

**The Political Economy of Inequality
in the Arab Region and Relevant
Development Policies**

Ali Abdel Gadir Ali

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Correspondence

Dr. Ali Abdel Gadir Ali, The Arab Planning Institute, P.O. Box: 5834 Safat.
13059 Kuwait, Tel: (965) 24843130, Fax: (965) 24842935, E-mail:
aali@api.org.kw

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Abstract

The paper deals with the political economy of inequality in the distribution of consumption expenditure in the Arab region. It argues that the relevant concept of development for dealing with political economy issues is that of development as freedom. Within such concept the paper looks at the nature of the Arab social contracts that prevailed in the region since independence and up to the mid-1980s. It argues that the core nature of these contracts was re-distributional and that their cumulative achievement was the current moderate degree of inequality enjoyed by the Arab region compared to the world. However, there is preliminary evidence of a rising degree of inequality in the Arab region, most likely due to the economic reform policies pursued by a number of countries in the region. This trend raises a number of concerns from a political economy perspective including the implication of the tolerance towards increasing inequality during the early stages of development, and development disasters; inequality traps in terms of the interplay of socio-political and economic inequalities; and equality of opportunity. Policies required for dealing with such implications are reviewed and found to be equivalent to the type of policies that were pursued by the Arab countries prior to their succumbing to neo-liberal policy packages of the 1980s and 1990s.

الاقتصاد السياسي لعدم المساواة في الدول العربية والسياسات التنموية الملائمة

ملخص

تناول هذه الورقة قضية الاقتصاد السياسي لعدم المساواة في توزيع الإنفاق الاستهلاكي في الدول العربية ولأغراض هذا التناول تقترح الورقة تبني مفهوم التنمية بوصفها عملية لتوسيع خيارات البشر. وفي إطار هذا المفهوم توضح الورقة أن العقود الاجتماعية التي سادت منذ استقلال الدول العربية وحتى منتصف ثمانينات القرن الماضي قد كانت توزيعية في طبيعتها الأمر الذي ترتب عليه تمتع الدول العربية بدرجة متوسطة من عدم المساواة مقارنة بالعالم. وعلى الرغم من ذلك توضح الورقة أن هنالك شواهد أولية تشير إلى نزوح درجة عدم المساواة إلى الارتفاع في السنوات القليلة الماضية، ربما بسبب من برامج الإصلاح الاقتصادي التي طبقتها هذه الدول. وتناقش الورقة مضامين هذا الاتجاه في ازدياد درجة عدم المساواة فيما يتعلق بالاقتصاد السياسي لكل من التحمل المجتمعي لمثل هذا التفاقم في حالة التوزيع وما يمكن أن يترتب عليه من كوارث تنموية، وتعمق حالة الوقوع في فخ عدم المساواة المترتب على تفاعل عدم المساواة الاقتصادية والاجتماعية والسياسية، وما يترتب على مثل هذا التفاعل من مساواة الفرص في المجتمع. واستعرضت الورقة السياسات الكهيلة بالتعامل مع هذه المضامين ووجدت أنها تكاد تكون متطابقة مع السياسات التي اتبعتها الدول العربية في إطار عقودها الاجتماعية السابقة قبيل وقوعها تحت إغراء تطبيق سياسات الإصلاح الاقتصادي.

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1. Introduction

At the outset it may be useful to remind ourselves that political "economy is about the sources of political power and its uses for economic ends. The sources of political power are coercion and legitimacy in varying combinations. Power can reasonably be seen as an end in itself.. However, power is not just an end in itself: it can be used to increase and to redistribute incomes" (Collier 2008: i-110). The policy instruments available to further these objectives (of economic growth and income redistribution) are the usual public expenditure (financed by taxation) and the regulation of economic activity (i.e. institutions). "Political economy investigates how interests and institutions shape these choices" (Collier (2008: i-111).

Basing themselves on the definition of political economy provided by Adam Smith in the *Wealth of Nations* Ajakaiye, Drazen and Karugia (2008: i4) argue that the "primary purpose of political economy is to enhance economic development prospects of the people". This, we suggest, is the relevant understanding of political economy in the context of developing countries⁽¹⁾. Combining the two definitions it can be argued that in the context of developing countries the political economy of inequality should be dealing with development policy choices⁽²⁾.

As is well known development policies pursued by most developing countries up to the end of 1970s were largely based on the propositions of the old school of development economics. The major strategic themes of such propositions have included industrialization, rapid capital accumulation, mobilization of surplus rural labor, and planning and an economically active state (see, for example, Sen (1983)). Since the resurgence of neo-classical economics in the early 1980s, especially with respect to development policy making, such earlier development policies came to be labeled as "poor policies". "A country with poor policies would be one with high inflation, large fiscal imbalances, and a closed trade regime" (World Bank (1998: 12)). The pursuit of good policies is said to be good for economic growth, and that there was a real trade-off between policies for economic growth and those for reducing inequality⁽³⁾. Such perceived trade-off, in our opinion, informs the debate on the "political economy" of inequality in developing countries, including countries of the Arab region.

Based on the above understanding this paper deals with the political economy of inequality in the distribution of consumption expenditure in the Arab region, it being recalled that consumption expenditure is the best available proxy for the standard of living in developing countries (in contrast to income being the relevant proxy in the advanced countries). In section (II) we briefly discuss the relevant concept of development that will be adopted. In section (III) we discuss the nature of the Arab social contracts that prevailed in the region since independence and up to the mid-1980s. We show that, compared to the world, the Arab region enjoys a medium degree of inequality. This, we suggest, should be understood as the cumulative achievement of the redistributive social contracts. We also show that the recent trend, however, is one of increased inequality. In section (IV) we discuss these recent trends in the context of tolerance towards inequality during the early stages of development.

Societies that tolerate increasing inequality are said to be endowed with a deep "tunnel effect" ala Hirschman (1973). In the absence of the "tunnel effect" developing

countries could fall into "development disasters" like civil wars. We show that a relatively large number of Arab countries experienced "development disasters" over the period since independence. In section (V) we discuss "inequality traps", the interplay of socio-political and economic inequalities. Inequality traps are essentially based on the concept of equality of opportunity. Policies required for dealing with such traps during the process of development are reviewed and are found to be equivalent to the type of policies that were pursued by the Arab countries prior to their succumbing to neo-liberal policy packages of the 1980s and 1990s. Section (V) summarizes the most important results of the paper.

2. A Development Framework

We suggest that the discussion of the political economy of inequality in developing countries requires the adoption of a broad definition for the "development process". Such a definition, which gained world-wide acceptance, is that "development can be seen as a process of expanding the real freedoms that people enjoy" (Sen (1999:3)). Without getting involved in the philosophical foundations of this approach we need to note that it requires judging the welfare of individuals neither in terms of the utility of goods and services, nor in terms of primary goods, but in terms of substantive capabilities to choose a life one has reason to value. "A person's capability to achieve functionings that he or she has reason to value provides a general approach to the evaluation of social arrangements, and this yields a particular way of viewing the assessment of *equality and inequality*" (Sen (1992: 4-5); emphasis is not in the original).

"Development as freedom" is a much broader approach to understanding what is meant by development compared to other approaches that identify development with increases in per capita income, or with industrialization, or with technological advance, or with social modernization. Being broad the capability perspective is closely related to the concept of "equality of opportunities"; but they are not identical. "In a very real sense, a person's capability to achieve does indeed stand for the opportunity to pursue his or her own objectives. But the concept of 'equality of opportunities' is standardly used in the policy literature in more restrictive ways, defined in terms of the equal availability of some *particular means*, or with reference to equal applicability of some *specific barriers or constraints*. Thus characterized, 'equality of opportunities' does not amount to anything like equality of *overall freedoms*" (Sen (1992: 7); emphasis is in the original)⁽⁴⁾.

Development as a process of expanding the freedoms that people enjoy, has found international recognition in the Millennium Development Goals (MDGs) adopted by the United Nations in September 2000. Over the past eight years, since their formulation, the MDGs and the broader definition of development on which they are based, influenced the development policy debate around the world (see, for example, the Commission for Africa (2005); Sachs (2005); UN Millennium Project (2005); the World Bank (2006); and, the Commission on Growth and Development (2008))⁽⁵⁾. The IMF, the World Bank, and the UNDP are all involved in helping least developed countries in estimating the feasibility of achieving the goals and the cost of doing so!⁽⁶⁾

Prior to the formulation of the MDGs, UNDP pioneered the measurement of “development as freedom” in terms of the by now famous Human Development Index (HDI). Capabilities included in the HDI are: the ability to live longer (as reflected in life expectancy at birth); the ability to read and write and to have access to available information (as reflected in literacy rates and combined educational enrolment rates); and, the ability to have a decent standard of living (as reflected by real per capita income). The HDI varies from one (for high human development) to zero (for no human development)⁽⁷⁾.

