estimates based on UNIDO and UNSD online datasets. Note: Oil-poor countries included are Jordan, Egypt, Morocco and Tunisia. Oil-rich countries included are Kuwait, Oman and Qatar.

Despite the dominance of petroleum industries, Arab countries, including oil-rich countries, are diversifying into other sectors, such as food and beverage and metals industries. The industry profiles of Jordan, Morocco and Tunisia, in line with the increasing trend in the share of machinery and transport exports, show a clear increase in the share

of machinery and equipment output. The translation of this increase in share of manufacturing into an increase in the share of exports could be interpreted as an indication of gains in competitiveness for these countries. However, Tunisia appears to be the main driver of this trend as the share of this technology-intensive sector increased from 5.3% to 12.8% of total manufacturing over the 16 year period (Figure 19). Simultaneously, aided by foreign investment, this sector's contribution to Tunisia's merchandise exports nearly tripled to reach 25.1% in 2009. The share of Tunisia's machinery imports did not increase over the same period. Tunisia defies regional trends in several aspects and confirms its place as an economy that underwent a meaningful structural transformation.





Source: Authors' estimates based on online UNIDO datasets

The textiles and clothing sector makes up the second highest portion of the manufacturing sector of oil-poor countries. Since 1990, Egypt and Morocco in particular have witnessed a decline in the share of textile industries in their total manufacturing, from 15.5% and 17.3% to 11.5% and 14%, respectively. The concomitant decline in the share of this subsector in total exports, a decline especially dramatic for Egypt, is an indication of the lack of competitiveness of the Arab textile industry. A major portion of Egyptian exports is lower value-added petroleum, mineral, and chemical products (Figure 20 A). Overall, the transition to indiscriminate premature liberalization at a time of low productivity levels has rendered manufacturing uncompetitive and exports concentrated in primitive products and natural resources.



Figure 20: Manufacturing base for Egypt (A) and Tunisia (B) in 1990 and 2006

The trends are broadly similar for trade in services, as the majority of Arab economies specialize in low valueadded services such as travel and transport, as opposed to more vibrant communications and financial services. Still, there are clear distinctions between oil-rich and oil-poor economies, as services play a less important role

Source: ibid

for the former (8-10% of total exports in the 2000s). For oil-poor countries, the corresponding share was 45% in 2009. Within oil-rich countries, the structure of service exports appears to be most balanced in Oman. Indeed from 1996 onwards, Oman was able to diversify its base of service export from one that is almost entirely reliant on travel and tourism to one where tourism, transport and communications services have relatively equal shares.





Source: WDI databases

Finally, some of the important differences in the services trade between some economies are worth mentioning. The distinction between Egypt and Tunisia is quite remarkable. The former has witnessed a large decrease in the share of higher value-added communications and computer services in exports and has become more reliant on tourism. Since 1995, Tunisia's service export sector has included a larger contribution from more dynamic sectors, such as transport and communications services, which are crucial for the promotion of a knowledge-based economy.



# **Employment, Social Protection and Fiscal Policy**

# Employment gains despite demographic pressure

We begin by reviewing demographic factors in order to understand the dynamics that have been systematically creating high rates of unemployment in the Arab region. The average life expectancy at birth in all countries in the region is 70 years or higher, except for the five poorest countries, Mauritania (55), Comoros (64), Djibouti (54), Sudan (56.7) and Yemen (61.7). With an average of 3.1 children per woman, the region's population is set to continue to grow rapidly into the foreseeable future. The highest fertility rate is observed in Yemen (5.9) and the lowest in Tunisia (2.0), followed by Lebanon (2.3), Kuwait and the United Arab Emirates (both 2.4).

The Arab region is at a relatively early stage in its demographic transition, which translates into a sustained pattern of increase in the working-age population. As illustrated in figure 22, the share of working-age population (15-64) in total has increased from 51% in 1970 to 62.45% by 2010 and is expected to peak at 66% in the year 2040 and decline to 65% by 2050. As the onset of fertility decline is relatively recent, the process of aging is still one decade away, with the share of people aged 65 and above expected to increase more rapidly by 2020. This means that by 2050, the proportion of people aged 65 or over is projected to quadruple, compared to 1980.



Figure 22: Age structure of population for Arab countries, 1970-2050

Source: Authors' estimates based on data from World Population Prospects: The 2010 Revision, UN Population division Note: All Arab countries are included in the regional average.

Rather than being seized as an opportunity, the increase of the region's working-age population has been preoccupying Arab policy makers as a major challenge. The region has one of the highest labour-force growth rates in the world, exceeding 3% per annum. Arab countries have witnessed a considerable increase in the share of labour in their total population during the period 1995 to 2009.

The labour force participation rate, which is a measure of how well a society makes use of its working-age population, has gone up slightly in the Arab region since 1970, but still remains one of the lowest in the world. This is largely due to extremely low rates of participation for Arab women who are still facing high barriers to labour market entry. At 52%, the Arab labour force participation rate is much lower than the prevailing rate for developing regions (61%). The gap is even more significant for the rate of female labour force participation (26.3% compared to 53% in developing regions).

Between 1991 and 2009, employment in Arab countries demonstrated an impressive average annual growth of 3.3%, among the highest of all developing regions. This apparently positive trend, however, is due to the poor growth in labour productivity in the region. Labour productivity is only 2%, according to the ILO <sup>15</sup>, compared to 7.6% for East Asia. In the Arab region, the 3.3% increase in employment was associated with a GDP growth rate of 6%, while the same 6% average growth in Asia was associated with an increase in employment of only 1.9%.



# Figure 23: Labour force participation rates, Arab countries versus other developing regions (A), across sub-regions (B) for age group (15+), 2009

Source: Authors' estimates based on ILO Kilmnet dataset.

Notes: 1) Refer to background paper "Employment, Vulnerability, Social Protection and the Crisis of the Crisis of Arab Economic Reforms" by Abu-Ismail, et. al. for further details on data and methodology. 2) Arab Countries included are GCC (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE), LDCs (Comoros, Djibouti, Mauritania, Somalia

Sudan and Yemen), Maghreb (Algeria, Libya, Morocco and Tunisia) and Mashreq (Egypt, Iraq, Jordan, Lebanon and Syria)

As a result, the employment-to-population ratio<sup>16</sup> rose from 44.2% to 46%, though it remains the lowest in the world. Women have benefited more from the rise in employment with an average annual growth of 4.4% compared to 3% for men. This has somewhat reduced the gender gap in the Arab employment-to-population ratio, but the gap is still the widest among developing regions. According to ILO data, in 2008, five of the ten lowest employment-to-population ratios were found in the Arab region, namely in Iraq, Jordan, Tunisia, Yemen and the Occupied Palestinian Territory.



Figure 24: Overall unemployment rates (A) and youth unemployment rates (B) for Arab countries and sub regions, 1990-2000 and 2001-2011

Source: Authors' estimates based on ILO Kilmnet dataset and Tunisia National Labour Survey 2011, National Institute of Statistics) Notes: 1) Arab countries included are GCC (Bahrain 1991 and 2001, Kuwait 1995 and 2005, Saudi Arabia 2002 and 2008, UAE 1995 and 2008, LDCs (Yemen 1994 and 1999), Maghreb (Algeria 2001 and 2008, Morocco 1990 and 2009, Tunisia 1997 and 2011 and Mashreq (Egypt 1998 and 2007, Lebanon 2004 and 2007, Syria 2002 and 2010).

Employment growth for young people has been quite impressive in Arab countries, which recorded the second highest growth rate (following Sub-Saharan Africa) among developing regions. As population growth was significantly above the growth in employment, the youth employment-to-population ratio for the Arab region fell from 27.19% to 24.3% in the period from 1991 to 2009. Again, this is the lowest among developing regions (with an average of 45% in 2009). Furthermore, the gender gap in employment is equally striking for youth. In 2009, only 14 out of every 100 young women were employed, compared to 41 out of every 100 young men.

12% in the nineties of the last century

Despite rapid growth in employment and the decline of unemployment rate from 12% in the nineties of the last century to 9.3% in the last ten years, the Arab region continues to register one of the highest unemployment rates in the world. This decrease in the unemployment rate is largely due to the substantial decline witnessed in the Maghreb region, specifically in Morocco and Algeria. However, the improvement in those two countries does not reflect a dynamic economic process capable of creating sustainable job opportunities. The majority of the new job opportunities created in Algeria are of a temporary nature and concentrated in the services and informal sectors related to the government subsidy and expenditure, which in turn, depend on high oil prices. In Morocco's case, the unemployment decline is due to the tremendous acceleration of illegal immigration to Spain and Italy during the first decade of the century, and does not reflect increased employment opportunities in the country.



