## **Poverty and the Labor Market in the Arab World: The Role of Inequality and Growth**

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#### Abstract

This paper employs a non-technical framework for analyzing the interactions between growth and distribution in the analysis of the behavior of poverty over time in six Arab countries (Algeria, Egypt, Jordan, Mauritania, Morocco and Tunisia). The framework suggests tentative country-specific strategies for dealing with poverty in the six Arab countries, based on indicators of country performance during 1986-96-- in terms of the rate of acceleration of growth, changes in poverty and extent of inequality —as well as prevailing labor market conditions during the period. For Egypt and despite the relatively equitable income distribution, poverty reduction strategies should account for direct policy measures for the immediate reversal of the rise in poverty coupled with longer term policies for generating equitable and sustained growth in the future. Once poverty started to decline and the equitable income distribution is sustained, only growth would be the major constraint. Moreover, growth acceleration and, especially avoidance of growth collapse, would position this country into an unstable, though could be prolonged, path of declining poverty. For the remaining five countries both growth and distribution would be required for reversing the rise in poverty in Algeria, Jordan, Mauritania and Morocco and eventually achieving a lasting impact on poverty. With more equitable income distribution and growth acceleration Tunisia could join the East Asian club of a prolonged phase of continuously declining poverty. However, given the labor market conditions of high and rising unemployment as well as declining real wages in all six countries, policies aimed at sustaining growth in the longer run or achieving meaningful reductions in income inequality must be anchored in the labor market.

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### 1. Introduction

Despite being a very diverse region in terms of overall economic indicators, the Middle East and North Africa  $(MENA)^1$  has made considerable achievements in the area of human development. In particular, the region is characterized by low poverty and more equal income distribution by international standards. A recent World Bank's (1995:pp. 2-3) report on the region observes that," during 1960-85 the MENA region outperformed all other regions except East Asia in income growth and the equality of income distribution..." The report then points out that these achievements have made it possible for the region to realize enormous social benefits, "infant mortality more than halved, and life expectancy rose by more than ten years. Primary school enrollment shot up from 61% in 1965 to 98% in 1991. And adult literacy improved from 34% in 1970 to 53% in 1990, with particular progress made in the oil-exporting countries". The report also credits the region's governments for effectively reducing poverty, "by 1990 only 5.6% of the population in MENA lived on less than \$1 a day---the global benchmark for absolute poverty---compared with 14.7% in East Asia and 28.8% in Latin America. And whatever the wealth, poverty was lower in MENA countries than elsewhere." Finally, the report, in our view, correctly attributes these achievements to both accelerated growth (in the 1970s and early 1980s) and distribution, with the latter being in terms of, "generous transfers to large parts of the population."

This paper, which agrees with the above analysis, uses a simple non-technical framework (drawn from a dynamic model of poverty, growth and income inequality due to Ali and Elbadawi (1999a), hereafter AE) to explain the observed experiences of six Arab countries (Algeria, Egypt, Jordan, Mauritania, Morocco, and Tunisia). Among all countries of the MENA region, only the above six countries have high quality data on income distribution<sup>2</sup>. On view of this data limitation, further analysis will be largely confined to the six Arab countries, which will be, throughout this paper, "liberally" referred to as the "Arab world" or the "Arab region". The analysis of this paper will extend on that of AE by examining, as well, the impact of the labor market in the poverty and income inequality outcomes. The framework will also be used to motivate future strategies for further poverty reductions in the six countries, based on their economic performance during 1986-96 as well as the prevailing labor market conditions during the period.

Section 2 provides a brief discussion of some aspects of diversity of the Arab region. The objective of this discussion is to underscore the need for developing varieties of strategies for dealing with poverty in the region, given its underlining economic diversity. Also this section is aimed at motivating subsequent analysis of the potential roles of

<sup>&</sup>lt;sup>1</sup> Our definition of the MENA region includes the two Arab countries of Sudan and Mauritania, which are not considered part of this region according to the World Bank, for example.

<sup>&</sup>lt;sup>2</sup> For more details, see Deininger and Squire (1996).

growth and distribution in poverty reduction, given the initial conditions of the labor markets in the region and the current economic slump, which impacted the region since the second half of the 1980s. Section 3 describes a non-technical framework for the analysis of poverty, growth and income inequality, while section 4 discusses some estimation results of these three pivotal variables, based on AE. Section 5 briefly describes the labor market conditions in the region and draws the linkages to income inequality and poverty. Given the poverty, growth and income inequality performances as well as the labor market conditions during the 1990s, section 6 identifies policy strategies for poverty reductions in the six Arab countries. Section 7 concludes.

## 2. Economic Diversity in the MENA Region

To highlight the economic diversity of the region, we follow ERF (1998) and group the countries of the region into four broad categories: mixed oil producers (MOP: Algeria, Iran and Iraq); Gulf Cooperation Council (GCC: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE); diversified economies (DE: Egypt, Jordan, Morocco, Syria, Tunisia and Turkey); and, primary producers (PP: Mauritania, Sudan and Yemen)<sup>3</sup>. The 1996 distribution of population and GDP over these categories was such that DE accounted for 49% of population and 39% of GDP; MOP's share in population was equal to its GDP share at 31%; PP's population share was 12% while its share of GDP was only 2% in contrast to that of GCC with a population share of only 7% and a GDP share of 29%. Excluding Iran and Turkey, the two non-Arab countries in ERF's definition of MENA, it is an easy matter to show that the Arab countries display a similar distribution to that of larger MENA. Thus, Arab DE had a population weight of 48% and a GDP share of 28%; MOP with a population share of 21% and a GDP share of 24%; PP with a population share of 20% but a GDP share of only 3%; and, GCC with a population share of 11% and a GDP share of 46%.