Under the MDGs the overarching objective of development in developing countries is the reduction of poverty. The first MDG requires the eradication of extreme poverty and hunger, where poverty is expressed as the proportion of people living below one dollar a day (i.e. the head-count ratio). Four of the remaining MDGs look at poverty from a capability, and achievements, perspective (education, gender equality, health and the environment).

Under the dominant money-metric approach to poverty reduction over a 25-year horizon both economic growth (changes in real per capita consumption expenditure) and changes in the inequality in the distribution of consumption expenditure matter. Thus, changes in poverty over time have a growth component and a distribution component: if a country experiences both economic growth and a decline in inequality it can be assured of reduced poverty. Otherwise, it will all depend on the relative strength of each of the two components⁽⁸⁾. In this respect we hasten to note that among the various measures developed in a growing literature on pro-poor growth the one proposed by Son (2004: 308) stipulates that “growth is unambiguously pro-poor if the entire Lorenz curve shifts upward”⁽⁹⁾.

Despite the above, most of the existing literature on the political economy of inequality approached the issue in the context of the narrow definition of “development” as “growth” by looking at the role of inequality in the growth process. A wide-ranging debate has ensued in this respect. From a purely theoretical economic point of view the nature of the debate is summarized by Aghion and Howitt (1998: 280) by noting that until “recently, a common wisdom among economists was that inequality should, if at all, have a stimulating effect on accumulation and growth; the same line of thought would in turn emphasize a fundamental tradeoff between productive efficiency (and/or growth) and social justice”. This common wisdom, however, is now being revisited.

A number of theoretical models have been proposed that show a negative relationship between inequality and growth (or, equivalently, a positive correlation between equality and growth)⁽¹⁰⁾. Relevant to our purpose are models specifically dealing with political economy considerations. Some of these models emphasize the effect of income inequality on social unrest. Under these models two links are identified: the first is from inequality to social unrest, while the second is from social instability to growth, it being understood that social unrest discourages investment. The second class of models emphasizes the role of politics in the fiscal process where the level of government expenditure and taxation is the result of a voting process in which income is the main determinant of a voter’s preferences. The logic is that in a society with high inequality the majority of voters will vote for high taxation thus

discouraging investment and growth. Hence, a more equal society will see relatively moderate taxation that does not discourage investment and growth.

The most important hypothesis based on this work is that *initial inequality is harmful to long-run economic growth*. The bulk of the empirical work undertaken to test the hypothesis is based on running a standard growth regression by adding an inequality measure to the right hand side of the growth regression equation⁽¹¹⁾. Despite the recent origin of this literature a variety of results are reported, the most recent of which establishes a negative causal link between initial asset inequality (where the Gini coefficient of operational land holdings is used as the measure of inequality in the distribution of assets) and the growth performance of countries⁽¹²⁾.

3. Arab Social Contracts and Inequality

It is well known that the Arab region is composed of a highly diverse group of countries. According to ERF classification four groups could be identified according to production structure: diversified economies (Egypt, Jordan, Lebanon, Morocco, Syria, and Tunisia); mixed oil economies (Algeria, Iraq, and Libya); oil economies (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates); and, primary export economies (Comoros, Djibouti, Mauritania, Somalia, Sudan, and Yemen). For 2005, excluding Iraq, Comoros and Somalia, the diversified economies accounted for 51% of the total population and 23% of total GDP; the mixed oil economies accounted for about 14% of population and GDP; the oil economies accounted for 12% of population and 59% of GDP; and, the primary export economies accounted for 22% of population and only 5% of GDP.

In the context of the above diversity in economic structure a relevant starting point to deal with the political economy issues of inequality in the Arab region is the nature of the social contracts that ruled the relationship between the state and society since independence⁽¹³⁾. Despite the diversity just noted Arab social contracts shared a number of core features summarized by the World Bank (2004-a: 2) to include the following:

- (i) “a preference for distribution and equity in economic and social policy”;
- (ii) “a preference for states over markets in managing national economies”;
- (iii) “the adoption of import-substitution industrialization and the protection of local markets from global competition”;
- (iv) “a reliance on state planning in determining economic priorities”;
- (v) “an encompassing vision of the role of the state in the provision of welfare and social services”; and,
- (vi) “a vision of the political arena as an expression of the organic unity of the nation, rather than as a site of political contest or the aggregation of conflicting preferences”.

It is admitted, rather grudgingly, that the Arab social contracts, despite various problems and setbacks, delivered “unprecedented levels of economic growth and

social development. Between 1965 and 1985 MENA's economic growth rates were among the highest in the world, *averaging 3.7 percent per capita a year*. The social contract also meant *low levels of poverty and income inequality*. The social payoffs from these policies have been enormous, with dramatic reductions in mortality and increases in life expectancy, school enrollment rates, and literacy levels" (World Bank (2004-a: 2); emphasis is not in the original)⁽¹⁴⁾.

The World Bank (2004-a: 2-3) goes on to observe a trade-off between the developmental achievements of these contracts and political freedoms. It is noted that large segments of the population benefited from the redistributive mechanisms of the social contract to the extent that they were identified by governments as a core constituency. "From 1960 through the 1980s, these social groups emerged as prominent winners in the political economies created by the interventionist-redistributive social contract. The welfare gains also helped to cement an "authoritarian bargain", with citizens trading restrictions on political participation in exchange for economic security and the public provision of social services, welfare, and other benefits" (World Bank (2004-a: 3))⁽¹⁵⁾.

In a rather rare admission the World Bank (2004: 3) notes that the inability to continue with the redistributive policies in the Arab countries was primarily caused by outside events: "declining oil prices, shrinking demand for migrant labor, and reduced remittance flows"!!! In response to the then emerging economic crisis governments in the Arab countries, like most governments in less developed countries, opted for the adoption of adjustment policies largely on the advice of the World Bank and the IMF: "across the region governments cut subsidies, reduced public expenditure, and reformed exchange rate regimes... (Adopted economic reforms) also included: privatization of state-owned enterprises, fiscal reform and trade liberalization, deregulation, and strengthening the institutional foundations for a market-led economy".

The above World Bank's assessment of the cumulative development achievements in the Arab countries is confirmed by looking at the 2005 human development index⁽¹⁶⁾. The UNDP (2007) report shows that seven Arab countries, comprising the six oil economies of the Gulf in addition to Libya, achieved high human development status an HDI of 0.8 or more. These seven countries account for about 15% of the Arab population; each of the remaining Arab countries achieved a medium human development status (i.e. an HDI of 0.5 but less than 0.8). Thus, in 2005 none of the Arab countries were included in the low human development category. Compared to human development achievement around the world, where about 8% of world population lived in low human development countries, this is indeed a credible performance. It should be noted, however, that the average Arab achievement is lower than that for the world: a simple average HDI for high human development category of 0.847 for the Arab region compared to 0.897 for the world; and, for the medium human development category of 0.649 for the Arab region compared to 0.698 for the world.

Having noted the above, we now look at the evidence regarding the inequality in the distribution of consumption expenditure in the Arab countries utilizing available information on the Gini coefficient, the most widely used measure of inequality⁽¹⁷⁾. The most recent compilation of the state of inequality, as measured by

the Gini coefficient, is provided in Ferreira and Ravallion (2008)⁽¹⁸⁾. The information is provided for 130 countries⁽¹⁹⁾. For each country the Gini coefficient is reported for two survey years: one in the 1990s, or just before that decade, and the other in the 2000s. However, not all countries have two entries. Out of the total number of countries in the compilation 98 had household surveys conducted in the 1990s and prior to 2000, while 84 had household surveys conducted in the year 2000 or more recent years. Further we note that for some countries the Gini coefficients are based on income distribution while for other they are based on consumption expenditure. In what follows we appropriately adjust the information available.

To appreciate the state of inequality in the Arab region we first establish a benchmark at the level of the world. To look at the inequality in the distribution of consumption expenditure at the level of the world we converted the reported Gini coefficients based on the distribution of income by subtracting 6.6 percentage points to obtain the Gini coefficients corresponding to the distribution of consumption expenditure (for the advice to undertake such an adjustment see Deininger and Squire (1996), and Li, Squire, and Zou (1998)).

