

CSIS

Center for Strategic and International Studies

1800 K Street N.W.

Washington, DC 20006

(202) 775-3270

Access: Web: CSIS.ORG

Contact the Author: Acordesman@aol.com

**III. Political, Economic and Demographic
Pressures on Middle Eastern Energy
Production and Exports**

***DRAFT FOR COMMENT
AND REVIEW***

**Anthony H. Cordesman
Arleigh A. Burke Chair in Strategy
Center for Strategic and International Studies**

March 15, 2004

Acknowledgements

The author would like to thank Jennifer Moravitz, Mehmet Emre Furtun, Stephen Lanier, Adam Whetsone, Daniel Berkowitz, Paul Famolari and Ghada Elnajjar for their help in researching and editing prior work on energy developments in the Middle East and North Africa during past years, and Jennifer Moravitz, Mehmet Emre Furtun, Stephen Lanier for work drawn upon in this study. He would also like to thank his colleagues James R. Schlesinger and Robert Ebel for their advice and help over many years.

This book would also have been impossible to write without the efforts of the Energy Information Agency of the US Department of Energy, and particularly of its country and area analysts. Much of the country and regional analysis is taken from this work by the EIA, and its analysts deserve great credit for consistently excellent reporting over the years. Their work can be readily access via the web at <http://www.eia.doe.gov/emeu/cabs/cabsme.html>.

The work of the International Energy Agency was also of great value, especially in writing the sections on energy investment in Chapter V. Credit should also be given to the many press sources used in researching this book, and particularly to four publications that provide consistently excellent reporting on regional political, economic, and energy developments: the Economist, the Estimate, Middle East Economic Digest, and Middle East Economic Survey. While this book relies primarily on official US government sources, and international organizations like the International Energy Agency and World Bank, for its data and citations, extensive use was made of press sources in researching this analysis.

TABLE OF CONTENTS

Acknowledgements..... ii

**III. POLITICAL, ECONOMIC AND DEMOGRAPHIC PRESSURES ON MIDDLE EASTERN ENERGY
PRODUCTION AND EXPORTS..... 1**

THE POLITICAL DIMENSION..... 1

AGING LEADERS, UNSTABLE REGIMES, UNCERTAIN REPLACEMENTS, AND ISLAMIC EXTREMISM 2

THE NEXT CLASS OF TECHNOCRATS 4

THE CHALLENGE OF LIMITED DEVELOPMENT AND ECONOMIC GROWTH 4

POPULATION GROWTH, DEMOGRAPHIC PRESSURES, AND A “YOUTH EXPLOSION” 12

THE INTERACTION BETWEEN OIL REVENUES, ECONOMIC DEVELOPMENT, AND DEMOGRAPHICS..... 37

ABILITY TO FUND INVESTMENT TO INCREASE OIL AND GAS PRODUCTION 53

LIST OF TABLES AND FIGURES

CHART III.1	7
THE MIDDLE EAST AND NORTH AFRICA HAVE HAD A STEADILY DECLINING SHARE OF THE GLOBAL ECONOMY:	7
CHART III.2	8
COMPARING TOTAL MIDDLE EASTERN AND NORTH AFRICAN GNP GROWTH TO THE OVERALL TREND IN DEVELOPING STATES:	8
CHART III.3	9
GDP GROWTH OF THE GULF AND MENA STATES: THE LAG BEHIND EAST ASIA	9
CHART III.4	10
AVERAGE PER CAPITA INCOME REMAINS HIGH BY DEVELOPING COUNTRY STANDARDS IN PPP TERMS	10
CHART III.5	11
TREND IN GDP PER CAPITA OF GULF AND MENA STATES	11
CHART III.6	14
LIVING IN A CROWDED DESERT: MASSIVE ONGOING POPULATION GROWTH IN THE TOTAL MIDDLE EAST AND NORTH AFRICA (MENA)	14
CHART III.7	15
POPULATION GROWTH IN THE GULF	15
CHART III.8	16
MENA YOUTH EXPLOSION AND THE PENSIONER BURDEN	16
CHART III.9	17
POPULATION GROWTH RATES DO DECLINE	17
CHART III.10	18
BUT, POPULATION MOMENTUM CONTINUES: TOTAL POPULATION BY LARGER MENA COUNTRY IN 2003	18
CHART III.11	19
TOTAL POPULATION BY SMALLER MENA COUNTRY IN 2003	19
CHART III. 12	21
TRENDS IN MENA TRADE AS A SHARE OF WORLD TRADE: PART ONE:	21
THE MIDDLE EAST AND NORTH AFRICA BADLY LAGGED IN THE GROWTH OF WORLD TRADE: 1986-1997	21
CHART III. 12	22
TRENDS IN MENA TRADE AS A SHARE OF WORLD TRADE: PART TWO:	22
GROWTH IN MIDDLE EAST AND NORTH AFRICA TRADE RELATIVE TO OTHER REGIONS: 1992-2001	22
CHART III.13	23
THE MIDDLE EAST HAS EXHIBITED CONSISTENT GROWTH IN EXPORTS; NORTH AFRICA HAS NOT	23
CHART III.14	24
THE GDP GROWTH OF MENA FUEL EXPORTERS LAGGED BEHIND THAT OF DIVERSIFIED EXPORTERS AND WAS FAR MORE VULNERABLE TO CHANGES IN OIL PRICES	24

CHART III.15	25
THE PER CAPITA INCOME GROWTH OF MENA FUEL EXPORTERS LAGGED BEHIND THAT OF DIVERSIFIED EXPORTERS AND WAS FAR MORE VULNERABLE TO OIL PRICES.....	25
CHART III.16	26
THE FISCAL BALANCES OF MENA FUEL EXPORTERS DETERIORATED RELATIVE TO THOSE OF DIVERSIFIED EXPORTERS.....	26
CHART III.17	27
TRADE CONDITIONS DO NOT FAVOR ENERGY EXPORTERS: PART ONE	27
THE TERMS OF TRADE OF MENA FUEL EXPORTERS DETERIORATED RELATIVE TO THOSE OF DIVERSIFIED EXPORTERS	27
CHART III.17	28
TRADE CONDITIONS DO NOT FAVOR ENERGY EXPORTERS: PART TWO.....	28
COMPARATIVE TREND IN ENERGY COMMODITY PRICES VERSUS NON-ENERGY COMMODITIES	28
CHART III.18.....	29
COUNTRIES DIFFER RADICALLY IN VOLUME OF TRADE AND TRADE BALANCES ARE UNCERTAIN EXCEPT IN YEARS WITH HIGH OIL REVENUES.....	29
CHART III.19	33
OPEC OIL EXPORT REVENUES: INVESTMENT AND STABILITY VERSUS INTERRUPTIONS: TOTAL.....	33
CHART III.20	34
DEMOGRAPHICS AND OIL WEALTH	34
“OIL CRASH” TO “OIL BOOM” IN 1992-2001: EVEN IN PEACETIME, OIL REVENUES ARE UNPREDICTABLE AND HAVE MASSIVE REGIONAL MACROECONOMIC IMPACTS	34
CHART III.21	35
BEYOND MARKET FORCES: OIL IS A CONFLICT-DRIVEN BUSINESS:	35
POLITICS, WAR, AND THE TRENDS IN THE PRICE OF SAUDI ARABIA LIGHT CRUDE: 1970-1999	35
ADAPTED BY ANTHONY H. CORDESMAN FROM CAMBRIDGE ENERGY ASSOCIATES, WORLD OIL TRENDS, 1998, CAMBRIDGE, MASS., 1998, PP. 26	35
CHART III.22	36
THE IMPACT OF OIL WEALTH ON THE SAUDI GDP AND GOVERNMENT EXPENDITURES: 1970-1999	36
CHART III.23	40
CASE EXAMPLES: POPULATION GROWTH AND THE YOUTH EXPLOSION IN IRAN.....	40
CHART III.24.....	41
CASE EXAMPLES: POPULATION GROWTH AND THE YOUTH EXPLOSION IN IRAQ.....	41
CHART III.25	42
CASE EXAMPLES: POPULATION GROWTH AND THE “YOUTH EXPLOSION” IN SAUDI ARABIA	42
CHART III. 26	43

THE SEARCH FOR JOBS: CIA ESTIMATE OF NUMBER OF YOUNG MALES ENTERING THE LABOR MARKET EACH YEAR	43
CHART III.27	44
FOREIGN POPULATION IN SELECTED COUNTRIES IN THE GULF	44
CHART III. 28	45
THE “YOUTHENING” OF SAUDI ARABIA – CASE EXAMPLE	45
ESTIMATE OF THE DISTRIBUTION OF THE TOTAL NATIVE AND FOREIGN POPULATION BY AGE AND SEX IN 2000	45
CHART III. 29	46
WOMEN AS A PERCENT OF THE LABOR FORCE: PACE OF SOCIAL CHANGE.....	46
CHART III.30	47
FOREIGN LABOR IMPACT ON SEX RATIO ISSUES: MEN AS A PERCENT OF THE TOTAL POPULATION IN 2003	47
CHART III.31	48
MASSIVE ON-GOING PRESSURES FOR SOCIAL CHANGE: MASSIVE URBANIZATION AND SHARP DECLINE IN THE ROLE OF AGRICULTURE.....	48
CHART III.32	49
PERCENT OF URBANIZATION AND PERCENT OF LABOR FORCE IN AGRICULTURE: SHAPING THE PACE OF SOCIAL CHANGE IN THE MENA REGION.....	49
CHART III. 33	50
ARAB DEVELOPMENT REPORT ESTIMATE OF URBANIZATION	50
CHART III.34	51
ARAB DEVELOPMENT REPORT ESTIMATE OF DECLINE IN ARABLE LAND PER CAPITA	51
CHART III. 35	52
OVER-DEPENDENCE ON NON-PRODUCTIVE GOVERNMENT JOBS HAS A COST: ESTIMATED COMPARATIVE DIRECT AND DISGUISED UNEMPLOYMENT RATE IN THE MIDDLE EAST; A ROUGH ESTIMATE.....	52

III. POLITICAL, ECONOMIC AND DEMOGRAPHIC PRESSURES ON MIDDLE EASTERN ENERGY PRODUCTION AND EXPORTS

Internal political and economic instability pose problems and uncertainties as great as those affecting military security . The MENA region has many regimes that have an uncertain ability to govern, internal religious and ethnic tensions, succession problems, and semi-authoritarian characteristics or lack a stable popular base. Most regimes need political reform and to develop more pluralistic and representative governments that serve the nation, not the ruling class. The rule of law needs to be strengthened, both in terms of human rights and the protection of property and basic civil and economic operations. In practice, this means that the political structure and internal stability of every MENA energy exporter must be the subject of constant review. This is particularly true in view of the threat posed by Islamic extremism and terrorism.

1

Politics, however, are only the most volatile aspect of internal instability, In spite of its energy export earnings, the MENA region has not succeeded in developing modern and competitive economics and virtually all the countries in the region take major demographic problems. For most energy exporting states, “oil wealth” is a myth dating back to the late 1970s and early 1980s. Energy exports now sustain faltering economies that are not yet on the road to diversified, and stable development. Major increases in population are destroying traditional social structures, creating hyperurbanization, and a “youth explosion” in terms of rapid, massive additions to work forces that already have high levels of disguised unemployment.

The Political Dimension

MENA political structures remain fragile and large authoritarian regardless of the formal structure of government, and all regional governments are repressive to some extent.. In broad terms, no state in the region has managed to create a secular political culture that provides effective pluralism. In fact, traditional monarchies often interfere less in human rights and normal social conduct than titular democracies All of the competing secular ideologies of the post-colonial have so far failed: Pan-Arabism, socialism, capitalism, Marxism, statism, and paternalism have not provided lasting political cohesion, given development adequate

momentum, or met social needs. As for Islam, the fact that much of the population of the region has turned back to more traditional social structures and religion is scarcely surprising. At the same time, it is unclear that even the most moderate and pragmatic Islamist have meaningful solutions to the region's problems.

The region is scarcely without hope. Leaders have emerged in some MENA countries that are pressing for serious reform. Far too often, however, MENA societies are so static that they may be moving towards revolution or civil war where they should be moving towards evolutionary political and economic reform. The tragedy of the Middle East is that so many opportunities are being wasted and the region is steadily falling behind the cutting edge of political, economic, and social development in areas like Asia and Latin America.

Aging Leaders, Unstable Regimes, Uncertain Replacements, and Islamic Extremism

The age of many of the region's leaders is a cliché in the political analysis of the Middle East. Age and ill-health have already led to a transfer of power in Bahrain, Jordan, and Morocco, and is leading to one in Saudi Arabia. They may soon lead to a transfer of power in the UAE. Age is a growing factor in any calculation about the future leadership of Kuwait. Unstable leadership elites are another serious problem, affecting Algeria, Iran, Iraq, Libya, and Syria. Even a ruler's track record of long-term survival – as is the case in Yemen – is no promise of what will happen when President Salah goes, and Sultan Qabus has left serious uncertainties regarding the succession in Oman.