The above diversity is also captured by differences in per capita GDP. Not surprisingly, GCC ranks top on this scale with a per capita GDP of US\$9045 in 1996, followed by MOP (US\$2478). DE ranks third with a per capita GDP of US\$1280 while PP's per capita GDP amounted to only US\$276. The production structures of the four groups differ as well. Thus, in 1996 the agricultural sector accounted for 24% and 23% of GDP in PP and MOP respectively, and for 16.2% in DE while it accounts for only 2.4% of GDP in GCC. The manufacturing sector accounted for 14.4% of GDP in DE, 11% in MOP and GCC, and 9% in PP. Thus, none of the country groups of the region could be considered as industrialized (defining this stage in terms of a manufacturing sector contribution of 20% of GDP). Extractive industry, however, contributed fairly large shares in GCC (35% of GDP) and MOP (27% of GDP).

Having noted the above we also need to note that the most recent growth performance of the countries of the region was judged to have been below potential (ERF, 1998). Thus, over the period 1991-1995 the best performing group was PP with an average growth rate

<sup>&</sup>lt;sup>3</sup> Libya and Lebanon are excluded for lack of data.

of GDP of 3.8% per annum, followed by DE (3.4% GDP growth rate). GCC recorded a growth rate of 2.9% while MOP's growth rate was a mere 0.8%. Given population growth rates for the respective groups only PP and DE recorded marginal improvements in GDP per capita over the period (at a rate of 0.7% per annum). Therefore, aside from the performance of the economically marginal PP group, current per capita growth in the region is either negative or zero. With such conditions of economic stagnation but low inequality, it has been argued that even modest growth will have a dramatic effect on poverty (as measured by \$1 per person per day). According to some estimates (e.g., World Bank, 1995: pp. 8), "moving from zero growth to 1% annual growth in the MENA region would reduce the number of poor in the region by 8 million over the next decade." On the other hand, the report also estimates that, " without the higher growth that the reform can bring the number of poor (those living on less than \$1 a day) would rise by 15 million by 2010." We are hastened to point out, however, that a strategy for poverty reduction, which is exclusively centered on growth-such as the one described above--can only be successful in the context of the limited development objective of dealing with *abject* poverty. This concept of poverty, which assumes a fixed poverty line relative to mean income, has been coming under intense criticism from labor movements, NGOs and other stakeholders in developing countries. Also recent contributions to the development literature support the view that poverty line should be responsive to growth in mean income (for a review, see Ali and Elbadawi, 1999b).

#### 3. Growth, Distribution and Poverty: A Framework

To guide subsequent policy discussions, we draw from AE to describe below a simple framework for the analysis of the linkages between growth, poverty and distribution. The essence of this framework is that poverty and growth are allowed to depend on the inequality in the distribution of income for both the short and longer runs<sup>4</sup>. In a much longer horizon, inequality in the distribution of income is assumed to be determined by the growth performance of the economy, as envisaged in a long-run development transformation process. The poverty, growth and inequality components of the framework can be jointly solved to determine an equilibrium rate of growth consistent with a long-term fixed level of poverty (i.e. stationary level of poverty). In addition, the solution generates a level of inequality consistent with both stationary poverty and a constant long-term rate of growth. Moreover, depending on initial conditions, the framework allows interesting patterns of interactions, which could inform broad strategies for dealing with poverty in the future.

#### **<u>3.i. The Growth Component</u>**

Long-run target growth is assumed to be determined by the degree of income inequality and a host of other growth fundamentals--reflecting policy variables, external factors and

<sup>&</sup>lt;sup>4</sup> However, even though AE's model accounts for both the long and short-runs determinants of growth, only the long- run modeling of growth is required for the analysis of this policy-oriented framework.

initial conditions. Following recent advances in the literature (see for example, Alesina and Rodrik, 1994) we assume that growth in the long-run is negatively associated with initial degree of inequality (initial level of Gini). The theoretical literature established this negative link by showing that less equal societies (as measured by high Gini coefficients) are susceptible to grow at lower rates due to the economic distortions created by the re-distributive polices (e.g. high tax rates). The logic behind this is that the essentially low-income majority of the population in such societies is likely to force such policies. Such economic distortions will be expected to reduce the rate of returns in investment and hence discourage investment and growth. At the empirical level there exists evidence to support such prediction. Further justification for the negative relationship is also reported in terms of the more encompassing concept of "distributional conflicts". Under this approach, "distributional conflicts" are envisaged to reduce the productivity with which a society's resources are utilized (hence reduced growth) through: delaying needed adjustment in fiscal policies and key relative prices (such as the real exchange rate or real wages), generating uncertainty in economic environment, and diverting activities from the productive sphere to the redistributive one (see Rodrik, 1998: pp.2).

## 3.ii. The Poverty Component

Following the literature, the poverty component of the framework is derived from the standard general specification of poverty measures as being dependent on the standard of living in society (e.g. per capita expenditure); inequality in the distribution of expenditure among the population (as measured, for example by the Gini coefficient); and a threshold below which people are identified as poor (i.e. a poverty line). For a wide range of poverty measures, it is expected that poverty would decline as per capita expenditure, poverty is expected to increase as the degree of inequality in the distribution increases. Thus, changes in poverty over time can be looked at in terms of those due to economic growth (through the increase in the per capita standard of living) and those due to distribution (through changes in the measure of inequality). The extent to which poverty responds to growth and distribution is usually measured by the elasticity of the poverty measure with respect to the relevant variables.

