comments welcomed

Reviving Growth in the Arab World

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Abstract

This paper analyzes overall economic growth performance in the Arab world since the mid 1960s, with the key objective of developing a better understanding about what drives the growth process in the Arab region. Growth in the region since 1985 has been rather disappointing, both relative to the best performers in the developing world as well as compared to the pre-1985 period . Revitalizing growth in the Arab world would, therefore, suggests asking two pivotal questions: why has growth in the Arab world lagged behind those developing countries that could be taken to represent the frontier in terms of the development discourse (East Asia)?, and why has growth been so erratic and unstable in the Arab world? To address these two questions, I estimate two growth models on the determinants of long-term growth and the persistence of growth, using global panel data drawn from more than 130 countries. Consistent with received wisdom, our results suggest that growth is associated with some broad fundamentals: effective institutions for protection of property rights, stable macroeconomic environment, adequate human capital and favorable initial conditions. In the Arab world, however, our results also show that growth does not happen without deliberate development strategies for exploiting (and/or overcoming) country-specific or region-specific potentials (constraints). We find two such growth potentials and one development constraint to be important in explaining the growth process in the Arab world: the advantage of location and geography; associated with export competitiveness and capacity to attract direct foreign investment; the "demographic gift", associated with the demographic transition to lower age dependency; and the preponderance of regional and civil conflicts, with their multiple negative consequences for development.

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1. Introduction

The twenty-two Arab speaking countries of the Middle East and North Africa (hereafter the Arab world) constitute the League of the Arab States (LAS). Though since its inception in 1945, the LAS has been mainly a political grouping of countries with common cultural and historical heritage, economic integration has always been high in the agenda. Despite the failure of the League to develop into a viable economic grouping, there exist considerable intra-Arab economic interdependences, especially in the areas of labor, development assistance and investments. Therefore, and despite its limited success so far as an economic grouping, the strong popular political commitment as well the high economic potential for deeper economic integration would suggest that the Arab world could potentially become a viable future economic grouping.

One significant achievement that could be credited to the Arab countries is that they have managed to effectively exploit their relatively high growth for most of 1960-84 period to achieve considerable gains in the area of human development. For example, due to both accelerated growth (in the 1970s and early 1980s) and distribution--in terms of "generous transfers to large parts of the population"—average schooling years increased by 100% between 1960-84 and 1985-1998, life expectancy increased by an impressive 10 years and average income per capita in 1985 at (5300 in ppp $) was almost five times the income level of 1960. A recent World Bank's report on the Middle East and North Africa region (MENA[1]), which include the Arab 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…" (1995:pp. 2-3). 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."

However, unlike East Asia growth could not be sustained in the Arab world following 1985, which marked the beginning of an era characterized with episodes of significant slumps in the price of oil, the main economic motor of the region. In many countries of the region, growth has not only slowed down, but has essentially collapsed. This brought the social progress to a grinding halt and kept the region standing in terms of "human well-being" well below the international frontiers (Ali, 2001a)[2]. Consistent with this assessment, more recent evidence due to Ali and Elbadawi (2000a) and Fergany (1998, 2000) suggest that poverty in the Arab world has actually increased Not decreased, and in some of the most populous countries like Egypt, Morocco, and especially Algeria and Sudan, the depth and spread of poverty have reached very high levels. Moreover, the collapse of growth prevented the region from exploiting the "demographic gift" of an expanding pool of educated labor. Instead, the region is faced with a serious unemployment crisis, only partially addressed by an expanding informal market. Because of its low productivity, and therefore, low income generating capacity, the informal sector is more a symptom of distorted economies than a window of opportunity for addressing poverty and unemployment in the region (Ali and Elbadawi, 2000b).

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[1] The Bank's definition of the MENA region, however, does not include the four Arab countries of Sudan, Mauritania, Somalia and Comoros.

[2] Using a broad approach to measuring "human well-being" that includes empowerment and participation, Ali (2001a) finds that only 8.9% of the Arab population live in countries that belong to the medium human well-being category. This leaves more than 90% of the Arab population belonging to the low human well-being category.

It is not surprising, therefore, that restoring growth has emerged as the top development agenda for the region (e.g. World Bank, 1995; Dhonte, Bhattacharya and Yousef, 2000; Makdisi, Fattach and Limam, 2000). An important consideration in the analysis of growth in the Arab world is the diversity of the region. Despite their common cultural and historical heritage, Arab countries have very diverse characteristics in such key areas as the structures of the economies, level of development, geographic location, and type of governance and institutions. To highlight the economic diversity of the region, we follow ERF (1998) and group the countries of the region into four broad categories[3]: mixed oil economies (MOE: Algeria, Iraq); Oil Economies (OE), which include the countries of the Gulf Cooperation Council of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE; diversified economies (DE: Egypt, Jordan, Lebanon, Morocco, Syria and Tunisia); and, primary export economies (PEE: Djibouti, Mauritania, Sudan and Yemen). The 1996 distribution of population and GDP over these categories was such that DE accounted for 48% of population and 28% of GDP; MOE's shares in population and GDP were, respectively, 21 and 24%; PEE's population share was 20% while its share of GDP was only 3% in contrast to that of OE with a population share of only 11% and a GDP share of 46%. Intra-Arab diversity is also captured by differences in per capita GDP. Not surprisingly, OE ranks top on this scale with a per capita GDP of about US$9000 in 1996, followed by MOE (US$2400). DE ranks third with a per capita GDP of US$1300 while PEE's per capita GDP amounted to only US$300. The production structures of the four groups differ as well. Thus, in 1996 the agricultural sector accounted for 24% and 23% of GDP in PEE and MOE, respectively, and for 16% in DE while it accounts for only 2.4% of GDP in OE. The manufacturing sector accounted for 14.4% of GDP in DE, 11% in MOE and OE, and 9% in PEE. 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 OE (35% of GDP) and MOE (27% of GDP).

This paper will attempt to contribute to the debate about growth in the Arab world by asking two pivotal questions: why has growth in the Arab world lagged behind, especially relative to the East Asian frontier?; and, aside from the over-dependence on the hydrocarbon sector, are there any useful insight that could shed light into the collapse of growth in the Arab world in the post 1985 period?. To analyze these two issues we would need empirical cross-country evidence on the determinants of the rate of per capita economic growth and on the factors influencing the persistence of growth in a global sample of countries. Section two provides preliminary analysis of growth in the Arab world, focusing on the evolution of growth and other factors associated with the growth process. Section three discusses the estimation results of two empirical growth models---one on the determinants of long-term growth and the other on the persistence of growth before and after 1985. In section four I use the estimated models to address the two questions posed above on why growth in the Arab world lagged behind the Asian frontier? And why has growth in the region collapse during the volatile post 1985 period. Taking into consideration the diversity of the Arab world, the empirical models will be simulated for the various groupings within the region. Section five concludes.

[3] For lack of adequate data, Iraq, Libya, Palestinian territories, Somalia and Comoros are not considered.

2. The Story of Growth in the Arab World

Following the collapse of the oil price in the early 1980s, per capita growth in the Arab world averaged just 0.5% per annum during the 1985-1998, which is just one fourth the average rate of growth for the earlier period of 1960-84. Moreover, long term growth in the Arab world has been a far cry from the record of the high performing East Asian economies (EA), which managed high and sustained annual growth rates of 5% or more throughout the last 40 years (Table 1). However, the experience of growth in the Arab world has also been very diverse, mimicking the diversity of its economies. For example, the DE has achieved growth rates higher than 4% during the first period, which could not be maintained following 1984. The same applies for some OE countries, such as Saudi Arabia and Oman, which grew very rapidly in the first period but saw their growth collapse in the second. Even by the standards of Sub-Saharan Africa---the region that retains the dubious distinction of being the most underdeveloped region of the world---the growth record of the PEE group has been sluggish throughout the two periods (at 1 and –0.5%, respectively). The growth record of Algeria (representing the MOE) has been one of significant growth collapse from 2.5 in the first period to –1.2% in the second. In addition to Iraq, for which no data is available[4], the post-1984 period has so far been lost to development for the many countries of the region with persistent negative growth rates, including Algeria, UAE, Bahrain, Saudi Arabia; and particularly the poorer non-oil surplus countries of Jordan, Djibouti and Yemen. Moreover, average growth in the Arab region has also been volatile, where growth volatility in the Arab world accounts for more than five times that of East Asia (Table 1). Also compared to the East Asian frontier (or to Sub-Saharan Africa in the case of PEE) annual profiles of growth suggest that it has been very volatile in all regions of the Arab world (Figures 1.A-D). Also growth volatility in the Arab world has disproportionately rose between the two periods, where relative variability in the post 1984 period (at 5.6) accounts for more than twice the rate of variability in the earlier period.

The received wisdom from the modern growth literature[5] and countless development experiences suggest that high growth is associated with some broad fundamentals: effective institutions for protection of property rights, stable macroeconomic environment, adequate human capital and favorable initial conditions. In most cases, however, growth does not happen without deliberate development strategies for exploiting (and/or overcoming) country-specific or region-specific potentials (constraints). We characterize two such growth potentials and one development constraint of relevance to the case of the Arab world: the advantage of location and geography; associated with export competitiveness and capacity to attract direct foreign investment; the "demographic gift", associated with the demographic transition to lower age dependency; and the preponderance of regional and civil conflicts, with their multiple negative consequences for development.

[4] The economic sanctions imposed on the country of Iraq and its people constitute the most severe and drastic external shocks of all kinds, where the collapse of economic growth has been a rather minor consequences of their far reaching and intractable devastation.

[5] A very partial list includes: Easterly and Levine (2001), Romer (1986), Lucas (1997), Barro (1997), Sala-i-Martin (1997), among others. See also an excellent review by Ali (2001b) of evidence on the most robust determinants of cross-country growth and their likely impact on the sustainability of growth in the Arab states.

2.i ***Traditional Growth Fundamentals:***

The comparisons between the two periods (1960-84, 1985-98) would suggest that the record of the Arab world in terms of human indicators has been one of considerable achievements. However, the MOE, and especially the PEE, would still have to overcome a big gap relative to the Asian frontier (Table 2). For example, life expectancy has risen considerably in the region, where it rose from 56 to 64 in MOE, 58 to 67 in DE, 43 to 51 in PEE, and in the case of OE it rose from 60 to 72 to surpass EA. Even a more compelling achievement was in the area of education, where average number of years of schooling (for the age group from 15 to 65) more than doubled to reach 5 in DE and 6 in OE, only one year behind the average for EA. However, the averages for MOE (at 4) and PEE (at 2) are still very low. Consistent with the significant progress at the social and human capital fronts, per capita income has also risen considerably between 1960 and 1985, excepts for the case of PEE. This could be directly related to the steady growth achieved by many countries in the region between the two periods. It is also important to note that, except for the OE, for which average per capita income was almost double that of EA (at $6000), income in the rest of the Arab world (about $1800 for MOE, $1500 for DE and only $300 for PEE) is still much lower than the median income for East Asia. Unfortunately, the Arab countries were unable to realize rapid catch-up growth in the post-1985 period, though they started off with much lower standards of livings compared to EA. However, growth is a complex process, which depends on much more than being poorer at an initial date (Easterly and Levine, 2001).

