Poverty, Growth and Inequality in Some Arab Countries

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1. Introduction

Poverty eradication is the most important goal of national and international development action and remains a priority and a challenge for most of Arab countries. According to the Global Human Development Report, poverty limits human freedom and deprives a person of dignity.

Improving living standards is a major objective of economic development. Economic growth is generally considered to be a necessary condition for increasing welfare. Yet it has been increasingly recognized that growth alone may not be sufficient to bring about substantial improvements to living standards to all segments of Thus, in many developing countries, growth-promoting policies are population. supplemented with policies specifically designed to improve the status of low income and vulnerable groups. Assessing the effectiveness of both types of policies in raising welfare, and formulating and implementing the latter policies, requires an information base that goes well beyond the standard indicators of a country's macroeconomic performance. Identifying who are the most vulnerable and where do they live, what are their socio economic characteristics are the first steps in designing social and economic policies aiming at raising living standards and enhancing equity. Change in inequality has frequently been associated with development. Nowadays, it is believed that inequality can hurt development, implying that it is important to fight inequality in order to achieve inclusive growth and development. Issues concerning levels of inequality, changes in inequality, and their determinants remain at the heart of the development agenda both in the theoretical debate and policy discussions.

Accordingly, in designing poverty reduction strategy, five main stages should be followed:

1. Identify who are the poor, prevalence, gap and severity.

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- 2. Identify the main characteristics of the poor (place of residence, education, employment,..)
- 3. Identify the main reasons of poverty, impact of interventions on poor and equality of income distribution.
- 4. Put short, middle and long term strategies and polices to alleviate poverty
- 5. Monitoring and evaluation the impact of policies and programs on the welfare levels.

2. How can we define Poverty?

There is no uniform approach to defining, identifying or measuring poverty. The poverty debate is concerned with the different potential causes of poverty, and the various ways by which poverty can be measured and compared, nationally and internationally.

Poverty can be seen as a state of lacking economic, political and social assets, as well as personal skills.

- Economic and physical assets include land, livestock, housing, good health, labor and other sorts of financial capital that provide basis of generating income and production, either now or in the future.
- Human assets include skills and talents. So people's ability to attack poverty can be strengthened by education and training that opens a wider range of opportunities.
- People's ability to draw on relationship with other people on the basis of trust is a *social asset*. People borrow from one another to meet immediate needs for food or faced with an illness. Such relationships of trust can be the basis of community organizations to take collective social and political action.

The monetary approach is the most traditional and widely used approach in identifying and measuring poverty. It defines poverty based on individual income or consumption levels, makes use of a standardized poverty line, and reduces poverty reduction strategies to increasing individual income levels.

Standard monetary approaches to poverty which focus on increasing the individual income level ignore the fact that some household members are discriminated against and may not be given a proportional share of household income. For instance, when children work, a family's income often rises above the poverty line, however these

children have no decision-making power regarding how this money is spent. Despite the fact that these children are deprived, according to the traditional income approach, they would not be considered poor.

Furthermore, the monetary approach neglects to note that human well-being also depends on non-market-based goods. Access to basic services and a safe environment are generally more dependent on the level of local provision than on household income. Thus, individuals cannot purchase these goods even if they have sufficient income.

Over time, several development organizations and scholars have argued that poverty is a phenomenon that cannot be defined solely in monetary terms. They recognize that poverty is multifaceted and cannot be measured and resolved through purely monetary means. In particular, organizations working in human development view poverty as a problem that requires comprehensive strategies in order to effectively address its many features. These recent developments augment the monetary approach to measuring poverty by considering other non-monetary factors, including household structure, gender, and age. This approach considers the social context as a whole, including the distribution of power and resources.

Accordingly, poverty could be measured using the two approaches:

- The first approach is the monetary approach, which uses an income-based poverty line to identify poverty.
- The second approach is the non-monetary approach (deprivation approach), which establishes a set of basic services and capabilities and then measures the number of individuals who do not have access to the basket of services and capabilities.

The monetary and non-monetary approaches to defining poverty should be seen as complementary approaches that, used together, provide a richer range of information than either approach alone.

3. First approach: Income Poverty

The monetary approach views poverty as income (or consumption) deprivation. Hence, poverty is caused because some people have low income levels that cannot satisfy their minimum basic needs as defined by the poverty line. The poverty line is the cost of basic food and non-food needs that reflect the consumption patterns of the poor. The consumption-based measure is produced according to internationally accepted standards and is based on data collected in Household Income, Expenditure and Consumption Surveys. The focus is placed on consumption – rather than income – because it is much easier to measure. Both food and non-food items are included, but not all public services are not addressed.