### The riddle of the declining unemployment rate in Morocco

Official data suggest a marked decline in unemployment in Morocco from 2000 to 2009 by when it had reached 9% after rising from 8.4% in 1989 to 14% in 1999. There are no factors such as a huge expansion in public investment and launch of job creating public schemes on the model of what happened in Algeria, to explain such a significant decline in unemployment. While growth picked up to average 4.5% over the period 2000-2009, this is not markedly different from the experience of Tunisia over the same period. Yet we know that in the case of Tunisia the country did not witness a significant decline in unemployment during this period. Hence the higher growth rate in itself cannot account for the reduction in unemployment.

Estimates by the Ministry of Economy indicate that the country had to create 325 thousand jobs yearly in order to keep the unemployment rate unchanged. Official data indicate that the pace of job creation fell short of this target, only averaging 155 thousand per year over the decade. Hence one has to find the solution to the riddle in a possible change in the total stock of working age persons in the country.

The one factor that can explain this reduction in unemployment is an increase in outmigration from Morocco, including illegal immigration to Italy and Spain. Data available from the receiving countries indicates an upsurge in Moroccan migration to Europe from an average of 20,000 per year in the 1990s to 130,000 per year in the 2000s. This figure is likely to underestimate the number of illegal immigrants, as many of them are never captured in data gathering exercises. A 3.5 fold increase in remittances from \$2 billion in 1999 to \$6.7 billion in 2008 substantiates the hypothesis about a substantial increase in Moroccan migration to Europe over the 2000s. This increased migration at the same time can explain the decrease in income poverty revealed by household consumption data.

However, with the increase in unemployment rates in Europe since 2008 the opportunities for migrant workers in Europe have already been substantially reduced, rendering continued outmigration not a feasible option for keeping a lid on unemployment and poverty rates in Morocco. The only sustainable solution to the unemployment and poverty problems in Morocco remains revitalization of the national economy to create decent jobs and reduce dependence on a rain-fed and low efficiency agricultural sector for absorbing new entrants into the labour force.

Source: The Dynamics of Poverty and Unemployment Reduction in Morocco" Abi-Samra 2011

In contrast, LDCs experienced an increase in unemployment rates (from 8% to 11%). The unemployment rate in GCC and Mashreq countries also increased slightly (from 4.5% to 4.6% and 9.3% to 9.8%, respectively).

Unemployment is particularly high among youth in the Arab region (people aged 15-24), where youth unemployment, based on estimates derived from ILO and UN data, reached 24% in 2005-2011 (more than double the world average of 11.9%), accounting for more than 50% of the total Arab unemployed. One of the main reasons for a high youth unemployment rate is the problematic transition from school to work, particularly among university graduates.



### Figure 25: Total (A) and youth unemployment rates (B) for Arab sub-regions by gender, 2001-2011

Source: ibid

Note: 1) Arab countries included are same as figure 24, 2) for Tunisia and Algeria same share of male and female to total youth unemployed and total labour force were used for computing youth unemployment figures for 2008 and 2011 respectively.

Arab unemployment is gender biased. Figure 25 shows that unemployment rates for Arab women are the highest compared to world regions, and the gap between male and female remains high (though it has recently narrowed). Arab women's unemployment rate is double that of Arab men (16% and 8%, respectively). The problem is particularly acute among younger women who are joining the labour force in ever-larger numbers because of their increasing participation in higher education and the rising average age of marriage. The average unemployment rate for young Arab women is estimated at 35%, according to the most recent surveys (2004-2011), compared to 20% for young men.

The above data reflects more than the failure of Arab economies to generate sufficient jobs; it points as well to the social biases against women (see the AHDR 2009). While there seems to be a correlation between women's educational levels and increased labour force participation rates, even educated women have difficulty finding decent jobs. This is reflected in the unemployment figures, as well as the growing phenomenon of "discouraged workers"<sup>17</sup> in the region.

There are also sharp gender-related differences in jobs held by women and men. Women are mainly concentrated in social, personal, and community services, especially in GCC and Mashreq regions, while in the LDC and Maghreb countries most work in agriculture. As noted in the first ADCR, such patterns of employment reinforce to a great extent the traditional division of labour.

An even more alarming feature of the Arab labour market is its increasing 'informality.' The concept of informality is a difficult one to measure. Among its many definitions, OECD proposes "non-coverage by social protection." (See Box 5 for further details on the definition of informal employment and the informal sector.) Informality is measured by the response to the question on social insurance coverage in labour force surveys. However, it is only recently that labour force surveys have included this type of question, so data is not available for earlier years.



Figure 26: Self-employed in non-agricultural employment (A), 1990s-2000s and share of informal employment in total non-agricultural employment (B), 2000-2007

Source: Tzannatos 2009

Figure 26 shows that self-employment, as a proxy for vulnerable employment, has increased in all Arab middle income countries for which we have data for two points in time in the recent past, with the notable exception of Tunisia. Unfortunately, the data on informality is only available for one point in time, and assessments about trends in informality over time must be based on proxy measures.

The above data clearly show a certain correlation between the share of population engaged in self-employment and informality, with countries having similar statistics on both criteria. We can conclude that informal employment has probably grown in most countries of the Arab region during the last two decades. The data is incomplete, but what is available shows that the share of formal economy employees in the total labour force (which is used as a proxy for formalization) hardly exceeds 60%. There is a wide variation between the Gulf states, where formalization reaches more than 90% on average, and other Arab countries with formalization rates of around 50%.

# Figure 27: Share of women employed in the non-agricultural sector (percentage of total non-agricultural employment) in Arab countries, 1990s-2000s (A) and in developing regions, 2000s (B)





Source: Authors' estimates based on WDI online datasets

Finally, Arab women bear a significant share of the weight of vulnerable employment. Figure 27shows that the share of women in non-agricultural employment is extremely low. At less than 20%, it is the lowest among developing regions. Even Tunisia, where the share is the highest, still lags behind the average for developing regions. Even more concerning, this share has remained relatively constant since the 1990s.

The Arab region has continued to invest heavily in education since the 1960s, devoting roughly 4.8% of GDP to education over the period 2006-2009.<sup>18</sup> Although this has helped to increase the average years of schooling in the region from 1.1 in 1960 to 5.9 in 2011,<sup>19</sup> the weighted average adult literacy rate only reached 72.9% by 2005-2010.<sup>20</sup> The educational system in the Arab region suffers from well-known quality issues that do not equip youth with the tools they need to succeed in the modern world, including joining the mainstream of economic activity. The regulatory environment in some countries does not encourage private investment in vocational and tertiary skill development, unlike in some other regions, such as with IT services and technical colleges in India. The region has failed to sustain job-creating growth and faces an explosive situation of youth unemployment that is particularly acute among the educated.

# 5 The informal sector and the difference between employment in the informal sector and informal employment

The 15th International Conference of Labour Statisticians, held in January 1993, defines the **informal sector** as "consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factors of production, and on a small scale. Labour relations - where they exist - are based mostly on casual employment, kinship, or personal and social relations rather than contractual arrangements with formal guarantees."

The informal sector is thus statistically defined as comprising household, unincorporated enterprises with market production that are: informal, own-account enterprises (those that are not registered under specific forms of national legislation), and enterprises of informal employers (those with less than a specified level of employment and/or not registered and/or employees not registered).

According to the definition agreed upon by the 15th International Conference of Labour Statisticians (ICLS), informal sector employment is dependent on the nature of the production unit. In other words, a person is counted as employed in the informal sector if they are employed in what constitutes as an informal sector enterprise, regardless of employment status (self-employment, etc.).

In the 17th ICLS, participants unanimously accepted guidelines concerning a statistical definition of informal employment. While acknowledging that the relevance and meaning of informal employment varied among countries, the ICLS expected that such guidelines would help countries to develop national definitions of informal employment and enhance international comparability.