#### 3.iii. The Inequality Component

One of the most celebrated propositions relating to the long-run transformation of developing economies is the so called the Kuznets (1955) hypothesis. Simply put the hypothesis asserts that as development proceeds (increase in per capita income) income inequality will tend to increase at first, reaches a maximum and then decreases. The hypothesis is based on historical observations pertaining to the sectoral shifts of population from a low inequality, low productivity sector to a high productivity, high inequality sector. Despite that the hypothesis has been subjected to extensive empirical testing, controversy is abound as to whether or not the Kuznets relation exists (for a review of the empirical and theoretical Kuznets literature, see Ali and Elbadawi, 1999b). In recent years renewed interest in the Kuznets hypothesis has been expressed from a

policy perspective, specially the perspective of the effect of economic policy reforms on the poor<sup>5</sup>. A careful review of recent theoretical advances should serve to illustrate the position that the Kuznets hypothesis is meant to describe a long transformation process during which not only production structures change but also institutions change. In short periods of time different economies may find themselves on either side of the Kuznets curve assuming that it exists. The side on which economies find themselves will have important implication for the reduction of poverty.

Therefore, subscribing to this view of the Kuznets relation, we assume that income inequality (Gini) is endogenous to mean income and a time trend, where the structure of the dependence of the Gini on income produces an inverted U shape. This would suggest that starting at low levels of development (low mean income) the Gini would initially rise as income increases before the relationship between Gini and income eventually becomes negative at high enough levels of development (high mean income).

## 3.iv. The Long-Term Equilibrium Solution

The long-run equilibrium solution decomposes the rate of change in poverty into two components. The net "growth effect" is given by the direct growth effect on poverty minus the indirect income inequality effect, operating through the growth channel. Under most conditions, the net effect of growth on poverty change is negative (i.e. with income inequality unchanged, higher growth normally reduces poverty). The second component is the "pure income inequality effect" which is positive<sup>6</sup>. The implication of this solution is that under conditions of high and rising income inequality, positive income growth may actually be associated with rising poverty or at best inconsequential reduction in poverty.

The equilibrium level of inequality is given as a fraction of the difference between the share of income growth rate explained by all determinants of growth (except initial income inequality) and the component of the rate of change in poverty explained by the "net inequality effect"<sup>7</sup>. This expression suggests that a stationary level of poverty is not

and a "trend distributional effect" ( $\boldsymbol{a}_0 = \boldsymbol{q}\boldsymbol{n}_0$ ) is given by:  $\boldsymbol{P} = -\boldsymbol{a}g + \boldsymbol{a}_0$ , where  $\boldsymbol{P}$  is an index of poverty;  $\boldsymbol{\varepsilon} =$  elasticity of poverty line with respect to mean income;  $-\eta =$  elasticity of poverty index with respect to mean income;  $\boldsymbol{\theta}$  is the elasticity of  $\boldsymbol{P}$  relative to inequality (Gini index),  $\boldsymbol{n}$  is the elasticity of the Gini relative to growth and  $\boldsymbol{n}_0$  is the component of the rate of change in the Gini that is does not depend on growth.

<sup>7</sup> Algebraically, the level of inequality  $(\tilde{G})$  consistent with equilibrium (i.e.  $\hat{P} = 0$ ), is given by  $\tilde{G} = \frac{1}{ab_0} (a\tilde{g}_F - a_0)$ , where  $a, a_0$  as defined in footnote 6 above;  $b_0$  is the negative of the

<sup>&</sup>lt;sup>5</sup> See, among others, Lal and Myint (1996); Bruno, Ravallion and Squire (1998); but see also Horton, Kanbur and Mazumdar (1995).

<sup>&</sup>lt;sup>6</sup> Algebraically, the rate of change in poverty, which decomposes the change in the poverty index into a "growth effect" net of the distributional effect through the growth channel (-a = -(1-e)h + qn)

necessarily inconsistent with high long term equilibrium level of inequality, provided that the absolute rate of reduction in poverty due to growth fundamentals (not including initial income inequality) is higher than the rate of change (increase) in poverty due to the "net inequality effect". If, on the other hand, the difference between the two components of the rate of change in poverty is small, a much smaller equilibrium level of inequality would be required to prevent poverty from rising.

The analysis of the dynamic behavior of inequality, poverty and growth around the long run equilibrium suggests six plausible phases describing the initial conditions of the economy relative to the equilibrium. These phases motivate some broad strategies for dealing with poverty. An analysis of these phases and the associated strategies are discussed in section 5.

## 4. Income Distribution, Poverty and Growth

In this section we describe the key results as well as draw the policy implications of the empirical estimation of the growth, distribution and poverty due to AE. These estimates are required for calculating the structural parameters of the framework.

## 4.i The Growth Estimation Results

The results of the long-term growth model suggest that income inequality is negatively and significantly associated with growth, with a parameter value of -0.07. To underscore the significance of this result, assume that we have two countries (country A and country B), which have identical policies and other initial conditions except that country A has more equitable initial income distribution than country B (initial Gini in country A is half that of country B). This result would suggest that the rate of growth of country A will be higher than that of country B by about 5%. If in addition to having identical initial income inequality) the two countries also happen to have identical income levels in the initial period, the income of country A will be double that of country B in about 14 years. Indeed, initial income inequality does have profound effect on long term growth.

In addition to initial inequality, AE's empirical analysis of the determinant of long-term growth also accounts for two pivotal macroeconomic growth variables (investment and government consumption). The two macroeconomic variables, could arguably, account for, or at least reflect, all the macroeconomic effects that matter for growth. The results suggest that high investment spurs growth, while excessive government consumption reduces it.

## 4.ii Income Distribution and Poverty

coefficient of initial inequality in the growth equation; and  $\tilde{g}_F$  is the component of growth due to other fundamentals (not including initial inequality).