The poverty line in the developing countries is constructed using the 'cost of basic needs' methodology. This methodology yields household-specific, regionally consistent, and unbiased absolute poverty lines (World Bank, 2007). Two poverty lines were constructed to measure poverty. One is based on the cost of a minimum diet, called the food poverty line (*Extreme poverty line*) and individuals who live in households below this line are considered extremely poor. The second poverty line constructed combines the cost of food with essential non-food expenditures. This is referred to as the *total poverty line* and individuals in households that spend less than this amount are considered poor

In order to classify households into poor or non-poor, household's consumption is compared with the constructed poverty line, the household's consumption includes:

- Cash expenditure on food, clothing, rent, education, health and all other consumption goods and services.
- Non cash expenditure:
 - Imputed rent for households that do not pay rent,
 - Value of goods consumed by the household from own production,
 - Value of goods and services acquired by the household in kind.

3.1. Income Poverty among Arab countries

According to the latest surveys among Arab countries, Figure 1 shows the prevalence of income poverty based on the national poverty lines. On average, one person from every 5 persons in Arab countries is poor. The figure shows that poverty rate varied from a very low head count ratio amounted to only 3.8% in Tunisia to 42.2% in Djibouti. Poverty rates in Palestine, Iraq, Egypt, and Yemen exceeds the overall average.



Figure 1: Poverty rates based on national Poverty lines (2000-2013)

Source: Countries calculated by Author (Egypt, Jordan, Lebanon, Syria, Oman) and others from Global Human Development Report 2014, UNDP, Statistical Tables, compiled by author of the report

3.2. Income Poverty Line for International Comparisons

The food poverty line (extreme poverty line) is the equivalent of spending one US dollar per person per day, as well as two US dollars a day, where the US dollar is evaluated using **purchasing power parity** (PPP). The World Bank publishes data and updates the assessment of the national currency of most countries in the world, including the equivalent purchasing power using a basket of food and non-food items collected and evaluated in the period 1993 - 1996 and then calibrate it for 1993 constant dollar prices.

Although using 1\$/day per person or 2\$/day per person as poverty lines facilitate the comparisons between worldwide countries, they have some disadvantages. They ignore differences in consumption patterns and prices across regions, they may not account for the differing "basic needs" requirements of different household members, for example, young versus old, male versus female. They ignore "economies of scale" within households; where non-food items can be shared among household members, and finally estimating of PPP is based on baskets that do not reflect the consumption pattern of the poor.

According to the above reasons, these poverty lines are used only for international comparisons and do not used for targeting or for implementing any interventions for selected groups.

Figure 2 presents the prevalence of poverty based on 1.25\$ per person per day among some Arab countries. The figure shows that poverty rate reached the highest values among Mauritania (23.4%), Djibouti (18.8%) and followed by Yemen (17.5%). On the other hand, there are some Arab countries, their prevalence of poverty almost trivial, as Qatar, Oman, Palestine and Jordan. However, these counties with no significant poverty rates based on 1.25\$ poverty line have a significant prevalence rates based on the national poverty line as shown in Figure 1. This confirms utilizing the national poverty line in targeting process.



Figure 2: Poverty Rates based on the International Poverty Line (PPP \$1.25/day)

Source: Human Development Report 2014, UNDP, Statistical Tables, compiled by author of the report

3.3. Inequality in Income Distribution and Public Services

The relative position of individuals or households in society is an important aspect of their welfare. In addition, the overall level of inequality in a country, region or population group is also in itself an important summary indicator of the level of welfare in that group.

Poverty measures focus on the situation of individuals at the bottom of the distribution. Inequality is a broader concept. It is defined over the entire population, not only for the population below a certain poverty line.

Inequality is measured irrespective of the mean or median of a population, simply on the basis of the distribution (relative concept). Inequality can be measured for different dimensions of well-being: consumption/expenditure and income, but also land, assets, and any continuous and cardinal variables. Gini coefficient is the most commonly used measure of inequality. Its value varies between zero, which indicates complete equality, and one, which indicates complete inequality. It measures the extent to which the distribution is far from that of total equality.