One measure of the quality of the overall policy and institutional environment is provided by the World Bank's **"**Country Policy and Institutional Assessment Index: (CPIA)."[6] The PEE group has the lowest CPIA ratings for 1985 (at 2.1), which is well below the African average of 2.75 (Figure 2.A). Moreover, more than a decade later this Arab group continues to be at almost the same impoverished rating. The other Arab group for which the CPIA index is available was the DE group, which managed to improve its ratings considerably from 2.8 in 1985 to 3.4 in 1998. However, the quality of the overall policy and institutional environment in the DE group in 1998 still remains well below that of East Asia at 4.2. Another important set of measures of institutional environment is reported by the Political Risk Service Group (PRS), which construct the famous International Country Risk Guide (ICRG). We construct a composite index using principal components derived from ten institutional variables (Figure 2.B). This data is available for East Asia and three groups of Arab economies (DE, MOE, OE). This index also suggests that the Arab countries were significantly lagging behind East Asia in 1980-84. The combined institutional index for EA was more than 7, compared to 5.2 for OE, 4.5 for DE, and 3.5 for MOE. Despite the significant improvement in the index in DE (by more than 40% in 1995-99 relative to 1980-84) and to some extent in OE (by 20%), the Arab region still remains well below East Asia according to this measure as well. Ali (2001b: Table 13) analyzed the five PRS indicators of risk for 15 Arab countries between 1985 and 1997. He finds that all the Arab countries considered achieved impressive progress in the area of "Government Repudiation" of contract, where all countries attain ratings of 8 or 9 in 1997, with a rating of 10 indicating a zero

[6] Quality refers to how conducive the policy and institutional framework to promoting poverty-reducing growth and how effective in using developing assistance. Each of the 20 components, which were rated ordinally by country specialists on a scale of 1 to 6 according to a standardized criteria, were assigned equal weights of 0 .05.

risk of repudiation. Except for the case of Iraq, the same progress was achieved in the area of "Expropriation", which measures the risk of outright confiscation or forced nationalization. However, the Arab world's ratings remain low with regards to the three remaining indicators of "Corruption", "Rule of Law" and "Quality of Bureaucracy".

In terms of specific aspects of the macro-institutional environments, several patterns could be identified (Table 3). First, compared to EA the Arab world is characterized by larger sizes of governments, especially in the OE. For example, the share of government expenditure to GDP in 1985-98 reached 49% in OE, rising from 34% in 1960-84. This of course is related to the dependence of these economies on the oil sector, which experienced considerable boom between the two periods. However, even in the cases of DE and PEE, where the public sector was significantly downsized between the two periods, it nevertheless, remains large relative to EA. The shares of public expenditure in the latter periods averaged 32 and 33% for DE and PEE, respectively, compared to only 20% for EA. Second, except for the MOE (Algeria), private investment has been low in other Arab regions for which data is available[7]. While private investments in EA rose between the two periods from 19 to 24%, it continues to be very low at 14% for DE and 11% for PEE, where the latter is comparable to the average for SSA. On the other hand private investment in Algeria declined from 29% in the first period to 20%. The high private investment in Algeria was mainly associated with the oil and gas sector. Public investment has been high during the first period for Algeria (at 12%) and DE (at 14%), though it was significantly reduced in the second period to ratios comparable with the ones prevailing in EA and SSA (at 9%). However, public investment for the case of the PEE has basically collapsed, where between the two periods it declined from 10 to just 6%[8]. Third, except for the PEE and to some extent MOE (Algeria), Arab countries have achieved high financial depth (measured in terms of the share of broad money to GDP), comparable to the East Asian ratios. Fourth, also the OE and the DE have managed to achieve a measure of macroeconomic stability (low inflation) comparable to EA. Finally, in terms of openness of the economy, only the OE could be considered as open as EA. The others, especially the MOE remains very closed.

2.ii Geography, Demography and Conflicts:

In addition to sound overall macroeconomic and institutional environment as well as rapid accumulation of human and physical capitals, growth has also been linked in the modern growth literature to factors associated with "geography and ecology", "demographic transition" and political and criminal violence, at national, regional or international levels. All three set of factors are likely to be strong determinants of growth in the Arab world. On the first issue Sachs and his research associates[9] argue that favorable geography and ecology--in terms of access to long coastal lines or sea navigable rivers and temperate climate—are robustly associated with superior growth record. This literature suggests several channels through which favorable geography and ecology could promote overall economic growth. A high share of a country's area around coastal lines or sea navigable rivers and high economic density along the coast are important determinants of competitiveness, especially for transaction-intensive exports, such as manufactures. Moreover, a high share of non-tropical (especially temperate) regions in a country

[7] This does not include the OE, for which no data on private and public investment is available.

[8] For a detailed analysis of the investment environment in the Arab world, see Elbadawi (1999a).

[9] Sachs, J. and A.M. Warner (1997), Bloom, D. and J. Sachs (1998), J.L. Gallup and J. Sachs (1998). See also Elbadawi, I. (1999b).

is associated with less prevalence of vector-borne diseases and high agricultural productivity. Figure 3 suggests that EA, OE and to some extent DE are endowed with long coastal lines and dense economic activity along the coast, while the case of MOE is one of high density but very small coastal regions, relative to the land area (Algeria, Iraq). While the PEE are endowed with longer coasts than SSA, their coasts remain substantially underutilized, where population density at the coastal areas of PEE was less than a third of the average density for SSA. Compared to the non-PEE regions of the Arab world, SSA is itself geographically isolated and has low economic density at the coast. Except for the DE group, all other countries in the Arab world as well as EA and Africa are dominated by non-temperate zones (more than 95%). While this evidence suggests that the DE group has a non-exploited potential, the large share of non-temperate regions in Asia does not seem to have harmed East Asia's economic development.

Second, many countries in the region, most notably Egypt, have entered the period in its demographic transition during which the working age population is increasing relative to the rest of the population (Table 4). For example, it is projected that by the year 2010 the working age population in Egypt 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 savings (Yousif, 1997). However, it must be emphasized that for Egypt and other countries of the region to realize such opportunity, growth must create enough jobs to absorb the huge growth in its working age population.

Finally, growth is also affected by conflicts (both civil and regional conflicts), of which the region has more than its fair share (Table 5 and Figures 4.A &B). First, there is the ongoing Arab Israeli conflict, which affects the region as a whole, especially Lebanon and the Palestinian territories. Second, there were the two major Gulf wars (1980-1988, 1991), which have had devastating regional implications, especially for Iraq. Third, there are several civil wars that erupted in many countries in the region, the most devastating of which is the still unresolved Sudanese civil war, which has so far accounted for 34 years of the countries 45 years of existence as an independent state. The Lebanese civil war, which has direct links to the Arab-Israeli conflict, has also been costly[10]. Though regional and international wars are likely to have more immediate and substantial effects on physical capital than civil wars, the latter could have more devastating effects on development because they also destroy "social" capital[11] (Collier, 1999). Instead, the former could actually foster social capital. Moreover, it has been argued that intense military and ideological threats from the former Soviet Union and China might have been a decisive factor in forcing the Republic of Korea and the Province of Taiwan to become developmental states. However, the two Gulf wars and the Arab-Israeli conflict have in all likelihood impaired development of the region by scaring foreign investments, distorting expenditure and possibly fostering bad governance.

[10] For analysis of the economic cost of the Sudanese civil war, see Elbadawi (1999c); and for a similar analysis for Lebanon, see Makdisi (2001).

[11] The concept of "social capital" used in this analysis follows Putnam (1993), who defines social capital as," the features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions."

Table 1: Growth Performance in the Arab World

	1960-84		1985-98	
	Growth	**Growth Volatility**	**Growth**	**Growth Volatility**
Mixed Oil Economies	2.5	4.3	-1.2	2.3
Algeria	2.5	4.3	-1.2	2.3
Oil Economies	**0.0**	**2.0**	**0.3**	**8.9**
United Arab Emirates	-3.0	3.2	-2.9	2.8
Bahrain	-5.0	1.5	-0.1	32.3
Kuwait	-5.7	1.5	4.8	3.0
Oman	10.2	2.0	1.1	3.5
Qatar	-	-	-	-
Saudi Arabia	3.6	1.9	-1.5	2.8
Diversified Economies	**4.3**	**1.4**	**1.7**	**3.2**
Egypt	3.8	1.0	2.1	0.7
Jordan	7.3	1.1	-1.3	4.8
Lebanon	-	-	4.2	4.8
Morocco	2.8	1.2	1.5	3.9
Syria	3.7	2.7	1.5	3.7
Tunisia	3.7	1.1	2.1	1.4
Primary Exports Economies	**1.0**	**3.8**	**-0.5**	**5.9**
Djibouti	-		-4.9	0.5
Mauritania	2.0	3.8	0.6	3.1
Sudan	0.0		2.4	2.7
Yemen	-		-0.3	17.4
Arab World	**2.0**	**2.1**	**0.5**	5.6
East Asia	**5.2**	**0.6**	**5.0**	**1.0**
Hong Kong	6.7	0.6	3.4	1.4
Indonesia	3.8	0.9	3.7	1.6
Malaysia	4.4	0.5	3.5	1.3
Singapore	6.9	0.6	5.2	0.7
South Korea	6.6	0.6	6.2	0.7
Thailand	4.4	0.5	6.5	0.5
Sub Saharan Africa	**1.1**	**4.4**	**0.4**	**6.8**

Source: Global Development Network Growth database
Notes: Growth rates is an average per capita GDP per annum
Growth volatility is an average annual standard deviation/absolute value of means

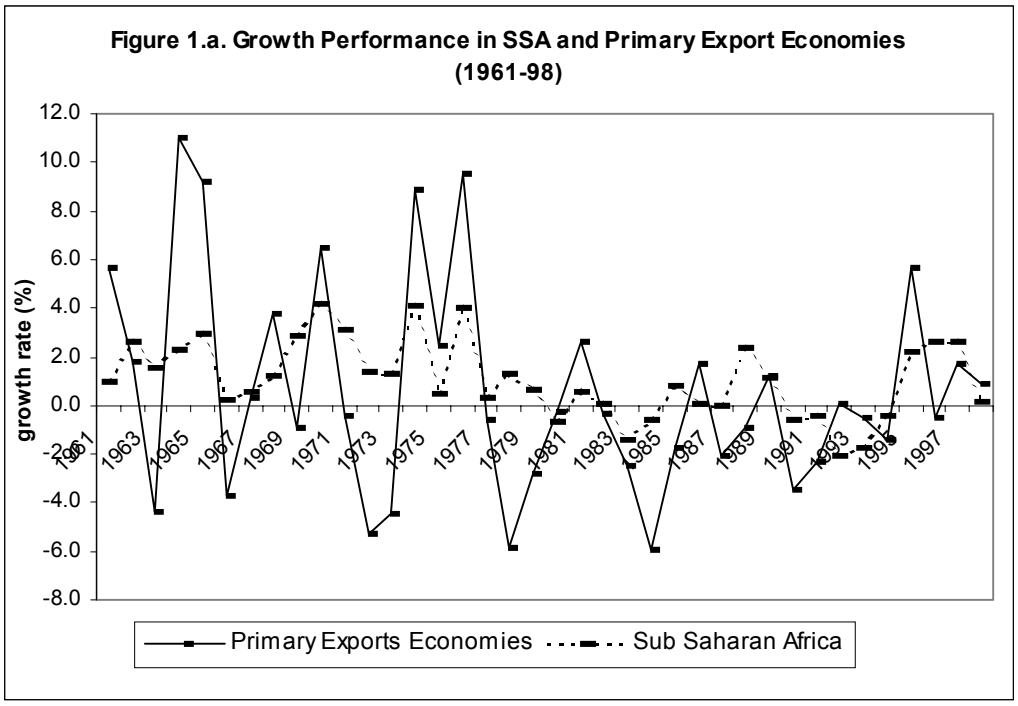


Figure 1.a. Growth Performance in SSA and Primary Export Economies
(1961-98)
growth rate (%)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
-2.0
-4.0
-6.0
-8.0
1961
1963
1965
1967
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
Primary Exports Economies
Sub Saharan Africa