In the 1990s the lowest recorded degree of inequality in the world is that of the Slovak Republic (a Gini coefficient of 0.129 in 1992) while the highest degree of inequality is recorded for Lesotho (a Gini coefficient of 0.631 in 1995). The overall average degree of inequality in the world is 40.6 percent, with a standard deviation of 10.6 percentage points. In the 2000s the lowest degree of inequality is recorded for Sweden (a Gini coefficient of 18.4 percent for 2000)⁽²⁰⁾; while the highest degree of inequality, a Gini coefficient of 53.6 percent, is recorded for Bolivia (for 2002). The overall average degree of inequality in the world is 37.57 percent, with a standard deviation of 8.91 percentage points. Thus, over the decade (roughly speaking) inequality in the world declined and its dispersion also declined.

To focus on the current state of inequality in the Arab region use will be made of the results for the 2000s. Using the above two descriptive statistics, together with the population for 2005, we can derive the distribution of the degree of inequality in the world as comprising low inequality (for countries with a Gini coefficient of less than 0.3311 (i.e. mean inequality minus half a standard deviation); medium inequality countries with a Gini coefficient of 0.3311 but less than 0.4202 (i.e. with a range equal to one standard deviation); and high inequality countries with a Gini coefficient of 0.4202 or above. Over these inequality ranges the 2005 population of the sample of countries was such that about 11% of the population was living in low inequality countries; about 40% were living in medium inequality countries while 49% were living in high inequality countries.

With the above inequality benchmark we can now look at the current state of inequality in the Arab countries. We have five Arab countries for which the Gini coefficient information is available for the year 2000, or more recent years. The reported Gini coefficients are 0.352 for Egypt (for 2004/05)⁽²¹⁾; 0.389 for Jordan (for 2002)⁽²²⁾; 0.393 for Mauritania (for 2004); 0.3921 for Syria (for 2004)⁽²³⁾; and, 0.3396 for Yemen (for 2005). Each one of these countries enjoys a moderate degree of inequality compared to the world. The simple average Gini coefficient for this sample of Arab countries is 0.3682 confirming that the Arab countries seem to enjoy a medium degree of inequality. Such a result should be understood as the cumulative

achievement of the social contracts that ruled in the Arab countries since independence.

Despite this moderate level of inequality in the 2000s there is evidence to suggest that the trend of inequality has been one of increase in the Arab region since the 1990s. To explore the trend in inequality in the Arab region we pooled the available information from eight Arab countries to look at the distribution of consumption expenditure as if the Arab world is one region. From the quintile observations for each country we generated a distribution for the region as a whole centered on two years 1995 and 2004⁽²⁴⁾. To do this we invoked the assumption that the distribution in question did not change over the relevant period for those countries that do not have the information for the two chosen years. Country real per capita consumption in 2005 PPP dollars for the chosen years are used together with the corresponding population. Thus for each country we have five income groups, and for each year we have 40 income groups. Based on these pooled income groups for each year the parameters of a quadratic Lorenz curve are obtained⁽²⁵⁾, based on which we calculated the shares of the various quintiles in consumption expenditure. The relevant information on the basis of which the calculations are based is presented in annex table (A.1). From the pooled data the average real consumption expenditure is calculated as US\$1897 in 1995 and US\$2008 in 2004 implying an annual rate of growth of 0.63 percent.

Our results confirm the above noted trend in inequality in the Arab region: the Gini coefficient for 1995 is calculated as 36.23 percent (i.e. 0.3623) compared to a Gini coefficient of 38.76 (i.e. 0.3876) for 2004. This implies that the Gini coefficient of consumption expenditure in the Arab countries recorded an annual rate of increase of one percent, a rate considered quantitatively significant by Li, Squire and Zou (1998)⁽²⁶⁾. We hasten to note that, given the per capita consumption growth rate, this increase in the Gini coefficient implies a Kuznets' elasticity (i.e. a percentage change in the Gini coefficient as a result of a percentage change in per capita consumption expenditure) of about 1.59. This, we suggest, is a very high elasticity compared to values obtained from cross-country regressions.

The above recent trend in inequality in the Arab region can be understood in terms of the inequality convergence result of Ravallion (2003). According to the result inequality convergence at the level of the world is explained in terms of the policy and institutional convergence since the 1990: "low- inequality socialist economies have become more market-oriented, which has increased inequality. On the other hand, non-socialist economies have adopted market friendly reforms. In some of these economies pre-reform controls benefited the rich, keeping inequality high, while in others the controls had the opposite effect, keeping inequality low. Thus liberalizing economic policy reforms can entail sizable redistribution between the poor and the rich, but in opposite directions in the two groups of countries" (Ferreira and Ravallion (2008: 14)). Pending further confirmation, it can be suggested that the pursuit of economic reform policies in Arab countries since the mid-1980s could have resulted in the above noted worsening income inequality.

4. Inequality and Development Disasters

Related to the political instability hypothesis noted earlier is the concept of the "tunnel effect" due to Hirschman (1973)⁽²⁷⁾. The tunnel effect deals with the political economy issue of the trade-off between economic growth and equity in the distribution of income in a developing economy at an early stage of development. The original statement of the tunnel effect is that in "the early stages of rapid economic development, when inequalities in the distribution of income among different classes, sectors, and regions are apt to increase sharply, it can happen that society's tolerance for such disparities will be substantial. To the extent that such tolerance comes into being, it accommodates, as it were, the increasing inequalities in an almost providential fashion. But this tolerance is like a credit that falls due at a certain date. It is extended in the expectation that eventually the disparities will narrow again. If this does not occur, there is bound to be trouble and, perhaps, disaster" (Hirschman (1973: 545))⁽²⁸⁾.

The "tunnel effect" takes its name from an analogy with a driver on a left lane, of a road with two lanes moving in the same direction, stuck in a traffic jam where no car is moving. "After a while the cars in the right lane begin to move. The spirit of the driver lifts considerably (i.e. he feels better off) on the understanding that the jam has been broken and with the expectation that the turn of the left lane to move will come any moment. If the expectation is disappointed, and only the right lane keeps moving, the drivers on the left lane may at some point "become furious and ready to correct manifest injustice by taking direct action (such as crossing the double line separating the two lanes)" (Hirschman (1973: 545)).

The tunnel analogy was translated into the standard language of welfare economics, where the welfare of a representative individual of a given, disadvantaged, group is defined on own income, own expected future income and the income of a representative individual of another, advantaged, group. Expectations about future income are formed by averaging current incomes of the two types of individual. In the appendix to the original paper, authored by Michael Rothschild, a dynamic version of the model assumes a log linear indirect utility function. Where superscripts D and A denote the disadvantaged, and the advantaged, groups respectively, and where y is current income, and e expected income, we have for the welfare of a representative individual of the disadvantaged group (where we suppress the time dependence of the income variables):

$$(1) V^D(y^D, y^A, e^D) = \alpha \log y^D + \beta \log y^A + \gamma \log e^D.$$

Expectations are formed according to the following:

$$(2) \log e^D = (1 - \eta) \log y^D + \eta \log y^A.$$

Thus, we have:

$$(3) V^D(y^D, y^A) = [\alpha + \gamma (1 - \eta)] \log y^D + [\beta + \gamma \eta] \log y^A.$$

Clearly the tunnel effect is present whenever $[\beta + \gamma \eta]$ is positive. The dynamics are introduced by assuming initial equal income and differential growth for

the D (with stagnant income) and A (with income growing at a constant rate) groups. The idea that initially the disadvantaged individual hopes to share in the good fortune of the advantaged, but grows more discouraged as time goes on, is captured by a specification of the weighting parameter η in the expectation formation mechanism such that the parameter declines over time at a constant rate. With these assumptions it is shown that the change over time in welfare of the D group can be solved for a date beyond which such welfare will begin to decline and society's tolerance for inequality will reverse (Hirschman (1973: 566)).

Hirschman (1973: 554) concluded that the tunnel effect is to be found in homogenous societies. In such societies “where resources are largely owned domestically, the tolerance for economic inequalities may be quite large as no language, ethnic, or other barrier keeps those who are left behind from empathizing with those who are making it”. In addition, traditional family arrangements facilitate the operation of the tunnel effect, provided that the traditional society is not highly segmented. The tunnel effect is expected to be weak, or non-existent, in fractionalized societies. The absence of the tunnel effect is expected to lead to “development disasters”. Two kind of development disasters are distinguished. “The first is characteristic of societies that have attempted to develop by means of a strategy implying the arising of new inequalities or the widening of old ones....The other kind of development disaster occurs in countries in which the above strategy is nicely abetted for a while by the tunnel effect, but the ruling groups and policy makers fail to realize that the safety valve, which the effect implies, will cease to operate after sometime”. Examples of the first kind of development disaster are given as Nigeria (Biafra war) and Pakistan (the breakaway of Bangladesh).