One has to be careful, however, about drawing any “apres moi le deluge” conclusions about succession in the MENA states. For all of its problems, the region is now more stable than it was at the time of Pan-Arabism and Nasser, and during much of the Cold War. While Islamic extremism is a serious problem, the fact is, however, that there is no guarantee of stability for a future that extends out to the year 2020. The key succession/domestic political issues affecting oil and gas exporting include:

- The success of the new leaders in Bahrain, and divisions within the royal family over how to govern, the political divisions between Shi'ite and Sunni, and the much higher birthrates of the Shi'ites.
- The near senility of the Emir and Prime Minister of Kuwait, growing divisions within the Kuwaiti royal family, and deep political divisions within a National Assembly more interested in ideology, Islam, and service politics than creating a stable structure of government.

- The uncertain balance of power between the “moderates” of President Khatami and the “traditionalists” of the Ayatollah Khamenei in Iran, and the future impact of low export revenues, low economic growth, and high population growth on the political stability of an aging and somewhat dysfunctional revolution.
- The problems that replacing the regime of Saddam Hussein present in Iraq, and the less obvious problems of creating a stable post-autocratic regime in a state with massive internal economic problems, high population growth, and deep divisions between Sunni, Shi’ite, and Kurd. These problems are compounded by the fact that the Shi’ite and Kurdish population is growing much more quickly than the Sunni population.
- The lack of formal heir to Sultan Qabus in Oman, other internal political problems and rivalries, and the fear the Sultan is increasingly isolated from the people and is not getting effective technocrat advice.
- Residual divisions within Qatar’s royal family and a tendency to provoke “generational” quarrels with Bahrain, Egypt, Saudi Arabia, and the UAE.
- Saudi Arabia now seems to have a smooth succession process from Fahd to Abdullah to Sultan, but may face a generational succession problem much sooner depending on their actual longevity. It certainly faces continuing problems with its Islamic extremists and “youth explosion.”
- Divisions within the UAE, questions about the post-Zayed unity of the seven Emirates, and rivalries within Abu Dhabi’s ruling family.
- The uncertain ability of Bashir Asad to govern in Syria, and the problems of creating a stable post-autocratic regime in Syria with an unreformed economy, very high population growth, and divisions between Alawite and Sunni, and secularist and Islamist. These problems are compounded by the slow progress in the peace process and the uncertain future of Syria’s presence in Lebanon.
- Mubarak’s age and the lack of a formally designated vice president in Egypt.
- President Zine El Abidine Ben Ali’s health, and failure to build a stable base of pluralism for his regime, raises serious questions about the future of Tunisia.
- Growing Islamist challenges to Qaddafi from Islamists in Libya and the lack of any modern state structure of government whether or not his sons replace him.
- Islamic extremism and secular corruption and authoritarianism have proven to be an explosive mix in Algeria.
- King Mohamed VI of Morocco has emerged as a more popular leader than his father, and has eased much of the repression in the country, There are so many demographic and economic problems in the country, however, that his efforts at reform may fail to bring stability,

Given this list, there is no reason to assume that a broad ranging succession crisis will occur in the region, whether it is a matter of aging leaders or aging regimes. It would be equally unrealistic, however, to assume that all of these succession and leadership issues will be resolved peacefully and lead to stable new governments and will affect the energy security of at least one Middle Eastern state between now and 2020.

The Next Class of Technocrats

Western risk analyses often focuses on the “corruption” of MENA ruling elites, military and arms spending, and human rights issues. Practical governance and energy development, however, are heavily dependent on the quality of the region’s technocrats. The present generation presents a major problem because it has not learned to control costs, to properly plan and manage projects on the basis of realistic ROI calculations, and often seeks to create very large-scale projects on a first of a kind basis for national and personal prestige. The end result has often been a vast drain on national budgets, a waste of resources on unprofitable ventures and investments, and a resistance to private investment and realistic national budgets and five-year plans. The region’s technocrats have accomplished a great deal and have much to be proud of, but they have cumulatively cost more, and created more problems, than corruption and military forces.

Many MENA technocrats have not adapted rapidly enough to deal with the decline in state revenues and investment income. Worse, many have no clear pattern of succession, and the authoritarian and personal nature of many governments has retained aging technocrats with too little turnover and too little delegation of responsibility. This may be least true in the energy sector, where the need for global competitiveness demands a high degree of competence. The problems still exist, however, and the problems in the energy sector cannot be separated from the overall management of the national budget.

A number of countries have also seen a major drop in the Western education of their future technocrats without replacing it with high quality domestic education. Local education over-emphasizes rote learning, Islam and politics in a way that means the pool of future talent with realistic public administration, economic, and business skills is too small to meet future needs. At the same time, many countries are cutting their numbers of foreign managers and advisors or relegating them to less influential roles. The demands on the next generation of technocrats will also be much higher than in the past for one simple reason: there is far less money and surplus capital.

The Challenge of Limited Development and Economic Growth

Important as politics are, it is economics and demographics which may prove to present the most serious challenge to the region’s stability. Economic development has been poor since

the end of the oil boom in the late 1970s. The Middle East only averaged 1.5% annual economic growth from 1990-2000, only half of its average annual population growth. This situation has improved since 1990, but growth averaged less than 3% before the economic collapse in Asia and similar collapse in world oil prices in late 1997. Population growth slightly outpaced real economic growth throughout the 1990s.

The World Bank's Global Economic Development report for 2003 shows a sharp decline in economic growth in GDP in constant prices from 6.5% during 1971-1980 to 2.5% during 1981-1990. While growth rose to 3.2% during 1991-2000, it still barely kept pace with population growth. This is reflected in the fact that growth in per capita income in constant prices dropped from 3.6% during 1971-1980 to -0.6% during 1981-1990, and was only 1% from 1991-2000 – reflected static income over nearly twenty years in a region with extremely poor equity of income distribution.

While inter-regional comparisons may be somewhat unfair, the economic growth in East Asia and the Pacific was 6.6% during 1971-1980, 7.3% during 1981-1990, and 7.7% during 1991-2000. The growth in real per capita income was the economic growth in East Asia and the Pacific was 3.0% during 1971-1980, 4.8% during 1981-1990, and 5.4% during 1991-2000.

Some states like Kuwait, Qatar, and the UAE have so much oil and gas wealth per capita that they maybe able to buy their way out of their mistakes indefinitely. Most Middle Eastern states, however, suffer severely from economic mismanagement and excessive state control of the economy. Structural economic reform has begun in Algeria, Morocco, Tunisia, Egypt, Jordan, Saudi Arabia, Lebanon, and Bahrain. This reform, however, remains highly uncertain and no country has yet carried out such reform to the point where it has a serious prospect of success.

The other Middle Eastern states have uncertain near to mid-term economic prospects, and this is true of most oil exporters as well. The Israeli and Palestinian economies have been crippled by war, Egypt Jordan Lebanon and Syria are all experiencing serious economic and demographic problems, and the Iraqi economy is weak and may soon face the shock of a new war. The Iranian economy is in a serious crisis, compounded by deep ideological conflicts over how to deal with the issue.

Algeria's efforts at economic reform have been partially blocked by corruption and civil war. Qadhafi's mismanagement and UN sanctions have blocked much of Libya's development. Bahrain no longer has significant oil reserves. Saudi Arabia has experienced over a decade of budget deficits and has only about 40% of the real per capita income it had at the peak of the oil boom. Oman is also experiencing serious development problems. While sources differ according to report, work by the World Bank shows that many Middle Eastern states have had rates of economic growth that lag behind their population growth, and that Middle East development has fallen badly behind the rate of growth in East Asia and China.

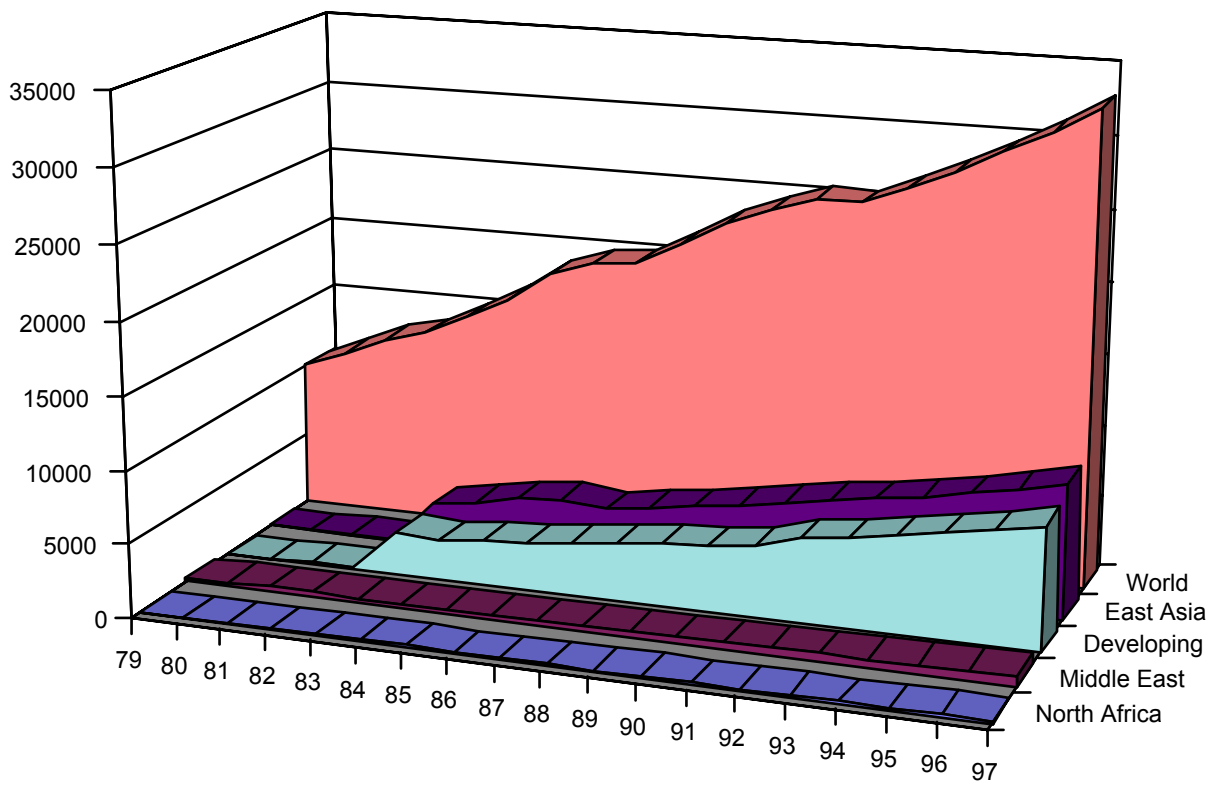
Once again, these trends become clearer when quantified:

- Chart III.1 shows a US State Department estimate of the trends in global economic growth. The Middle East and in the developing world as a whole and East Asia in particular.
- Chart III.2 shows the same data only for the developing world.
- Chart III.3 compares World Bank data on GDP growth by region and key MENA country. It is clear that Middle Eastern growth rates have dropped from parity with East Asia in the 1970s to rates have that level ever since. It is also clear that major oil powers like Saudi Arabia have had growth rates far lower than their population growth rates for more than two decades.
- Chart III.4 shows similar data for per capita population growth.
- Chart III.5 compares World Bank data on GDP growth by region and key MENA country. It is again clear that Middle Eastern growth rates have dropped from parity with East Asia in the 1970s to rates have that level ever since. It is also clear that major oil powers like Saudi Arabia have had growth rates far lower than their population growth rates for more than two decades.