Figure 3 presents Gini coefficient for different Arab countries. The median value of Gini coefficient among the presented 15 countries reached 0.358. Country specific Gini coefficient fluctuated but it fell always between 0.30 and 0.41. The figure shows that Gini Coefficient ranged from a level of 0.30 in Lebanon to 0.41 in Qatar and reached its highest value 0.64 in Comoros. Although Qatar has the lowest poverty rate after Tunisia, it has the highest Gini coefficient (after Comoros).



Figure 3: Inequality in income distribution; Gini Coefficient in Arab Countries (2000-2013)

Although inequality in income distribution is important, inequality in access to public services is important as well. Although all Arab countries provide subsidized public education and health services, opportunities in access to such services are unequal.

The 2010 Human Development Report introduced an Inequality-adjusted Human Development Index (IHDI), where it takes into account inequality in each dimension of the 3 dimensions (Education, health and living conditions) of the HDI². All Arab countries suffer from declining HDI due to inequality, because of substantial inequality

Source: Human Development Report 2014, UNDP, Statistical Tables, compiled by author of the report

² Human Development Index (HDI): A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge and a decent standard of living.

across all three dimensions. While the simple HDI remains useful, it stated that "the IHDI is the actual level of human development (accounting for inequality)," and "the HDI can be viewed as an index of 'potential' human development (or the maximum IHDI that could be achieved if there were no inequality)."

Figure 4 presents the HDI for the Arab countries and the overall percentage loss³ in the value of the index due to inequality in its three dimensions. As expected, Gulf countries have the highest HDI, where they achieved a high level in education, health and particularly the standard of living. Qatar has the highest value in HDI among Arab countries followed by Saudi Arabia and UAE. On average, HDI among Arab countries reached 68.2.

Taking inequality in access to the three dimensions of HDI into account, Figure 4 shows that the average loss in the HDI due to inequality in all Arab countries is about 25%. Among Arab countries, losses range from 12% in Palestine followed by 19% for Jordan to 33% for Yemen and followed by Djibouti and Mauritania (35%).



Figure 4: HDI and overall percentage loss in HDI due to inequality in Arab Countries (2014)

Source: Human Development Report 2014, UNDP, Statistical Tables, compiled by author of the report

³ Overall percentage loss is the percentage difference between the IHDI and the HDI

Table 1 shows the percentage losses in each dimension of the three dimensions of the HDI based on the inequality in distribution of this dimension depending on data from household surveys estimated using the Atkinson inequality index.

Overall, Arab countries show the highest inequality in education dimension, followed by income dimension and health dimension. Losses in education dimension ranged from 7% for Palestine followed by Jordan (22%) to 47% for Yemen.

Regarding inequality in life expectancy at birth, UAE shows the least inequality in long and healthy life followed by Qatar and Lebanon, while Mauritania, Djibouti and Yemen show the highest inequality in healthy life, where life expectancy at birth index decreases by more than 30% due to inequality.

	% losses in life expectancy at birth % losses in education index		% losses in income index	
Qatar	6.0	-	-	
Saudi Arabia	8.7	-	-	
UAE	5.5	-	-	
Oman	7.0	-	-	
Lebanon	6.7	24.1	30.0	
Jordan	11.9	22.4	21.1	
Tunisia	10.6	0.0	0.0	
Palestine	13.1	6.9	15.0	
Egypt	13.4	40.9	14.2	
Syria	12.6	31.5	18.3	
Iraq	17.6	29.8	16.1	
Morocco	16.8	45.8	23.0	
Yemen	30.3	47.2	17.6	
Mauritania	36.6	45.9	21.2	
Djibouti	32.5	47.0	21.7	
Arab States	17.4	38.0	17.3	

Table 1: Percentage loss in HDI dimensions due to inequality in each dimension

Source: Human Development Report 2014, UNDP, Statistical Tables, compiled by author of the report

> Inequality in employment opportunities

Human Development Report (HDR) (2010) highlighted the achievements of six Middle Eastern countries in human development by placing them in the list of the top ten countries with fastest improvement in their Human Development Index (HDI) over forty years. Achievements have been made towards sustainable development covering the economic, social and environmental areas with clear implications in the daily life of Arab citizens in terms of health, education and economic conditions.

Within weeks of these important recognitions, Tunisia, one of the best performer was in full-scale popular revolt. In light of Tunisia's undeniable success in education, health, and economic growth, the three pillars of HDI calculus, *inequality in opportunities* was one of the reasons behind this uprising.