Hirschman's development disasters have since then come under rigorous study by the literature on civil wars. In the context of this specialized literature a civil war is defined as an internal conflict, involving a government, with at least one thousand battle-related deaths per year and at least five percent of the deaths inflicted by the weaker party⁽²⁹⁾. The economic causes, and consequences, of civil wars have recently been subjected to a rigorous empirical analysis. What has come to be known as the Collier-Hoeffler model of civil war is summarized in Collier, Hoeffler and Sambanis (2005). In the analysis individuals are assumed to behave rationally and choose whether to support a rebel movement (i.e. to fight the government) on the motivation of greed and grievance. Pure greed rebellions will take place only when they are financially viable. Similarly, even rebellions motivated by grievance need to meet financial constraints. For a civil war to occur rebel groups need to build fairly large organizations that require substantial resources for wage payments and for the purchase of arms. The grievance discourse, where inequality plays a dominant motivation, is the one favored by political scientists.

The economic theory of civil wars focuses on the feasibility of rebellion as well as its motivation. The feasibility hypothesis proposes that when a rebellion is feasible it will occur. “The agenda of the rebel group is determined by the preferences of the social entrepreneur leading whichever organization is the first to occupy the (rebellion) niche. Sometimes this will be a not-for-profit organization with a political or religious agenda, and sometimes a for-profit organization. Where the niche is sufficiently large several rebel groups may coexist, but the factors that explain rebel

agenda are incidental to the explanation of civil war” (Collier, Hoeffler and Rohner (2006: 5)).

The latest empirical results on the basis of the above construct are reported in Collier Hoeffler and Rohner (2007)⁽³⁰⁾. A logit regression analysis is used based on a sample of 172 countries with 71 civil wars over the period 1965-2004, resulting in 1063 observations where the risk of war start is examined in five year periods. War start is coded as one if a war breaks out during the five-year period. The statistically significant determinants of civil war are found to include: (a) the level of per capita income, the lagged growth rate of GDP per capita income, the composition of income represented by a quadratic of primary commodity exports as a ratio of GDP (the three are the economic factors); (b) the number of years since the end of the last civil war, and colonial history, a dummy that takes the value of one if the country was a former French African colony and zero otherwise (these two are the historical factors); (c) social fractionalization (defined by the product of the famous ethno-linguistic fractionalization index and a religious fractionalization index), and the proportion of young men in the age range of 15-29 years (these two are the social factors); and, (d) a geography variable defined as the proportion of the terrain of a country that is mountainous.

What is relevant for our purposes is the statistical significance of the social fractionalization variable, which confirms the result that the absence of the tunnel effect gives rise to a “development disaster” defined as the start of a civil war. What has been conspicuously absent from this literature, however, is the statistical significance of any inequality variable as a cause of civil wars. One possible explanation for this is the unavailability of reliable data on inequality in the distribution of income or wealth, and additionally the type of inequality that needs to be explored, and included, in the analysis.

In a wide ranging critique of the statistical studies of civil wars Cramer (2005: 16-18) calls for “looking deeper into processes, mechanisms, and relations that generate and sustain inequality”. He argues that such a research route can be found in, among others, Hirschman’s “tunnel effect” and Stewart’s (1999 and 2007) “horizontal inequality”. In this respect it is noted that these two approaches are closely linked. Stewart is of the opinion "that most studies of the relationship between economic inequality and political conflict have understood it only in terms of ‘vertical inequality’, that is, the distribution of income across the whole population of individuals from the richest to the poorest and as captured by the Gini coefficient. However, she argues, horizontal inequality is far more significant, reflecting as it does differential standards of living and access to public sector employment, political rights, educational opportunities, and so on among collective groups within a society. These groups may fall into various classification kinds, for example, religious, regional, class, or ethnic” (Cramer (2005: 16)).

Similarly Sambanis (2005: 327-328), himself an active and original contributor to the statistical studies of civil wars, drawing conclusions from case studies to refine and expand the empirical study of civil wars, notes that “inequality is another variable that keeps coming up in the case studies, but is dismissed as nonsignificant in most quantitative analysis of civil war”. He argues that perhaps the relevant inequality variable is that dealing with horizontal inequality: “Thus , if

group-level data on inequality are not available, a useful measure of inequality to consider should be regional inequality, measured in terms of the differences between mean levels of per capita income across subnational units (such as provinces)”.

Within the context of the civil war literature we may define an indicator for the existence of tunnel effect as the time that has elapsed since independence before the outbreak of a civil war of more than one year duration. A recent compilation of development disasters, understood as the outbreak of civil wars, listed 53 countries that have recorded such civil wars in developing countries (Sambanis (2008); see annex table (A.3))⁽³¹⁾. The average duration of the tunnel effect in the sub-sample of non-Arab countries is about 16.26 years, with a standard deviation of 15.25 years. The duration ranged from a minimum of zero years (i.e. no tunnel effect; recorded for Angola, DR Congo, India, Kenya, South Korea, Myanmar, and Namibia) to a maximum of 46 years (i.e. a society endowed with a deep tunnel effect, recorded for Haiti).

Eleven Arab countries are Algeria (which gained independence in 1962, and outbreak of a civil war in 1992 meaning a duration of a tunnel effect of 30 years); Djibouti (1977 with a civil war in 1991 and a tunnel effect of 14 years); Egypt (1945 with a civil war in 1995 and a tunnel effect of 50 years); Iraq (1945 with a civil war in 1961, and a tunnel effect of 16 years); Jordan (1945 with a civil war in 1970, and a tunnel effect of 24 years); Lebanon (1946 with a civil war in 1975 and a tunnel effect of 29 years); Morocco (1956 with a civil war in 1975, and a tunnel effect of 19 years); Somalia (1960 with a civil war in 1988, and a tunnel effect of 28 years); Sudan (1956 with a civil war in 1962 and a tunnel effect of 7 years); Syria (1946 with a civil war in 1979 and a tunnel effect of 33 years); and the Arab Republic of Yemen (1945 with a civil war in 1962 and a tunnel effect of 17 years)⁽³²⁾. The average duration of the tunnel effect in Arab countries is 24.27 years with a standard deviation of 11.66 years. The duration ranged from a minimum of seven years (i.e. very shallow tunnel effect; recorded for Sudan) to a maximum of 50 years (i.e. a society endowed with a deep tunnel effect, recorded for Egypt).

Conducting the usual t-test of difference between two means it can be ascertained that, contrary to expectations, the difference between the two groups of countries is marginally statistically significant: a t-value of 1.6364 (with probability 0.1079)⁽³³⁾. This a rather surprising result. Using Alsenia et al (2003) fractionalization indexes we computed a composite social fractionalization index as the product of ethnic, language and religious fractionalization. For the Arab sub-sample of civil war countries the average social fractionalization index is 0.0411 while that for the non-Arab sample is 0.1712. The t-value for the difference between means is 2.1 (significant at the 5 percent level) indicating that Arab countries are more homogenous than other developing countries that suffered "development disasters"⁽³⁴⁾. As such, therefore, from a cultural point of view, one would have expected the Arab countries as a group to have been endowed with a relatively deeper tunnel effect compared to other developing countries⁽³⁵⁾.

In view of the above, we suggest that there is a need for further investigation of the existence of the tunnel effect in the Arab countries primarily to alert policy makers of the dangers of taking the implication of the current degree of inequality for granted. Such investigation of the existence of the tunnel effect in Arab countries

could invoke a broader measure of horizontal inequality between regions, capturing the broader definition of development, in the form of differences between mean levels of development achievements as summarized by the human development index (HDI).

5. Inequality Traps and the Rediscovery of Relevant Development Policies:

It will be recalled that during the latest stages of the preparation of the World Development Report 2000/2001: *Attacking Poverty* there ensued a major disagreement between the team preparing the report and a number of quarters (including mainly the US treasury, at the time under the leadership of Larry Summers, and a number of hard line neoclassical economists from inside and outside the Bank). The nature of the disagreement was explained by Kanbur (2001), the original team leader of the WDR who subsequently resigned, and Wade (2001).