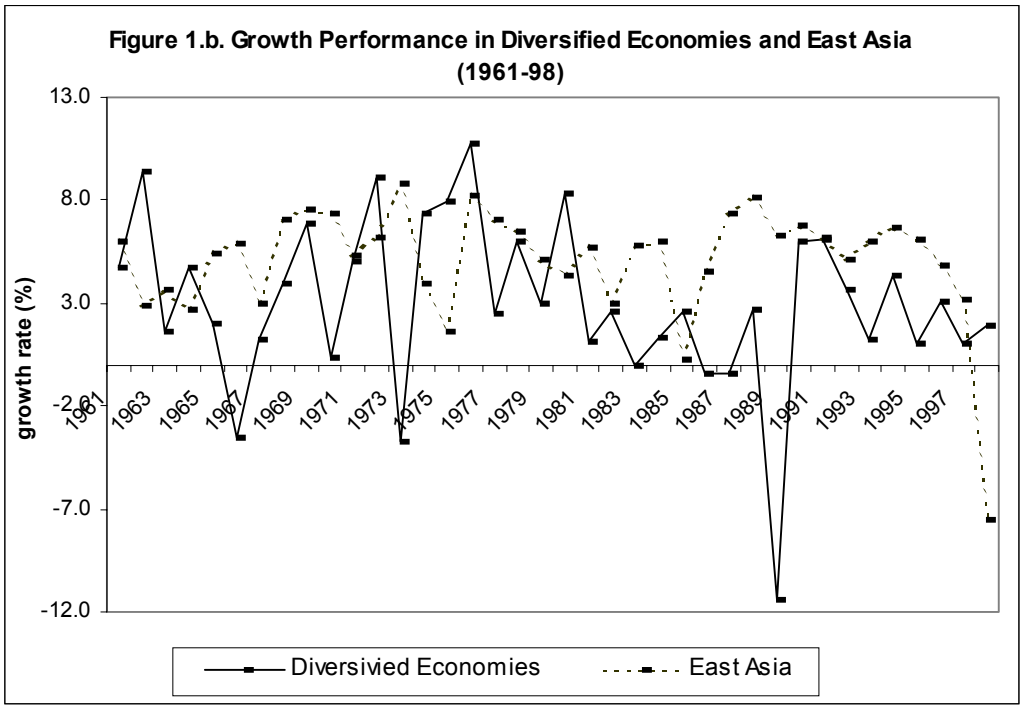
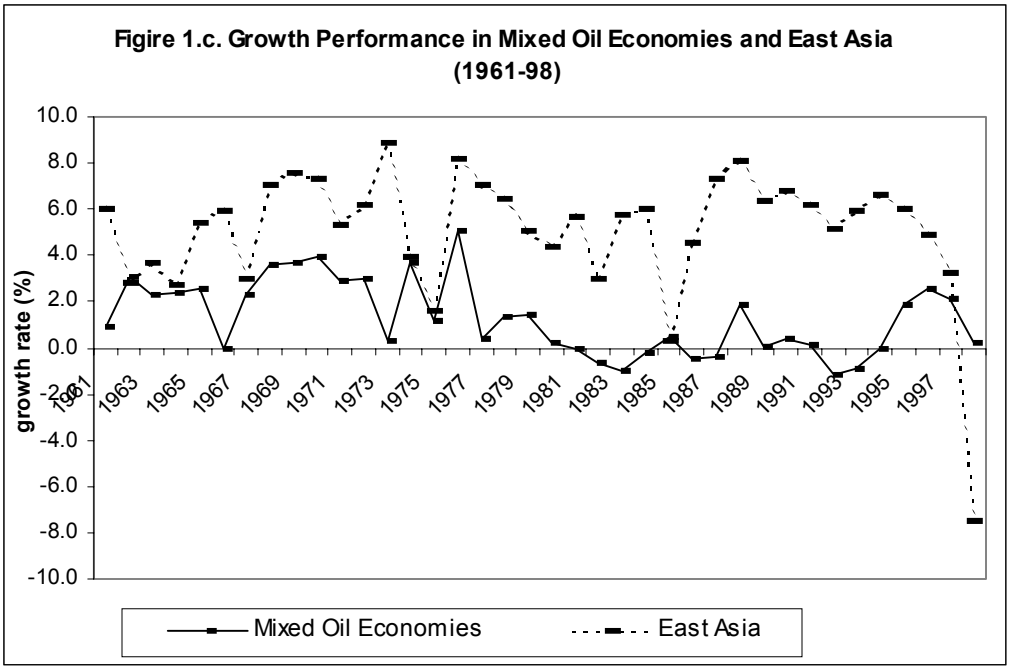


Figure 1.b. Growth Performance in Diversified Economies and East Asia
(1961-98)
growth rate (%)
13.0
8.0
3.0
-2.0
-7.0
-12.0
1961
1963
1965
1967
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
Diversivied Economies
East Asia


Figire 1.c. Growth Performance in Mixed Oil Economies and East Asia
(1961-98)
growth rate (%)
10.0
8.0
6.0
4.0
2.0
0.0
-2.0
-4.0
-6.0
-8.0
-10.0
1961
1963
1965
1967
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
Mixed Oil Economies
East Asia

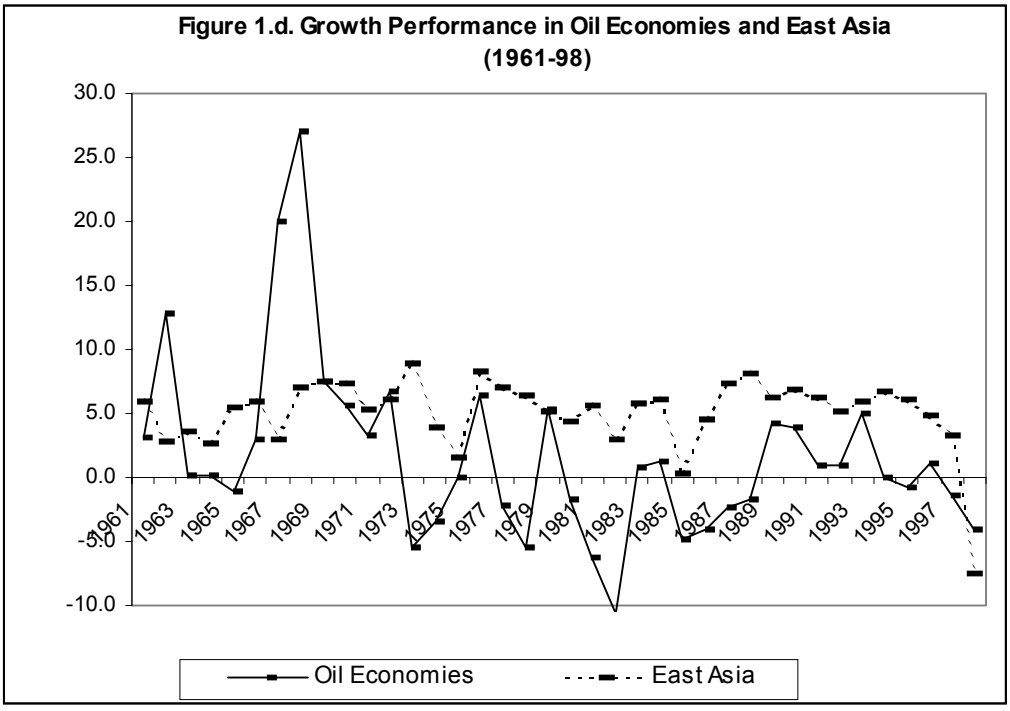


Figure 1.d. Growth Performance in Oil Economies and East Asia
(1961-98)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
1961
1963
1965
1967
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
Oil Economies
East Asia

Table 2: Human Development and Initial Conditions in the Arab World

	Average Schooling Years		Life expectancy at birth		GDP per capita		Gini Coefficient
	1960-84	1985-98	1960-84	1985-98	1960	1985	
Arab World	2	4	55	65	1190	5275	40
Mixed Oil Economies	2	4	56	64	1145	1859	39
Oil Economies	3	6	60	72	2232	11429	
Diversified Economies	2	5	58	67	510	1543	41
Primary Exports Economies	0	2	43	51	-	315	-
East Asia	5	7	62	71	1442	6097	40
Sub Saharan Africa	2	3	46	51	601	862	46

Source: Global Development Network Growth Database and International Data on Educational Attainment (Robert J Barro and Jong-Wha Lee)

Table 3: Macroeconomic Environment in the Arab World

	Govt. Expend		Priv Investment		Pub Investment		M2/Y		Openness		Inflation	
	1972-84	1985-98	1960-84	1985-98	1960-84	1985-98	1960-84	1985-98	1960-84	1985-98	1960	1985
MOE			29	20	12	10	35	54	58	45	8	17
OE	34	49					29	61	118	114	7	2
DE	39	32	14	14	14	11	42	78	65	78	8	10
PEE	43	33	12	11	10	6	17	39	64	74	14	39
Arab World	27	30	16	14	13	9	32	62	87	86	12	17
EA	20	20	19	24	8	9	37	61	102	136	25	5
SSA	26	30	10	11	10	9	19	24	64	70	14	20

SOURCE: GLOBAL DEVELOPMENT NETWORK GROWTH DATA

Government Expenditures = all government current expenditures for purchases of goods and services (including compensation of employees). Data are in percentage of GDP
Private Investment = gross domestic investment-public investment as percentage of GDP
Public Investment = gross domestic investment-private investment as percentage of GDP
M2/Y = Money and quasi money comprise the sum of the currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sector other than central government. Data are in percentage of GDP.
Openness = calculated as export and import of goods and services over GDP
Inflation rate = measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a fixed basket of good and services.