Accordingly, the 17th ICLS recommends for inclusion in the measurement of informal employment:

- · Own-account workers (self-employed with no employees) in their own informal sector enterprises;
- · Employers (self-employed with employees) in their own informal sector enterprises;
- · Contributing family workers, irrespective of type of enterprise;
- Members of informal producers' cooperatives (not established as legal entities);
- Employees holding informal jobs, as defined according to the employment relationship (in law or in practice, jobs not subject to national labour legislation, income taxation, social protection, or entitlement to certain employment benefits (paid annual or sick leave, etc.);
- Own-account workers engaged in production of goods exclusively for own final use by their household.

Source: Kilmnet glossaries, <http://kilm.ilo.org/KILMnetBeta/pdf/kilm07EN-2009.pdf>.

Note: For full details on the concept of informal employment, its history and measurement, see R. Hussmanns: "Measuring the informal economy: From employment in the informal sector to informal employment", Integration Working Paper, No. 53 (ILO, Geneva, December 2004), <a href="http://www.ilo.org/public/libdoc/ilo/2005/105B09\_37\_engl.pdf">http://www.ilo.org/public/libdoc/ilo/2005/105B09\_37\_engl.pdf</a>>.

Evidence suggests that Arab unemployment is fundamentally a demand-side problem. El-Mattrawy and Semmler (2006) argue that in Egypt's case, the growth return of education is low since misguided policies do not enable the country to translate the accumulated knowledge into ideas, innovations, and new productive activities. As the authors note, ultimately this means that the country must also encourage productive investment so that the skilled and educated can find employment. Indeed, the build-up of human capital can foster technological progress and consequently can increase productivity and output only if there is a sufficient rate of job creation.



Employment creation is often closely associated with output growth and fixed capital formation. This means that unsatisfactory labour market outcomes are primarily due to unfavourable macroeconomic conditions that inhibit investment in fixed capital and productivity growth, and to inadequate growth of labour income, which constitutes the most important source of domestic demand. Figure 28 shows the growth in gross fixed capital formation as a share of GDP (constant 2005 prices), as well as growth in total employment for the Arab region. It shows a constant trend for employment growth, accompanied by a slightly upward trend for gross fixed capital formation. This suggests a decline in the ability of investment to generate employment.

Some have argued that low ability of investment to generate employment is mainly due to the low quality of education and the mismatch between educational outcomes and market demand. This is not the complete story. The dynamics of oil-led growth skewed growth away from productive employment and are largely responsible for the employment crisis in Arab countries. The limited demand for educated workers and skills can be inferred from many different symptoms in the labour market. First, educated workers get a relatively low wage premium when employed, while the Arab region has one of the highest emigration rates of skilled workers in the World<sup>21</sup>, suggesting they have skills that are in demand elsewhere, often in more technologically advanced countries (e.g. OECD economies or better jobs in the GCC economies). Second, and contrary to what one would expect, if firms faced skills shortages (a common complaint of employers against the low quality and irrelevance of the educational system) then they would have to compensate for it by providing training to their employees; Arab firms provide the lowest levels of training globally.





Source: Authors' estimates based on ILO Kilmnet and WDI online datasets.

A related comment on unemployment in the Arab region is that it is present in both low-income and highincome households.<sup>22</sup> This is not an unexpected finding, as it correlates to the high unemployment rates of more educated workers who come predominantly from wealthier families. It further substantiates the contention that the economy does not generate decent jobs acceptable to most workers, be they youth or adults.



#### Figure 29: Percentage of unemployed with unemployment benefits (contributory and non-contributory), 2011

Source: Tzannatos, Haq, and Schmidt, 2011. Note: Regional estimates are weighted by labour force, 2009

In addition, only a small amount of protection is provided for the unemployed, as there are only few countries, such as Algeria and Tunisia that have some forms of general unemployment compensation plans. Bahrain also offers assistance for the unemployed who are looking for work for the first time. Kuwait also provided a social assistance plan for job seekers for the first time in 2003, granting the unemployed citizens, who declared their willingness to work, a monthly grant for up to one year. The Kingdom of Saudi Arabia also recently introduced an employment allowances system for citizens. Jordan is considering the introduction of various forms of compensation and assistance in case of unemployment. However, the coverage of unemployment compensation in the region is still the lowest in the world (Figure 29).

Only policies that carefully manage the demand side and enhance labour insurance can address the employment challenge. However, before delving into the policy agenda, it would be useful to grasp the rough order of magnitude of jobs and investment required over the medium and long term, in order to assess the contours of the required macroeconomic policy shift.

Three different scenarios were analyzed to project the number of jobs needed. The first scenario projects the number of jobs required if the Arab region is to keep the unemployment rate constant, with no change in the labour force participation rate. In the second scenario, we estimate the number of jobs required to halve the unemployment rate. The third, which is the best case scenario, calculates the number of jobs required to halve the unemployment rate and raise the women's labour force participation rate to 35% (which is still 15% below the average for developing regions). To do this exercise, we relied on the projected rates of growth of the working-age population by the UN, and unemployment rates, labour force participation rates, and employment-to-population ratios reported by the ILO. The number of jobs required under the three scenarios is estimated over three periods: 2011-2015, 2011-2020, and 2011-2030. The order of magnitude of the results indicates an overwhelming task ahead of Arab countries. According to the first scenario, the region (represented by Algeria, Egypt, Jordan, Lebanon, Mauritania, Morocco, Syria, Tunisia, and Yemen) needs to generate 6.1, 13.6, and 28.6 million jobs by 2015, 2020 and 2030, respectively. For the second scenario, the number of jobs required increases to 15.4, 24.1 and 40.8 million, while for the third scenario; it reaches a staggering 24.7, 47.1 and 91.8 million for the periods up to 2015, 2020 and 2030, respectively. <sup>23</sup>

Using the above data on employment, we can easily estimate the order of magnitude of investment needed to generate the required job opportunities. By dividing the sum of total gross fixed capital formation (constant 2005 prices) during the time period of 2004-2008 by the total number of new jobs in the same period, we observe a relatively high average investment cost per employment opportunity created, at approximately \$100,000 (still significantly lower than Latin America, Europe and East Asia). Excluding the GCC, where the investment required



per job exceeds \$400,000, the regional average drops to approximately \$48,000.<sup>24</sup> Simple calculations show that the total investment bill for the region (excluding the GCC) required to reach full and productive employment by 2030 (scenario three) will reach \$4.4 trillion (in constant 2005 prices). This implies an average annual investment bill of \$220 billion, which is 50% of the GDP of these countries in 2009 (against an average investment-to-GDP ratio of 27.8% for 2004-2009). The required rate of investment is substantially higher for LDCs, at around 100% of GDP, clearly requiring significant external support for its realization. For middle income countries, however, the desired rate of investment is well within reach, at around 40% of GDP.

The above discussion does not factor in the additional cost of upgrading the conditions of the working poor, whose number runs into tens of millions. It further assumes the same low investment levels per job in LDCs, Egypt, and Syria as the historical average, while we know that this level of investment is not able to produce high productivity jobs. Simply raising the cost per job created in these countries to the regional average would add a further \$1.2 trillion or 27% to the cost of achieving full employment by 2030.

A recent ILO working paper by M. Muqtada (2010) empirically anchors the evolution of macroeconomic thinking over the past quarter century from its neo-liberal origins to the present day's search for a more employment-centred framework. The paper assesses evidence on the relationships observed between a number of macroeconomic stability variables (inflation, budget deficit, investment, and current account deficit) and GDP growth based on panel data for 80 developing countries. The five main facts that the paper identifies for developing regions as a whole, based on cross-country evidence, are as follows:

- 1. Nearly two decades of stabilization reforms have reduced the inflation levels in most countries.
- 2. With the exception of a few countries, GDP growth was low or inadequate during the 1980s and much of the 1990s.
- 3. Despite substantial declines in the inflation rate and budget deficit, as indicators of better macroeconomic stability, the investment-to-GDP ratio (I/GDP) has failed to gain momentum.
- 4. The investment-to-GDP ratio tends to explain growth better than other "stability" variables.
- 5. The current account deficit is negatively, but not robustly, correlated to growth.

### Figure 30: Investment as% of GDP, in Non-GCC Arab countries and developing region, 1990-2010



Source: Authors' estimates based on WDI online datasets.