According to Wade (2001:1436) the January 2000 draft of the WDR gave rise to strong opposition inside and outside the Bank: "Many critics said it short-changed growth, and gave far too much attention to income inequality. It even said that world income inequality was widening, and that this widening was bad – not good- for growth. This, said the critics, was a politically biased finding, the result of poor econometrics. Many mainstream economists claim that, in any case, income inequality is good for growth, because it strengthens incentives to effort and risk-taking". So the fundamental disagreement at the time revolved around the relative roles of economic growth and income inequality in the reduction of poverty in developing countries.

Be the above as it may, it seems that indeed time is the best healer for disagreements on the political economy of inequality. The WDR 2006: *Equity and Development* elaborated the role of inequality in the development process. To eventually formulate its ultimate message the WDR 2006 defined equity in terms of two principles: the principle of "equal opportunity" and the principle of "the avoidance of absolute deprivation" (World Bank (2006: 18-19)). Consistent with Sen's capability approach it is explicitly noted that by "equity we mean that individuals should have equal opportunities to pursue a life of their choosing and be spared from extreme deprivations in outcomes" (World Bank (2006: 2)).

The main message of the report is stated as that "equity is complementary, in some fundamental respects, to the pursuit of long-term prosperity" (World Bank (2006: 2)). Such complementarity arises from two sets of reasons. One set has to do with market failures in developing countries (i.e. missing or imperfect markets), and the resulting mal allocation of investment opportunities and resources. If correcting market failures "is not feasible, or far more costly, some form of redistribution can increase economic efficiency" (World Bank (2006: 2)). The second set of reasons has to do with "the fact that high levels of economic and political inequality tend to lead to economic institutions and social arrangements that systematically favor the interests of those with more influence. Such biased institutions can generate economic costs and society as a whole is then likely to be more inefficient and to miss out on opportunities for innovation and investment" (World Bank (2006: 2)).

It is on the basis of the two principles of equity, and their implications for resource allocation, that the concept of the "inequality traps" is formulated. The crux of the inequality traps is the realization that political systems do not always appropriately aggregate peoples' views into social preferences. "Policies and institutions do not arise from a benign social planner who aims to maximize the present value of social welfare. They are the outcomes of political economy processes in which different groups seek to protect their own interests. Some groups have more power than others, and their views prevail" (World Bank (2006: 20)). Thus inequality traps result from the interaction of political, economic and cultural inequalities: "unequal economic opportunities lead to unequal outcomes and reinforce unequal political power. Unequal power shapes institutions and policies that tend to foster the persistence of the initial conditions" (World Bank (2006: 20))⁽³⁶⁾.

The existence of inequality traps has two main implications. "The first implication is that, because of market failures and of the ways institutions evolve, inequality traps can affect not only the distribution but also the aggregate dynamics of growth and development. This in turn means that, in the long run, equity and efficiency may be complements, not substitutes" (World Bank (2006: 21)). The second implication is that "no real-life policy or institution is entirely exogenous: no existing organization or application of a policy idea has been implemented on a purely technocratic basis. All policies and institutions exist because the political system has brought them into being or allowed them to survive. The political system reflects the distribution of power and voice attained at a particular time and place. This distribution is, in turn, influenced by the distribution of wealth, income, and other assets and outcomes in that society" (World Bank (2006: 22-23)).

The above equity dimension gave rise to an enlightened discussion of relevant development policy reorientation, albeit in the context of a stable macroeconomic environment (appropriately defined) and fairly efficient institutions (World Bank (2006: 9-16; and, 129-205))⁽³⁷⁾. Such reorientation requires the involvement of government in investment in human capacities (including early childhood development, education, health, social protection); in building equitable justice systems; in ensuring greater equity in access to land (including land reforms); in ensuring equitable access to infrastructure (including roads, electricity, water, sanitation and telecommunication); and, in ensuring that market transactions are not influenced by the wealth or status of participants (including financial, labor, and product markets). Required resources to implement such interventions can be mobilized from a moderately progressive tax system that does not have large efficiency losses (e.g. a tax system with simple exemptions for basic foodstuffs and an expanded role for property taxation) (see, World Bank (2006: 13)).

The above equity reorientation of policy is tantamount to rediscovering relevant development policy pursued by Arab countries during the decades of 1960-1980. We hasten to note that in the 1980s such policies were dubbed "bad policies" by the World Bank itself (in addition to the IMF). It is now very well known that the social contracts that prevailed in the Arab countries over the period 1965-1985 addressed the various equity concerns of the development process through the mechanisms of social transfers and public employment in addition to investment in infrastructure. There is empirical evidence to suggest that indeed these are very effective mechanisms for such a role. The empirical evidence for this was first established by Milanovic (1994)

and confirmed recently by Bulir (2001)⁽³⁸⁾.

Bulir (2001) uses the original data of Milanovic which is assembled for an international sample of 75 countries including four Arab countries (Algeria (1989), Egypt (1975), Jordan (1986), and Morocco (1980)). The original specification of the inequality-development relationship due to Kuznets (1955) is estimated, where a measure of inequality in the distribution of the standard of living (e.g. the Gini coefficient) is regressed on the stage of development as reflected in real per capita GDP (the specification is usually a quadratic in GDP per capita). The inequality-development relationship is augmented by adding two explanatory variables relating to the role of the state: (a) state employment: defined as the percentage of all employed who work in the state sector inclusive of government administration; and (b) social transfers: defined as the percentage share of cash and in-kind social transfers in GDP, where social transfers are taken as pensions, maternity and family allowances, temporary sick pay, unemployment compensations, education and health.

In the regression analysis the Gini coefficient, in percentage terms, is used as the dependent variable. The explanatory variables are the logarithm of GDP per capita expressed in 1988 PPP international dollars, and its square; in addition to state employment and the social transfers. All explanatory variables are taken for the same year of the observation of the Gini coefficient. The estimated relationship confirmed the existence of a Kuznets inverted-U relationship (significant at the 5-percent level), had an adjusted R-squared of 0.67, and with the social policy variables significant at the one percent level. According to these results an increase in subsidies and transfers as a ratio of GDP by a percentage point reduces the Gini coefficient by 0.42 points. Similarly, an increase in state employment as a ratio of total employment by a percentage point reduces inequality by 0.23 points.

Another augmentation of the inequality-development relationship is undertaken by Calderon and Serven (2004). This time around indicators of infrastructural investment are added to the explanatory variables on the right-hand side of the Gini coefficient equation (where the Gini coefficient is entered as a ratio between zero and one)⁽³⁹⁾. Two aggregate indicators of infrastructure are built: the first captures the stock while the second captures the quality. The stock indicator is a composite indicator of the number of main telephone lines per thousand workers (with a weight of 0.6159); the electricity generating capacity in Giga Watt per thousand workers (with a weight of 0.6075); and the total road length normalized by the surface area of the country (in km per squared km; with a weight of 0.5015)⁽⁴⁰⁾. The composite stock indicator is the weighted average of the logarithms of the component indicators. For each country the original data is averaged over five years over the period 1960-2000.

The index of the quality of infrastructural services is also based on deriving weights from principal component analysis focusing on three indicators: the services of telecommunications (measured as number of years waiting for telephone main lines; with a weight of 0.5923); power services (measured as the percentage of transmission and distribution losses in the production of electricity; with a weight of 0.5814); and transport services (measured as the share of paved roads in total roads; with a weight of 0.5578).

Without getting involved in technical details we note the overall result regarding the effect of investment in infrastructure on inequality: "a one standard deviation increase in the index of infrastructure stocks (1.2) reduces the Gini coefficient by 0.06. An analogous increase in the index of infrastructure quality (1.13) reduces the Gini coefficient by 0.01. Hence, a one standard deviation increase in both quantity and quality of infrastructure services would reduce the Gini coefficient by 0.07" (Calderon and Serven (2004: 23))⁽⁴¹⁾.

Despite the appropriateness of the distributive content of the Arab social contracts there is evidence to suggest that Arab countries, under pressure from various quarters, succumbed to the temptation of drastically changing their commitment to reducing inequality in the distribution of the standard of living. Thus, like many other less developed countries, most Arab countries adopted stabilization and structural adjustment programs like secular Gods since the mid-1980s. The end result was that during the 1990s the Arab region (looked at as an income group) was the only region in which subsidies and social transfers as a ratio of total government expenditure declined from 21% in 1990 to 18% in 1997, before recovering to 23.8% in 2005⁽⁴²⁾. The evidence also shows that the region did not have an excessive ratio compared to other income groups. With the exception of Kuwait and Morocco, all other Arab countries experienced a decline in ratio of subsidies and current transfers to total expenditure. Compared to other country groupings the Arab countries did not have a significantly higher average ratio in 1990 and they recorded the lowest average ratio in 1997 and 2005.