Table 4. Demography and Labor Market: Shares to total population

	young age dependency (0-14)		old age dependency (> 64 years)		working age population (15-64)		labor force	
	1960-84	1985-98	1960-84	1985-98	1960-84	1985-98	1960-84	1985-98
Arab World	44	41	3	3	52	55	35	36
Mixed Oil Economies	46	42	3	3	50	55	27	28
Oil Economies	43	42	3	3	54	56	31	34
Diversified Economies	43	39	4	4	53	57	34	35
Primary Exports Economies	45	45	3	3	52	52	48	47
East Asia	41	32	3	4	56	63	41	47
Sub Saharan Africa	47	46	4	4	50	51	48	46

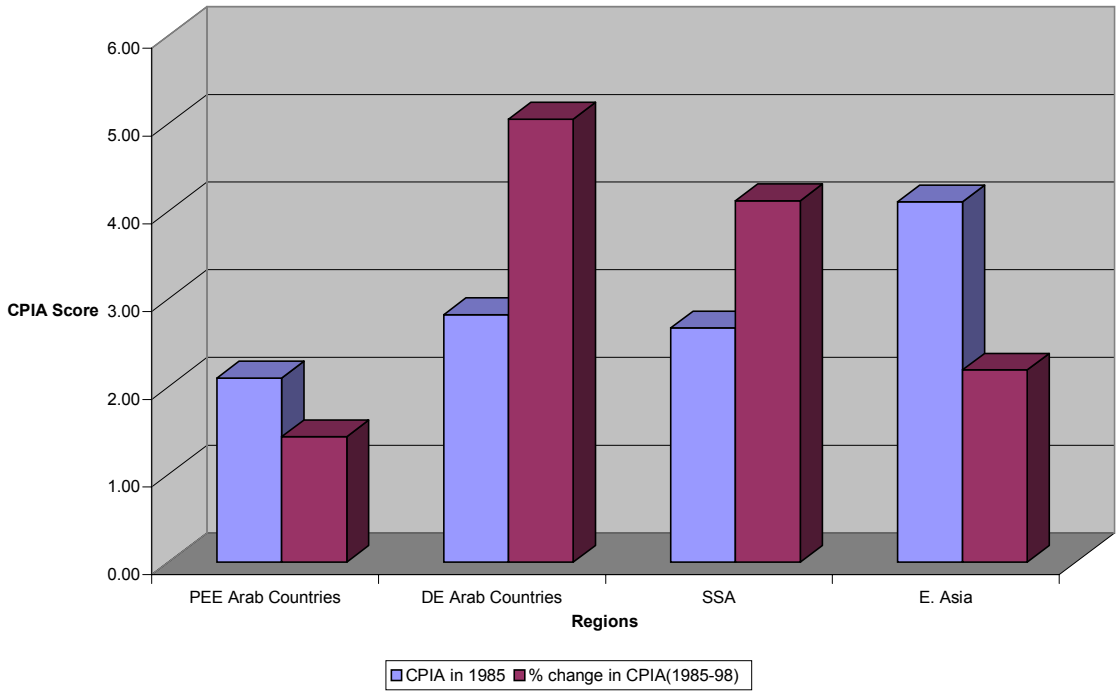
Source: SIMA database

Table 5: Incidence of Civil, Regional and International Wars (1960-2001)

	Civil Wars		Regional/International Wars	
	Years of war	**No. of years**	**Years of war**	**No. of years**
Mixed Oil Economies		**12**		**9.7**
Algeria	1962, 1991-99	9		
Iraq	1961-74	14	1961-63, 1973, 1974-75, 1980-88, 1990-91	9.7
Oil Economies		**10**		**0.4**
United Arab Emirates	-		1991	0.3
Bahrain	-		1991	0.3
Kuwait	-		1990-91	0.7
Libya			1978-79	1.0
Oman	1965-75	10	1991	0.3
Qatar	-		1991	0.3
Saudi Arabia	-		1973, 1991	0.3
Diversified Economies		**13**		**4.0**
Egypt	-		1967, 1969-70, 1973, 1991	1.7
Jordan	1971	1	1967, 1973	0.2
Lebanon	1965-75, 1975-90	25	1992-2001	9.0
Morocco	1975-89	14	1975-83, 1991	8.3
Syria	-		1967, 1973, 1982, 1991	0.7
Tunisia	-			
Primary Exports Economies		**14**		**3.7**
Djibouti	1991-94	3		
Mauritania	-		1975-79	3.7
Sudan	1963-72, 1983-..	27		
Yemen	1962-69, 1986, 1990-94	12		
Arab World		**13**		**2.6**
East Asia		**14**		**4.8**
Hong Kong	-			
Indonesia	1963-66, 1975-82, 1986, 1999	12	1975-77	1.6
Malaysia	-			
Singapore	-			
South Korea	-		1965-73	7.7
Thailand	1967-83	16	1967-73	5.3
Sub Saharan Africa		**14**		**3**

Source: ICPSR data and WB database

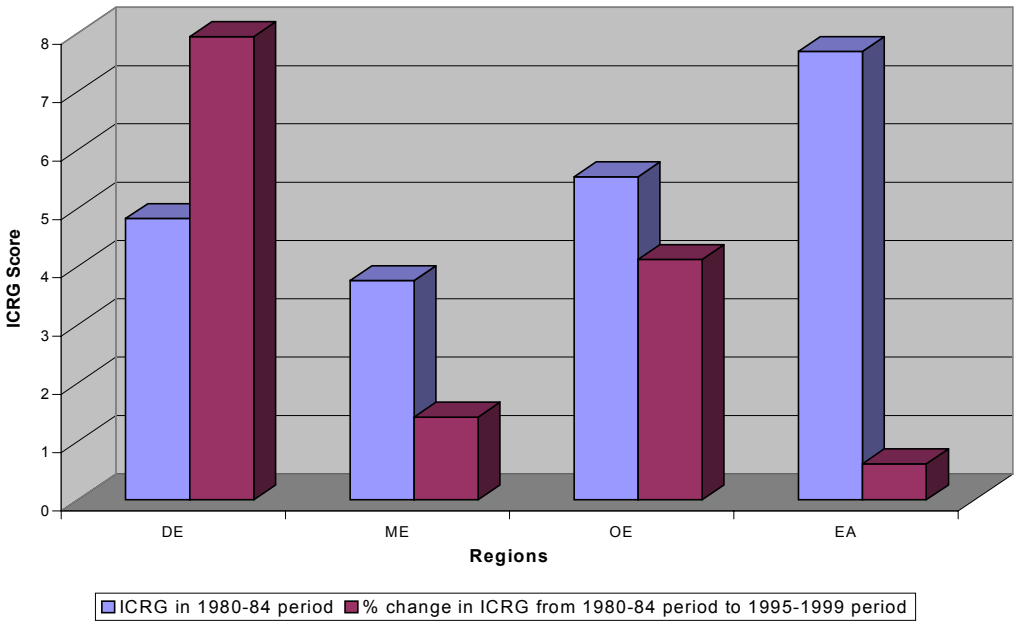
Figure 2A: Overal Policy and Institutional Environment



Notes to Figure 2.A:

The CPIA is composed of 20 components covering four categories: macroeconomic management and sustainability of reforms; policies for sustainable and equitable growth; policies for reducing inequality; and public sector management and service delivery

Figure 2.B: International Country Risk by Region

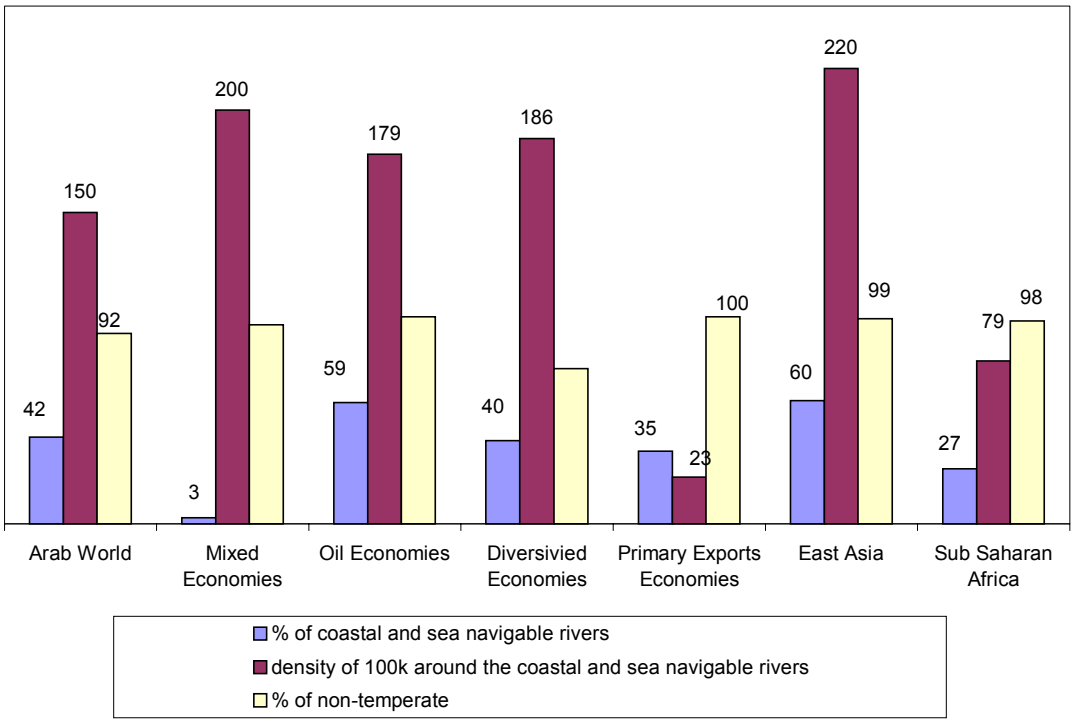


Notes to Figure 2.B:

1. Percentage values are scaled sown by a factor of 6

2.The International Country Risk Guide (ICRG), is a composite index of the quality of institutions derived by principle component from ten institutional variables, namely: Government stability, socioeconomic conditions, investment profile, corruption, involvement of military in politics, involvement of religion in politics, law and order, ethnic tensions, democratic accountability, bureaucracy quality. Scores for these variables (for each country) were assigned and published by the PRS Group. We construct an overall index based on 10 ICRG indicators using principal components: Government stability (0.31); Socioeconomic Conditions (0.31); Investment Profile (0.33); Corruption (0.34); Involvement of Military in Politics (0.34); Involvement of Religion in Politics (0.20); Law and Order (0.36); Ethnic Tensions(0.26); Democratic Accountability (0.33); and bureaucracy quality (0.36).