Note: Non-GCC Arab Countries included are Algeria, Morocco, Tunisia, Egypt, Jordan, Lebanon, Syria, Comoros, Djibouti, Mauritania, Yemen, and Sudan

Figure 30 shows that investment in non-GCC Arab countries has been close to the average for developing regions, except for a period of higher investment from 1990 to 1995, when the Arab region was attempting to make up for lost investment in the low growth decade of the 1980s. The above-noted historical trend in investment, if it were evenly distributed among all countries included in the grouping used, would allow the concerned countries to reach full employment by 2020, assuming unchanged labour force participation rates for both men and

women. However, the investments are not evenly divided. Based on current trends, Algeria is on track to reach full employment and raise female participation rate to 35% by 2020, while Yemen and Mauritania cannot even keep the unemployment rate constant for any of the periods and are projected to experience an ever-increasing rate of unemployment. The latter trend is clearly untenable. Except for Algeria, all countries included in the group have to substantially increase their investment rates if they are to make a meaningful dent in the unemployment problem.

# Social protection is still a major challenge<sup>25</sup>

Arab countries have a long tradition of social and family solidarity that is reflected in their systems of governance and social security arrangements. Besides formal social security systems, the countries in the region have established social assistance programmes and targeted cash or in-kind benefit programmes to support the poor.<sup>26</sup>

The dominant elements of social security policies in most Arab countries are social insurance programmes that provide long-term benefits for old age and in case of disability and death. Such plans cover workers on regular contracts in the public sector, including the military, as well as workers in the formal private sector.<sup>27</sup> Other categories of workers, such as temporary or casual workers,<sup>28</sup> agricultural workers and domestic or migrant workers, are excluded from legal coverage in some countries. Few formal social security mechanisms exist to cover the risk of unemployment, while social assistance plans and other formal social safety nets tend to be fragmented and weakly coordinated. Some countries have unemployment compensation plans such as Algeria. Kuwait introduced a social assistance plan for first time job seekers in 2003 and Saudi Arabia has recently announced plans for unemployment compensation and a guaranteed minimum wage for nationals. Jordan and Syria are considering the introduction of unemployment compensation accounts under a funded (private) pillar. All the same, the coverage of unemployment compensation in the region remains among the lowest in the world. <sup>29</sup> Recent World Bank estimates suggest that on average, only one third of the region's workers are covered by pension plans, with wide sub-regional variations ranging from 8% in Yemen to 87% in Libya.<sup>30</sup>

Social dialogue mechanisms are weakly institutionalized and many employers and workers' organizations struggle with inherent structural problems, including sectoral shifts in employment and reduced trade union membership, as the share of services in employment increases. Such weak institutional frameworks create challenges for the development and implementation of crisis response strategies guided by effective and well-established tripartite mechanisms.<sup>31</sup>

In order to remedy this coverage gap, some countries, such as Bahrain and Jordan, have embarked on projects extending their social security plans to cover additional benefits. To this end, Bahrain has recently set up an unemployment benefits plan aimed at facilitating the return of the unemployed to the formal labour market. The plan also covers first-time job seekers, with incentives to take up formal employment. Jordan is in the process of extending its social security benefits to cover maternity and unemployment and is envisaging the introduction of health-care benefits in due course. These measures, among others, constitute an effort to prevent people from being forced into informal labour, promote women's participation in the workforce, and ensure sustainable growth of employment in the formal economy.

Several systems also exclude from coverage employees who work in small enterprises. As a result, considerable parts of the region's labour force are left out of any social security coverage. The Jordanian social security system in 2007, for example, covered only around 50% of the formal private sector workforce. In order to provide comprehensive protection and remedy this coverage gap, the Jordanian Parliament has

been discussing extending the country's social security law to cover unemployment, health, and maternity benefits and extending coverage to all enterprises with one or more employees, which would nearly double the number of persons covered. Some countries, including Yemen, have recently extended social security to workers in small enterprises but face some difficulties in enforcement. Another remarkable example of extending social security coverage to a wider group of the population is Tunisia, which between 1987 and 2001 increased the membership in its social security system from about 900,000 to nearly 2 million people.

While most of the countries in the region have achieved relatively good economic performance, recent economic growth has not fully translated into sufficient increase in quality employment. Low formal employment levels (outside of the Gulf states), low female participation in the workforce, and high levels of youth unemployment remain the main causes of low coverage rates of formal social security plans. This leaves a large portion of the population vulnerable to economic shocks. As nearly all social security systems in the region are financed by contributions and linked to formal employment, a high proportion of people lack any form of social security, other than some basic social assistance. While the small proportion of women with stable careers in the public and private sector is relatively well protected, many women with short and interrupted formal employment have little or no social security coverage.

Some countries have already embarked on reforms to extend the scope of coverage of their pension plans, for example, by including workers in small enterprises, workers in temporary or other forms of "non-regular" employment, agricultural, migrant, and domestic workers. Tunisia implemented a series of measures in the 1980s and 1990s that gradually extended the scope of pension plan coverage to previously unprotected groups of workers.<sup>32</sup>

Some countries have set up cash transfer systems and social assistance programmes in order to grant a minimum of benefits to the most vulnerable groups of the population. In Tunisia, the Ministry of Social Affairs set up the National Programme for Aid to Needy Families to provide direct cash transfers to the poorest households. In 2005, the programme benefited 115,000 families, most of which included elderly or disabled persons. The programme also grants, among other things, the right to free care in hospitals. It covers 717,100 individuals in total, or 7% of the population. According to surveys, however, coverage under the programme is not completely satisfactory, administration is complex, eligibility lists are rarely updated, and when they are, benefits are not always granted to those families newly identified as eligible. Algeria has set up a public works and cash transfer programme that provides compensation to those able to work and financial support to those who are old and handicapped. The programme, however, covers only 20% of the poor, while some people receive multiple benefits. In Morocco, there are a number of different programmes coordinated by an administrative body under the authority of the Ministry of Social Development and Social Solidarity in support of the poor. Overall, these programmes reach only 1.6% of the poor, due to inadequate coordination with other agencies and lack of administrative capacity.

Finally, as noted by the ILO, "All countries in the region offer some kind of social assistance programmes (income support and other safety net programmes). Traditionally, social assistance programmes in Arab countries tend to focus on specific groups of the population deemed to be in particular need of support, such as female-headed households or persons with disabilities. Some of these programmes are provided directly by the government or semi-autonomous institutions (such as social funds in Egypt and Yemen). In addition, many social assistance programmes are run by non-governmental organizations. Lack of coordination is a concern, resulting in the duplication of support to some groups, while others are hardly covered at all."<sup>33</sup>

# Is there fiscal space for an employment-centered transformation?<sup>34</sup>

The previous sections show that the fundamental economic development challenge in the Arab region is one of structural transformation, or lack thereof. Heavy sectoral weights of extractive industries lead to dependence on global oil prices. The structure of production limits employment generation for skilled and semi-skilled labour. Low-skill services and informal activities absorb the labour force and have negative effects on aggregate productivity and living standards. The slow emergence of manufacturing capacities distinguishes the economies of the Arab region from other developing countries. In fact, manufacturing exports do not contribute sufficiently to growth compared to emerging economies in Asia. Concurrently, growth is volatile and saving and investment rates are significantly below what is required to embark on this economic transition.

The approach to fiscal space taken up in this report is therefore focused on asking the question: what are the barriers to the creation and utilization of fiscal space that will be necessary to undertake the above transformation? We seek to assess the feasibility of creating and utilizing fiscal space for a structural transformation that would be essential for a new development model.

A sustainable fiscal policy is defined as one which (a) does not undermine fiscal sustainability in the long-term and (b) that is not charity-based or dependent on exogenous and (as has been frequently pointed out) highly volatile sources of external finance, such as bilateral aid and concessional and non-concessional foreign borrowing. Such a policy requires:

- An analytical framework that specifies the main features of such a long-term resource mobilization framework.
- Specific indicators to assess fiscal sustainability and if possible, suggest fiscal rules that could be deployed to secure the long-term sustainability of such a framework.

There are two major differences in designing an analytical framework for long-term fiscal policy as opposed to short-term. The first relates to the greater importance of objects of fiscal spending for assessing sustainability in the long as opposed to the short run. For instance in the short run, spending on both a rail network that reduces the transport costs of potential industries and a prestigious stadium that is only used once can lead to a budget deficit. However, in the long run the rail project is expected to increase fiscal receipts by facilitating increased industrial production and can pay for itself. Clearly, diverse development situations will require separate modes of spending; to be technically precise, they will require different weights placed on the stabilization, allocation and distribution functions of public finance.