Inequality in employment opportunities is one of the main reasons behind the uprisings that spread across the Arab world in 2011, where unemployment is a major source of economic insecurity in most Arab countries. HDR 2014 show that the overall average unemployment rate for the Arab countries was 10.4% compared to 7.5% for the world at large.

National unemployment rates vary considerably among Arab countries, ranging from 0.4% in Qatar followed by 3.6 in Kuwait to about 23% in Palestine followed by Sudan (19.8%) and Tunisia (17.6%).

Trends in unemployment, coupled with population growth rates, indicate that Arab countries will need about 51 million new jobs by 2020. Most of those jobs will be essential to absorb young entrants to the labour force.

The rate and size of employment in the informal sector are also large, where workers lack contracts and benefits. The most recent UNDP figures available show that Algeria, Egypt, Morocco and Tunisia have very large informal sectors, comprised between 40 percent and 50 percent of the nonagricultural employment.

Pensions' value at least in middle income countries and least developing countries is very low and its pace of change does not match with inflation, pointing to the vulnerability of pensioners.

4. Main Characteristics of the poor

Poverty remains largely a rural phenomenon and households with larger size and more children and higher dependency ratio are more likely to be poor. Poor households characterize by lower participation rates, higher unemployment rates, with agricultural workers or in informal sector. Additionally, poor household are more likely to have lower educational attainment, higher dropout ratio and higher percentage of child labor. Regarding housing characteristics among poor households, most poor households in Arab countries have lower access to potable water and sanitation.

Fertility rates affects and are affected by poverty status of household. Large numbers of children and small numbers of working household members may provide at least a partial explanation of why particular households are poor. Poor people often want more children as they experience high infant mortality rates, and high underweight children. Children represent wealth, provide household labor and are the only form of social security available to parents in their old age.

Poor households depend largely on transfers, which make them vulnerable to external chocks and price changes.

Finally, education is the strongest factor contributed to poverty and it explains how poverty transfers from one generation to other generation.

5. Poverty Trends and Growth

To monitor progress in poverty reduction, it requires an examination of the determinants of the change in poverty over time (*Poverty trend*). It can be shown that such a change will have two components: an *economic growth component* (which is a multiplicative term of the partial response of the head-count ratio with respect to consumption expenditure and the per capita growth rate of real consumption expenditure); and, a *distribution of income component* (which is a multiplicative term of the head-count ratio to the Gini coefficient and the rate of change of the Gini coefficient). This raises the question of the bi-directional relationship between economic growth and the distribution of productive endowments in the population.

Poverty decreases as income increases while it increases as inequality increases, these two factors may work at opposite directions.

Growth does not explain all the variation in poverty, growth is necessary but not sufficient condition for poverty reduction. Change in poverty can be attributed to shifts in the mean per capita expenditure (Growth component) and /or shifts in the parameters of the Lorenz curve (redistribution component). These two components can act in the same or opposite directions.

Data of Egypt in 2000-2005 showed decline in mean expenditure - deterioration and increase in inequality indicator at the same time, which results increasing poverty. While in 2005-2008, it showed decline in mean expenditure and decrease in inequality indicator, however, the deterioration effect is greater than the distribution effect, which results also in increasing poverty.

Regarding poverty trend in Yemen, the data shows that during 1998-2005 the mean expenditure increases (growth effect) and on the same time the inequality decreases, which results in decreasing poverty.

Role of Redistribution component in Development

Redistribution as Compensation: redistribution of income may be necessary to compensate for the regressive distributional effect of growth.

Redistribution to Accumulate Assets in the Hands of the Poor: redistribution of assets may be beneficial to growth directly and indirectly.

But redistribution of current income may be harmful to growth (through disincentives to accumulate), e.g. if redistribution policies rely on taxation of current income.

Figure 5 presents the Growth incidence curves (GIC) for urban, rural and total Egypt for the period 2004/5 - 2008/9. All of GIC curve lies below 0, suggesting that in terms of ability to buy basic needs the purchasing power of the population fell. The top quintiles were the main losers.

From the poverty perspective the distribution has deteriorated sharply with losses for the poorest among the rural poor (those who already was barely meeting their basic needs).



Figure 5: Growth incidence curve for 2004/5-2008/9 - Egypt

Source: Author calculations

6. Second Approach of Poverty: Multidimensional Poverty Index (MPI)

The Global HDR 2010 introduced the Multi-dimensional Poverty Index (MPI), which complements money-based measures by considering multiple deprivations and their overlap.