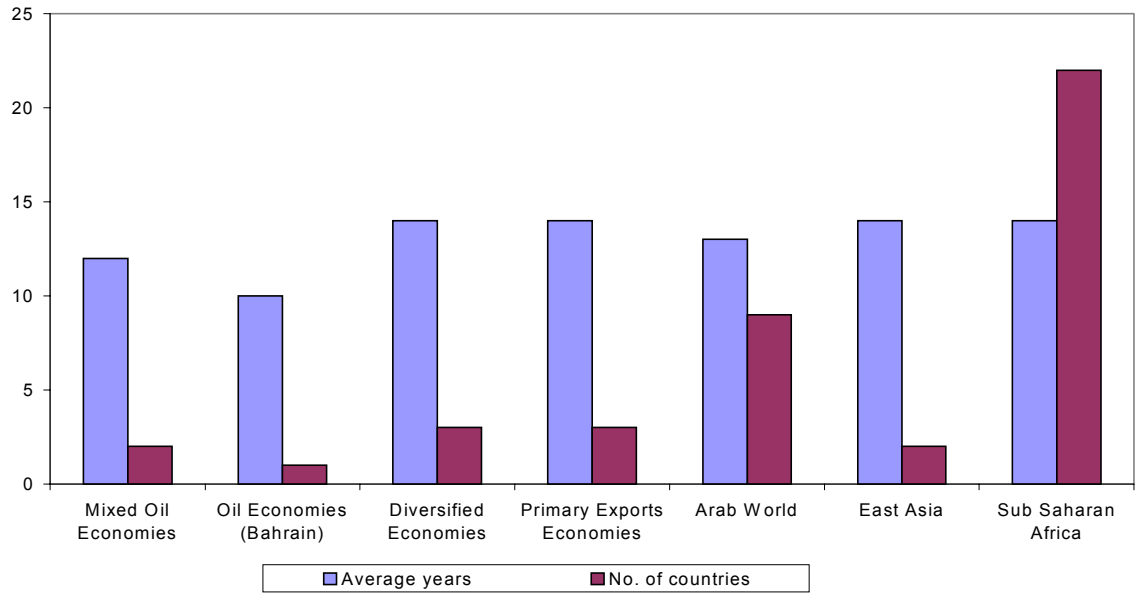
Figure 3: Location and Geography (1960-98)



Notes to figure 3:
1. The actual number for density of 100k around the coastal and sea navigable rivers in East Asia is divided by 7 (actual number is 1538.8)

Note to figure 4.A:
Duration refers to the average length of conflict for countries experiencing civil wars (see Table 5)

Figure 4.A: Average Duration (in years) and No. of Countries that Experiencied of Civil Wars during 1960-2001



Note to Figure 4.B:
Duration refers to the average length of conflict for countries involved in a regional/international war (see Table 5)

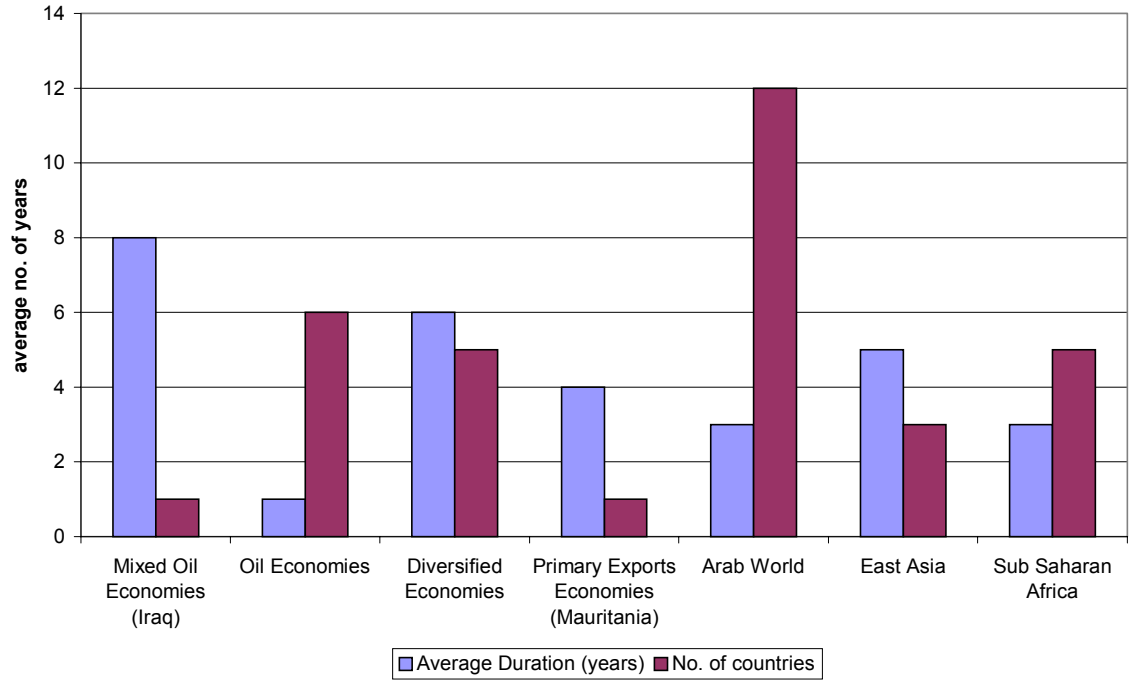
3. The Growth Process in and outside the Arab World

Using the above endogenous growth framework—argued above as the most appropriate for explaining the growth process in the Arab region---I proceed to estimate two growth models in this section. The first is a long-term endogenous growth model, using global panel data drawn from more than 130 countries. The second is a persistence of growth model specifying the dynamics of growth between the two periods before and after 1985. This year, as the analysis of the previous section suggests, marked the end of the era of positive and relatively high per capita growth in the Arab world. The key determinants of the persistence of growth are the capacity of nations to manage shocks (such as the one that impacted the Arab world in the post 1984 era) without resorting to shortsighted growth retarding policies. This key concept will be developed below in the context of the persistence of growth analysis.

3.i Long-term Growth:

I estimate an endogenous growth model for a panel of 134 countries over seven period-averages: 1965-69, 1970-74, 1975-79, 1980-84, 1985-89, 1990-94, 1995-98 (Table 6a-b). The reported regression results are based on random and fixed-effects models, which also controls for period and country-specific effects (not represented). The diagnostic tests (at the bottom of Table 6a) rejects the simple pooled OLS model in favor of random and fixed-effects models (Breush Pagan

Figure 4.B: Incidence of Civil Wars, Regional and International Wars (1960-2001)



test); and subsequently the Hausman test rejects the random-effects in favor of the fixed-effects model of Table 6b. Hence we will confine our analysis to the results of the fixed-effects model. The results corroborates the version of the endogenous growth model we discussed in Section 2 above as the most relevant framework for explaining growth in the Arab region. The results suggest that standard growth fundamentals (initial income, human capital and policy and institutional environment) are significantly associated with long-term growth, and that their

effects are consistent with theory. In addition, the two geography variables were also strongly linked to cross-country growth. High economic density along the coast or sea navigable rivers tends to spur growth, while a high share of a country's land area covered by non-temperate climate has adverse effect on growth. Finally, civil wars tend to have substantial negative consequences for subsequent growth. However, we fail to find robust association between regional/international wars and growth.

The failure of the model to corroborate the likely deleterious effects on growth of regional/international wars suggests a possible co-variation between the set of the explanatory variables. Its likely that the CPIA (or ICRG) ratings takes into consideration the degree of political tensions in the region, which suggests estimating an IV growth model with CPIA (or ICRG) treated as endogenous. An alternative estimation strategy to deal with this problem is to specify two models with CPIA (or ICRG) and regional/international wars included one at a time. The latter approach produced better results, as the IV regressions fail to produce robust results. The results of the two additional models are reported as Model 2a, 2b and 2c (2a', 2a'', 2a''') in Table 6b. The CPIA-based models appear to be uniformly better than their ICRG-based counterpart. Hence we will focus on the CPIA-based family of regressions. Model 2a (with CPIA and without regional/international war dummy) produces a very strong and theoretically consistent effect for CPIA with other growth fundamentals remaining robustly associated with growth. As for the other model (2b&c), which excludes CPIA but includes international and regional wars, all other variables including the former were found to be significant except for primary education, which was subsequently dropped from the regression. Given that this model is clearly more restrictive, because it forces elimination of policy and institution environment as well as human capital variables, I will only consider the model 2a for further analyses. Moreover, the chosen model is superior to the other in terms of overall explanatory power.

Table 6a: Random Effects Model Regression: Dependent Variable- Real GDP Per capita growth

Variable	Model 1a	Model 1b	Model 1c	Model 2a'	Model 2a''	Model 2a'''
Initial Conditions						
Initial Income	-0.8668	-0.8521	-1.4673	-1.1643	-1.1635	-1.0551
	(-3.260)	(-4.460)	(-6.210)	(5.108)	(5.082)	(5.004)
Primary School Enrolment	0.0213	0.0147		0.0189	0.0189	
	(2.330)	(1.840)		(1.806)	(1.802)	
Demographic Gift						
Log(Labor force/total population)	-0.0591	0.1449	0.4478	-0.6963	-0.7012	-0.7337
	(-0.040)	(0.120)	(0.300)	(0.458)	(0.459)	(0.496)
Policy and Institutional Environment						
CPIA	1.2462					
	(5.570)					
ICRG				0.7392	0.7372	0.7826
				(6.025)	(5.991)	(6.726)
Geography						
Population Density at the Coast	0.3205	0.4136	0.5037	0.3772	0.3789	0.3210
	(2.430)	(3.150)	(2.790)	(2.574)	(2.574)	(2.319)
Proportion of land in Non temperate Zones	-0.0197	-0.0280	-0.0520	-0.0139	-0.0139	-0.0126
	(-2.040)	(-3.690)	(-5.270)	(1.675)	(1.675)	(1.741)
Conflict						
Civil War	-1.1259	-1.7485	-1.9142	-0.3641	-0.3617	
	(-2.660)	(-4.7820)	(-5.110)	(0.818)	(0.811)	
Regional Conflict		-0.7909	-0.8151		-0.1761	
		(-1.690)	(-1.690)		(0.314)	
Constant				6.6144	6.6114	7.5188
Number of observation	410	669	699	396	396	426
Number of Countries	102	133	134	115	115	127
R squared	0.1984	0.1497	0.2296	0.1985	0.1981	0.1832
Breush Pagan chi^{2}Test (OLS vs. RE)	9.98[0.0016]	63.35[0.000	54.47[0.00	26.64[0.00	26.58[0.00	28.23[0.000]
Hausman test (RE vs. FE)	89.06[0.0000]	]	0]	0]	0]	89.04[0.000]
		118.5[0.000	105.56[0.0	68.03[0.00	60.69[0.00	
		]	0]	0]	0]	

Table 6b: Fixed Effects Model Regression: Dependent Variable- Real GDP Per capita

Variable	Model 2a	Model 2b	Model 2c	Model 2a'	Model 2a''	Model 2a'''
Initial Conditions						
Initial Income	-6.8991	-5.3975	-5.6441	-6.3009	-6.3544	-6.6757
	(-7.880)	(-8.520)	(-8.990)	(6.090)	(6.142)	(6.808)
Primary School Enrolment	0.03875	0.0130		0.0301	0.0306	
	(2.460)	(0.920)		(1.409)	(1.433)	
Demographic Gift						
Log(Labor force/total population)	15.0780	9.1855	9.0271	17.6868	17.7672	18.4944
	(4.720)	(3.660)	(3.950)	(4.880)	(4.902)	(5.422)
Policy and Institutional Environment						
CPIA	0.9037					
	(3.650)					
ICRG				0.4391	0.4176	0.5625
				(3.293)	(3.123)	(4.794)
Geography						
Population Density at the Coast	2.1439	2.8752	2.9376	1.5318	1.5483	2.0912
	(7.350)	(3.420)	(3.630)	(5.529)	(5.591)	(8.462)
Proportion of land in Non temperate Zones	-0.1461	-0.1366	-0.1362	-0.1290	-0.1271	-0.1459
	(-8.380)	(-6.590)	(-6.800)	(7.668)	(7.484)	(8.679)
Conflict						
Civil War	-1.5119	-1.8813	-2.1323	-0.7499	-0.7266	
	(-2.820)	(-3.920)	(-4.420)	(1.219)	(1.176)	
Regional Conflict		-1.0295	-0.9833		-0.6750	
		(-1.990)	(-1.910)		(1.415)	
Constant	67.9469	51.1703	53.5935	72.3822	72.6379	75.9910
Number of observation	410	669	699	396	396	426
Number of Countries	87	113	113	115	115	127
R squared	0.6444	0.5974	0.6298	0.6811	0.6827	0.6743