We argue that the main concerns with respect to securing fiscal space for structural transformation are to ensure that:

- 1. There is a sufficient cushion in current spending relative to current revenue to afford countercyclical expenditures including on social programmes;
- 2. The revenue and expenditure structures are aligned with the overall structural transformation as it takes place;
- 3. There is sufficient fiscal space available for public investment, and such investment occurs in areas most directly conducive to the desired structural transformation.



We understand the concern that public investment may crowd out private investment. However, we feel that public investment can actually facilitate private investment by providing the needed productive social infrastructure to encourage a positive structural transformation. Public investment, in this case, has the same effect as fiscal incentives in increasing private investment. Of course, the portfolio of such spending would need to be radically different from what it obtains at present.

Capital investments would still have some limits, given the rule of zero current deficit, as the state would have to be in a position to cover the associated burden of interest to the extent that such spending is financed through borrowing. Attention should also be paid to the impact of such borrowing from national sources on the cost of capital for the domestic private sector. The latter is ultimately shaped by the long-term savings behaviour of the economy, plus the ability to attract foreign savings in the form of foreign direct investment.

Consistent with our understanding of fiscal space, we have two main concerns: the first relates to the potential for increasing fiscal revenues and the second to medium-term fiscal sustainability. In what follows, we assess both dimensions of fiscal space using context-specific indicators.

### Adequacy of current revenue

We assess performance with respect to the current zero deficit rule. In the broadest sense, this requires government consumption expenditure (measured as the sum of wage and establishment expenditures of general government) to be fully financed out of current revenues. For the sample of countries for which data is available, Table 6 indicates that there is a comfortable positive balance across the region. In other words, there is sufficient fiscal space for expenditure, other than on the instruments of government from the existing revenue effort, to invest in capital expenditures and transfers.

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Algeria		24.1	24.5	27.0	26.5	32.3	34.3	30.4	37.6	25.0	24.6	28.6
Egypt						11.0	11.6	12.8	14.1	6.4	8.7	10.8
Jordan				6.3	10.0	12.0	14.6	12.4	7.0	6.0	6.7	9.4
Kuwait	53.8	35.9	36.8	33.7	41.1	64.8	53.9	57.1	45.7	39.7	42.3	45.9
Lebanon			4.9	6.3	6.5	4.4	1.3	2.7	2.1	2.9	5.7	4.1
Libya	26.0	10.9	26.3	22.0	32.3	51.5	51.2	49.0	54.7	50.7	50.8	38.7
Morocco	9.5	7.7	7.4	5.5	6.3	4.8	9.2	11.4	11.5	10.7	10.9	8.6
Qatar				18.0	12.7	22.8	20.8	17.4	24.1	21.9		19.7
Syria	16.0	19.4	15.6	16.5	14.4	11.9	14.5	10.4	5.1	11.2	11.4	13.3
Tunisia		10.0	10.1	9.4	9.8	9.6	9.9	10.5	11.9	10.4	9.2	10.1
UAE	13.3	8.5	3.6	11.4	16.7	28.2	38.1	31.6	33.8	16.4	22.4	20.4
Yemen				16.7	18.2	21.9	23.5	16.0	22.7	10.6	11.5	17.6
Average	23.7	16.6	16.1	15.7	17.7	22.9	23.6	21.8	22.5	17.7	18.6	

# Table 6: Current revenues net of privatization minus current expenditure net of subsidies and interest payments (percentage of GDP), 2000-2010

Source: Authors' estimates based on data from IMF Article IV for Arab countries

We take current revenues net of privatization and current expenditures net of interest payments and subsidies to assess fiscal adequacy. The logic underlying this measure is policy related: if total revenues cover current expenditures (less interest and subsidies) without relying on privatization receipts, then policy can focus on reducing the interest and subsidy burden. When we include interest payments and subsidies, data on the same balance shows that Jordan, Egypt and Lebanon have to urgently address the budgetary burden of their subsidies and interest payments in order to free up meaningful fiscal space for needed capital investments.

The region as a whole has a reasonable current surplus by this measure. In some cases, notably Morocco, there have been significant improvements in fiscal health on this score. Among the non-oil economies, Tunisia has managed to secure a respectable average surplus on this account of 10% of GDP. Egypt, Jordan, and Lebanon clearly need to pay much attention to their public finances, as even when one ignores subsidies and interest payments, these countries have current surpluses in the single digits. This indicates insufficient attention to mobilizing tax revenues. In Egypt's case, we already know that non-oil revenues cover current government consumption, so the deficit is generated by the need to undertake large transfer expenditures. Lebanon is a country whose debt problems derive from a series of shocks that can fairly be described as crisis related. The problem is well known and the consequent need for collective action has been argued for some time.

### Potential for expansion of current revenues

There is a fairly strong relationship between tax revenues and GDP levels (Hinrichs, 1966). In general, one can expect tax-to-GDP ratios to exceed 20% of GDP in middle-income countries and to hover between 10 and 15% of GDP in low-income and lower-middle-income countries. Tax revenues less than 10% of GDP reflect a minimalist state or other specific economic features (such as reliance on a single source of non-tax revenue) that are not structurally desirable.

From an examination of tax revenue trends in Arab countries, we see that considerable scope exists for tax revenue expansion, including through conversion of some customs revenues into tax revenues. In the middle-income countries, one would look for scope to increase the share of direct taxation in the tax effort, as well as ensuring that in the process of economic transformation, overall levels of taxation are roughly comparable to countries with similar income levels.

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Algeria	-	9.4	10.6	10	9.5	8.5	8.5	8.1	8.7	11.2	11.4	9.6
Egypt	-	13.4	13.4	13.9	14	15.8	15.4	15.4	15.7	12.4	14.9	14.4
Lebanon	-	-	14.4	15.1	15.7	14.5	14.6	14.8	16.5	17.4	18.4	15.7
Morocco	24.1	22.8	22.9	19.7	19.9	21.4	22.2	24.8	25.5	25.9	26.1	23.2
Syria	9.8	9.1	10.2	10.6	11.6	10.8	11.6	10.9	8.4	12.2	11.6	10.6
Tunisia	-	21.6	21.5	20.6	20.7	21	20.5	20.8	-	-	-	21
Average	16.95	15.26	15.5	15.0	15.2	15.3	15.5	15.8	14.96	15.82	16.48	

#### Table 7: Tax revenue (percentage of GDP) in MICs, 2000-2010

Source: ibid.

When it comes to total revenue, it is clear that middle-income Arab countries can aim for revenue-to-GDP ratios that are roughly comparable to those in Latin America & the Caribbean, as well as Southeast Asia. However, tax revenues are much lower in Arab countries, even compared to relatively poor tax performers. Syria, for example, has lower tax revenue than the Dominican Republic (10.6% and 14.8%, respectively). Egypt and Lebanon have lower tax revenues than Brazil (14.4% and 15.7% versus 15.9%, respectively), itself a poor performer when compared to countries like South Africa and even Kenya (26% and 17.5%, respectively). This indicates that considerable scope exists across the Arab region to undertake fiscal reform, and to link it more with overall economic performance by relying more heavily on tax revenues. This reform would facilitate positive structural transformation and at the same time reduce distortions inherent to excessive dependence on non-tax revenues.

### Potential for expenditure switching policies

The other source of fiscal space—expenditure switching policies—requires an examination of the composition of government expenditures. Unfortunately, we do not have access to this data for all countries in the region. Therefore, we can only report trends for a few countries that differ markedly from each other. In Egypt's case, the bulk of spending is on general services and social protection. Economic services and the provisioning of key public goods like health and education have seen their low shares steadily decline over time. In Jordan, the lion's share of expenditure is on general

services, defence, and social protection. Again, there is extremely low spending on economic services, health, and education. In Tunisia, on the other hand, expenditure on education and general and economic services is significantly higher than average for Arab MICs. In the two GCC countries for which data is available, there is significant spending on public goods provisioning, while at the same time high levels of expenditure on defence and general services are maintained. In both these cases, this is possible because of the relatively high share of government spending in GDP.





Source: IMF GFS online datasets.

There is sufficient fiscal space in the non-GCC countries for some expenditure switching, particularly into the provision of public health and education. The high levels of expenditure on social protection do not appear to yield much in the way of development payback. This is not so much because such expenditures are in and of themselves undesirable—indeed, recent global experience suggests that social protection serves as a key element of countercyclical expenditure— but because what passes for social protection expenditure in these countries is not fit for the purpose. Such expenditures suffer from poor programme design; there is therefore a great margin for improvements in their efficiency and effectiveness. This is particularly the case with regards to fuel subsidies in Egypt, where several recent World Bank studies demonstrate its poor targeting.