Chart III.1

The Middle East and North Africa Have Had A Steadily Declining Share of the Global Economy:

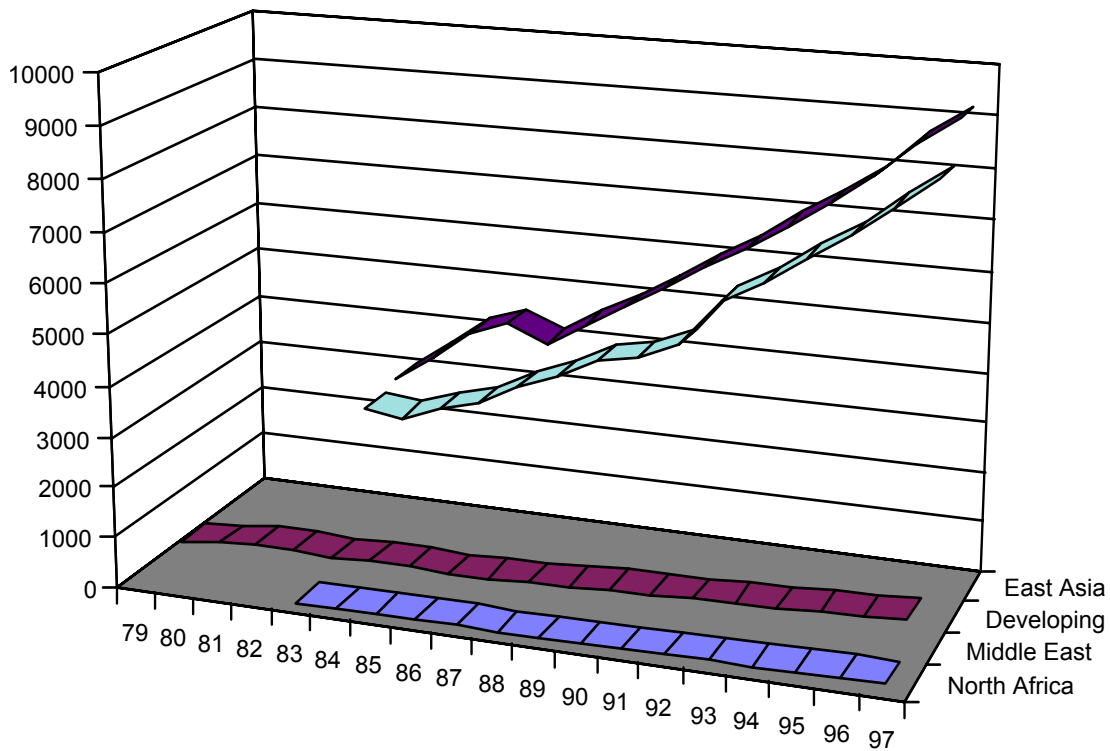
The GNP of the Middle East Relative to World Total in (\$US Current Billions)



Adapted by Anthony H. Cordesman from ACDA, World Military Expenditures and Arms Transfers, various editions. Middle East does not include North African states other than Egypt.

Chart III.2

**Comparing Total Middle Eastern and North African GNP Growth to The Overall Trend in Developing States:
(\$Current Billions)**

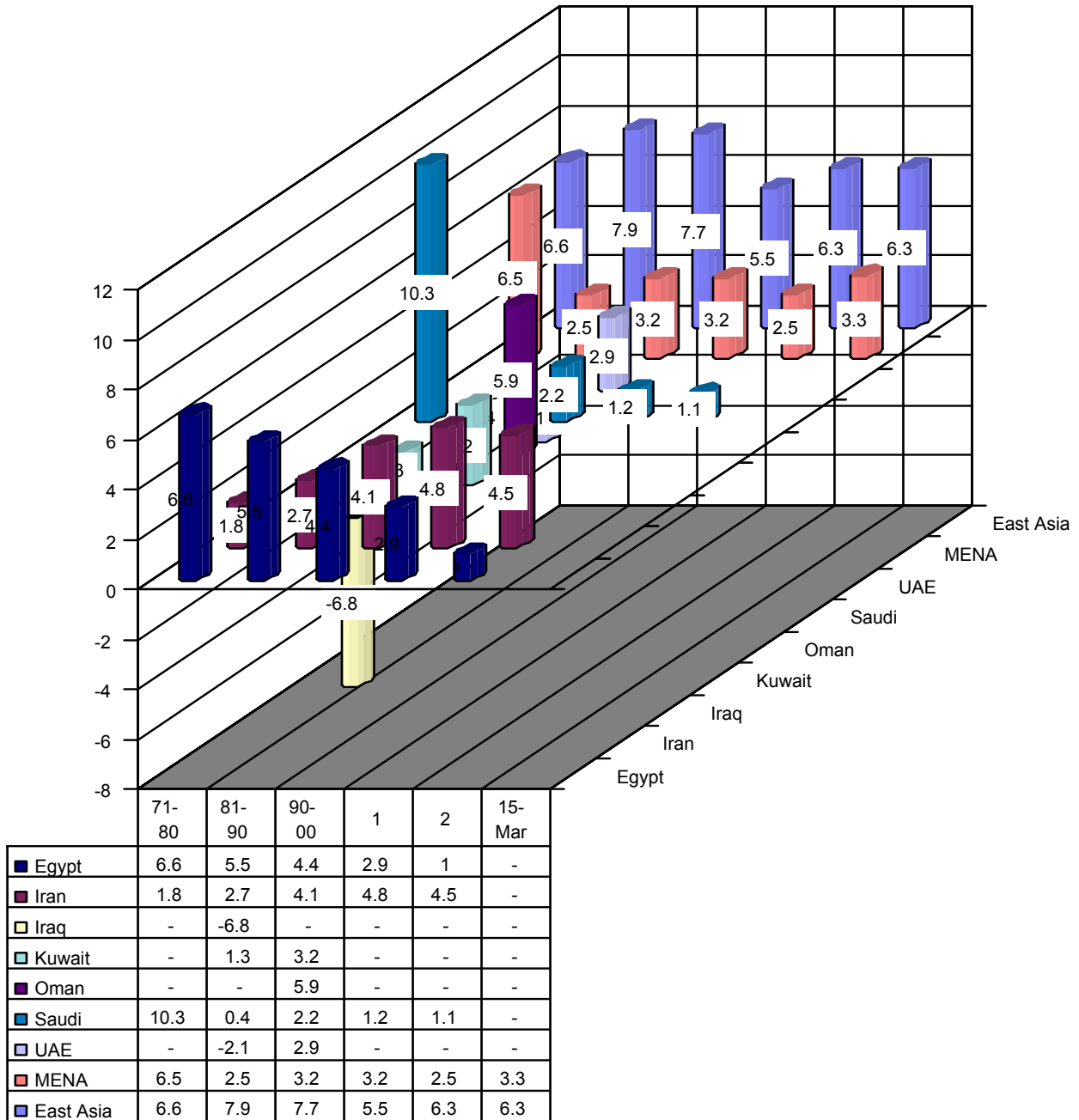


	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97
■ North Africa					76	74	79	77	78	79	85	95	101	102	104	111	114	126	133
■ Middle East	281	355	408	403	384	402	409	381	402	410	446	491	498	544	565	588	629	657	692
■ Developing					2895	2773	3053	3244	3680	3970	4390	4520	4850	5780	6230	6750	7240	7850	8460
■ East Asia					3005	3526	4109	4400	4070	4540	4960	5420	5930	6390	6890	7420	7960	8650	9210

Adapted by Anthony H. Cordesman from ACDA, World Military Expenditures and Arms Transfers, various editions. Middle East does not include North African states other than Egypt.

Chart III.3

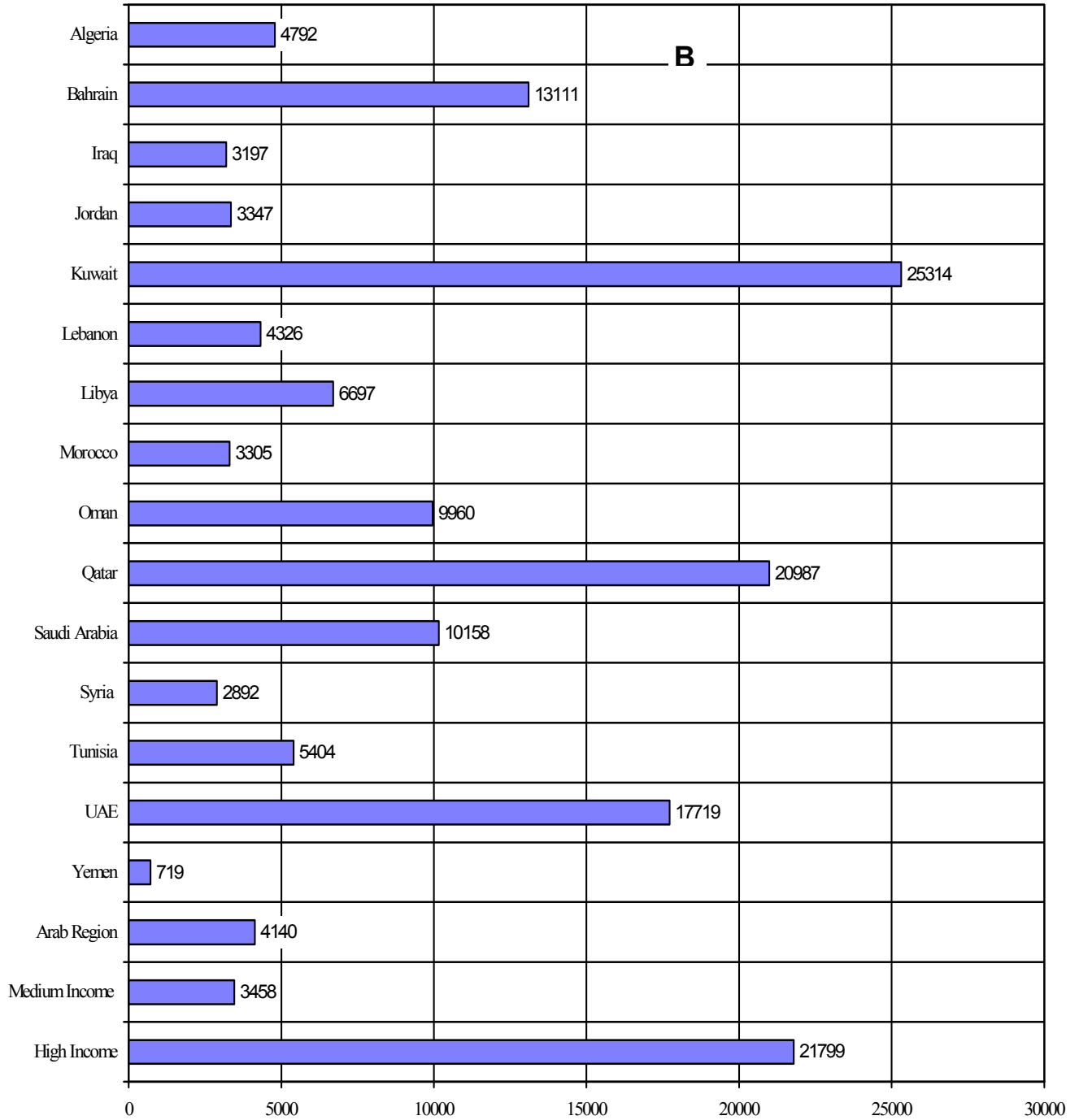
GDP Growth of the Gulf and MENA States: The Lag Behind East Asia
(Percent of Real Annual Change during 1980-2000)



Adapted by Anthony H. Cordesman from World Bank, *World Development Indicators*, 2002, pp. 204-206, and *Global Economic Prospects*, 2003, p. 204.