The Arab countries also seem to have abandoned their commitment to equity in terms of employment in the state sector. Evidence on this, however, is lacking. Indirect evidence is to be found in the relatively high unemployment rates that distinguish the region compared to other world regions. Moreover, there is evidence to suggest that the unemployment rate in a number of Arab countries had a statistically significant upward trend since the 1970s. In this respect it is to be noted that the World Bank (2004-a: 99, figure 4.6), though deals with unlocking the employment potential in the Arab countries, failed to provide the detailed evidence on how public employment changed over the 1990s decade⁽⁴³⁾!

As is usual with information requiring surveys the details of unemployment in the Arab countries are problematic, both in terms of availability and quality. Despite this, however, there is evidence to suggest that during the period since 1980 to the present unemployment rates remained relatively high and exhibited increasing trends in most of the Arab countries for which time series data is available. These countries are Algeria, Egypt, Jordan, Morocco, Tunisia and Syria⁽⁴⁴⁾.

Available time series evidence shows that the average unemployment rate for 1980s decade ranged from a high of 16.5% in Algeria to a low of 4.8% in Syria. Morocco's unemployment rate was second highest (14.2%), followed by that of Tunisia (13.6%), that of Egypt (7.6%), and that of Jordan (6.2%). The weighted average unemployment rate for this group of Arab countries for the 1980s is 10.6%, where the labor force weights for 2005 are used. For the 1990s decade the average unemployment rate for Algeria remained the highest at 25.3%, followed by that for Morocco (18%), with both Jordan and Tunisia recording the third highest average unemployment rate of 15.5%, followed by Egypt (9.6%) and Syria (8.1%). The

weighted average unemployment rate for the 1990s decade is 14.5%. Thus, over these two decades the unemployment rate did indeed increase for all countries under consideration. Similarly, though slightly fragmentary, preliminary evidence for the 2000s decade indicate that the weighted average unemployment rate increased to 15.5% from its average in the 1990s decade⁽⁴⁵⁾. These overall trends are confirmed for all the countries above except for Morocco⁽⁴⁶⁾.

Given the relatively high unemployment rate, and its tendency to increase over time in most Arab countries, and taking into account the pressures of the global market on policy makers, there is now a move in policy circles for designing macroeconomic policies that can initiate and sustain a high level of employment without sacrificing increased productivity. According to Bhaduri (2005:14) domestic "demand-led expansion is the cornerstone of this employment strategy...An employment guarantee scheme at the minimum wage, financed to the extent necessary by an expansionary budgetary policy of the government, might be required to break the inertia of continuing serious unemployment". The implication of such a strategy run counter to the neo-liberal advocacy of reforming labor market policies and institutions with the aim of increasing the flexibility of labor markets. In this respect the Commission on Growth and Development (2008: 45) notes that "rules and institutions exist to safeguard the rights of labor, defending workers against exploitation, abuse, underage employment, and unsafe working conditions. In some countries, these rights are protected by unions or government regulations. But in others, no such protections are in place. The Commission feels strongly that these rights should not be sacrificed to achieve other economic objectives, including growth".

6. Summary

The most important conclusions of this paper can be summarized as follows:

- (i) the political economy of inequality in the Arab countries should best be addressed under a broad understanding of development as a process of expanding the freedoms that people enjoy to choose the style of lives that they have reason to value;
- (ii) such an understanding lies behind the MDGs of the UN, which can be interpreted as requiring the adoption of reducing poverty as the overarching objective of development;
- (iii) once we are concerned about poverty it follows that we must be concerned about the inequality in the distribution of consumption expenditure (i.e. the relevant indicator of the standard of living in developing countries);
- (iv) it goes without saying that we would also be concerned with initiating, and sustaining, economic growth; and indeed taking into account inequality traps, it can be argued that there exists no trade-off between equity and efficiency considerations for long-run growth processes;
- (v) the Arab region, despite the diversity of its countries, in the initial stages of its development immediately after independence adopted social

contracts that were redistributive in nature. These social contracts achieved both growth and equity resulting in credible poverty reductions over about twenty years before they were derailed by the adoption of structural adjustment policies starting in the mid-1980s. Despite the development achievements a relatively large number of Arab countries contracted "development disasters" in the form of civil wars;

- (vi) one of the enduring legacies of the Arab social contracts is a moderate degree of inequality judged by world standards. Recent trends, however, show that inequality in the region is on the rise;
- (vii) thus far, however, such increasing inequality did not give rise to development disasters, but it may. A surprising result is that the Arab countries do not seem to be different from other developing countries in terms of the existence of the tunnel effect, which calls for a careful investigation of the existence of tunnel effect in the region;
- (viii) invoking the concepts of equality of opportunity and inequality traps, there is evidence to suggest that the world community is rediscovering relevant development policy, inclusive of relevant redistributive policies. Some of these policies were the core policies which defined the Arab social contracts up to the mid-1980s.

To sum up each Arab country will do well by defining its own ranges of "good policies", taking into account the changes that have taken place in the world economic environment.

Footnotes

⁽¹⁾ Drazen (2006: i18-i71) argues that political economy models used to study political economy issues in developed countries can be relevant to developing countries. Motiram and Nugent (2007) develop a model relevant to developing countries in this tradition using the provision of education as a mechanism through which inequality and development interact. However, Azam (1995) argued the opposite position, especially as regards the relevance of the median voter theorem.

⁽²⁾ We take it for granted that the third wave of globalization since the early 1980s has severely constrained the autonomy of an individual country to pursue national development policy; see, among others, Bhaduri (2005).

⁽³⁾ It will be recalled that this was the major policy advocacy position of the International Financial Institutions, and the donor countries, under the by now largely discredited, and abandoned, structural adjustment programs.

⁽⁴⁾ In presenting empirical evidence in the context of this broader approach to development Sen (1999: 38-40) identified five instrumental freedoms that have immediate policy relevance: political freedoms; economic facilities; social opportunities; transparency guarantees; and, protective security. Sen (1999: 38) notes that these "instrumental freedoms tend to the general capability of a person to live more freely, but they also serve to complement one another". A careful reading of the content of the above instrumental freedoms clearly shows the political economy nature of issues of the inequality in the distribution of income, wealth, and indeed opportunities.

⁽⁵⁾ Reflecting this world wide consensus the Commission on Growth and Development (2008: 1) specifically notes that growth "is not an end in itself. But it makes it possible to achieve other important objectives of individuals and societies". The Commission goes on to refer to the MDGs. We hasten to note that such was the critique leveled by Sen (1983) against the conventional "development economics" of the 1940s and 1950s.

⁽⁶⁾ Indeed the adoption of the Poverty Reduction Strategy Papers (PRSP) by the Boards of the IMF and the World Bank as required documents to access concessional funding, and eventually getting debt relief, by less developed countries is an implicit acceptance of this broad definition of development. It can easily be argued that PRSPs are in the nature of medium-term development plans with a different tag attached to them; but, of course, that is a long "political" economy story.

⁽⁷⁾ Countries are classified in three mutually exclusive and exhaustive categories according to the value of their HDI: as high human development (for an index equal to or greater than 0.8); medium human development (for an index equal to 0.5 but less than 0.8); and low human development (for an index less than 0.5). In addition to the HDI, in its 1997 Report, UNDP also proposed the Human Poverty Index (HPI) to capture various aspects of "unfreedoms" or deprivation from the above capabilities.

⁽⁸⁾ As is well known the most widely used measure of poverty under the money metric approach, the head-count ratio, could be formulated as follows, where $H(\cdot)$ is the poverty measure, μ is mean real per capita consumption expenditure, z is the per capita poverty line, θ an index of inequality, and $\lambda = \mu/z$ is a standard of living ratio: $H = H(\lambda, \theta)$. Percentage change in poverty, $G(H)$ can be written as: $G(H) = \eta G(\lambda) + \nu G(\theta)$; η is the partial elasticity of the poverty measure with respect to mean consumption expenditure (which is negative), and ν is the partial elasticity of the poverty measure with respect to the inequality index (which is positive). The first term in the $G(H)$ equation is the growth component while the second term is the distribution component.