As is well known high quality data sets permitting comparison of inequality across countries and regions has only recently became available. The currently agreed upon criteria for high quality requires that observations be based on household surveys that cover the whole population and use a comprehensive measure of income including consumption out of own production. For MENA region only a limited sample is reported to have high quality data sets. This is a limitation on this study as well. Thus, due to lack of recent high quality data the MENA countries in this paper exclude both of Iran and Turkey, which have a combined weight of 34.4 and 38.6% of the region's population and GDP, respectively. Excluded also are countries belonging to the GCC category for the same reason (with a weight of 7.2% of the population and 28.6% of the GDP of the region) as well as Iraq, which has been in a rather abnormal economic condition since the Gulf war. Of the remaining Arab countries the sample used represents 68% of the population and 92.6% of GDP.

Given income distribution information, poverty results can be generated using appropriately specified poverty lines. To generate the poverty results we use the high quality expenditure distribution data of Deininger and Squire (1996) and the World Bank (1998). A summary of our results is reported in Table (4.1) for the four regions of the developing world with which we are dealing. For inequality we report the Gini coefficients while for poverty we report the three standard measures: headcount ratio (H: to measure incidence or spread), the poverty-gap ratio (P1: to measure depth), and the squared poverty-gap ratio (P2: to measure severity)<sup>8</sup>. We hasten to note that these are meant to be illustrative results for the purposes of making our framework operational for policy analysis.

			Poverty	Gini	Head-	Poverty-	Squared	
Region	No. of	Mean	Line*	Coeffici	Count	Gap	Poverty-	
	Count	Expend	(US\$)	ent (%)	Ratio	Ratio	Gap Ratio	
	ries	iture*			(%)	(%)	(%)	
		(US\$)						
Arab	6	115.3	50.8	38.95	21.52	6.51	3.38	
World		(45.1)	(13.7)	(3.61)	(8.80)	(5.83)	(4.91)	
Africa	18	75.0	41.9	48.0	52.10	23.04	13.21	
		(70.4)	(24.2)	(10.07)	(13.78)	(8.06)	(5.87)	
Asia	8	97.67	45.84	37.03	24.72	6.99	2.95	
		(45.62)	(13.37)	(7.18)	(12.22)	(4.25)	(2.03)	
Latin	16	172.7	73.6	50.38	34.83	14.40	7.94	
America		(82.0)	(32.7)	(6.69)	(8.57)	(5.04)	(3.59)	
Overall	48	109.1	52.0	45.83	37.96	15.42	8.51	
		(78.6)	(27.8)	(9.39)	(16.33)	(9.10)	(6.08)	

Table (4.1): Inequality and Poverty in a Sample of Countries by World Regions

<sup>&</sup>lt;sup>8</sup> The reported results are averages over the results of individual countries generated by Povcal (a program used for grouped data: t-statistics are shown in brackets).

Source: own calculations. \* per person per month.

Looking at expenditure distribution first we note that Latin America boasts the highest degree of inequality in the distribution of income as reflected by a Gini coefficient of about 50%. Next highest inequality is reported for sub-Saharan Africa with a Gini of 48%. The lowest inequality is reported for Asia with a Gini coefficient of 37%, with the Arab region registering the second lowest inequality with a Gini of about 39%. These results are in conformity with the generally accepted ranking among world regions.

As is well known these average results hide a lot of variation that exists among countries. Thus, for example, as far as inequality in the Arab region is concerned the lowest inequality is reported for Egypt with a Gini coefficient of 30% in 1991 (i.e. a Gini of 37% for income distribution), followed by Morocco and Algeria with a Gini of about 39% each. The highest inequality is reported for Mauritania with a Gini coefficient of 42.5%, followed by Jordan (40.7%) and Tunisia (40%).

Given our method of estimating the poverty line, the Table shows that the Arab World boasts the lowest poverty for all measures except for the severity of poverty. Asia follows in second place as the region with lowest poverty in terms of incidence and depth but ranks first in terms of severity. Africa is the highest poverty region for all poverty measures followed by Latin America. Thus according to the above results, about 22% of Arab population were living below a poverty line of \$51 per person per month in the early 1990s. At the other extreme 52% of Africa's population were living below a poverty line of US\$42 per person per day in the early 1990s. Among Arab countries the highest incidence of poverty in the sample is recorded for Mauritania where 39% of the population lived below a poverty line of \$33 per person per month. On the other hand, the lowest incidence of poverty is recorded for Egypt with 14% of its population living below a poverty line of \$42 per person per month.

Similar results can be read for the depth and severity of poverty as recorded by the poverty-gap and the squared-poverty gap measures respectively. From the Table it is easy to calculate the average income of the poor where it can be shown that such an average comes to \$34 per person per month in the Arab region compared to \$23 per person per month in Africa and US\$44 for Latin America. Among the Arab countries the lowest average income for the poor of \$18 per person per month is recorded for Mauritania

An important issue for policy is the extent of sensitivity of poverty with respect to growth (changes in per capita consumption expenditure or income) and distribution (changes in the Gini coefficient). This is measured by computing the elasticity of poverty with respect to each of growth and distribution (the percentage rate of change in poverty due to a 1percentage increase in growth (or inequality)). Table (3.2) of AE provides estimates of these elasticities. The estimates suggest that the pattern of sensitivity of poverty is similar in the Arab region and Asia where it is seen that poverty is responsive both to growth and distribution and where sensitivity to distribution is consistently higher

than that to growth. The sensitivity of poverty to growth is marginally higher in Asia than in the Arab world, while the reverse is true for distribution. Thus, for example, a percentage point increase in per capita consumption expenditure will be expected to reduce poverty by 2.3 and 2.4 percentage points in the Arab World and Asia respectively. A percentage point decline in the Gini coefficient, on the other hand, will be expected to reduce poverty by 6.2 and 5.7 percentage points in the Arab World and Asia respectively. By contrast the sensitivity of poverty to growth and distribution is lowest in Africa followed by Latin America. However, the sensitivity of poverty to changes in the distribution of income in Latin America's is almost double that of Africa.