3.ii Persistence of Growth:

We estimate the determinants of growth persistence before and after 1985, which marked the beginning of major episodes of external shocks that affected the Arab world. The regression was based on an error-correction persistence model, and the estimation results are reported in Table 7 below. Following Rodrik (1998a), the key variable in this regression is "Conflict", which reflect the capacity (or the inability rather) of a society for managing external shocks[12]. External shocks can be economically costly, when social divisions run deep (due, for example, to high income-inequality) and the societies institutions for conflicts management are weak. Therefore, this variable suggests that the combination of deep social conflicts and weak social and political institutions tends to magnify the effects of external shocks on growth, by leading to growth-retarding policies (the precise definition of "Conflict" is provided in the notes to Table 7). The estimated coefficient for Conflict was highly robust and fairly stable across nine different regressions, using three different measures of Conflict. The model also accounts for error-correction effects, which is the lagged residual of the estimated long-run growth regression 2a of Table 6a. This variable suggests that growth in the current period must accelerate, if growth in the previous period was lower than the rate consistent with long-term equilibrium growth. The estimated error-correction effect was also highly significant as well as consistent with theoretical predictions. In addition to these two effects, the model also accounts for the potential role of changes in CPIA (the overall institutional and policy environment) in the dynamics of growth. This variable partially reflects the economic reforms adopted by many countries, including some in the Arab region, in response to the post 1984 shocks and at the behest of the International Financial Institutions. An increase in the CPIA was robustly and positively associated with acceleration of growth.

[12] The measure of external shock we use is the standard deviation of the first log-difference of the terms of trade multiplied by the average share of total trade in GDP in the initial period. This measure captures the unexpected component of the volatility of the streams of income associated with foreign trade. Assuming that the terms of trade follow a random walk (possibly with a drift) Rodrik (1998b) shows that this measure is the theoretically appropriate measure of external volatility. Moreover, Rodrik argues that the fact that this measure treats positive terms-of-trade shocks identically as negative shocks is justified, since positive income shocks could also trigger the same kind of distributional conflicts that obtain under negative shocks.

Table 7: Persistence of Growth Regression (Rate of Growth in 1985-1999 minus rate of growth for 1965-84)

	Confl1	Confl2	Confl3	Error Correction term	Change in CPIA	Constant	Adjusted R-Squared	F-test	N
A1	-0.0002 (-3.210)					-0.1117	0.0984	10.27	86
B1		-0.0001 (-2.640)				-0.1690	0.0677	6.96	83
C1			-0.0002 (-3.160)			-0.1652	0.0953	9.96	86
A2	-0.0002 (-2.050)			-0.6107 (-4.220)		0.2527	0.3568	17.36	60
B2		-0.0001 (-1.430)		0.6122 (-4.080)		0.1243	0.3386	13.82	57
C2			-0.0001 (-1.780)	-0.6202 (-4.220)		0.1361	0.3459	16.60	60
A3	-0.0002 (-2.520)			-0.5428 (-4.040)	1.0251 (3.400)	0.3226	0.4573	17.58	60
B3		-0.0001 (-1.870)		-0.5487 (-3.850)	1.1663 (2.860)	0.1318	0.3947	13.17	57
C3			-0.0001 (-2.340)	-0.5442 (-3.980)	1.0431 (3.420)	0.2204	0.4494	17.05	60

Notes:

1. Confl1 = standard deviation of $\Delta(\text{LTOT})_{65\text{-}84}$ x $\text{openness}_{65\text{-}84}$ x $(20\text{-}\text{polity}_{65\text{-}84})$ x $\text{gini}_{65\text{-}84}$
2. Confl2 = standard deviation of $\Delta(\text{LTOT})_{70\text{-}79}$ x $\text{openness}_{70\text{-}79}$ x $(20\text{-}\text{Polity}_{70\text{-}79})$ x $\text{gini}_{70\text{-}79}$
3. Confl3 = standard deviation of $\Delta\ (\text{LTOT})_{70\text{-}84}$ x $\text{openness}_{70\text{-}79}$ x $(20\text{-}\text{polity}_{70\text{-}84})$ x $\text{gini}_{70\text{-}79}$
4. Polity = 10+Democracy-autocracy, where both democracy and autocracy range from 0 to 10. Polity is a composite index widely used in the political science literature.
5. Error Correction term= Predicted Annual rate of growth (1955-84) minus actual average annual rate of growth (1965-84)
6. Change in Policy= Average CPIA (1985-1999) minus Average CPIA (1965-1984)

4. The Failure of Growth in the Arab

Taking the East Asian economic performance as the development frontier for the region, the two pivotal questions this paper would like to ask are: why has there been (relatively) little growth in the Arab world?; and, why has the growth, as little as it may be, collapsed following the post-1985 hocks. Using the growth regressions of the previous section, we now have the necessary ingredients to address these questions, at least in a context of a partial equilibrium framework.

4.i Why has the Arab World Grown so Little?

Using the long-run growth regression results (Model 2a of Table 6b) we address the question regarding the sources of growth that allow the East Asian countries to outperform the Arab world by simulating the sources of the growth differential between East Asia and each of the three middle and high income Arab countries (MOE, OE and DE). In addition we also simulate the growth differential between DE and PEE. The simulation results pertain to the period of 1985-1988 (Table 8). The results suggest that relative to EA, MOE and DE have had huge catch up effect that could be exploited to generate economic growth, because their initial incomes are much lower than those prevailing in the high performing Asian economies. The exception are the oil-rich economies of the Arab world, which has no catch up effect to exploit being much richer than the East Asian economies. On the other hand, the poorer Arab countries (PEE) have huge growth potential to the relatively richer middle-income diversified economies of the Arab world. Clearly, such potential could materialize in a context of a deeper economic integration in the Arab region. The huge catch up effect which accounts for 6-7% growth differential is not likely to be outweighed by the superior performance of EA in the area of human capital accumulation, which tended to be rather small in comparison to each of MOE, DE, and to a lesser extent OE. However, the PEE group lags behind DE rather significantly in terms of human capital accumulation, leading to a much less net conditional convergence effect (the sum of the initial income and primary school enrollment effect) of only 5.6% compared to 7.2% for unconditional convergence effect.

The second most significant source of growth in favor of EA (as well as PEE relative of DE) has been the effect due to the net demographic gift. This effect has allowed, other things equal, EA to grow by more than 8% compared to MOE and by more than 3% compared to OE and by almost 6% compared to DE. Discounting the effect of migrant labor in the case of OE would suggest that this effect is much stronger than indicated by the 3.3% growth differential. On the other hand, the PEE group had an advantage in terms of the augmented demographic gift of more than 2% per capita growth relative to the DE group. The major failure of the middle and high income Arab countries (MOE, OE, DE) to generate sufficient job opportunities to absorb the rising demand for labor, associated with their demographic transitions, is at the heart of the failure of these countries to achieve high growth, or to prevent massive unemployment, especially among educated youth.

Geography appears to be a very significant source of growth differentials between the groups. Despite smaller shares of coastal lines to land area in EA (relative to DE and OE), the much higher economic density along the coasts of EA compared to the Arab region translated into higher growth for the former. The higher East Asian growth due to this effect amounted to 4% relative to OE, 1.3% relative to MOE and 1.9% relative to DE. However, the superior EA

performance due to the effect of coastal economic density is more than outweighed by the climate effect in the case of DE, where the marginal contribution of the latter equaled almost 3.5% in favor of the DE group. This would lead to a net growth of about 1.5% in favor of DE. However, the combined effect of the geography factors would remain in favor of EA relative to both of OE and MOE. Within the Arab region, both factors of geography would contribute to perpetuating the poverty of the low income PEE relative to the middle income DE. The combined effects of climate and coastal economic density translated into more than 8% of per capita growth in favor of the DE group.

In terms of policy and institutional environment, EA has dominated the middle-high income Arab world where its superior performance accounts for more than 1.2% higher growth relative to MOE and DE and almost 1% of higher growth than OE. On the other hand, poorer institutional and policy environment in the PEE (relative to DE) is estimated to have accounted for more than half a percentage of the positive DE-PEE growth differential. Finally, in general the effect of civil wars appears to be relatively marginal in explaining growth differentials between the groups. The two exceptions are the case of EA-MOE and to a lesser extent DE-PEE, where civil wars had, respectively, accounted for 0.8% and 0.4% of the growth differentials. Clearly the indirect effects of civil wars through institutions and other channels could be much higher.

Table 8: Growth Performance in the Arab World and East Asia (1985-1998)

Variable	*Coeffecient*[a]	*EA-MOE*	*EA-OE*	*EA-DE*	*DE-PEE*
Initial Conditions/Human Capital					
Initial Income	-6.899	-6.20	6.26	-7.65	-7.21
Primary school enrollment	0.039	0.03	0.40	0.17	1.62
Demographic Gift					
Proportion of labor force size to population size (in Log)	15.078	8.20	3.33	5.74	-2.06
Policy and Institutional Environment					
CPIA	0.904	1.27	0.98	1.20	0.53
Geography					
Population Density at the Coastal/ Sea Navigable River	2.144	1.31	4.00	1.89	4.50
Proportion of Land in Non-Temperate Zone (in Log)	-0.146	-0.44	0.14	-3.44	3.61
Conflict					
Start of Civil War	-1.512	0.81	-0.20	0.05	0.38
Explained Difference		4.97	14.90	-2.04	1.38
Actual Difference		5.41	5.30	3.16	0.50
Unexplained Difference		0.44	-9.60	5.20	-0.89

Note: The coefficients are from Model 2A of Table 6B
EA= East Asia
MOE= Mixed Oil Economies
OE= Oil Exporting Economies
DE= Diversified Economies
PEE= Primary Exporting Economies

4.ii Why has Growth Collapsed in the Arab World?

A comparison of average growth rates for the Arab region and East Asia during 1970-1999 suggests that there are three episodes (1970-84, 1985-94, 1995-1999) of different growth patterns (Table 9). While growth in the Arab world collapsed between the first two periods, the East Asian countries were able to maintain their stellar growth performance throughout the two periods. However, the Arab world appears to be on the verge of a hesitant recovery since the second half of the 1990s, while East Asian growth dropped by 50% as a result of the recent financial crises that impacted the region. It is also pertinent to point out that between the first two periods, growth had also decelerated (though not as massively as in the Arab world) in Latin America as well as in Sub-Saharan Africa. On the other hand, growth had accelerated in South Asia, even by more impressive margins than in East Asia (Table 10). Focusing on the collapse of growth in the Arab world between the first two periods, we analyze below the main sources contributing to it.

Using the models of Table 7, we decomposed the measured persistence of growth in Asia (or collapse of growth in other regions, including the Arab world) into three components (Table 10). These factors are the capacity of a society to manage the impact of exogenous shocks, represented by the variable "Conflict"; the change in overall institutional and policy environment; and the automatic error-correction effect that depends on whether actual growth is lower or higher than predicted growth at the initial period.