### Fiscal space for public investment

Annex table 30 presents the economic classification of government expenditure for key countries in the region. Most have extraordinarily low levels of public investment relative to the total size of government spending. Public investment in most countries is less than 7% of GDP. Only Algeria, Libya, Qatar and Djibouti all of which have relatively small private sectors and very little non-oil private investment, have public investment that exceeds 10% of GDP. There is no chance that current levels of public investment, even with heroic efforts at capital portfolio restructuring, will be sufficient to undertake the required structural transformation.

In most Arab countries, there is a tough choice to be made between subsidies and public investment. This is particularly true for countries such as Sudan, Yemen, and Egypt that face an infrastructure deficit (particularly in rural areas). In countries where the public sector already accounts for over one third of GDP, there is a clear need for demonstrated improvements in the allocation of public expenditure priorities to reduce the need for an increase in revenues. If increased revenues are raised through taxation, this may reduce private consumption, while if they resort to borrowing, it can reduce funds available to private investors.

The standard measure of the ability of a country to finance public investment through domestic borrowing is the extent to which such expenditure increases interest payments or claims against future revenues. The most apparent indicator of such affordability is the magnitude of interest payments in current expenditure, which is fairly low for most countries of the region. The three countries where such expenditures are in the double digits are Morocco, Egypt, and especially Lebanon. In the case of Morocco, the share of interest in current expenditure has been declining over time, including during the global financial crisis of 2008. Thus, all Arab governments other than Egypt and Lebanon can increase public investment levels through domestically financed public deficits.

Furthermore, debt-to-GDP ratios have declined for most highly indebted Arab countries, namely Lebanon (after debt rescheduling), Mauritania, and Sudan. Syria's debt reduction (most of which was owed to the former Soviet Union) was also quite significant.





Figure 32 shows the historical relationship between budget deficits and inflation in MICs and LDCs (excluding Algeria). It can clearly be observed that the two are not positively correlated, with higher levels of deficit actually associated with lower levels of inflation. This is understandable, given the cost-push character of inflation in these countries. There is no reason for excessive fiscal austerity for fear of setting off an inflationary spiral.



### Figure 33: Gross National Savings (% of GDP), 1990-2000 and 2001-2010

Source: WEO online datasets.

Note: Arab countries included are Algeria, Libya, GCC (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, UAE), MICs (Egypt, Jordan, Lebanon, Morocco, Syria, Tunisia) and LDCs (Sudan, Yemen, Djibouti and Mauritania).

We see in figure 33 that the savings rate for Arab countries is significantly below the level required to support a development transformation in LDCs and MICs (minus Algeria). Moreover, savings rates are not only low, but have declined for the MICs and remained stagnant for LDCs. Oil-rich countries, on the other hand, have seen their savings rise substantially since 2000, along with rising oil prices. Their high savings numbers simply show a low investment propensity in the non-oil sector and the fact that, in more recent times, these countries are channelling less oil wealth to consumption and more to SWFs and/or public investment (as in the case of Saudi Arabia in 2011).

Note: Arab oil poor included are Djibouti, Comoros, Egypt, Jordan, Syria, Morocco, Lebanon, and Tunisia



# Water Security, Food Security and Climate Change

# Water is an increasingly binding constraint on Arab development

The Arab region has the highest level of aridity in the world, with access to only 0.5 % of total renewable water resources, while accounting for 10% of the total area and more than 5% of the world's population. Most Arab countries either depend on transboundary water resources or on non-renewable aquifers and suffer from excessive water scarcity (Figure 34), defined as the ratio of consumption of water to the availability of sustainable water resources. Eight countries (Jordan, Bahrain, Libya, Yemen, Saudi Arabia, Qatar, UAE, and Kuwait) suffer from 'absolute water scarcity,' with less than 165 cubic meters per capita.



Figure 34: Total renewable water resources per capita (2008) (m3/inhab/yr)

Source: Authors' estimates based on FAO STAT.

In Yemen, the situation is particularly problematic. Water per capita is less than 100 cubic meters per year, less than 2% of the world average. With no significant perennial sources of surface water, Yemen relies on over-exploitation of groundwater, extracting water at a rate three times its replenishment from the limited rainfall. In the Sana'a basin, home to over 10% of the country's population, the water table is falling by 6 to 8 meters a year. The falling water table has encouraged the use of oil digging rigs, further exacerbating the unsustainable situation. By 2009, Yemeni Water and Environment Ministry officials estimated that more than 800 private drill rigs were operating in the country, in contrast to only three rigs in Jordan. In the meantime, the concentration of minerals in the water has increased, leading to deterioration in water quality. The resultant water shortages and increased cost of water have forced thousands of families to spend a third of their incomes on purchasing water. Meanwhile, cultivation of qat, a water-intensive crop that itself uses up to 40% of the water, has increased seven-fold since the 1970s.<sup>35</sup>

The depletion of the Sana'a Basin, which could lead to the capital city running out of water, cannot be blamed entirely on limited precipitation. Rather, multiple factors are at play: the confluence of limited rainfall with the failure of water institutions (exemplified by the uncontrolled digging of wells), mismanagement of the agricultural system, and fast population growth.

Water scarcity is often exacerbated by conflict and occupation. As reported by OXFAM, most Palestinians who rely on farming and herding live in Area C of the West Bank, where Israel maintains full military and civil control. Illegal access restrictions prevent them from reaching critical water sources, while they are prevented from digging new wells and building water-harvesting cisterns, and have what little infrastructure they manage to build destroyed by the occupying power (see Box 6 for further details).



### Continued theft of Palestinian water and land in the Palestinian Jordan Valley

The Palestinian Jordan Valley, which covers around 28.5% of the West Bank, has rich agricultural land, a temperate climate, and abundant water resources, offering enormous agricultural, economic and political potential. For the Palestinian community, adequate access to water is paramount to survival; 42% of Palestinians in the Jordan Valley depend on agriculture or animal husbandry as their main source of income. Without water, both of these professions would disappear.

Prior to 1967, the Jordan River was a prominent source of water for the whole of the Jordan Valley. Immediately after the occupation, Israel took complete control of all water sources in Palestine and completely denied Palestinians access to the Jordan River. In 1993, the implementation of the Oslo Accords allowed Israel to strengthen its means of oppression in the region. Since then, Israel has continued to deny Palestinians the right to water by demolishing Palestinian wells, cisterns, and other water sources. In 1967, there were 774 operational wells; by 2005, Israel has reduced this number to 328. From January 2009 to August 2011, the government demolished 44 cisterns and rainwater collection structures in Area C, the vast majority of which were in the Jordan Valley. The demolitions affected 13,602 Palestinians and displaced 127 people. Beyond Israel limitations on access to surface water sources, Palestinians are further denied the ability to construct new water structures. Consequently, approximately 67% of the Palestinians in the Jordan Valley do not have water available to them and are forced to purchase Israeli water tanks that are extremely expensive, resulting in some households spending more than 50% of their income on water alone.

Meanwhile, the 9,400 Israeli settlers alone consume around 45 million cubic meters of water a year – a third of the quantity of water allocated to the 2.5 million Palestinians living in the West Bank. In other words, the average Israeli settler's water usage is 18 times greater than the average per capita water usage available to West Bank Palestinians (see Table 1). Thus, while Israeli settlers are provided with large quantities of heavily-subsidized water for agricultural development and personal use – to the extent that every settlement includes large swimming pools--the restrictions on the Palestinian water usage are so extreme that many Palestinians have seen their springs and wells run dry, forcing them to Israeli settlers and increased the amount of water allocated to Israeli agriculture in the Jordan Valley. Palestinians will have even less access to the scarce land and vital water resources. Their livelihoods will be threatened even further, and their dispossession increased.

#### Table 1: Water Allocation Comparison in the Jordan Valley (liters/day/person)

Table 1: Water Allocation Comparison in the Jordan Valley (liters/day/person) Israeli settlement	Palestinian community
Yitav (317)	Ras al-Auja (30)
Argaman (411)	Zbeidat (81)
Mechola (386)	Ein al-Beida (117)
Niran (433)	Al-Auja (82)
Ro'l (431)	Al-Hadidiya (20)

Sources: Ma'An Development Center. Parallel Realities: Israeli settlements and Palestinian communities in the Jordan Valley. 2012. <www. maan-ctr.org/pdfs/FSReport/Settlement/content.pdf>. OXFAM based on, B'Tselemen, 2011 and the Association of Civil Rights in Israel.