The index identifies deprivations across the same three dimensions as the HDI and shows the number of people who are poor (suffering a given number of deprivations). The Multidimensional Poverty Index (MPI) identifies overlapping deprivations suffered by households in health, education and living standards.

According to Sen (1976), a general framework for measuring poverty should consist of ;

- 1- Selecting the space in which poverty is to be assessed
- 2- Identifying the poor by determining a cut-off for each space to distinguish the poor from non-poor, and
- 3- Aggregating the resulting data by an appropriate poverty index

There are several poverty measurement procedures that are consistent with this general framework.

The Alkire-Foster (AF) framework⁴ which was developed based upon the Foster-Greer-Thorbecke (FGT) poverty measures is the most widely used to assess multidimensional poverty. It is a fairly simple framework consisting of identifying the poor by assigning a cut-off in each equally weighted dimension (normally using a binary coding of indicators), and then using a counting approach to identify the multidimensionally poor by an arbitrarily chosen percentage of the overall score.

The AF method was adopted in the Human Development Report and published since 2010 through the HDR as a global MPI. This MPI was calculated for all countries using the same indicators and methodology extracted from national household surveys. MPI unlike the Inequality-adjusted Human Development Index—all indicators needed to construct the index must come from the same survey.

The household is considered poor if its weighted sum exceeds 33.3% poverty cut-off across the three dimensions of health, education and standard of living. The household is considered severe poor if its weighted sum exceeds 50% and considered vulnerable if its weight ranges 20% and 33.3%. The indicators are "years of schooling, child school attendance, child mortality, nutrition, electricity, improved sanitation, improved drinking water, flooring, cooking fuel, assets ownership" (Figure 6 and Table 2).

⁴ Alkire and Foster, (2007)

The MPI (referred to as M_0) is the product of two components: the headcount ratio (H) and the intensity of poverty (A). The headcount ratio, also called the incidence of multidimensional poverty, is the proportion of people, out of the total population, experiencing poverty according to the set weights, and the poverty cutoff. The intensity of poverty is the proportion of weighted indicators in which the poor person is experiencing deprivation; it is expressed in percent units. The intensity of poverty has the flexibility to reflect changes in the deprivation level among the poor (referred to as dimensional monotonicity), so if a poor family is deprived in an additional indicator the intensity of poverty increases.



Figure 6: Dimensions, indicators and weights of the MPI

Dimensions	Indicator	Deprived if	Weights
	Years of	No household member has completed five	1/6
Education	Schooling	years of schooling.	
	Child School	Any school-aged child is not attending school	1/6
	Attendance	up to class 8.	
	Child Mortality	Any child has died in the family.	1/6
Health	Nutrition	Any adult or child for whom there is nutritional information is malnourished.	1/6
	Electricity	The household has no electricity.	
Living Standards	Improved	The household's sanitation facility is not	1/18
	Sanitation	improved (according to MDG guidelines), or it	
		is improved but shared with other households	
	Improved	The household does not have access to	1/18
Drinking Water		improved drinking water (according to MDG	
		guidelines) or safe drinking water is more than	
		a 30-minute walk from home, roundtrip.	
	Flooring	The household has a dirt, sand or dung floor.	1/18
	Cooking Fuel	The household cooks with dung, wood or	1/18
		charcoal.	
	Assets	The household does not own more than one	1/18
	Ownership	radio, TV, telephone, bike, motorbike or	
		refrigerator and does not own a car or truck.	

Table 2: Dimensions, indicators, deprivation cutoffs and weights of the MPI

Source: Alkire et al., (2013).

The process of constructing MPI requires the availability of all the selected indicators for any household under study. Each indicator has a set cut-off point below which a household would be considered deprived in this indicator. Indicators are categorized into 3 dimensions and each dimension is given equal weight of one-third (1/3); this weight is then divided among the indicators within each dimension, so if a dimension included 2 indicators each is given a weight of one-sixth (1/6). The poverty cut-off is used to label a household as 'poor' or 'not poor, so if a poverty cut-off is (0.333) then the sum of the weighted indicators in which each household is deprived is compared to the poverty cut-off and accordingly the household is either 'poor' or 'not poor'. According to MPI methodology, a poor household implies that all its residents are poor.