To obtain the growth elasticity of poverty after allowing for changes in the distribution of income over time and for the functional dependence of the poverty line on mean income would require specifying the way in which distribution changes with income (the so called Kuznets relation). The estimation of the Kuznets specification allows calculating the turning point of mean income, which is equal to about US\$1111 of private per capita consumption in 1987 prices. Thus countries with per capita consumption lower than this turning point would be expected to experience increasing inequality as their economies transform, other things being the same. Beyond the turning point countries are experiencing declining inequality. This is the sense in which a Kuznets relationship is useful in the context of the dynamic interaction between growth, inequality and poverty. Not surprisingly, most of the developing countries in the sample were found to be below the turning point except for 14 countries out of 48 covered by the sample (see Appendix Table 1 of AE). The latter group includes only two Arab countries: Algeria and Jordan with mean per capita consumption of \$1243 and \$1352, respectively.

## 5. The Role of the Labor Market

Rigorous analysis of the role of labor market as it relates to poverty has only recently been explored in the literature. This is especially true for the case of reforming countries, where reform programs incorporate direct and indirect policy measures that affect the working of the labor market. In this context it is recognized that the labor market is a crucial element in understanding poverty in view of the fact that most of the poor generate their income by hiring out their labor services. Indeed, assetless workers only have their labor as potential assets, which generates returns only if they are offered employment in the labor market. So that the way the labor market operates conditions employment, quality of employment as well as wage outcomes, all of which are affected by the package of policies and institutions in a given economy.

As already noted the most widely used measure of poverty is the headcount ratio. An obvious linkage to the labor market would be to observe that the higher the unemployment rate the more widely spread poverty would be. This is obvious for the simple reason that usually assetless workers would have no entitlement to income earning opportunities except through wage employment in the labor market. And hence, by not earning any income they would be expected to be among those falling below the poverty

line. Despite the data problems surrounding information on unemployment rates in the region, available evidence suggests that indeed unemployment rates are relatively high. Thus, for example, according to ERF (1996: pp. 90), "unemployment rates exceeded 20% in Algeria in the early 1990s and were close to 15% in Morocco, Tunisia, Jordan and Yemen....In Egypt and Algeria, for which multiple year data are available, there appears to be an increasing trend in the unemployment trend for the early nineties." More problematic feature of the labor market in the region, from a poverty perspective, is the observed consistent pattern in the unemployment profile along education and age lines. Thus the, "analysis of unemployment by age and education indicates that the primary cause of unemployment in the region is the inability of educated new entrants to the labor force to get the increasingly scare public sector jobs, which were the main source of employment for that group in the past." (ERF, 1996: pp. 91). It is reported, for example, that in Syria and Egypt about 80% of the unemployed are first time job seekers. In Jordan, Morocco and Tunisia the first job seekers account for 50% of the unemployed. The implications of this feature should be obvious for poverty, given that this type of the unemployed would be the least equipped to hedge against falling below the poverty line.

Another linkage is the structure of the labor market, especially the urban labor market. A major characteristic of this market in the region is its dual nature of formal and informal employment. By its nature the informal sector is characterized by ease of entry and low productivity. The first feature explains why this sector has accounted for the bulk of job creation over the recent past. On the other hand, the low productivity implies relatively lower wages, compared to the formal sector. As such, therefore, recently observed phenomena of increasing urban poverty can be explained in terms of such structure and working of the labor market. As observed by ERF (1998), the informal sector played a major role in the process of job creation in the region over the last two decades. As a result of this a sharp increase in the share of informal employment is recorded for most countries of the region. While it is acknowledged that there are severe statistical data limitations in this respect, it is nevertheless estimated that the size of the informal employment ranges between 30-35% of the urban labor force in Egypt, Between 35-45% in Yemen, about 37% in Morocco and, about 33% in Jordan.

Moreover, the labor markets in the region are characterized by declining real wages. This also provides an obvious link to the depth of poverty, as measured by the poverty gap ratio. Thus even if there were no observed increase in the spread of poverty, the depth of poverty could increase as a result of declining or stagnant real wages. This is simply because the average real income of the poor would be increasing at a lower rate than the real cost of attaining the required entitlement to basic needs. There is evidence that most of the countries of the region experienced sharp declines in real wages over the recent past (see ERF, 1996: pp. 93-94). The decline is reported to have been led in most cases by public sector wages, thus for example, real government wages in Egypt in 1992 were equivalent to only 50% of their 1982 levels. Similarly by 1993, public sector wages in Morocco accounted for only 77% of their value in 1975, while those in Jordan accounted for 85% of their 1985 levels. The above behavior in public sector real wages is also reported for the behavior of the real minimum wage for some countries of the region. For example, the real minimum wage in Algeria declined by 16% per annum over the period 1989-92.

## 6. Labor Market Implications of the Poverty Reduction Strategies

The analysis of the dynamic behavior of inequality, poverty and growth around the longrun equilibrium configuration of the economy (i.e. steady state) enabled the identification of six phases, two of which give rise to stable paths toward the long-run equilibrium state of the economy (i.e. the steady state). Based on average growth, poverty and distribution performance in 1986-96 (see Appendix Table 1), the six Arab countries can be classified according to the phase they are likely to be associated with during the period (Table 6.1). We discuss below this classification and the implied strategy for poverty reduction in these countries and the implication of this for the labor market<sup>9</sup>.