#### Figure 35: total renewable water resources per capita, 1958-2007



Source: FAO database.



As is evident from Figure 35, the region as a whole has witnessed supplies of renewable water resources per capita fall from 3600 m3/year in 1960 to about 1000 m3/year in 2000. Water availability is projected to fall to 500 m3/year by 2025, simply on account of population increase. The situation is likely to be more dramatic once the likely impact of climate change and increasing consumption patterns are taken into account.

Most Arab countries have established improved drinking water sources for the majority of their populace (Figure 36). The exceptions are significant, however, with more than 40% of the population in Sudan, Yemen, and Mauritania and more than 70% of the population in Somalia not having access to improved drinking water sources. Furthermore, inequalities between urban and rural communities are most apparent not only in certain LDCs (Djibouti, Somalia, Yemen) but also in Iraq and Morocco, and, to a lesser extent, Tunisia. Yet, even those numbers do not reveal the full picture, since there may be differences within urban communities themselves – such as between urban metropolitan communities and urban ghettos.

### Figure 36: Percentage of population without access to improved drinking water sources: Total, Urban, and Rural Communities



Source: WHO, 2010 (except Tunisia, 2008).

Access to drinking water sources does not guarantee access to clean drinking water or continual access to water. In Algeria, for example, although 83% of the population has access to improved water sources, the regularity of service varies considerably, with 40% of the population not receiving a daily supply and only 10% having access throughout the day.<sup>36</sup>

Significant potential for water efficiency and water conservation exists in the upkeep of infrastructure, and in the development of better networks, installation of water saving devices, reuse of treated wastewater, and encouragement of personal conservation techniques.

However, the main source for water waste is in agriculture, which accounts for more than 86% of the regional water withdrawal with very low water use efficiency.<sup>37</sup> In Libya, Saudi Arabia, Oman, UAE, Tunisia, and Yemen, more than 70% of the land under irrigation is supplied by groundwater. The consequent alarming rate of groundwater withdrawal has led to overexploitation of aquifer systems, causing saltwater intrusion.<sup>38</sup>

There have been some improvements in irrigation efficiency in the region. Tunisia, for example, has adopted efficient irrigation techniques in 50% of the irrigated area by providing financial incentives.<sup>39</sup> Nevertheless, water loss from leaks and evaporation is 40%,<sup>40</sup> and irrigation water loss remains at 65% regionally.<sup>41</sup> While conservation measures to reduce water loss by 80% are technically available, they may not be financially accessible. As reported by IFAD, "Poor farmers are unable to invest in new technologies to improve their resource base, so they are forced to adopt survival strategies detrimental to the long-term sustainability of drylands."<sup>42</sup>

Irrigation water subsidies have been justified on the grounds that they provide aid to the poor. However, newly accumulated data reveal that the rural poor, like their counterparts in urban areas, do not necessarily benefit from such policies. In Egypt, 75% of water subsidies benefit the richest 50% of households, whereas only 25% benefit the poorest 50%. Irrigation subsidies are not justified as a policy instrument for the redistribution of income, as they mainly benefit the rich.<sup>43</sup>

Excessive depletion of virtual water is another aspect of water mismanagement. Virtual water is the volume of water required to produce a commodity or service. The Arab region, one of the world's major destinations of imported virtual water, still exports virtual water through various water-rich crops. For example, Egypt ranks as one of the world's largest producers of rice and sugar cane, both of which are heavily water-intensive crops, and thus is exporting virtual water.

The region is most vulnerable to climate change on account of its water scarcity. The Inter-governmental Panel on Climate Change (IPCC) estimates an increase in temperature of up to 2 degrees Celsius in the next 15-20 years, and over 4 degrees Celsius by 2100. The consequence would be a mean decrease in precipitation of 30% in most of the region by 2050. It is critical for Arab governments to build reserves, increase conservation efforts, and begin integrated adaptation mechanisms, while simultaneously advocating for a serious reduction in greenhouse gas emissions. The approaching water crisis risks further marginalizing the poor if affordable and accessible water is not treated as a human right.

# Food Security: Livelihoods, Agriculture, and Nutrition

The region faces food security challenges, evidenced by the continued decrease in per capita land and water availability, the increase in food prices, hunger and malnutrition, and the insecure livelihoods of small farmers.

Food prices increased to a record level in 2007-2008. The upward price trends have resumed since late 2010 and appear to herald a new 'normal' of high food prices, driven by a confluence of factors, namely: (1) strong linkages among international markets of oil and food; (2) increased demand due to rise in global population and an increased share of meat, egg, and dairy products in food baskets; (3) droughts in grain-producing areas; (4) competition of biofuels with food for feedstock and arable land; (5) weak and ill-conceived agricultural policies in most developing countries; and (6) speculative trading in agricultural commodities.<sup>44</sup>

In addition to these regional and global economic factors, none of which have changed,<sup>45</sup> there are the physical and environmental constraints of climate change, reduced groundwater irrigation capacities, desertification, and reduced soil fertility.<sup>46</sup> Long-term structural factors that drive global food insecurity are even more pronounced in the Arab region, with its high population growth rates and per capita consumption levels on the demand side, and shrinking levels of arable land and renewable water resources on the supply side.<sup>47</sup>

Hunger and malnutrition, which remain serious problems in several Arab countries, are "primarily a problem of a lack of access to productive resources such as land and water, of unscrupulous employers and traders, of an increasingly concentrated input providers' sector, and of insufficient safety nets to support the poor."<sup>48</sup> Attention needs to be paid both to the imbalances of power in the food systems and to the failure to support the ability of small-scale farmers to feed themselves, their families, and their communities.



The increase in food prices did not result in increased income for the farmers themselves. Rather, as happens all too often, the increase in food prices resulted in increased financial pressure on farmers, notably small-scale farmers. The spike in food prices affected both imported and local food items. Egypt, for example, recorded one of the highest increases in food prices in the world. Paradoxically, the prices of locally produced food experienced an even greater increase than imported food.<sup>49</sup> (Refer to Box 7 for more details.)

In response, governments have continued to focus on subsidies, a short-term bandage, rather than use subsidies as part of a holistic approach to food security, agricultural development, and farmers' livelihoods, to insure household food security by providing basic food commodities at fixed and affordable prices to the population.

In the 1980s and 1990s, the ever increasing fiscal cost of food subsidy programmes and the pressure of international financial institutions led most countries to reduce or eliminate subsidies. Food subsidies were progressively eliminated in Algeria (1991-1993), in Yemen (1998-2000), and almost eliminated in Jordan (1990-2000). In other countries, the risks of social instability obliged the governments to adopt a gradual approach to reducing food subsidies, without significantly reforming the system. Egypt, for example, reduced progressively the number of beneficiaries of ration cards, the quantity and the number of subsidized commodities and the quality and the availability of subsidized bread. The Tunisian government adopted a "self-targeting approach" under which subsidized products are available to all, but are selected specifically to discourage the rich from consuming them. Morocco adopted the same approach via subsidizing a low-grade quality of flour.

However, these policies to eliminate subsidies and reduce costs were not accompanied by sustainable safety net programmes, and large portions of the population risk falling into poverty as a result of rising food prices. Food subsidies suffer from a number of shortcomings. For example, in Egypt, a significant proportion of the poor and the most vulnerable do not benefit from food subsidies (Refer to Box 7). In Morocco, according to an April 2008 estimate of the Haut Commissariat au Plan, the wealthiest 20% of the population receives more than 40% of the benefits of food subsidies, while the poorest 20% receives less than 10%.



### The Impact of Soaring Food Prices: Egypt

As rising global food prices continue to threaten to push millions of people into extreme poverty, Egypt grapples with an insurmountable budget burden, against the threat of further unrest and bread riots, lest it discontinue the food and fuel subsidies on which the livelihoods of so many Egyptians depend. As one of the largest importers of food, and the largest importer of wheat in the world, Egypt is among the countries with the highest level of spending on food subsidies. In the context of the 'silent tsunami' of the 2008 crisis, preceded by the devaluation of the Egyptian currency, staggering inflation rates, with Egypt recording one of the highest increases in food prices in the world, meant that the rising importance of food subsidies became inevitable. During this time, the purchasing power of poor households decreased by 10% (in 2007); an extreme poverty rate which stood at 16.7% in 2000 reached 19.6% by 2004/5, and 21.6% by 2008/9.