Finally, constructing MPI requires the computation of headcount ratio (H) and intensity of poverty (A). Headcount ratio of multidimensional poverty is the proportion of persons who were categorized as 'poor'. The intensity of multidimensional poverty is the proportion of the weighted indicators in which, on average, poor people are deprived. The formula for Multidimensional poverty is M_0 =H x A.

Figure 7 shows the headcount ratio and the average intensity of multidimensional poverty among different regions in the world. Overall, 18.6 percent of population on Arab countries are deprived in at least three indicators of deprivation. The Arab Region's average intensity of 50.9 percent is below world average but above the average in both Latin America and Caribbean and East Asia and the Pacific.

There is no doubt that the MPI has many advantages not only compared to the conventional money metric poverty measures but also compared to other human poverty measures such as the aggregate-level Human Poverty Index which was also introduced and monitored by the UNDP's Human Development Report prior to 2010:

Total countries		0.317			0.532
South Asia	0.54	7			0.532
East Asia and the Pacific			0.137		0.465
Sub-Saharan Africa	0.645				0.582
Latin America and Caribbean			0.104		0.462
Central and Eastern Europe and the			0.03		0.421
Arab States		0.	.186		0.509
Average Intensity Headcounts	0.30	-0.60 - -0.50 - -0.40 -	-0.30 - -0.20 - -0.10 -	0.00 0.30 0.30 0.30	0.50 - 0.60 - 0.70 - 0.80 - 0.90 -

Figure 7: Headcount and Average intensity of multidimensional poverty among the World

Source: Alkire, S. and Robles, G. (2015).

- MPI can accommodate ordinal, cardinal and categorical indicators though dichotomizing the data into 'deprived' and 'non-deprived' according to the cutoff point;
- 2- MPI satisfies dimensional monotonicity so it detects when the poor person gets deprived in an additional dimension.
- 3- It can be decomposed by sub-groups (for example by urban-rural areas) which allows better understanding of the poor and facilitates targeting the poorest groups;
- 4- It can be broken down by indicator thus allows to know how much each indicator is contributing to the overall poverty level;
- 5- MPI is easy to compute and to interpret. (Alkire and Santos 2014)

Results for the Arab Region

According to the most recent data published by the OPHI, most middle and upper middle income Arab countries have a relatively low MPI. The Arab region however also includes some of the poorest nations in the world (Somalia, Sudan, and Mauritania). Since 2011, an increasing number of countries in the Arab region are suffering from ongoing civil wars, military conflict and occupation. The socioeconomic consequences of conflict include, inter alia, large internal population displacement and enlarged number of refugees and across countries. This is expected to have a powerful negative impact on poverty. However, data in Figure 8 does not capture this impact since most of the Arab countries for which data is available, especially those with highest intensity of conflict, do not have recent surveys.



Figure 8: Global Multi-dimensional Poverty Index, Arab Countries

Source: Alkire, S. and Robles, G. (2015)

Figure 8 show that Somalia has the highest intensity of poverty (63.3%) while the lowest intensity occurs in Jordan (35.0%). The Arab Region's (population weighted) average headcount rate however is significantly below world average (18.6% versus 31.7% in Figure 9). This translates into an average MPI of 0.10, which is significantly below the global weighted average, putting the region almost at par with Latin America and East Asia and the Pacific. The stylized fact therefore is that multidimensional poverty is low in Arab countries compared to other developing countries.

Figure 9: Population Weighted MPI and distribution of poor by HDI level for Arab Countries







Source: Abu-Ismail, et al., estimates based on Alkire, S. and Robles, G. (2015) and the Human Development Report (2014), compiled by author of the report

Table 3 reveals the distribution of the multidimensional poor and severely poor population in Arab countries, by country HDI classification, with the latter being a subset of the former. Of the Arab population in the sample (approximately 260 million, representing more than two thirds of the total Arab population), almost 52 million are multidimensionally poor while 30 million of those are in severe multidimensional poverty. Using the World Bank income based classification, the majority of the Arab multidimensional poor population belong to the lower middle-income group (LMICs). This distribution pattern, shown in table 3 is expected given the vast majority of the Arab population (75.4%) belongs to this group. The poverty rates for each of the income groups (i.e. dividing column 3 by 1) are 7%, 20.5% and 81.4% for the UMICs (Upper middle-income group), LMICs and LICs (Least-income group) respectively. The concentration of multidimensional poor population in lower middle-income countries is also confirmed globally, even after excluding China and India. (Alkire et al, 2013)