⁽⁹⁾ As is well known the Lorenz curve is a relationship between the cumulative share of income and the cumulative share of population. Thus if $L(P)$ is the cumulative share of income of the corresponding cumulative share of population P , a valid Lorenz curve is required to satisfy the following restrictions: $L(0) = 0$; $L(1) = 1$; $L'(0) \geq 0$; $L''(P) \geq 0$ for all P belonging to the open interval $(0, 1)$. It will be recalled that when the Lorenz curve shifts upward it becomes closer to the diagonal which gives the state of complete equality.

⁽¹⁰⁾ For the contributions to this literature see, for example, Perotti (1996) and Aghion and Howitt (1998) and references cited therein. Perotti (1996: 151-154) classifies this literature into four groups: "endogenous fiscal policy"; "sociopolitical stability"; "borrowing constraints and investment in education"; and, "joint education-fertility decision".

⁽¹¹⁾ Without getting involved in technical details causal relationships can be estimated by running a regression of the form: $G(y) = \alpha + \beta Z + \gamma \text{INEQ}$; where in this case we have the growth rate of per capita income as the dependent variable, Z is a vector of explanatory variables and INEQ is an inequality variable.

⁽¹²⁾ Deininger and Olinto (2000).

⁽¹³⁾ It will be recalled that the title of one of the most influential papers on the subject carried the term “social contract” thus: “Unequal Societies: Income Distribution and the Social Contract” (Benabou (2000)). The paper, however, deals with advanced countries: USA and Western Europe.

⁽¹⁴⁾ According to Elbadawi (2005: 296, table1) the Arab world recorded an average per capita growth rate of 2.5 percent per annum over the period 1960-1984 with a standard deviation of 2.2 percentage points reflecting a relatively high level of volatility. The annual growth rates of the various groups was as follows: diversified economies 3.1 percent; mixed oil producers 1.9 percent; oil economies 5.5 percent; and primary export economies 0.4 percent.

⁽¹⁵⁾ See Elbadawi and Makdisi (2007) who, using a widely recognized classification of political regimes that ranges from democratic to dictatorship, found that most of the Arab countries could be classified as authoritarian regimes over the period 1950-1990, and that these regimes tended to survive much longer than the median regime of their type in the world.

⁽¹⁶⁾ The HDI is calculated for 177 country and region: Iceland with an HDI of 0.969 was the best performing country while Sierra Leone, with an HDI of 0.336 was the worst performer.

⁽¹⁷⁾ For the philosophical issues of inequality, looked at from a development perspective, see Sen (1999 and 1992). For various measures of inequality see, among others, Sen and Foster (1997) and Duclos and Araar (2006).

⁽¹⁸⁾ It will be recalled that the Gini coefficient is a measure of inequality based on the Lorenz curve which gives a non-linear relationship between the cumulative share of population and the corresponding cumulative share of consumption expenditure or income, where individuals are arrayed from the poorest to the richest. The Gini coefficient ranges from unity for the case of complete inequality (i.e. only one individual getting 100 percent of expenditure) to zero for the case of complete equality (i.e. every individual getting average expenditure).

⁽¹⁹⁾ Nine Arab countries are included in this compilation: Algeria (with a survey for 1995); Egypt (1995); Jordan (1992 and 2002); Kuwait (1998); Lebanon (1995); Mauritania (1993); Morocco (1998); Tunisia (1995); and Yemen (1992). In addition, we also include the Gini for Syria for 2003, (from El-Laithy and Abu-Ismaïl (2006)).

⁽²⁰⁾ For the 1990s decade the average Gini at the level of the world was 0.4076 with a standard deviation of 0.1031. The lowest degree of inequality of 0.129 was recorded for the Slovak Republic (for 1992), while the highest degree of inequality of 0.677 was recorded for Namibia (for 1993).

⁽²¹⁾ See El-Issawy (2007: 535, table 8.6).

⁽²²⁾ Ferreira and Ravallion (2008).

⁽²³⁾ UNDP (2005)

⁽²⁴⁾ This is what Milanovic (2005: 7-8) calls "concept 3" inequality where inequality is calculated across all individuals in the (Arab) world. Inequality under concepts 1 and 2 take countries as units of analysis un-weighted and weighted by population respectively. Concept 3 inequality is talked about as the true inequality.

⁽²⁵⁾ Using the software POVCAL of the World Bank (see the poverty net site in www.worldbank.org).

⁽²⁶⁾ The pooled results also show that the Arab Lorenz curve has shifted downwards between the two years. Thus, for example, the share of the lowest quintile was 6.6% of total consumption expenditure in 1995, but declined to 5.5% in 2004. Correspondingly, the share of the richest quintile increased from 43% in 1995 to 44.6% in 2004.

⁽²⁷⁾ The idea of the tunnel effect has recently been invoked by Ravallion and Lokshin (2000), Birdsall, Graham and Pettinato (2000), and the Commission on Growth (2008).

⁽²⁸⁾ This is an echo of Kuznets' (1955) hypothesis that during the early stages of development inequality is expected to rise as per capita GDP increases and then falls. The inequality-development relationship is a long-run one that traces the structural transformation in dual economies ala Lewis (1954), but the evidence used was from advanced countries.

⁽²⁹⁾ For the problems involved in the definition of a civil war, and the coding of conflicts accordingly, see Sambanis (2005: 303-305).

⁽³⁰⁾ See also Collier, Hoeffler and Sambanis (2005).

⁽³¹⁾ Without attempting to draw conclusions we report in annex table (A.3) ethnic, language and religious fractionalization indexes from Alesina et al (2003). On the basis of these we also calculated a social fractionalization index as the product of the three indexes. It is an easy matter to show that the Arab sub-sample enjoys a lower social fractionalization (mean index of 0.0417 with a standard deviation of 0.0713) compared to the non-Arab sub-sample (mean index of 0.1712 with a standard deviation of 0.1815). The t-value for the difference between means is 2.0983 significant at the 5-percent level.

⁽³²⁾ It is interesting to note that Collier, Hoeffler, and Sambanis (2005) list only seven Arab countries with a civil war of more than year duration: Algeria; Iraq, Lebanon, Morocco, Somalia, Sudan, Yemen Arab Republic.

⁽³³⁾ A similar result is obtained if we are to use the shorter list of civil wars in Collier, Hoeffler and Sambanis (2005). In this compilation only six countries are included: Algeria (with a civil war 1975); Iraq (1961); Lebanon (1975); Morocco (1975); Somalia (1982); Sudan (1963); and Arab Republic of Yemen (1962).

⁽³⁴⁾ It is interesting to note that the Arab sub-sample was significantly different from the non-Arab sub-sample as far as religious (respective means of 0.2262 and 0.4215), and language (respective means of 0.3048 and 0.5690), fractionalization: with respective t-values of 2.4 and 2.6, meaning more homogeneity among Arab countries; but not with respect to ethnic fractionalization (t-value of 0.17) (annex table A.3 provides the information on which the above results are based)!

⁽³⁵⁾ Earlier indications that the Arab countries, in historical perspective, may be subject to a shallow tunnel effect due to ethnic fractionalization is to be found in Al-Ansari (1995).

⁽³⁶⁾ Examples of interaction of the social and economic inequalities can be found in the case of women in patriarchal societies; those of the interaction of political and economic inequalities involve farmers working for powerful landlords, as well as poor individuals in geographically isolated regions and ethnic minorities.

⁽³⁷⁾ The appropriate definition of a stable macroeconomic policy environment would take into account the results of Easterly (2003) which show that unless a country is starting from extremely poor policy indicators it should not expect to see improvements in its growth rates as a result of improving its policy stance in the direction of the old style structural adjustment policies. But also see the recent recommendations of the Commission on Growth and Development (2008: 33-69).

⁽³⁸⁾ In this respect it is perhaps significant to note that the World Bank (2006: 247-273) does not refer to these results in its massive reference list!

⁽³⁹⁾ Other explanatory variables included the average years of schooling attained by population 25 years and above (i.e. education); the number of physicians per thousand people (i.e. health); the ratio of credit to the private sector to GDP (i.e. financial depth); the CPI inflation rate (i.e. macroeconomic instability); and, the share of industry and services in total values added (i.e. economic structure).

⁽⁴⁰⁾ Note that these weights are obtained from principal component analysis.

⁽⁴¹⁾ The conclusion is based on the estimated coefficients of the stock and quality indicators of 0.0464 (significant at the 10 percent level), and 0.0102 (significant at the 5 percent level) respectively (see table 6 column 5 in Calderon and Servén (2004: 37)).

⁽⁴²⁾ According to World Bank (2001: 306-307, table 17) information middle, lower middle, upper middle, and high income groups saw their ratios increasing respectively from 23% to 40%; 18% to 26%; 32% to 48%; and, 56% to 60%. For the world as a whole the ratio increased from 23% to 37%. The evidence for 2005 is from WDI 2007.