Chart III.4

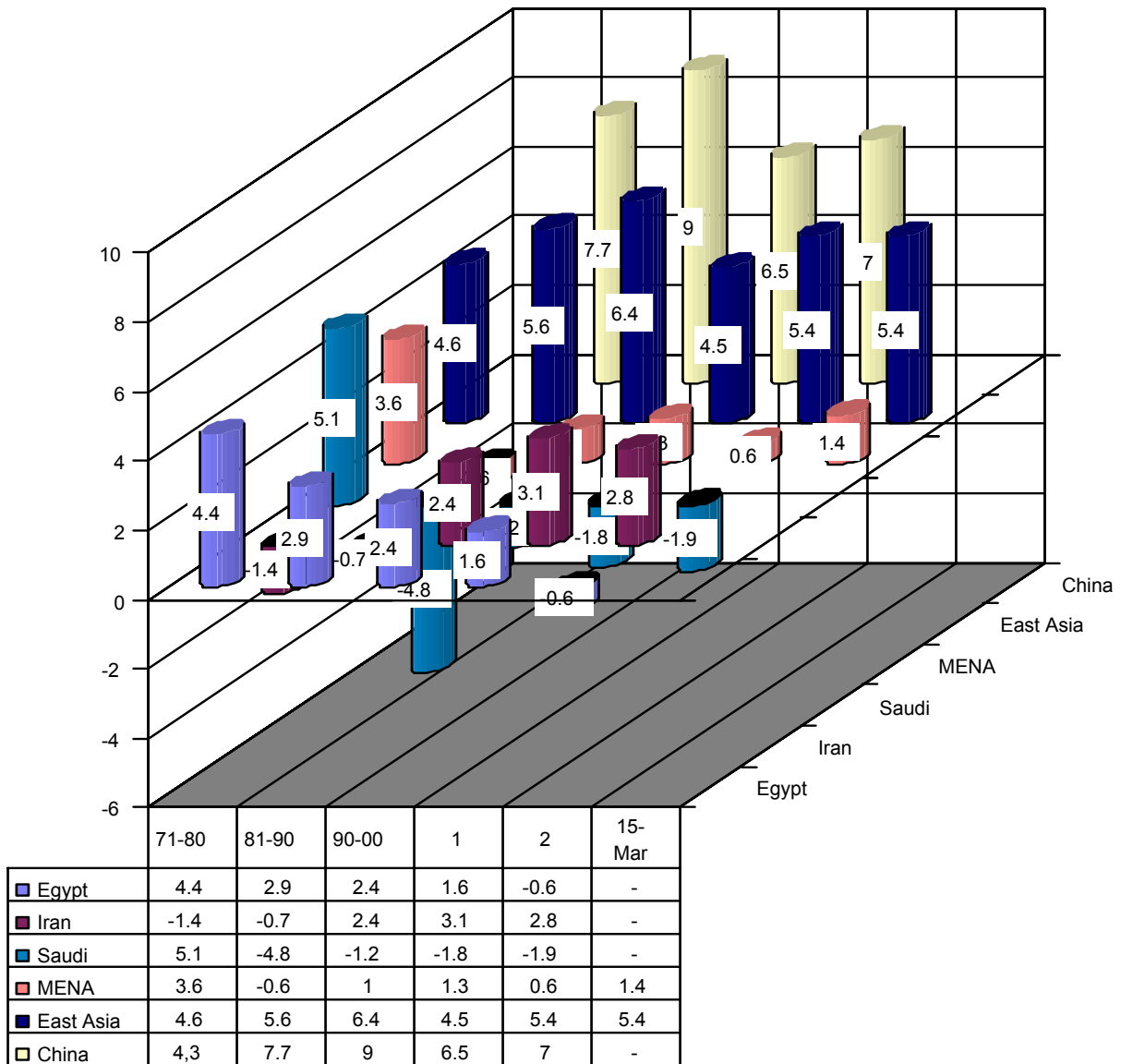
Average Per Capita Income Remains High By Developing Country Standards in PPP Terms (\$Current)



Adapted by Anthony H. Cordesman from Arab Human Development Report, 2002, p. 5, p. 143.

Chart III.5

Trend in GDP Per Capita of Gulf and MENA States
(Percent of Real Annual Change during 1980-2000)



Adapted by Anthony H. Cordesman from World Bank, *Global Economic Prospects, 2003*, p. 205.

Population Growth, Demographic Pressures, and a “Youth Explosion”

The total population of the Middle East and North Africa has grown from 78.6 million in 1950 to 101.2 million in 1960, 133.0 million in 1970, 177.9 million in 1980, 244.8 million in 1990, and 307.1 million in 2000. Conservative projections put it at 376.2 million in 2010, 449.3 million in 2020, 522.3 million in 2030, 592.1 million in 2040, and 656.3 million in 2050. This growth will exhaust natural water supplies, force permanent dependence on food imports, and raise the size of the young working age population aged 15 to 30 from 20.5 million in 1950 to 87.8 million in 2000, and 145.2 million in 2050. The fact that the age group of 14 years or younger now totals over 40% of the population of the region creates an immense bow wave of future strain on the social, educational, political, and economic system.

The end result is that a combination of fluctuating oil revenues, high population growth rates, and a failure to modernize and diversify the overall economy threatens to turn the past oil wealth of the oil exporting states into oil poverty. The Southern Gulf states have only about 40% of the real per capita income they had at the peak of the oil boom in the early 1980s, and little prospect for anything other than a slow decline. Kuwait, Qatar and the UAE maintain high per capita incomes, but Saudi Arabia’s “oil wealth” is becoming increasingly marginal, as its population grows far more quickly than its economy.

The resulting social turbulence is compounded by the region’s extremely young population, overstretched and outdated educational systems, and the failure of the labor market to create productive jobs, or any jobs at all for many of the young men entering the labor force. Emigration creates another source of social turbulence, while religious and cultural barriers to the effective employment of women compound other problems in productivity and competitiveness with other developed regions.

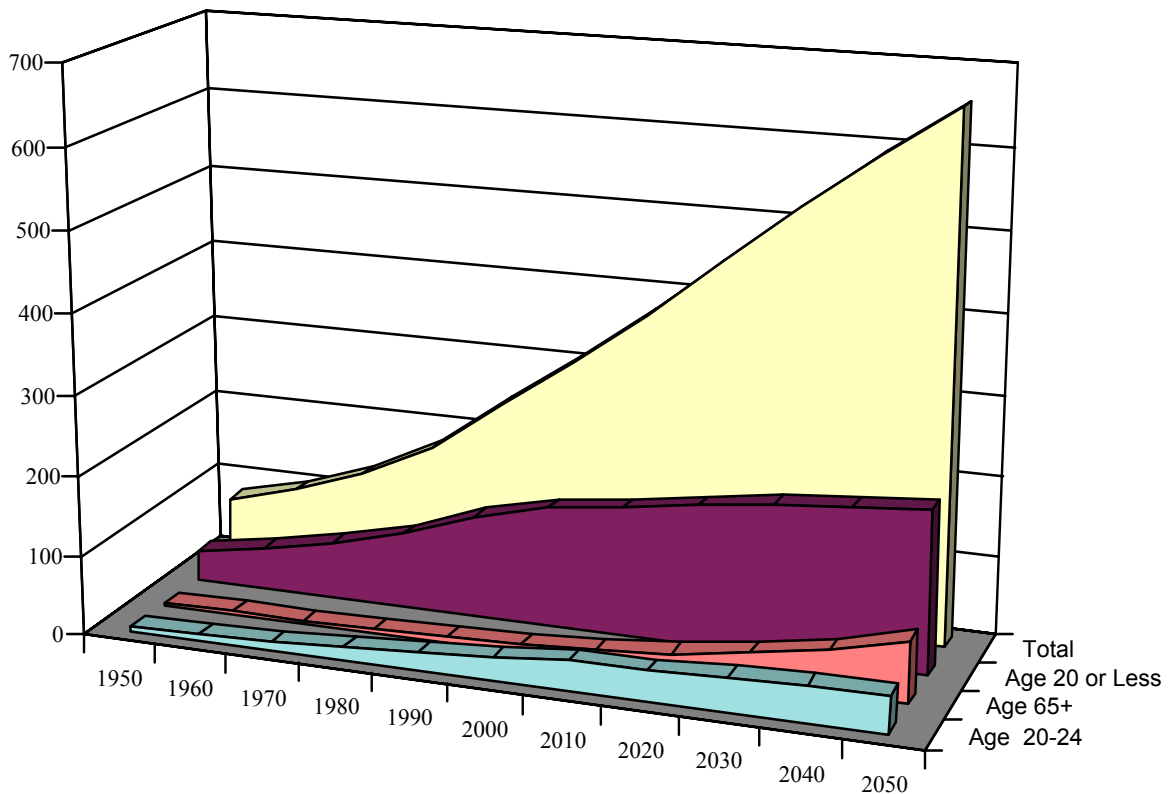
Political structures remain fragile and large authoritarian regardless of the formal structure of government. Traditional monarchies often interfere less in human rights and normal social conduct than supposed democracies. In broad terms, however, no state in the region has managed to create a secular political culture that provides effective pluralism, and most competing secular ideologies have failed: Pan-Arabism, socialism, capitalism, Marxism, statism, and paternalism have all failed to provide adequate development and meet social needs, and all

governments are to some extent repressive. The fact that so many in the region have turned back to more traditional social structures and religion is scarcely surprising, but it is unclear that this offers any meaningful solution to the problems involved. Theocracies seem to be the common enemy of man, economic development, and God.

- Chart III.6 shows the trends for the entire Middle East and North Africa.
- Chart III.7 shows the even steeper rate of population increase in the Gulf region, driven by higher average rates of birth than in the entire MENA area.
- Chart III.8 shows how the “youth explosion” will dominate total population growth until 2030, but that a sharp rise in the post-work part of the population over 65 years of age will provide a new source of demographic pressure after that time.
- Chart III.9 reveals that these estimates of population growth do reflect a sharp decline in the growth rate in most countries over time. This is projected on the basis of experience in Europe and Asia. If Middle Eastern societies react differently, the rate of population growth will be much steeper much longer.
- Chart III.10 shows the impact of the demographic bulge and “youth explosion” by major MENA country.
- Chart III.11 shows similar data for smaller MENA countries,

Chart III.6

Living in a Crowded Desert: Massive Ongoing Population Growth in the Total Middle East and North Africa (MENA)
 (UN Estimate - Population in Millions)

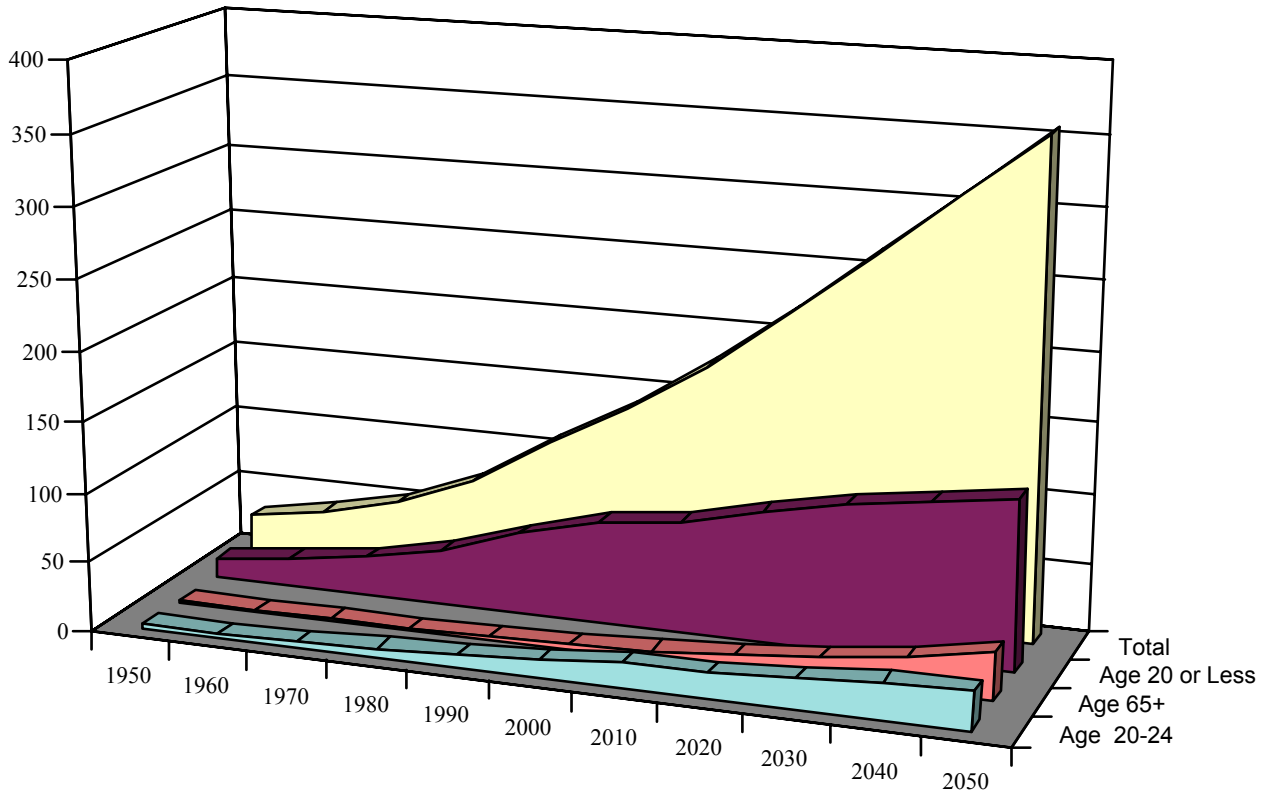


	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
Age 20-24	6.8	8.4	10.9	16.2	21.9	28.7	37.9	38.6	42.7	46.4	48.3
Age 65+	3.1	3.6	5.1	6.4	8.2	11.3	15.5	24.6	38	53.9	77.9
Age 20 or Less	39.9	53.6	73.1	96.2	128.4	151	161.7	175.7	187.6	196.5	203.6
Total	78.7	101.2	133	177.9	244.8	307.7	376.2	449.3	522.4	592.1	656.3

Adapted by Anthony H. Cordesman from data provided by the US Census Bureau.