First, the economic performances of Algeria and Jordan during 1986-96 were characterized by rising poverty, decelerating growth and higher inequality than levels consistent with the long run equilibrium of the economy (i.e. the steady state). According to our analysis the performances of these two countries produced a "transitional low-level equilibrium trap", driven by an unstable path of rising poverty. For these two countries both low growth and bad distribution are constraints on sustainable poverty reduction. However, re-distributive measures are particularly important to move the two economies to the phase where the rise in poverty will come to a halt at the steady state along a stable Moreover, a combination of growth acceleration and efficient distributional path. measures could push the two countries further to the phase where poverty declines continuously along a transitional unstable path of "super-performance". It is to be noted that the implications for the labor market policies are obvious. As noted in section (4) above, the economies of these two countries were characterized by fairly high rates of unemployment that were increasing over time (from 17% in 1989 to 23.8% in 1992 for Algeria and from 14.9% in 1987 to 18.8% in 1991 for Jordan). In the case of Algeria, moderately high rates of inflation (slightly above 20% per annum) exerted further pressures on the poverty front. As such, therefore, the design of re-distributive policies would have an important anchor in the labor market, with the objective of reducing the rate of unemployment in both countries. Moreover, in the case of Algeria the strategy should also aim at stabilizing the economy.

Second, the economic performance of Mauritania and Morocco during the period 1986-1996 was characterized by rising poverty, and higher inequality than levels consistent with the long run equilibrium of the economy (i.e. the steady state), but growth was accelerating. According to our analysis these countries are likely to be located in the region characterized by "transitional low level equilibrium trap". Even though growth may be less of a constraint for these countries, they would, however, need re-distributive measures similar to those recommended for Algeria. In the case of Morocco, we note the

<sup>&</sup>lt;sup>9</sup> For a detailed exposition of strategies for dealing with poverty in the Arab world, see UNDP (1996); and for Egypt see Fergany (1997,98).

historical performance of the economy produced negative labor market outcomes in the form of fairly high, and increasing, unemployment rates (from 14.7% in 1987 to 16% in 1992). Further, real wages in the economy have declined at an annual rate of 5.5% despite the stabilization of the economy where the inflation rate has declined from 4.9% as an average for the period 1985-1995 to 1.8% for 1996. Such evidence points to the importance of labor market policies to complement other re-distributive measures.

Third, in terms of overall average performance during 1986-96, the Egyptian economy was one of equitable income distribution (relative to steady state levels), rising poverty as well

Countries	Phases	Phase Description (Performance 1986- 96)	Predicted Performance/ Recommended Strategy
Tunisia	Phase I	<ol> <li>declining poverty</li> <li>decelerating growth</li> <li>Inequality higher than levels consistent with steady state</li> </ol>	<ol> <li>Poverty would decline at a decreasing rate along a stable path toward the steady state.</li> <li>Avoiding growth collapse and achieving more equitable distribution would prolong the cycle of declining poverty.</li> </ol>
Egypt.	Phase IV	<ol> <li>Rising poverty</li> <li>Accelerating growth</li> <li>Inequality lower than steady state levels</li> </ol>	<ol> <li>Poverty would increase at a decreasing rate until it converges to zero at the steady state, where distribution worsens over time</li> <li>Both distribution and growth are important, where equitable growth that avoids increased inequality could lead to declining poverty over time. This could push the economy into a divergent phase of continuously declining poverty (East Asia, until recently).</li> </ol>
Mauritania, Morocco.	Phase V	<ol> <li>Rising poverty</li> <li>Accelerating growth</li> <li>Inequality higher than steady state levels</li> </ol>	1.Divergent phase of continuously rising poverty: "transitional low equilibrium trap" 2.growth is not an immediate constraint, but redistributive measures will be required to shift the

# Table 6.1: Strategies for Poverty Reduction in the Arab World (Based on Average Performance in 1986-96)

				economy to Phase IV, and possibly Phase III
Algeria, Jordan.	Phase VI	1. 2. 3.	Rising poverty Decelerating growth Inequality higher than steady state levels	<ol> <li>Unstable path towards continuously rising poverty: "transitional low equilibrium trap"</li> <li>Both growth and distribution are constrains but redistributive measures will be required to shift the economy to phase IV, and possibly Phase III</li> </ol>

Source: Ali and Elbadawi (1999a).

negative but accelerating economic growth<sup>10</sup>. According to our analysis, this phase would lead the economy along a stable path where poverty would rise at a decreasing rate until it converges to zero at the steady state. Distribution is also predicted to worsen over time. In this case both distribution and growth are important, where equitable growth that avoids increased inequality could lead to declining poverty over time. A combination of declining poverty, equitable income distribution and positive growth acceleration would enable the Egyptian economy to get to a path of continuously declining poverty. Once such conditions of were established only growth would matter for simultaneously reducing poverty as well as improving distribution over time. This would happen if this phase also produces a relatively sustained era of "transitional super-performance". However, for now the immediate strategy should be to accelerate growth and undertake direct measures for reversing the rise in poverty. Most of these measures must be anchored in the labor market. The labor market performance in Egypt, however, has not been promising. Unemployment rates have been high and rising over time. Moreover, real wages in the manufacturing sector have declined at fairly high rates (an annual rate of decline of 9.5% for the period 1985-1992) despite the stabilization of the economy (the inflation rate declined from 14.8% for the period 1985-1995 to 9.1% in 1996). This not only threatens the past gains of a relatively equitable distribution of income, but it also points to the centrality of labor market policies in the context of sustaining growth in the future. Job creating growth, especially urban job creation, will be an important challenge for policy makers.