⁽⁴³⁾ The background paper on which the figure is based, which is to be found on the World Bank web-site, does not have its statistical appendix; nor is the data set lodged in the data sets web-site!!!!

⁽⁴⁴⁾ The time series on unemployment in the Arab countries is compiled by Belkacem Laabas of the Arab Planning Institute in Kuwait. A recent compilation for Syria is taken from the State Planning Commission of Syria.

⁽⁴⁵⁾ In 2005 the total labor force of these countries amounted to 67.5 million representing about 57% of the total Arab labor force (LAS et al (2007)).

⁽⁴⁶⁾ The time trend coefficient for Algeria is 0.0279 (with a t-value of 7.2 and an R-squared of 0.69), that for Egypt is 0.0223 (with a t-value of 3.9 and an R-squared of 0.4), that for Jordan is 0.0655 (with a t-value of 6.2 and an R-squared of 0.63), that for Morocco is 0.0082 (with a t-value of 1.4 and an R-Squared of 0.08), that for Syria is 0.024 (with a t-value of 6.2; and an R-squared of 0.52), and that for Tunisia is 0.0082 (with a t-value of 6.3 and an R-Squared of 0.65).

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Appendix

Annex Table (A.1): Quintile Distribution of Consumption Expenditure in Arab Countries

Country (Source of Grouped Data)	Year	Poorest Quintile	Second Poorest Quintile	Third Poorest Quintile	Fourth Poorest Quintile	Richest Quintile	Per Capita Consumption Expenditure (US\$ 2005 PPP)	Gini Coefficient
Algeria (WIDER)	1988	6.54	10.79	14.82	20.67	47.18	2136	39.9
	1995	6.97	11.55	16.23	22.63	42.62	1835	35.4
Egypt (World Bank (2007))	1995	9.80	13.20	16.60	21.40	39.00	2156	28.7
	2004	8.90	12.69	16.03	20.79	41.55	2543	34.4
Jordan (World Bank (2004))	1997	7.00	11.19	15.12	21.10	45.58	2159	37.9
	2003	6.92	11.13	15.25	21.53	45.16	2419	37.6
Syria (El-Laithy and Abu Ismail (2005))	1997	7.91	12.12	16.05	22.85	42.07	1984	33.7
	2004	7.21	10.21	14.30	21.18	47.12	1948	39.2
Mauritania (WIDER)	1995	6.19	10.78	15.49	21.95	45.59	1030	38.9
	2000	6.20	10.60	15.20	22.30	45.70	981	39.0
Morocco (World Bank (2001))	1991	6.50	10.60	14.80	21.30	46.60	1622	39.2
	1999	4.00	9.00	15.00	22.50	49.50	1542	39.4
Tunisia (World Bank (2003))	1990	6.00	10.50	15.30	22.20	46.10	2142	40.1
	2000	6.00	10.30	14.80	21.70	47.20	2788	40.8
Yemen (World Bank (2002); and WIDER)	1998	7.34	12.02	16.29	22.31	42.04	730	34.4
	2005	7.16	11.37	15.30	20.83	45.36	810	37.7

Note: Wider data set accessed on 7 October 2008.

Annex Table (A.2): Inequality in the Arab World: Quintile Share in Consumption Expenditure (percentages)

Year	Poorest Quintile	Second Poorest Quintile	Third Poorest Quintile	Fourth Poorest	Richest Quintile	Gini Coefficient (%)	Per Capita Consumption (US\$ PPP)
1995	6.4	11.6	16.4	22.5	43.0	36.23	1897
2004	5.5	10.8	16.0	23.0	44.6	38.67	2008

Annex Table (A.3): The Tunnel Effect in Developing Countries: The Duration Indicator

Country	Independence Year	Start of War	Duration of Tunnel Effect (Years)	Ethnic Index	Language Index	Religion Index	Social Index
Afghanistan	1945	1978	33	0.7693	0.6141	0.2717	0.1284
Algeria	1962	1992	30	0.3394	0.4427	0.0091	0.0014
Angola	1975	1975	0	0.7139	0.6848	0.2326	0.1137
Argentina	1945	1975	30	0.2550	0.0618	0.2236	0.0035
Bangladesh	1971	1974	3	0.0454	0.0925	0.2090	0.0009
Burundi	1962	1965	3	0.2951	0.2977	0.5158	0.0345
Cambodia	1953	1970	17	0.2105	0.2104	0.0965	0.0453
Chad	1960	1965	5	0.8620	0.8635	0.6411	0.0043
China	1945	1946	1	0.1538	0.1327	0.6643	0.0136
Columbia	1945	1948	3	0.6014	0.0193	0.1478	0.0017
Congo	1960	1993	33	0.8747	0.6871	0.6642	0.3392
DR Congo	1960	1960	0	0.8747	0.8705	0.7021	0.5346
Djibouti	1977	1991	14	0.7962	0.6558	0.0435	0.0227
Egypt	1945	1995	50	0.1836	0.0237	0.1979	0.0008
El Salvador	1945	1979	34	0.1978	-	0.3559	--
Ethiopia	1945	1974	29	0.7235	0.8073	0.6249	0.3650
Guatemala	1945	1966	21	0.5122	0.4586	0.3753	0.0882
Guinea B.	1974	1998	24	0.8082	0.8141	0.6128	0.4032
Haiti	1945	1991	46	0.0950	--	0.4704	--
India	1946	1946	0	0.4182	0.8069	0.3260	0.1100
Indonesia	1949	1950	1	0.7351	0.7680	0.2340	0.1321
Iran	1945	1978	33	0.6684	0.7462	0.1152	0.0575
Iraq	1945	1961	16	0.3689	0.3694	0.4844	0.0660
Jordan	1945	1970	25	0.5926	0.0396	0.0659	0.0015
Kenya	1963	1963	0	0.8588	0.8860	0.7765	0.5908
South Korea	1949	1948	0	0.0020	0.0021	0.6604	0.0000
Laos	1954	1960	6	0.5139	0.6382	0.5453	0.1788
Lebanon	1946	1975	29	0.1314	0.1312	0.7886	0.0136
Liberia	1945	1989	44	0.9084	0.9038	0.4883	0.4009
Mali	1960	1990	30	0.6906	0.8388	0.1820	0.1054
Morocco	1956	1975	19	0.4841	0.4683	0.0035	0.0008
Mozambique	1975	1976	1	0.6932	0.8125	0.6759	0.3807
Myanmar	1948	1948	0	0.5062	0.5072	0.1974	0.0507
Namibia	1973	1973	0	0.6329	0.7005	0.6626	0.2938
Nicaragua	1945	1978	33	0.4844	0.0473	0.4290	0.0098
Nigeria	1960	1967	7	0.8505	0.8503	0.7421	0.5367
Pakistan	1947	1973	24	0.7098	0.7190	0.3848	0.1964
Papua NG	1975	1988	13	0.2718	0.3526	0.5523	0.0529
Peru	1945	1980	35	0.6566	0.3358	0.1988	0.0438
Philippines	1946	1950	4	0.2385	0.8360	0.3056	0.0609
Rwanda	1962	1963	1	0.3238	--	0.5066	--
Senegal	1960	1989	29	0.6939	0.6961	0.1497	0.0723
S. Leone	1961	1991	30	0.8191	0.7634	0.5395	0.3373
Somalia	1960	1988	28	0.8117	0.0326	0.0028	0.0001
Sri Lanka	1948	1983	35	0.4150	0.4645	0.4853	0.0936
Sudan	1956	1963	7	0.7147	0.7190	0.4307	0.2213
Syria	1946	1979	33	0.5399	0.1817	0.4310	0.0423
Thailand	1945	1966	21	0.6338	0.6344	0.0994	0.0400
Turkey	1945	1984	39	0.3200	0.2216	0.0049	0.0003
Uganda	1962	1966	4	0.9302	0.9227	0.6332	0.5435
Vietnam	1955	1960	5	0.2383	0.2377	0.5080	0.0288
A.R. Yemen	1945	1962	17	--	0.0080	0.0023	--
Zimbabwe	1966	1972	6	0.3874	0.4472	0.7363	0.1276

Source: own compilation for civil wars of duration more than one year from Sambanis (2008). Fractionalization indexes are from Alesina et al (2003). The fractionalization index for any category is (for $i=1 \dots n$; and where S is the share of the i^{th} group) $FI = 1 - \sum S_i^2$.

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