Chart III.7

Population Growth in the Gulf
(UN Estimate - Population in Millions)



	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
■ Age 20-24	2.5	3.2	4.5	6.5	9.4	12.6	18.2	18.7	22.4	26.2	27.8
■ Age 65+	1.3	1.4	1.7	2.2	3	4.3	6.5	10.9	16.5	23.1	34.5
■ Age 20 or Less	15.4	20.9	28.8	40.9	59	73.7	80.9	94	106	114.1	121.2
■ Total	30.4	39	52.3	74	109.6	140.2	176.1	219.4	264.6	310.3	355.4

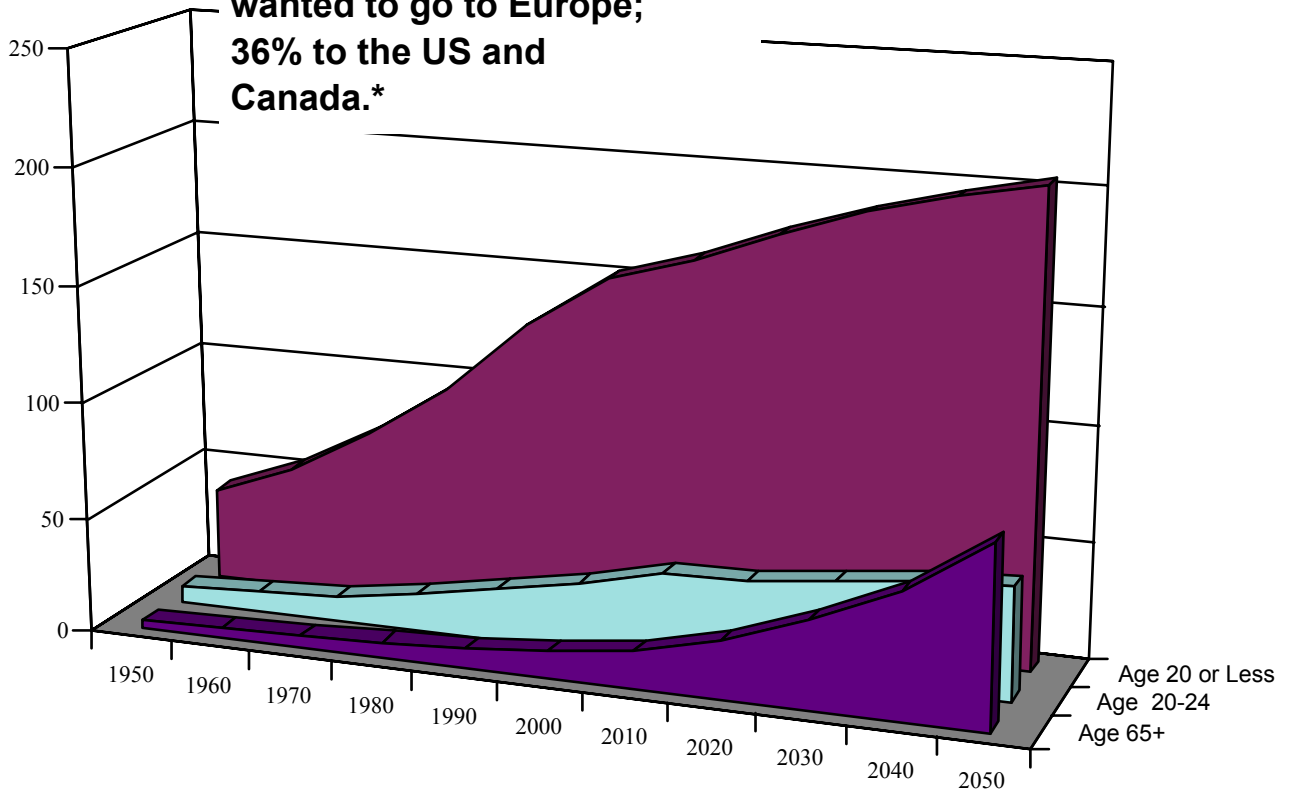
Adapted by Anthony H. Cordesman from data provided by the US Census Bureau

Chart III.8

MENA Youth Explosion and the Pensioner Burden

(UN Estimate - Population in Millions)

Roughly 51% of older youths polled expressed a desired to emigrate to other countries. 46% wanted to go to Europe; 36% to the US and Canada.*

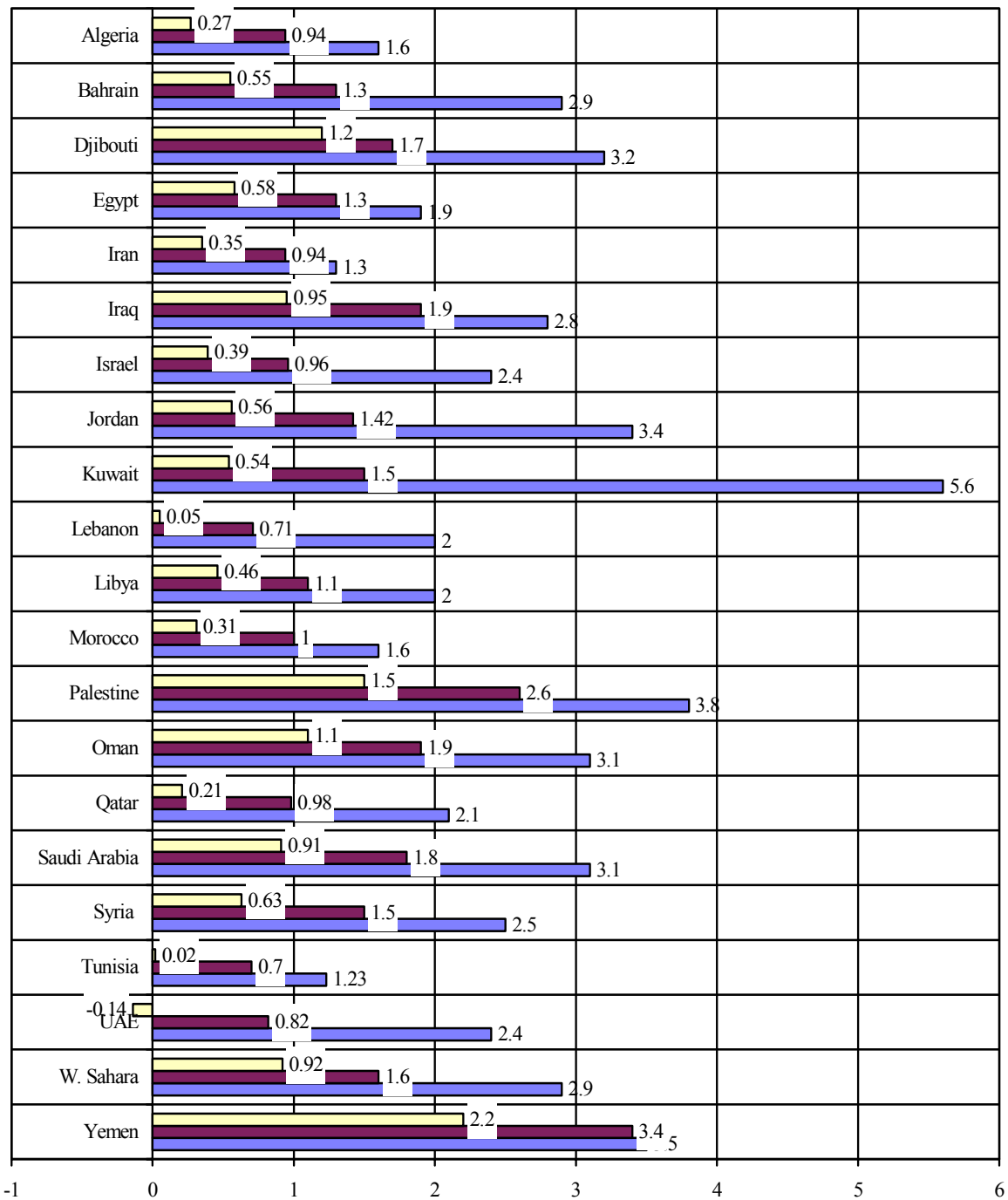


	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
■ Age 65+	3.1	3.6	5.1	6.4	8.2	11.3	15.5	24.6	38	53.9	77.9
■ Age 20-24	6.8	8.4	10.9	16.2	21.9	28.7	37.9	38.6	42.7	46.4	48.3
■ Age 20 or Less	39.9	53.6	73.1	96.2	128.4	151	161.7	175.7	187.6	196.5	203.6

Adapted by Anthony H. Cordesman from data provided by the US Census Bureau. * From Arab Human Development Report, 2002, p. 30.

Chart III.9

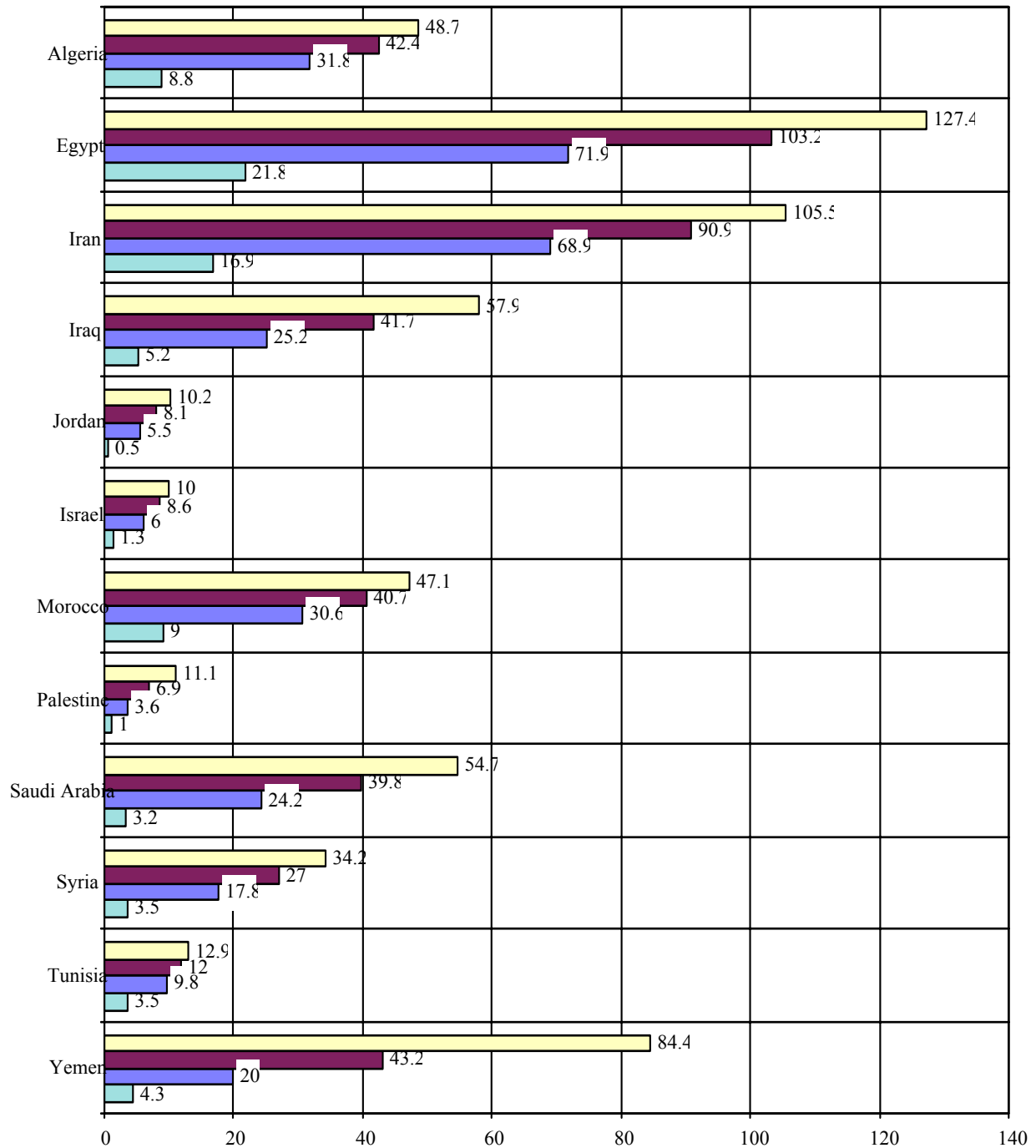
Population Growth Rates Do Decline



Adapted by Anthony H. Cordesman from United Nations, World Population Prospects, The 2002 Revision, New York, United Nations, ESA/WP 180 February 26, 2003.