Fourth, the performance of the Tunisian economy over the period 1986-1996 was characterized by decelerating growth, a higher than long-run equilibrium inequality levels but declining poverty. According to our analysis poverty is predicted to decline at a decreasing rate along a stable path and, will therefore, come to a halt at the steady state. Both distribution and growth are important. For example, a collapse of growth (negative rates of real growth) might push these countries into a transitional "low equilibrium trap", where poverty rises over time. On the other hand, more equitable distribution and positive growth could move this country into a "transitional super-performance" phase, and hence produce a more sustained era of declining poverty. We note in this respect

<sup>&</sup>lt;sup>10</sup> Our model's predictions that poverty has risen in Egypt in the post 1985 period is corroborated by recent poverty studies on Egypt (for a review, see El-Mahdi, 1999).

that the labor market outcomes in Tunisia has not been conducive to poverty reduction. Unemployment rate was relatively high and increasing over time: the rate increased from 14.1% in1987 to 16.1% in 1993. On the macroeconomic front Tunisia was able to establish and maintain stable macroeconomic environment, where annual inflation rate averaged 5.6% per annum for the period 1985-1995 and declined to 4.8% in 1996. Despite this, however, there is evidence that the real manufacturing wage in Tunisia has declined over the period 1980-1992 at an annual rate of 1.4%. Moreover, as noted in section (4) above, government real wages have declined as well. Again, these observations point to the importance of labor market policies in the context of future strategies.

## 7. Conclusions

This paper analyses the behavior of poverty, growth and income distribution under the prevailing labor market conditions in the Arab World. The non-technical framework of the paper motivates broad strategies for poverty reduction for the case of six Arab countries (Algeria, Egypt, Jordan, Mauritania, Morocco and Tunisia), for which high quality data is available. A combination of average performance on the areas of growth, poverty and income distribution as well as prevailing labor market conditions during 1986-96 period provides the basis for classifying the countries into phases. Thus, the recommended strategies vary across the six countries, depending on the phase in which they were judged to be located during this period.

The main thesis of this paper is that a strategy for poverty reduction, which is exclusively centered on growth, can only be successful in the context of the limited development objective of dealing with *abject* poverty. Taking a broader view of poverty, the analysis of this paper shows that with initial conditions of low inequality and faltering growth as well as worsening labor market conditions (high unemployment as well as declining real minimum wages) in the region, a strategy for poverty reduction must be much broader. The main elements of these strategies are described below.

First, for Egypt and despite the relatively equitable income distribution, the strategy should comprise direct policy measures for the immediate reversal of the rise in poverty coupled with longer term policies for generating equitable and sustained growth in the future. Once poverty started to decline and the equitable income distribution is sustained growth acceleration and, especially avoidance of growth collapse, would position this country into an unstable, though could be prolonged, path of declining poverty. However, sustaining high growth appears to be very much dependent on future conditions of the labor market. The past performance of the economy, however, produced relatively high unemployment rates with a tendency to increase over time. Moreover, real wages in the manufacturing sector have declined at fairly high rates. This not only threatens the past gains of a relatively equitable distribution of income, but it

also points to the future centrality of labor market policies in sustaining growth. In particular, job-creating growth, especially urban job creation, will be an important challenge for policy makers.

Second, for the cases of Tunisia our analysis suggests that poverty has declined at a decreasing rate along a stable path and, will therefore, come to a halt at the steady state. In this case both distribution and growth are important for prolonging the phase of declining poverty, or even better, they could move this country into a "transitional super-performance" phase, and hence produce a more sustained era of declining poverty. Once again, this strategy very much depends on the labor market conditions in this country. We note in this respect that the past performance of the labor market in this country—where despite high and rising unemployment real wages have been declining-suggest that this market will be the main battle ground in the fight against poverty in the future.

Third, for the cases of Mauritania and Morocco re-distributive measures would be required before the two countries could escape the dire consequences of a possibly longish, though transitional, "low equilibrium trap" of rising poverty. On the other hand, Algeria and Jordan would require both growth and re-distributive measures to move the economy from a path of continuously rising poverty to the phase where the rise in poverty will come to a halt at the steady state along a stable path. Moreover, a combination of sufficiently high growth acceleration and efficient distributive measures could push the economies of all four countries into the phase of continuously declining poverty along a transitional unstable path of "super-performance". An important point to make in this connection is that, at least for Algeria, Jordan and Morocco, the relatively high income inequality are very much the outcome of labor market conditions that prevailed in these countries. As the analysis of previous section makes clear, labor markets in these countries are characterized by high and rising unemployment as well as declining real wages. This suggests that policies aimed at sustaining growth in the longer run or achieving meaningful reductions in income inequality must be anchored in the labor market.

Finally, the central tenets of the recommended strategies are that---with the exception of Egypt, where only growth is likely to be the eventual constraint---both distribution and growth are constraints. Moreover, even in the case of Egypt immediate and direct measures for poverty reduction would be required for reversing the current rise in poverty (see Box 1: for more detailed analysis on these measures, see for example, Fergany, 1997, 98; and El-Mahdi, 1999). A particularly interesting feature of the above analysis is that despite the differences that exist between the countries of the sample, in terms of initial conditions and equilibrium configurations, the labor market implications of the analysis are almost identical. This is due to the almost identical labor market outcomes produced by past performance. As a result new forms of distributive policies would be required in the future and such policies must be anchored on the labor market. As is clear from the analytical framework the long-run equilibrium poverty level will be stationary where poverty is defined in terms of the head-count ratio. The depth of poverty, however, can increase despite the stationarity of the head-count ratio on account of the differential behavior of the real wage rate and the real cost of basic needs. It is in this respect that

labor market policies will be central to future policies. With changing structures of production it is perhaps reasonable to argue that the skill mix of the labor force would need to be changed. The most relevant policy measure in this respect would be investment in education and training including apprenticeship training in critical future industries. Moreover, while maintaining the stability of the macroeconomic framework will continue to be important for growth enhancement, the decline in real wages needs to be arrested. This may point to a possible future trade-off that requires judicious policy-making.