First, the role of capacity for managing conflicts following external shocks, was by far the most dominant factor behind the collapse of growth in the Arab World. This factor--which could be interpreted as a measure of low social cohesion—contributed –0.7% to the collapse of growth in the region. This accounts for about a fourth of the growth collapse experienced by the region, which was much larger than similar effects for other regions. Though this is mainly due to the intensity of the shocks that impacted the Arab region rather than a sudden collapse in social cohesion; the moral of these findings is that promoting social group cooperation is, perhaps, the best available defense against external shocks.

Second, unlike other regions, the Arab world (and to a lesser extent South Asia) appear to have grown much faster in the first period than would be predicted by the fundamentals. This is reflected in the negative influence of the error-correction effect, which suggests that the growth rates of the pre-1984 are not sustainable, given the initial growth environment.

Finally, overall policy and institutional environment appeared to have worsened in the Arab world (and to a lesser extent in South Asia), contributing –0.34% to the collapse of growth in the Arab region (and –0.13% to the change in growth South Asia). On the other hand, this factor had negligible effects for East Asia and Latin America, while the apparent progress in Africa on this area had a marginal contribution of less than 0.1% to the change in growth in this region. However, this effect was more than outweighed by other effects, hence overall growth in Africa decelerated between the two periods.

Table 9: Episodes of Growth in the Arab World and East Asia

Median (annualized)	1970-84	1985-94	1995-1999
East Asia	**5.0**	**5.3**	**2.7**
Arab Countries	**3.6**	**0.9**	**1.6**
Mean (annualized)			
East Asia	**4.7**	**5.5**	**2.8**
Arab Countries	**3.0**	**0.3**	**1.8**

Note: The Arab countries considered here include: Algeria; Egypt, Arab Rep.; Jordan; Mauritania; Morocco; and, Tunisia. And, the East Asian countries includes: China; Indonesia; Korea, Rep.; Malaysia; Philippines; Singapore; Thailand.

Table 10:The Collapse of Growth in the Arab World (1985-94vs.1975-84)

Average	Actual change in Growth (1)	Change in growth attributed to:			Predicted change in Growth (2+3+4)
		Policy and Institutional environment (2)	Error - correction (3)	Conflict (4)	
Arab	-2.614	-0.339	-0.418	-0.716	-1.473
East Asia	0.021	0.010	0.538	-0.180	0.368
África	-0.750	0.089	0.072	-0.462	-0.301
Latin America	-0.672	-0.016	0.007	-0.261	-0.270
South Asia	0.106	-0.125	-0.635	-0.025	-0.785

Note: The decomposition of the actual change in the rates of growth between the two periods was computed using regression C3 of Table 7, where median values were used.

5. Conclusions

This paper analyzes overall economic growth performance in the Arab world since the mid 1960s, with the key objective of developing a better understanding about what drives the growth process in the Arab region. The growth record of the region has been rather disappointing. First, it has not been high enough (as in the case of East Asia, for example) to facilitate sufficiently deep structural transformation in the region's economies. Second, and perhaps more importantly, growth could not be sustained in the post-1985 era, when it was most needed to expend employment opportunities to a rising share of working age-population. This growth failure, we argue, has deprived the region from realizing a potential "demographic gift". Instead, massive unemployment, especially among educated first time job seekers, became the major source of poverty and have already started to roll back the earlier impressive social gains achieved by the region. Revitalizing growth in the Arab world would, therefore, suggests asking two pivotal questions: why has growth in the Arab world lagged behind those developing countries that could be taken to represent the frontier in terms of the development discourse (East Asia)?, and why has growth been so erratic and unstable in the Arab world?

To address these issues, the paper estimates two models of long-run endogenous growth and growth persistence, using global data over the 1965-98 period. The long-run growth model accounts for traditional growth fundamentals (initial level of development, overall institutional and policy environment, human capital) as well as other factors of particular relevance to the Arab region. The significance of this latter set of growth determinants stems from the evidence that, even with good progress on the above fundamentals, growth usually does not happen without deliberate development strategies for exploiting (and/or overcoming) country-specific or region-specific potentials (constraints). We argue that that there are at least three sets of such factors of relevance to the growth process in the Arab world. These are the advantage of location and ecology; associated with export competitiveness and capacity to attract direct foreign investment as well as health; the "demographic gift", associated with the demographic transition to lower age dependency; and the preponderance of regional and civil conflicts, with their multiple negative consequences for development. The persistence of growth model, on the other hand, estimates determinants of the change in growth between the two periods before and after 1985. This year, as our analysis suggests, marked the end of the era of positive and relatively high per capita growth in the Arab world. The key variable in this regression is "Conflict",

which is a covariate variable reflecting the extent of external shocks combined with the degree of latent social conflicts in a society (such as high income inequality) and the institutional capacity for managing conflicts within societies. Therefore, this variable suggests that the combination of deep social conflicts and weak social and political institutions tends to magnify the effects of external shocks on growth, by leading to growth-retarding policies.

These two models, which were corroborated by the data, permit addressing the two pivotal questions asked by this paper regarding the growth process in the Arab world. The main conclusions of the analyses, which hopefully could have useful policy implications regarding the daunting task of revitalizing growth in the region, are summarized below.

First, in order to attain the Asian frontier middle and high-income Arab countries and especially low-income Arab countries would need to continue to improve the overall enabling environment for economic growth. This would require enhanced institutional quality, further accumulation of human capital as well as maintaining macroeconomic stability on a sustained basis. As our results suggest closing this gap would consolidate the catch-up effect that favors low and middle-income Arab countries because of their relatively lower standard of living compared to East Asia.

Second, however our results suggest that East Asia has grown more rapidly than the middle and high income countries of the Arab region much more as a result of its ability to exploit the demographic gift and because of the high economic density along its coastal lines. On the other hand, the diversified economies of the Arab region appear to have an unexploited potential relative to East Asia in terms of the high share of their land area dominated by temperate climate. These findings are important because they corroborate recent thinking in economic growth literature in that while achieving an overall enabling environment for growth is a necessary condition for growth to happen, is not a sufficient condition, however. The implications of this is that growth would require deliberate strategic interventions by the state in order to facilitate exploitation of possible growth potential or to overcome major constraints.

Third, the link between location and climate ecology to economic growth is well developed in the recent strand of the endogenous growth literature that emphasizes the role of geography. For example, high economic density at coastal lines and along the banks of sea-navigable rivers is a major determinant of competitiveness of labor-intensive manufacturing exports. Therefore, a deliberate and carefully planned strategy for intensifying economic activity along the vast coastal lines of the Arab world should provide an important source of long-term growth. Among other things, this would require a provision of infrastructure, regulatory environment and other services. In addition, any viable strategy for enhancing competitiveness of the Arab economies should include an explicit agenda for acquisition of technical know-how especially with the widening technological gap for the Arab world relative to the frontier (Ali, 2001).

Fourth, the failure of the Arab region to exploit the "demographic gift" relates to the plethora of structural and policy problems afflicting Arab economies, which manifest themselves in dysfunctional labor and credit market (Yousef, 2000). The bloated and inefficient public sector and the stifling regulatory environment leaves little space for the private sector to be responsive to the ever increasing demand for labor generated by the nascent demographic transition that started to take hold in many countries of the region. In as much as the demographic transition presents a serious development challenge for the region, with appropriate strategies it could also be turned into an opportunity for generating high and sustained per capita growth. An insightful proposition in this regard was put forward by Dhonte, Bhattacharya, and Yousef (2000) who argue that massive construction in the housing sector could provide an answer to the challenge of the demographic transition. They argue that both housing finance and investment are driven by

the growth of the working age population. The key insight behind their proposal hinges on their argument that, "the dynamics of the housing sector are closely related to the demographic transition". They went on to describe this process where they stated that, "as the working age population expands there is a strong acceleration in housing investment while indigenous financing trails, creating a possible constraint on investment. As the process matures, however, housing investments levels off, while the housing stock continues to grow, so that housing-related savings catch up and eventually exceed the flow of investments. The catch is in the take off stage, when the availability of financing is a constraint on investment; the operation of housing saving schemes and the development of mortgage markets, not the provision of public housing, is the answer"(pp 14). Such a strategy would require an important strategic role for the public sector especially in the area of regulation, including better-defined and enforced property rights, land titling and reducing the historical biases of development policy in favor of investment in plants.

Fifth, conflicts are not only key sources of political instability, but they are also major constraints for high and sustained growth. Civil wars were found to have impeded the growth of the mixed oil economies (Algeria, Iraq) relative to East Asia; as well as the growth of lo w-income Arab countries relative to the relatively safe middle-income countries of the region. The estimated effects, however, are likely to substantially underestimate the true effects of civil wars, which could also damage institutions and other factors influencing growth. Also the many regional & international wars, though not directly analyzed in the growth accounting exercise, must have exacted significant costs on the region. Resolving the problem of the high risks of regional and international wars would obviously require a *just* and *comprehensive* resolution of the Arab-Israeli conflict being the core of the region's political crisis. In addition, resolution of other regional conflicts would require enhancing the Arab League capacity for promoting cooperation and conflict resolution among its member states as well as between the League members and other neighbors and partners. Addressing the problems of the civil wars--which remain a serious challenge for many Arab countries-- would require a fundamental rethink regarding the treatment of cultural and religious minorities in the Arab world. Recent evidence on the causes of civil wars suggests that civil wars are essentially a response, usually by minority groups, to political repression and economic deprivation inflicted by a dominant central state (Elbadawi and Sambanis, 2000).

Finally, the central role of "social cohesion" in the ability of an economy to sustain growth, especially following external shocks is a profoundly important finding. Social cohesion could be high when a society is relatively homogenous (for example due to religious and ethnic homogeneity or because of very low income or wealth inequalities). On the other hand, in socially diverse societies, strong institutions are required for mediating conflictive (but not necessarily violent) interests among social groups. According to our analysis, social cohesion in the Arab world is impaired by low standards of political rights throughout the region, and high income-inequality in most countries as well as high social diversity in a few others. Improving political rights as a means for enhancing social cohesion in the Arab world, I will argue, is perhaps the one area of public policy (as well as popular activism), which is likely to yield the highest return for economic and political development. First, with increased globalization destabilizing shocks are likely to increase rather than decrease, leading to more frequent episodes of growth collapse in countries with low social cohesion. Second, viewing civil wars as extreme cases of lack of social cohesion, it is clear that improving the standards of political rights should also be a top priority for maintaining the territorial integrity and peace of the countries in the region.