Chart III.10

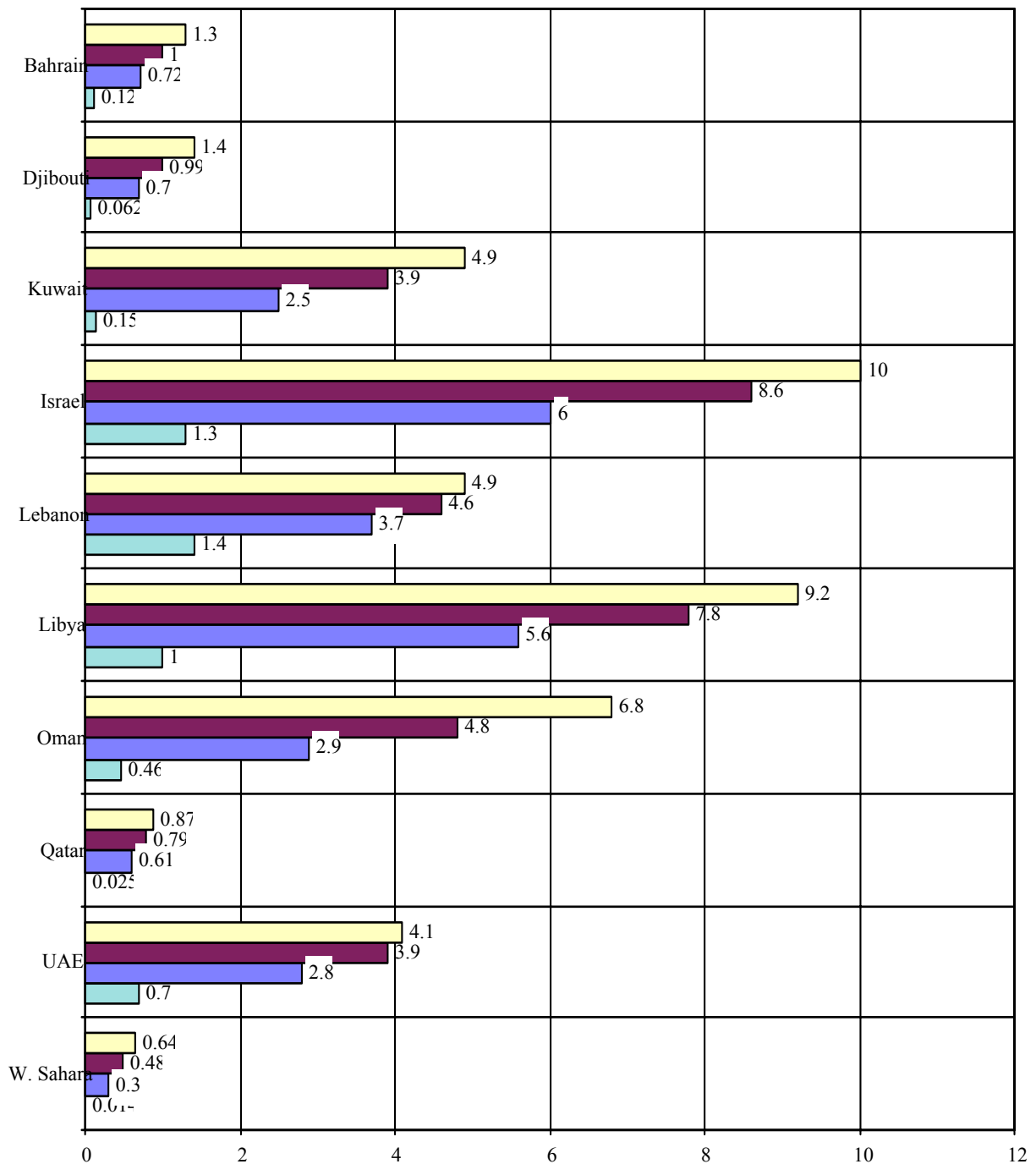
But, Population Momentum Continues: Total Population By Larger MENA Country in 2003



Adapted by Anthony H. Cordesman from United Nations, World Population Prospects, The 2002 Revision, New York, United Nations, ESA/WP 180 February 26, 2003.

Chart III.11

Total Population By Smaller MENA Country in 2003



Adapted by Anthony H. Cordesman from United Nations, World Population Prospects, The 2002 Revision, New York, United Nations, ESA/WP 180 February 26, 2003.

Trade, Oil Wealth, and Oil Non-Wealth

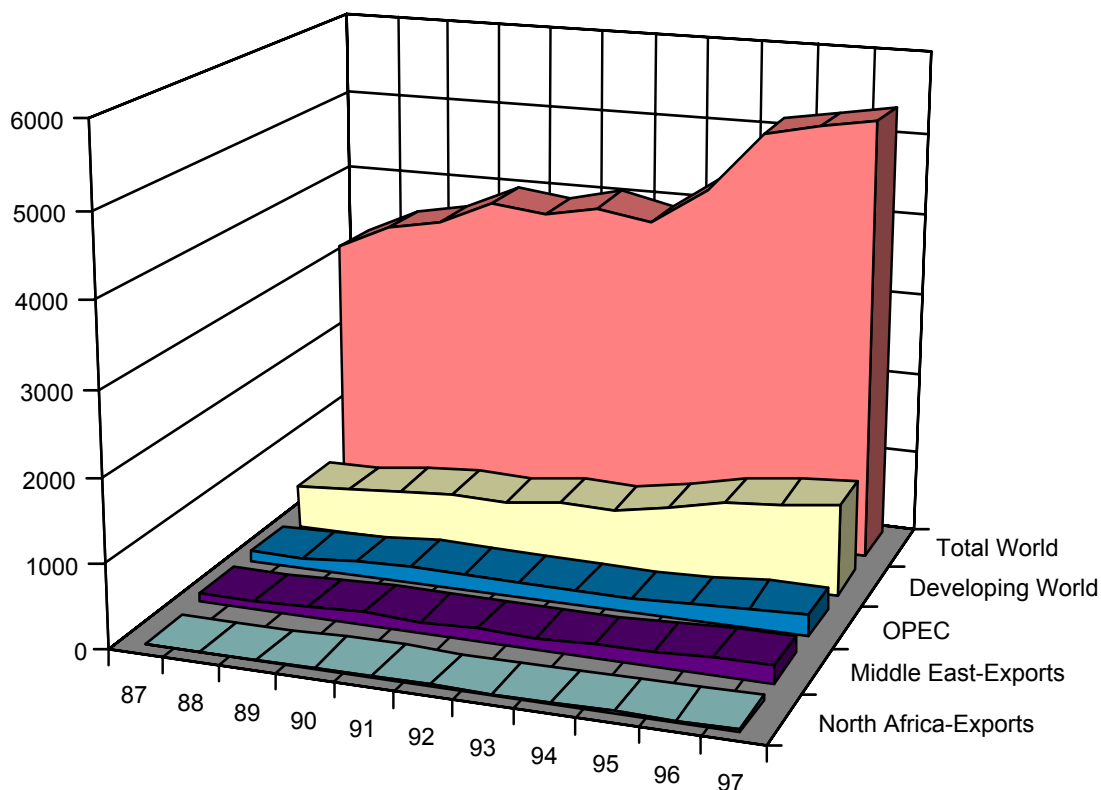
The world's dependence on MENA energy exports often disguises the fact that its overall role in world trade has shrunk just as steadily as its share of the world's GDP. In broad terms, MENA trade has shrunk as a share of world exports for nearly half a century. The only exceptions are a few years like 1974 and 1980, of sudden massive peaks in the value of oil exports. This drop in the importance of MENA trade reflects a drop in overall regional competitiveness relative to the Industrialized World, Asia, and Latin America. It also reflects the inefficiency of state industries and MENA financial systems, a comparative inability to attract foreign investment, and a growing dependence on imports from other regions. MENA nations produce less and less goods and services that are competitive within each country or on an intraregional basis. All MENA nations now trade primarily with trading partners outside the region, and efforts to break down regional trade barriers can accomplish little at best.

- Chart III.12 shows the broad decline in Middle East and North Africa trade as a share of world trade and relative to other developing countries.
- Chart III.13 shows that the trend in North Africa is even less competitive than the trend in the Middle East.
- Chart III.14 shows that oil revenues have not, in general, led to high rates of growth among oil exporters, and that diversified economies have outperformed petroeconomies.
- Chart III.15 shows the same is true in terms of per capita income.
- Chart III.16 shows that the fiscal balances of diversified MENA economies have done better than those of oil economies except in boom years.
- Chart III.17 shows that the same is true for terms of trade.
- Chart III.18 shows, however, that trade flows and balances do differ sharply by MENA country and that regional trends do not apply in many individual case.

Chart III. 12

**Trends in MENA Trade as A Share of World Trade: Part One:
The Middle East and North Africa Badly Lagged in the Growth of World Trade: 1986-1997**

(In Constant \$1997 US Billions)

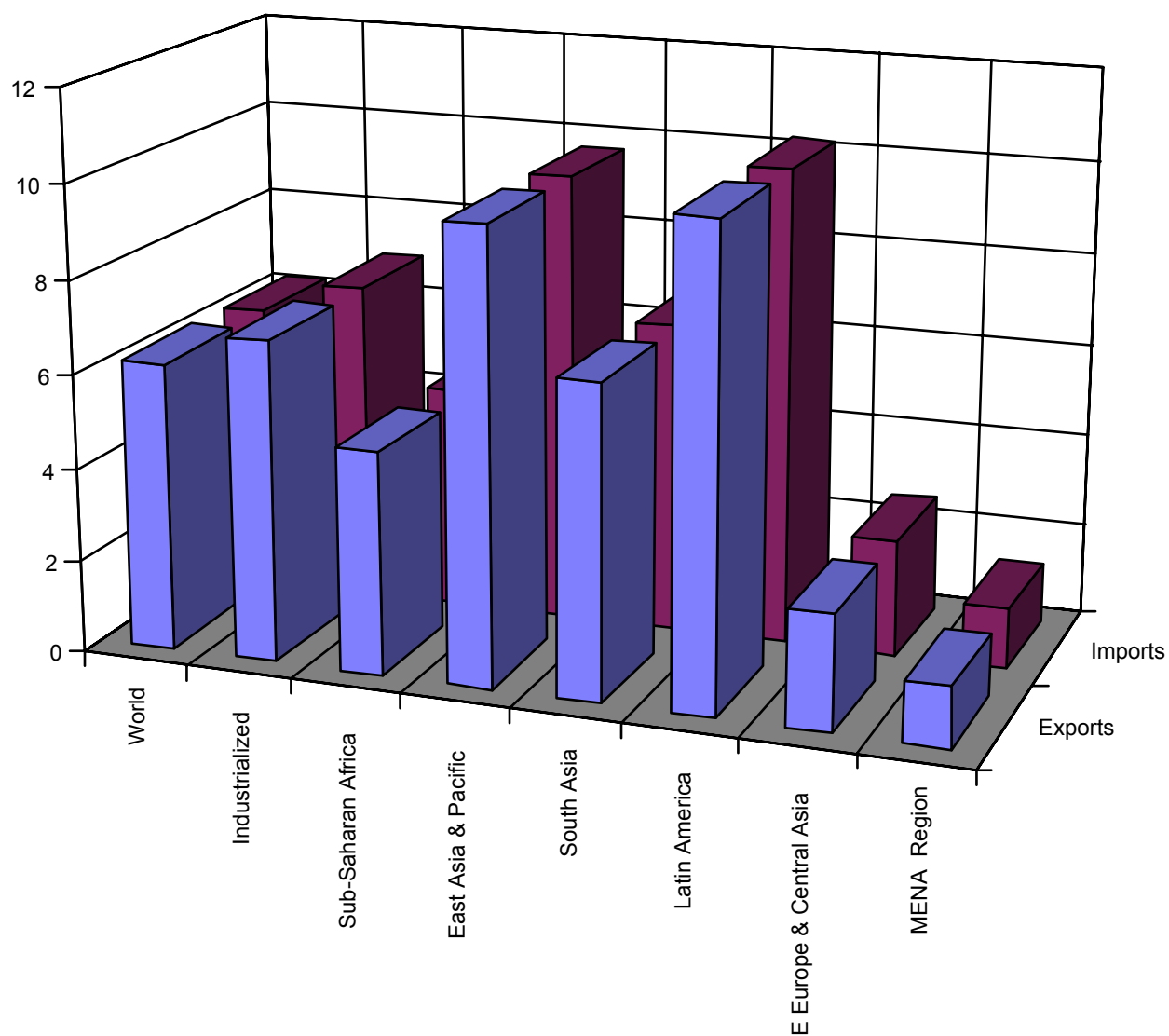


	87	88	89	90	91	92	93	94	95	96	97
■ North Africa-Exports	27.8	26.3	29	39.8	36	32.2	27.6	26.7	32.2	35.7	36.4
■ Middle East-Exports	114	110.3	134.1	157.1	143	152.4	140.3	144.7	158.9	183.2	189.5
■ OPEC	157.2	149.8	177.8	221.9	201.8	209.7	193.2	195.6	214.9	254.3	262.4
■ Developing World	519.1	558.5	607.1	667.2	648	717.8	714.7	810.1	957.7	1035	1107
■ Total World	3240	3552	3674	3990	3884	4037	3917	4367	5119	5242	5348

Adapted by Anthony H. Cordesman from US State Department, World Military Expenditures and Arms Transfers, various editions. Middle East does not include North African states other than Egypt.