	•			•		•••	
	Total population (12 countries)		MPI po	MPI poor population		People in severe MPI poverty	
	(1) in Mils	(2) % of pop.	(3) in Mils.	(4) % of total Arab pop. (1)	(5) Mils.	(6) % of total Arab pop. (1)	
UMICs (4 countries)	55.5	21.2	4.0	1.5	2.9	1.1	
LMICs (7 countries)	197.6	75.4	40.6	15.5	21.5	8.2	
LICs (1 country)	8.6	3.3	7.0	2.7	5.7	2.2	
Total	261.7	100	51.6	20	30.2	11.5	

Table 3: Multidimensional Poor Population in Arab countries by Income Category

Source: Abu-Ismail, et al., estimates based on Alkire, S. and Robles, G. (2015) and the Human Development Report (2014), compiled by author of the report

Note: The World Bank income categories are based on July 2014 Gross National Income estimated using the Atlas Method. For the methodology please see World Development Indicators (World Bank 2015).

> Contribution of deprivation in dimensions of MPI

One of the important aspects in multi-dimensional poverty analysis is to determine the most contributed dimension to the overall poverty. This type of analysis helps in targeting process. Figure 10 presents the deprivation share of each dimension of the three dimensions of the MPI to the overall poverty. The figure shows that the most contributed dimension to multidimensional poverty in Egypt, Jordan, Palestine and Tunisia is the health dimension followed by education dimension. Living standard dimension is most contributed dimension in Mauritania, Yemen and Djibouti.



Figure 10: Contribution of deprivation in dimensions of MPI to overall poverty among Arab countries

Source: Human Development Report 2014, UNDP, Statistical Tables, compiled by author of the report

7. Recommendations

- There is a great need for a clear policy framework to guide poverty reduction efforts
- A review of national anti-poverty plans emphasizes the importance of developing a new strategy, that focuses on making growth pro-poor, targeting equality, empowering the poor and generating employment.
- Policies should aim to build assets for the poor and support demand for these assets through:
 - 1. Improving targeting of social services
 - 2. Expansion of education, which, helps in building assets for the poor
 - 3. Supporting agricultural development and raising relative prices of agricultural commodities.
 - 4. Raising wages of unskilled workers through enhancing their productivity.
- There is a need to establish communication lines and networks between targeted poor and vulnerable groups and policy and decision makers.
- > Improving institutions, empowering the poor and providing good governance.

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References

- Abu-Ismail, K., El-Laithy, H., Aramanious, D., Khawaja, M., Ramadan, M. (2015)"Multidimensional Poverty Measures for Middle and Upper Middle Income Countries: Results from the Arab Region" ESCWA Working Paper.
- Alkire, Sabina, and Robles, Gisela. (2015). Multidimensional Poverty Index 2015: Brief Methodological Note and Results. OPHI.
- Alkire, Sabina and Santos, Maria Emma. (2014). Measuring acute Poverty in the Developing World: Robustness and Scope of the Multidimensional Poverty Index. World Development, 59, 251-274.
- Alkire, Sabina, Conconi, Adriana, and Roche, Jose Manuel (2013), Multidimensional Poverty Index 2013: Brief Methodological Note and Results. OPHI.

- Alkire, Sabina and Santos, Maria Emma. (2010). Acute multidimensional poverty: A new index for developing countries." UNDP Human Development Report office background paper 2010/11.
- Alkire, Sabina, and Foster, James. E. (2007, revised January 2008). 'Counting and Multidimensional Poverty Measures', OPHI Working Paper Series, Working Paper No. 7, Oxford Poverty and Human Development Initiative (OPHI).
- Foster, James, J. Greer, and E. Thorbecke. (1984). "A Class of Decomposable Poverty Measures." Econometrica 59: 687-709.
- Global Human Development Report 2014. Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience
- Human Development Report 2010. The Real Wealth of Nations: Pathways to Human Development
- Sen, Amartya. (1976). "Poverty: An Ordinal Approach to Measurement." Econometrica 44:2.
- UN (United Nations) and LAS (League of Arab States) (2013). Arab Millennium Development Goals Report: Facing Challenges and Looking beyond 2015. E/ESCWA/EDGD/2013/1.
- UNDP (United Nations Development Programme) (2011) "Poverty Measurement in Iraq: Findings from Poverty Measurement Technical Committee meeting".