## Box 1: The Labor Market and Strategies for Dealing with Poverty in Egypt

Egypt has entered the period in its demographic transition during which the working age population is increasing relative to the rest of the population (it is projected that by the year 2010 the working age population will be twice the size of the dependent population). It has been argued that this type of demographic transition offers "a demographic window of opportunity", where the high shares of the working age population fosters accelerated and sustained economic growth by increasing labor participation and saving (Yousif, 1997). However, it must be emphasized that for Egypt to realize such opportunity, growth must create enough jobs to absorb the huge growth in its working age population. First, without reducing the currently high unemployment (more than 10% since 1993) growth is not likely to be sustained in the future, even with the best economic programs. Recent evidence suggests that societies with major "latent" social conflicts (e.g. due to high inequality or high unemployment) are not likely to achieve stable growth. These societies, the argument goes, are likely to adopt growth-retarding policies in response to external shocks as the authorities try to accommodate conflictive interests of noncooperative social groups (Rodrik, 1998). Second, even if growth could be sustained with little labor absorption, it will likely be associated with rising poverty as has been the case in the 1990s. Thus, future growth strategies in Egypt, indeed its overall future development strategies, will neither be sustainable nor will it be poverty reducing if they are not anchored in the labor markets. Some elements of these strategies for Egypt (and other Arab countries) are discussed in the last two sections of this paper. A successful labor market-based strategy for poverty reduction in Egypt must aim at achieving a radical restructuring of the labor market. Eventually, the formal private sector (currently employing just 3% of the labor force) should account for most of the employment growth in the future. This will require increased productivity and gradual formalization of the private informal sector, which currently account for 28% of total employment. The expansion of the private formal sector will permit growth in productivity and gradual reduction in employment in agriculture and the government sectors, which account for a combined share of 64% of total employment.

#### Job Creation:

In the medium-to-short runs, however, the pro-active measures for job creation should be maintained, and if possible expanded and enhanced. These measures were put in place in the 1980s as part of the instruments for mitigating the social consequences of the Economic Reforms and Structural Adjustment Programs (ERSAP). This recommendation would be in recognition of the widely held view that the lingering and high unemployment as well as the substantial reductions in the food subsidy programs have been the main factors behind the worsening of poverty in Egypt in the 1990s. The effects on poverty of these two factors have clearly dominated the poverty-reducing impact of the positive per capita growth achieved during the period. In the context of Egypt's "intermediate" strategy for poverty reduction the Social Fund for Development (SFD) has been an effective instrument. In assessing the role of SFD in job creation, Abda Al-Mahdi writes (1999: p. 36). "Over a three year period of operation, the SFD succeeded in generating 630 thousand jobs of which 250 thousand were permanent...While the absolute numbers are quite significant given the limited resources and the SFD's limited goal of alleviating unemployment associated with ERSAP, they are insufficient when compared to the number of unemployed. As stated previously, the number of unemployed in 1995 was estimated at 1.9 million or 11.3 percent of the labor force. This means that the SFD was only able to absorb 18 percent of the unemployed in permanent and temporary jobs.

Jobs created by the Fund are characterized by their low cost pointing to effective use of donor funds. A World Bank report states that "the SFD met its employment creation objectives with annual expenditures equivalent to only .2 percent of GDP or about 6 percent of annual donor flows to Egypt. This job creation cost compares favorably with other countries". The report estimates the cost of job creation at market exchange rate at US\$ 1,401. However, the question remains as to the sustainability and productivity of workers in these newly generated job opportunities."

Adapted from Al-Mahdi (1999).

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Appendix Table 1: Predicted Performance in the 1986-96 period: Behavior of Poverty, Growth and Distribution in Six Arab Countries

Country	§K.	G	$g_{\rm F}$	$\tilde{G}$	Ŷ	<b>&amp;⊳</b> 0	<b>&amp;</b> ≪0	$G > \widetilde{G}$	$G < \tilde{G}$	$\hat{P} > 0$	$\hat{P} < 0$
Algeria	-0.0776	39.2813	1.1972	24.26	7.8057		Х	Х		Х	
Egypt	0.2864	32.0057	3.9962	36.90	0.6804	Х			Х	Х	
Jordan	-0.1722	40.6564	1.6606	24.26	7.9486		Х	Х		Х	
Mauritania	0.0286	42.5346	3.9843	36.90	0.7200	Х		Х		Х	
Morocco	0.5680	39.2002	4.7004	36.90	0.7176	Х		Х		Х	
Tunisia	-0.1192	40.0013	6.6971	36.90	-0.4021	Х		Х			Х

Notes: Source: Appendix Table D.1 and equation (10) of AE

 $\hat{P} = -\boldsymbol{a}g + \boldsymbol{a}_0$ , where

a = (1 - e)h - qv is the elasticity of the growth effect on poverty net of the influence of inequality operating through the growth channel.

 $\alpha_0$  = component of change in poverty due to distribution.

g= average annual growth rate in 1986-96.

 $\delta =$  average annual change for the rate of growth for 1986-96

G= level of Inequality in 1986-96

 $g_F = g + b_0 G$  is the average annual growth explained by non-distributional fundamentals (1986-96)

 $\tilde{G} = \frac{1}{ab_0} (ag_F - a_0)$ ; where the parameters are obtained from Appendix Table D.1 of AE.