Chart III. 12

**Trends in MENA Trade as A Share of World Trade: Part Two:
Growth in Middle East and North Africa Trade Relative to Other Regions: 1992-2001**
(Annual Growth in Export and Import Volumes in Percent)

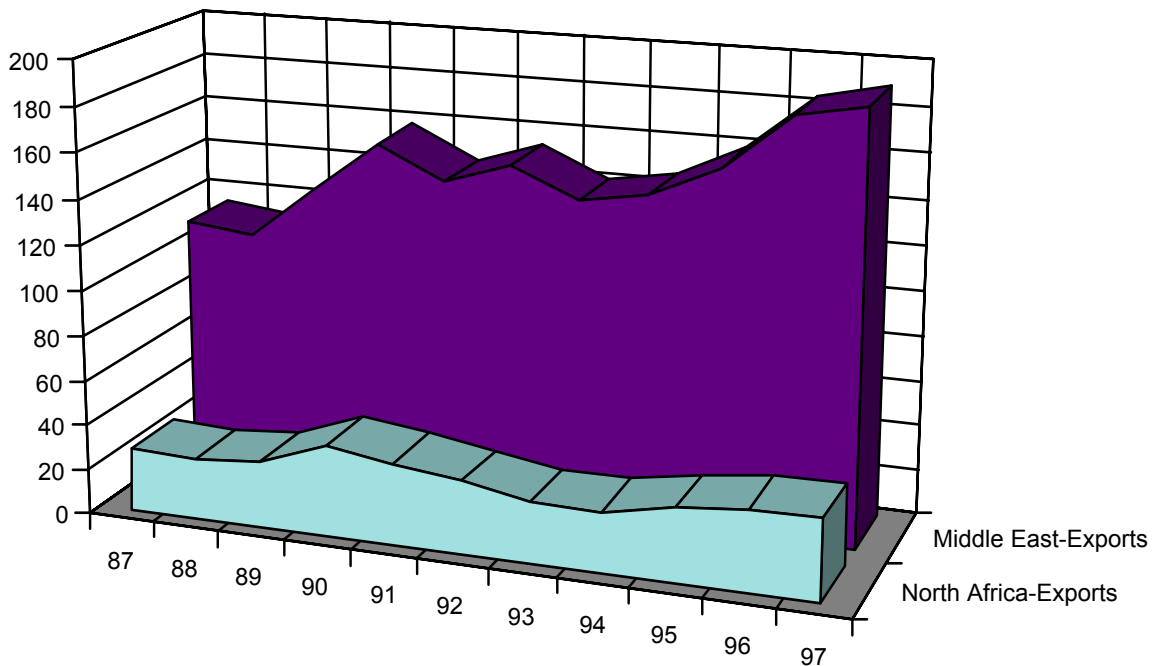


	World	Industrialized	Sub-Saharan Africa	East Asia & Pacific	South Asia	Latin America	E Europe & Central Asia	MENA Region
Exports	6.2	6.9	4.8	9.7	6.7	10.2	2.5	1.3
Imports	6.2	6.9	4.8	9.7	6.7	10.2	2.5	1.3

Adapted by Anthony H. Cordesman from World Bank, *Global Economic Prospects, 2003*, Washington, World Bank, 2003, pp. 208-211.

Chart III.13

The Middle East Has Exhibited Consistent Growth in Exports; North Africa Has Not
(In Constant \$1997 US Billions)

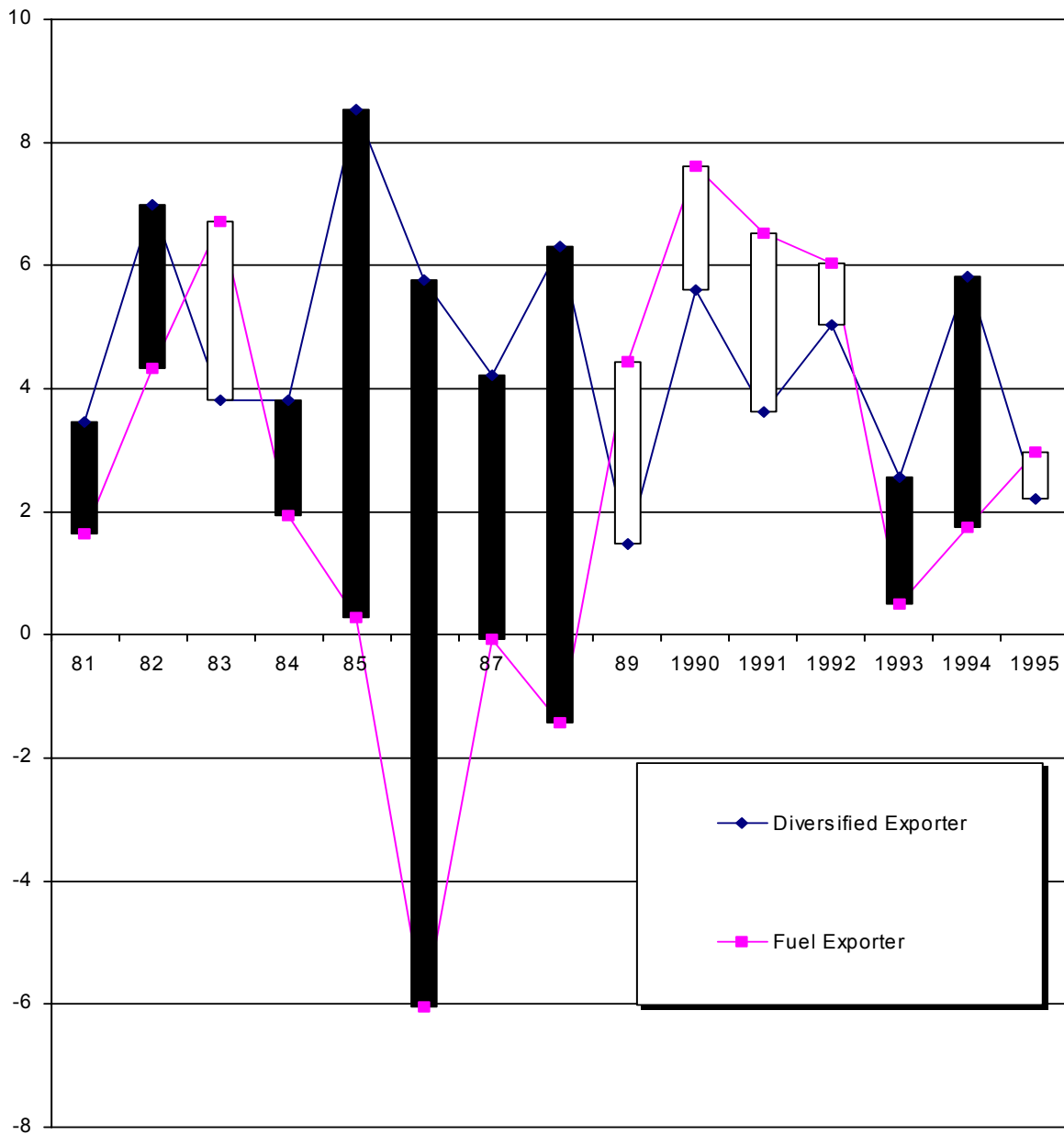


	87	88	89	90	91	92	93	94	95	96	97
■ North Africa-Exports	27.8	26.3	29	39.8	36	32.2	27.6	26.7	32.2	35.7	36.4
■ Middle East-Exports	114	110.3	134.1	157.1	143	152.4	140.3	144.7	158.9	183.2	189.5

Adapted by Anthony H. Cordesman from ACDA, World Military Expenditures and Arms Transfers, various editions. Middle East does not include North African states other than Egypt.

Chart III.14

The GDP Growth of MENA Fuel Exporters Lagged Behind That of Diversified Exporters and Was Far More Vulnerable to Changes in Oil Prices
 (Percent of GDP Growth)



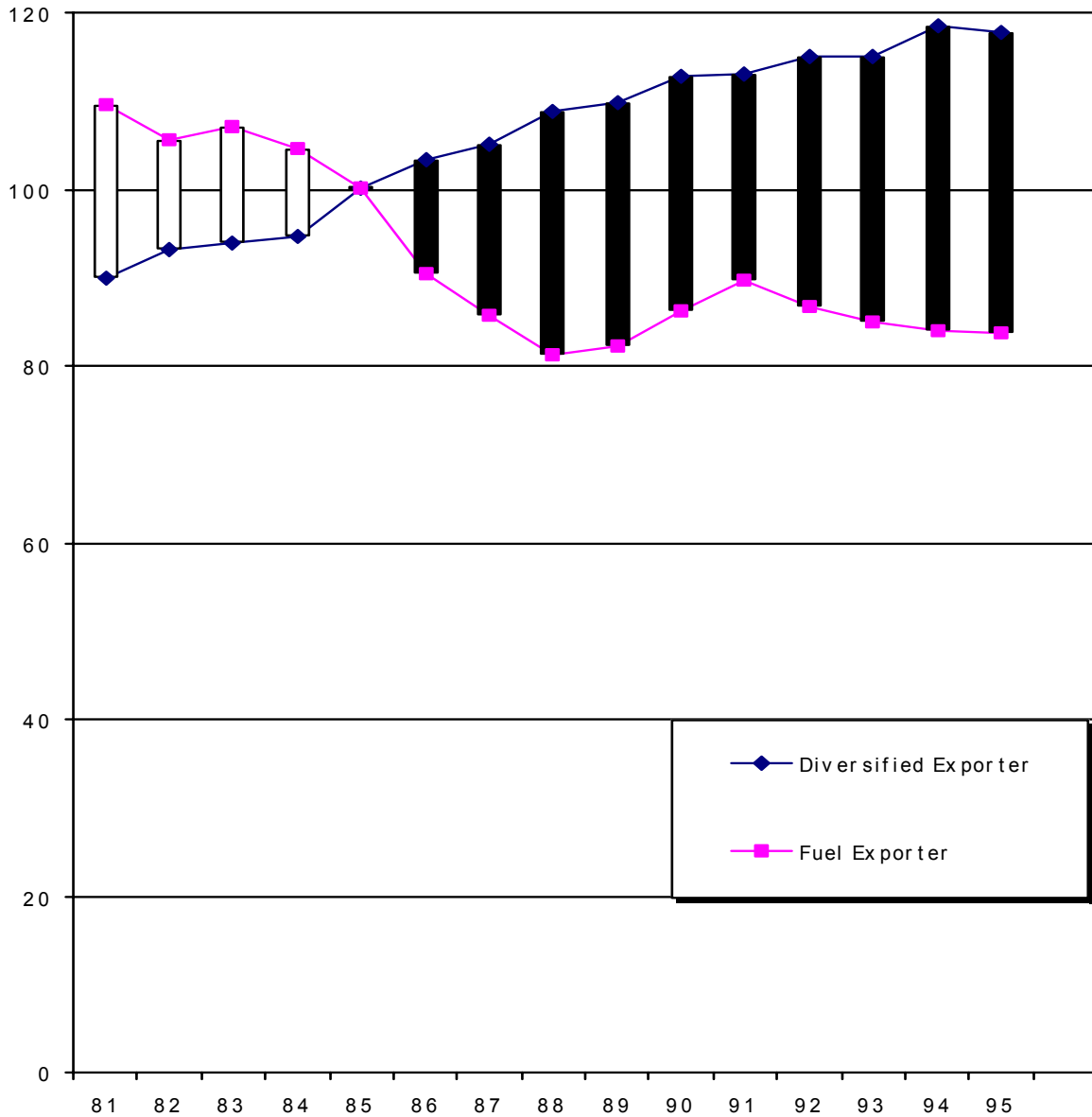
Diversified exporter = Egypt, Israel, Jordan, Morocco, Syria, and Tunisia.

Fuel exporter = Algeria, Bahrain, Iran, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE.

Adapted by Anthony H. Cordesman from IMF, *World Economic Outlook*, Washington, IMF, May, 1996, pp. 98-105.