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Appendix Tables

Appendix Table 1: Human Development and Initial Conditions in the Arab World

	Average Schooling Years		Life expectancy at birth		GDP per capita		Gini Coefficient
	1960-84	1985-98	1960-84	1985-98	1960	1985	
Mixed Oil Economies (MOE)	**2**	**4**	**56**	**64**	**1145**	**1859**	**39**
Algeria	2	4	55	68	1145	1859	39
Iraq	1	3	57	61	-	-	-
Oil Economies (OE)	**3**	**6**	**60**	**72**	**2232**	**11429**	
United Arab Emirates	3		63	74	-	24971	-
Bahrain	2	5	64	72	-	8797	-
Kuwait	3	6	67	76	-	10329	-
Libya			55	69	-	-	-
Oman			51	70	696	5607	-
Qatar			62	73	-	-	-
Saudi Arabia			55	69	3768	7440	-
Diversified Economies (DE)	**2**	**5**	**58**	**67**	**510**	**1543**	**41**
Egypt	2	5	52	64	360	890	-
Jordan	3	6	64	69	-	1929	40
Lebanon			64	68	-	2462	-
Morocco			54	64	696	1173	39
Syria	2	5	57	67	475	1036	-
Tunisia	2	4	57	67	-	1771	42
Primary Exports Economies (PEE)	**0**	**2**	**43**	**51**	**-**	**315**	**-**
Djibouti			41	48	-	-	-
Mauritania		2	44	51	-	-	-
Sudan	1	2	45	52	-	-	-
Yemen	0	1	44	53	-	315	-
Arab World	**2**	**4**	**55**	**65**	**1190**	**5275**	**40**
East Asia (EA)	**5**	**7**	**62**	**71**	**1442**	**6097**	**40**
Hong Kong	6	9	71	78	3008	13690	42
Indonesia	3	4	50	62	249	603	33
Malaysia	4	6	63	71	975	2587	50
Singapore	5	6	69	75	2699	13180	40
South Korea	6	10	62	71	1256	5190	35
Thailand	4	6	60	68	466	1333	
Sub Saharan Africa (SSA)	**2**	**3**	**46**	**51**	**601**	**862**	**46**

Source: Global Development Network Growth Database and International Data on Educational Attainment (Robert J Barro and Jong-Wha Lee)

Appendix Table 2: Macroeconomic Environment in the Arab World

	Govt. Expenditures		Privte Investment		Public Investment		M2/Y		Openness		Inflation	
	1972-84	1985-98	1960-84	1985-98	1960-84	1985-98	1960-84	1985-98	1960-84	1985-98	1960	1985
Mixed Oil Economies (MOE)			**29**	**20**	**12**	**10**	**35**	**54**	**58**	**45**	**8**	**17**
Algeria			29	20	12	10	52	54	58	45	8	17
Iraq							19					
OE	**34**	**49**					**29**	**61**	**118**	**114**	**7**	**2**
United Arab Emirates							22	55	107	118		
Bahrain	33	33					52	67	219	189	9	0
Kuwait	35	66					39	89	100	98	7	3
Libya							31	72	90			
Oman							19	30	97	85		
Qatar							23	61			5	3
Saudi Arabia							17	51	96	77	7	1
DE	**39**	**32**	**14**	**14**	**14**	**11**	**42**	**78**	**65**	**78**	**8**	**10**
Egypt	49	36	12	11	13	12	47	79	51	51	9	14
Jordan			19	18	17	10	58	106	121	125	10	6
Lebanon		34						132		92		
Morocco	33	30	12	12	11	10	34	53	46	56	7	5
Syria	41	25					37	53	45	59	8	17
Tunisia	32	34	13	14	15	12	35	46	60	86	9	6
PEE	**43**	**33**	**12**	**11**	**10**	**6**	**17**	**39**	**64**	**74**	**14**	**39**
Djibouti		35						72		115		
Mauritania	43		15	12	16	10	15	23	97	106		7
Sudan			10	10	5	3	20	17	31	15	14	72
Yemen		32						46		61		
Arab World	**27**	**30**	**16**	**14**	**13**	**9**	**32**	**62**	**87**	**86**	**12**	**17**
EA	**20**	**20**	**19**	**24**	**8**	**9**	**37**	**61**	**102**	**136**	**25**	**5**
Hong Kong												6
Indonesia	20	18	15	21	8	8	28	44	12	21	99	11
Malaysia	27	27	18	22	11	12	26	38	55	65	4	3
Singapore	20	22					39	74	89	156	4	2
South Korea	16	17	22	27	6	8	59	81	312	362	14	6
Thailand	17	16	20	29	7	8	32	67	42	76	6	5
SSA	**26**	**30**	**10**	**11**	**10**	**9**	**19**	**24**	**64**	**70**	**14**	**20**

Source: Global Development Network Growth Data

Appendix Table 3: Demography and Labor Market

	Population Size			No. Young Age Dep. (1-14 yrs)			No. Old Age Dep. (64 yrs up)			No. Working Age Population			Labor Force		
	1960	1985	1999	1960	1985	1999	1960	1985	1999	1960	1985	1999	1960	1985	1999
Mixed Oil Economies	**17647**	**37196**	**52747**	**7885**	**16554**	**20430**	**581**	**1290**	**1875**	**9181**	**19352**	**30442**	**5404**	**9958**	**16182**
Algeria	10800	21879	29950	4726	9628	11251	415	864	1174	5659	11387	17526	3316	5929	9913
Iraq	6847	15317	22797	3159	6926	9179	166	426	701	3522	7965	12916	2088	4028	6269
Oil Economies	**6544**	**21436**	**33936**	**2809**	**8965**	**13809**	**218**	**492**	**969**	**3517**	**11979**	**19158**	**1951**	**7191**	**11563**
United Arab Emirates	90	1379	2815	38	391	752	2	18	60	50	970	2003	25	720	1393
Bahrain	149	425	666	65	135	205	4	10	19	80	280	443	43	178	300
Kuwait	278	1712	1924	98	636	650	6	22	36	174	1054	1238	116	668	764
Libya	1349	3786	5419	584	1758	2103	55	87	169	710	1941	3148	442	1128	1550
Oman	558	1397	2348	242	631	1031	15	34	62	301	732	1255	160	402	625
Qatar	45	358	565	18	98	187		3	14	27	257	364	16	183	306
Saudi Arabia	4075	12379	20198	1765	5317	8881	136	317	609	2174	6745	10707	1149	3912	6625
Diversified Economies	**49142**	**91737**	**125072**	**21248**	**37746**	**44029**	**1651**	**3496**	**5429**	**26243**	**50495**	**75614**	**17144**	**31318**	**46405**
Egypt	25922	46511	62655	11006	18390	21925	852	1794	2801	14064	26327	37929	9254	16279	23684
Jordan	844	2644	4740	375	1244	1843	35	95	139	434	1305	2758	238	666	1398
Lebanon	1968	3275	4271	801	1227	1384	114	169	248	1053	1879	2640	561	976	1482
Morocco	11626	21648	28238	5211	8988	9375	301	858	1221	6114	11801	17642	4255	7945	11211
Syria	4561	10397	15711	2025	5018	6496	173	301	477	2363	5078	8738	1464	2932	4933
Tunisia	4221	7262	9457	1830	2878	3007	175	278	543	2216	4105	5907	1372	2520	3698
Primary Exports Economies	**17486**	**33694**	**49287**	**7653**	**15384**	**20852**	**522**	**899**	**1517**	**9311**	**17411**	**26918**	**6642**	**11695**	**18095**
Djibouti	83	391	648	34	172	269	2	10	21	47	209	358	-	-	-
Mauritania	991	1766	2598	418	797	1133	28	55	83	545	914	1383	522	825	1198
Sudan	11165	21459	28993	4947	9448	11392	328	577	915	5890	11433	16686	4220	7897	11510
Yemen	5247	10078	17048	2254	4966	8058	164	257	498	2829	4855	8491	1899	2973	5387
All Arab World	90819	184063	261042	39596	78648	99120	2972	6177	9790	**48252**	**99237**	**152132**	**31141**	60161	92246
East Asia	**158241**	**278857**	**347509**	**65621**	**101394**	**100079**	**5087**	**10740**	**17461**	**87533**	**166723**	**229969**	**63008**	**123729**	**174274**
Hong Kong	3064	5456	6721	1253	1279	1224	86	408	686	1726	3769	4811	1183	2733	3542
Indonesia	93996	163036	207022	37764	63041	64385	3137	5863	9310	53096	94132	133328	36658	67986	99370
Malaysia	8140	15677	22710	3685	6062	7740	278	584	914	4177	9030	14056	2816	6083	9334
Singapore	1646	2736	3952	637	603	721	31	132	216	978	2001	3015	541	1332	1943
South Korea	25003	40806	46858	10486	12229	10209	831	1751	3021	13687	26826	33629	8376	17669	23757
Thailand	26392	51146	60246	11796	18181	15800	725	2002	3316	13870	30964	41130	13434	27926	36328
Sub Saharan Africa	**223148**	**440005**	**643175**	**96408**	**198648**	**284819**	**6411**	**12724**	**18332**	**120328**	**228633**	**340024**	**105970**	**194909**	**281821**

Source: World Bank database

Appendix Table 4. Location and Geography

	% of Coastal and sea Navigable rivers	Density of 100k around the Coastal and Sea Navigable rivers	% of non temperate
Mixed Oil Economies	**3**	**200**	**96**
Algeria	4	221	94
Iraq	1	178	98
Oil Economies	**59**	**179**	**100**
United Arab Emirates	70	37	100
Bahrain	87	985	100
Kuwait	91	96	100
Libya	10	28	99
Oman	45	7	100
Qatar	96	63	100
Saudi Arabia	11	35	100
Diversified Economies	**40**	**186**	**75**
Egypt	37	175	100
Jordan	12	52	89
Lebanon	100	337	0
Morocco	35	117	100
Syria	12	338	63
Tunisia	46	97	100
Primary Exports Economies	**35**	**23**	**100**
Djibouti	95	8	100
Mauritania	7	14	100
Sudan	2	15	100
Yemen	37	53	100
Arab World	**42**	**150**	**92**
East Asia	**60**	**1539**	**99**
Hong Kong			
Indonesia	24	453	100
Malaysia	83	528	100
Singapore	76	77	100
South Korea	89	6466	94
Thailand	27	170	100
Sub Saharan Africa	**27**	**79**	**98**

Source: GIS data

2. APPENDIX TABLE 4. LOCATION AND GEOGRAPHY

	% of Coastal and sea Navigable rivers	Density of 100k around the Coastal and Sea Navigable rivers	% of temperate
Mixed Oil Economies	**3**	**200**	**4.2**
Algeria	4	221	6.5
Iraq	1	178	1.9
Oil Economies	**59**	**179**	**0.2**
United Arab Emirates	70	37	0
Bahrain	87	985	0
Kuwait	91	96	0
Libya	10	28	1.4
Oman	45	7	0
Qatar	96	63	0
Saudi Arabia	11	35	0
Diversified Economies	**40**	**186**	**24.7**
Egypt	37	175	0
Jordan	12	52	10.7
Lebanon	100	337	100
Morocco	35	117	0.1
Syria	12	338	37.5
Tunisia	46	97	0.1
Primary Exports Economies	**35**	**23**	**0**
Djibouti	95	8	0
Mauritania	7	14	0
Sudan	2	15	0
Yemen	37	53	0
Arab World	**42**	**150**	**8.3**
East Asia	**60**	**1539**	**1.2**
Hong Kong			
Indonesia	24	453	0
Malaysia	83	528	0
Singapore	76	77	0
South Korea	89	6466	5.8
Thailand	27	170	0
Sub Saharan Africa	**27**	**79**	**1.8**

Source: GIS data