The increase in consumer food prices in Egypt was far from a simple transmission of international food prices. Paradoxically, the prices of local products experienced even a greater increase than imported products. The highest increases were recorded for dairy products (82%), fruits (139%) and vegetables (102%), the three food groups in which Egypt is actually self-sufficient. This had large negative ramifications on the composition and quality of the Egyptians' diet. The poor, who were disproportionately affected by this price rise, shifted their consumption increasingly towards cereals such as subsidized bread.

As a result, Egyptians have witnessed a remarkable increase in their dietary caloric intake over the recent years, but the nutritional value has decreased markedly, as the composition of this energy supply has been overwhelmingly dominated by cereals, making up 60% of the Daily Energy Supply (DES) in Egypt (according to HIES data). As subsidized foods consist mainly of energy-dense and micronutrient poor commodities (sugar, oil, bread), micronutrient deficiency, or "hidden hunger", still remains a serious problem. The prevalence of obesity in adults has become very high, especially among women. In addition, according to WHO, one in every two children under the age of five suffers from some degree of anaemia, and the share of stunted children, an indication of chronic malnutrition, is increasing at an alarming rate.

Source: El-Laithy, 2011. and Abi-Samra and Hachem, 2011.

Nevertheless, food subsidies have remained the only substantial programme that protects the poor and the most vulnerable populations from food insecurity. Other safety nets and poverty and food security programmes are rare and marginal. In Egypt in 2004, for example, the Social Fund for Development (SFD) and the Cash Transfers programmes represented 0.1 and 0.2% of GDP, respectively, compared to 1.7% of GDP spent on food subsidies.

Between 2005 and 2008, subsidies increased significantly in most Arab countries. Measured in absolute terms (local currency), food subsidies have more than doubled in most of the countries. They increased by 310% in Tunisia, 309% in Jordan, 205% in Morocco, and 75% in Egypt. As a share of GDP, between 2005 and 2008, food subsidies increased from 0.7% to 1.2% in Morocco, from 0.7% to 2% in Tunisia, and from 0.6% to 1.7% in Jordan.

While governments continue to focus on subsidies, the skewed distribution of land ownership, which has a major impact on the livelihoods of the rural poor, has received little attention. In Morocco, for example, while the 60% of small farmers (i.e. with holdings of less than 5 hectares) own less than 20% of the land area, the top 20% hold 58% of the land area.<sup>50</sup> Lebanon has one of the most unequal land holdings, with 50% of the farmland owned by 0.1% of the people.

There have been some recent positive signs of increased attention to rural development in certain countries, including Saudi Arabia and Morocco. In Morocco, the Green Plan, which became operational in 2010, intends to support small, disadvantaged farmers. While it is too soon for an assessment of its impact, the neglect of the threat of extreme weather conditions, such as unexpected cold spells, risks undermining its effectiveness. Already in February 2012, almost all of the country's potatoes and most of its sugarcane, two major primary export commodities, were impacted by a sudden cold blight.<sup>51</sup>

A more fundamental policy change has come from GCC countries. Driven by increasing water scarcity, Saudi Arabia and other GCC countries have turned to foreign land acquisition to secure food supplies through direct ownership.<sup>52</sup> These farmland investments can be pro-poor, if they stimulate agricultural productivity, overhaul national agricultural research systems, and increase employment and skills in the agricultural sector and the non-farm economy. Impact of such investments on rural poverty in the host countries is also a function of whether they promote large or small farmers and the irrigation systems they use.<sup>53</sup>

# Climate Change and Unsustainable Consumption: Threats to Environmental Security

Climate change adversely affects water and food security. Concerns about water and food security were already major factors in social contestation movements in the Arab region.<sup>54</sup> Some of the recent civil protests in Jordan, for example, may have been partly sparked by tribal grievances over lack of access to water resources for local livelihoods and agriculture.<sup>55</sup> In Syria, severe and recurrent droughts have contributed to the wave of internal dispossession impacting tens of thousands of farmers throughout the countryside. Human security in the coming decades will be greatly affected by the implications of living in a resource-constrained region, with the cumulative impact of ecological change increasing the frequency and magnitude of droughts, floods, and other disasters, all of which largely affect the poor. Decades of exploitation have left the region's resources at risk as demands continue to grow and ecological capacities continue to shrink.

A key concept in the analysis of the interaction of rising consumption and carrying capacity of the environment is the ecological footprint and biocapacity. Ecological footprint, or human demand, is defined as population multiplied by consumption per person, multiplied by resource and waste intensity. Biocapacity is the land area multiplied by its bioproductivity.<sup>56</sup> We enter an unsustainable situation when the ecological footprint exceeds biocapacity, or, in other words, when the demand exceeds the supply.



All Arab countries have an ecological footprint greater than their domestic biocapacity, though individual rates of consumption vary widely.<sup>57</sup> Residents of the United Arab Emirates currently have the world's highest average ecological footprint, at 10.7 gha per person (2007 data), with Qatar (10.51) and Bahrain (10.04) among the world's highest (Figure 37). In Saudi Arabia and Qatar, the footprint is more than 150 percent larger than the biocapacity; in other words, the demand exceeds the available supply by more than 150 per cent. The lowest biocapacity relative to population is found in Jordan (0.2 gha), Iraq (0.3 gha) and Kuwait, Libya, and Lebanon (all at 0.4 gha).<sup>58</sup>





Source: Global Footprint Network.

Examining these features historically (1961-2007, Figure 38) reveals a problematic trend: the land cannot sustain the demands incurred upon it. The largest increase in footprint per capita is in Saudi Arabia (+373). The greatest loss in per capita biocapacity is in Qatar (-95). Even in countries where individual consumption rates declined (Jordan, Algeria, Mauritania, Sudan, and Yemen), i.e. where individual consumption patterns did not increase with population growth, the biocapacity available per person still declined significantly. In all cases, the trend is unsustainable.





Source: Global Footprint Network.

Climate change exacerbates underlying challenges in scarcity of resources and expanding consumption trends. The Inter-Governmental Panel on Climate Change (IPCC) Fourth Assessment Report (2007) estimated an increase in temperature in the Arab region of up to 2°C by 2030 and 4°C by 2100, with a reduction of water run-off of 20-30% by 2050, owing to rising temperatures, less precipitation and the likelihood of more frequent droughts. Meanwhile, IPCC projections foresee risks from rising sea levels in the coastal communities of the Egyptian delta, where a 0.5-meter rise of the sea level could displace 2-4 million people by 2050. There are also risks to other coastal populations, including Bahrain, the only small island-state in the region. <sup>59</sup>

Over the last century, the Arab region has experienced an increase in warming of up to 0.5°C, with significant increases of 0.5° to 3°C in Morocco, Algeria, Tunisia, and Saudi Arabia, while Somalia has experienced decreasing mean temperatures of 0.5°C. In Sudan, precipitation has decreased by up to 10% in recent decades.

The convergence of scarcity of resources, increased consumption demands, and strains on the ecology of the planet creates risks to peace and could trigger new conflicts or exacerbate existing tensions. The Arab region is at particular risk, with prevailing conditions of water and food insecurity, high levels of poverty, and increasing cross-border and internal competition over land use and shared water resources.

Agricultural yields, especially in rain-fed areas, are expected to fluctuate more widely over time and lead to lower, long-term averages. Some estimate that for the Arab region as a whole, agricultural output could decrease 21% in value terms by 2080, with up to a 40% decrease in parts of North Africa.

Climate change affects four key elements of food and water security: availability, access, utilization, and stability. It brings risks to availability of arable land and rural livelihoods through a decline in water, desertification, droughts, and floods. It is one culprit for increasing food prices and market volatility and increasing poverty in rural communities. Climate change complicates issues of utilization, as it exacerbates pre-existing social competition over scarce resources and induces new conflicts within society. Finally, it could place additional strain on social welfare, human health, and social safety nets. In particular, climate change will make vast populations increasingly food and water insecure.

It is a fundamental issue of national and regional security for Arab governments to recognize the threats of climate change, and make the issue central to their development policies. It can no longer be sidelined. Conservation efforts must be increased to build ecological resilience, and strong actions need to be implemented immediately to decrease greenhouse gas emissions and increase production of energy from renewable sources.