Chart III.15

The Per Capita Income Growth of MENA Fuel Exporters Lagged Behind That of Diversified Exporters and Was Far More Vulnerable to Oil Prices
 (Percent of Change in Per Capita Income; 1985 = 100)



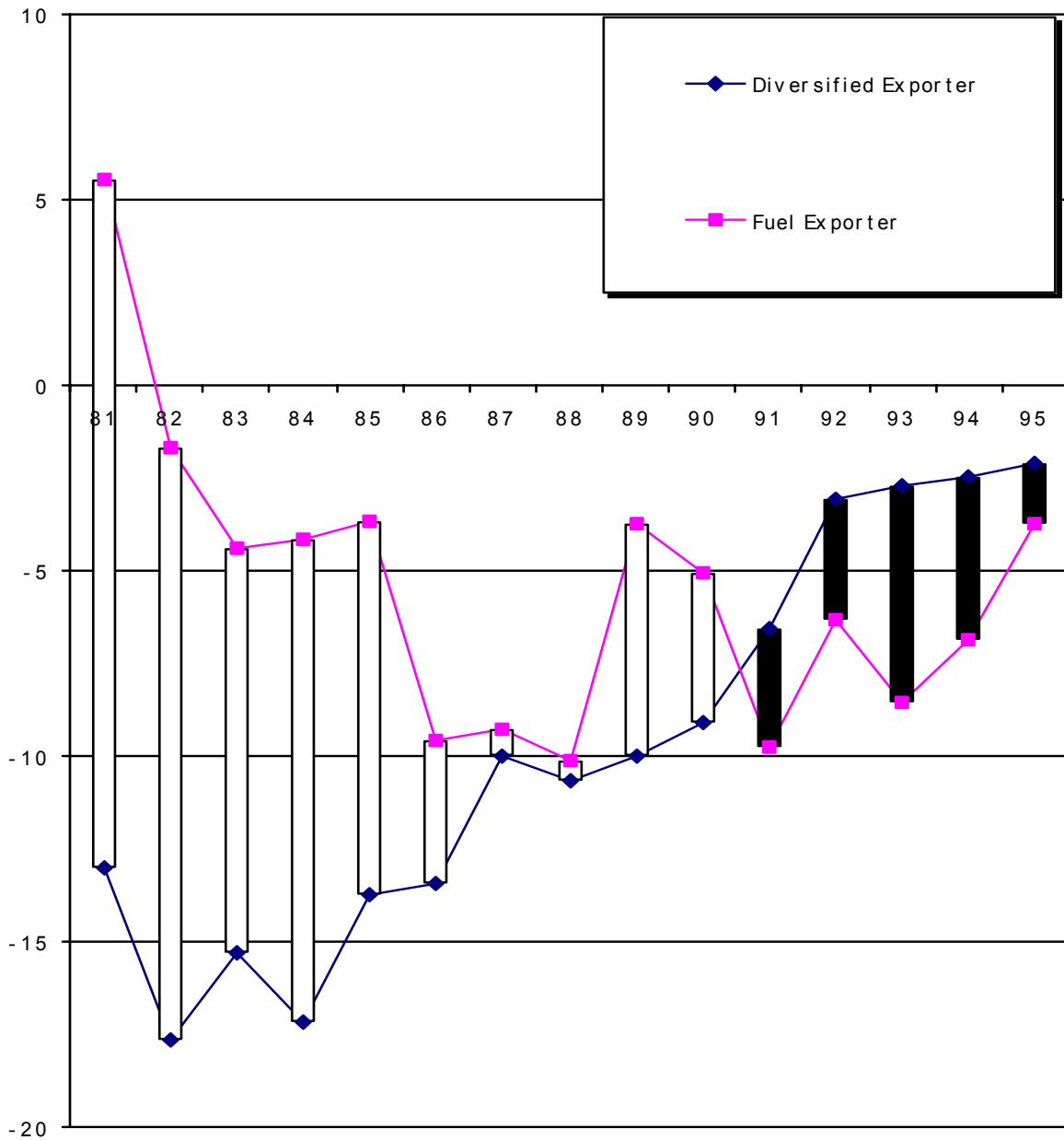
Diversified exporter = Egypt, Israel, Jordan, Morocco, Syria, and Tunisia.

Fuel exporter = Algeria, Bahrain, Iran, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE.

Adapted by Anthony H. Cordesman from IMF, *World Economic Outlook*, Washington, IMF, May, 1996, pp. 98-105.

Chart III.16

The Fiscal Balances of MENA Fuel Exporters Deteriorated Relative to Those of Diversified Exporters
 (Budget Deficits as a Percent of GNP)



Diversified exporter = Egypt, Israel, Jordan, Morocco, Syria, and Tunisia.

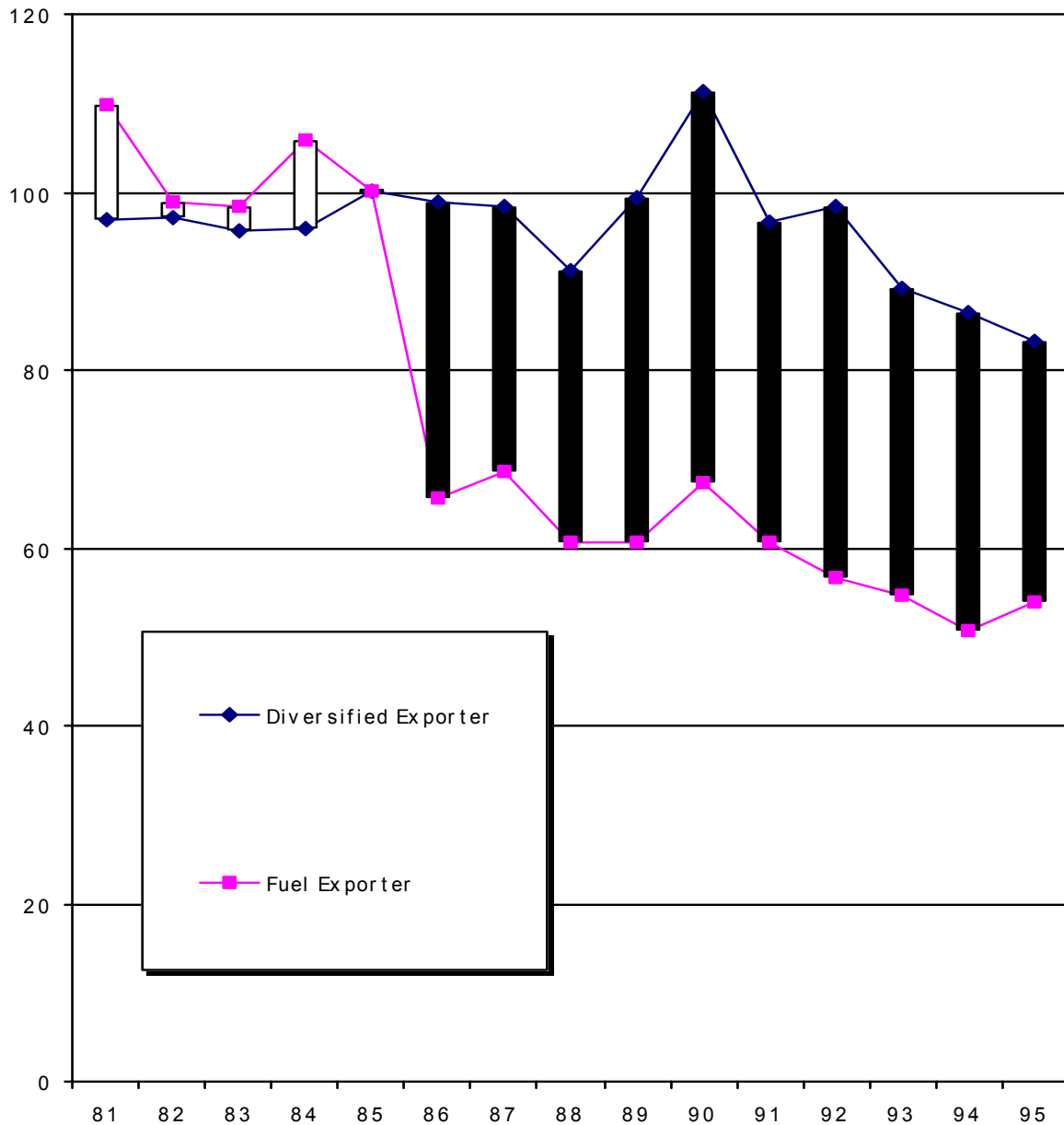
Fuel exporter = Algeria, Bahrain, Iran, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE.

Adapted by Anthony H. Cordesman from IMF, *World Economic Outlook*, Washington, IMF, May, 1996, pp. 98-105.

Chart III.17

Trade Conditions Do Not Favor Energy Exporters: Part One

The Terms of Trade of MENA Fuel Exporters Deteriorated Relative to Those of Diversified Exporters
(1985=100)



Diversified exporter = Egypt, Israel, Jordan, Morocco, Syria, and Tunisia.

Fuel exporter = Algeria, Bahrain, Iran, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE.

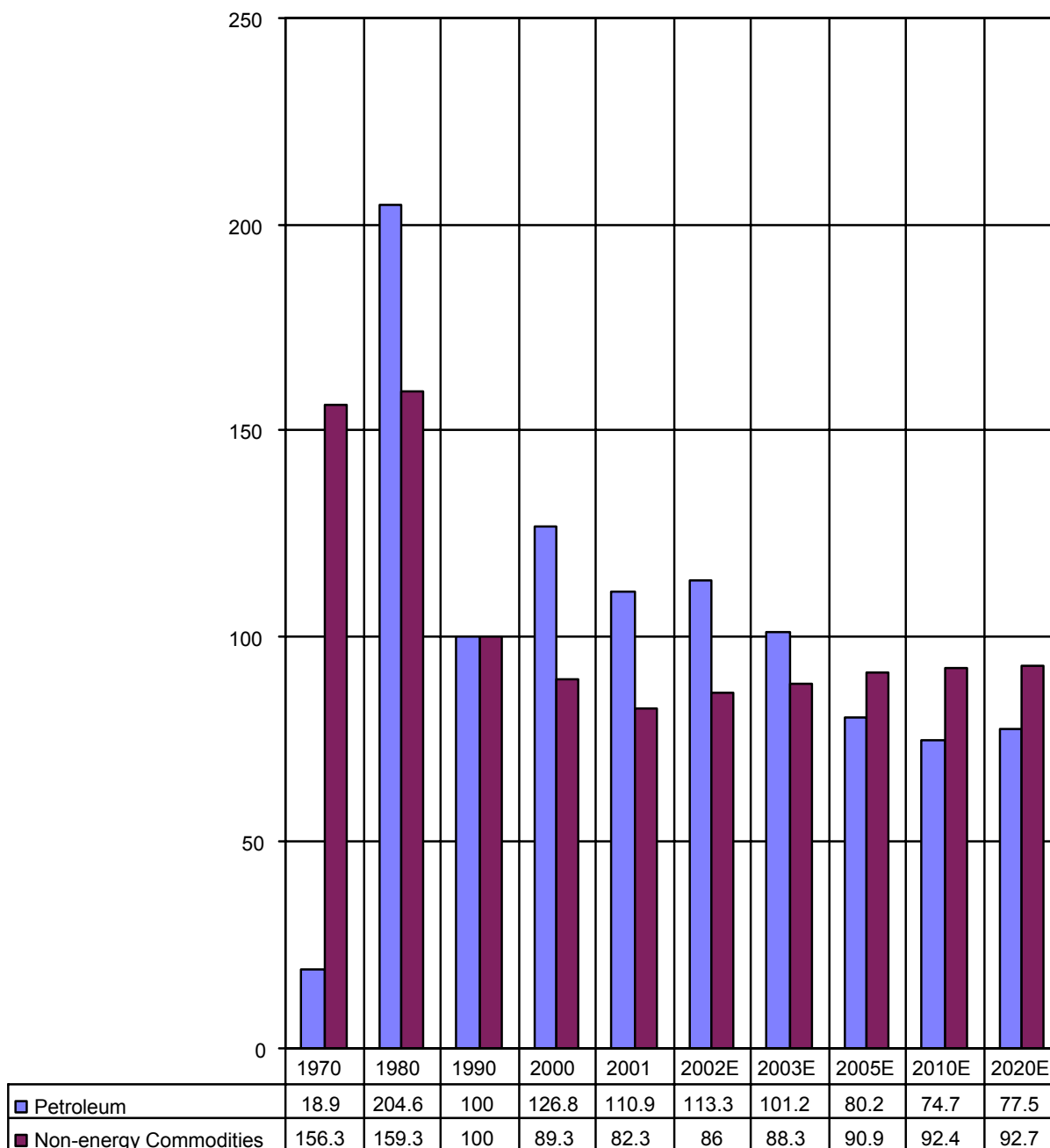
Adapted by Anthony H. Cordesman from IMF, *World Economic Outlook*, Washington, IMF, May, 1996, pp. 98-105.

Chart III.17

Trade Conditions Do Not Favor Energy Exporters: Part Two

Comparative Trend in Energy Commodity Prices versus Non-Energy Commodities

(100 = 1990 Measured In Constant \$US 1990 Dollars)

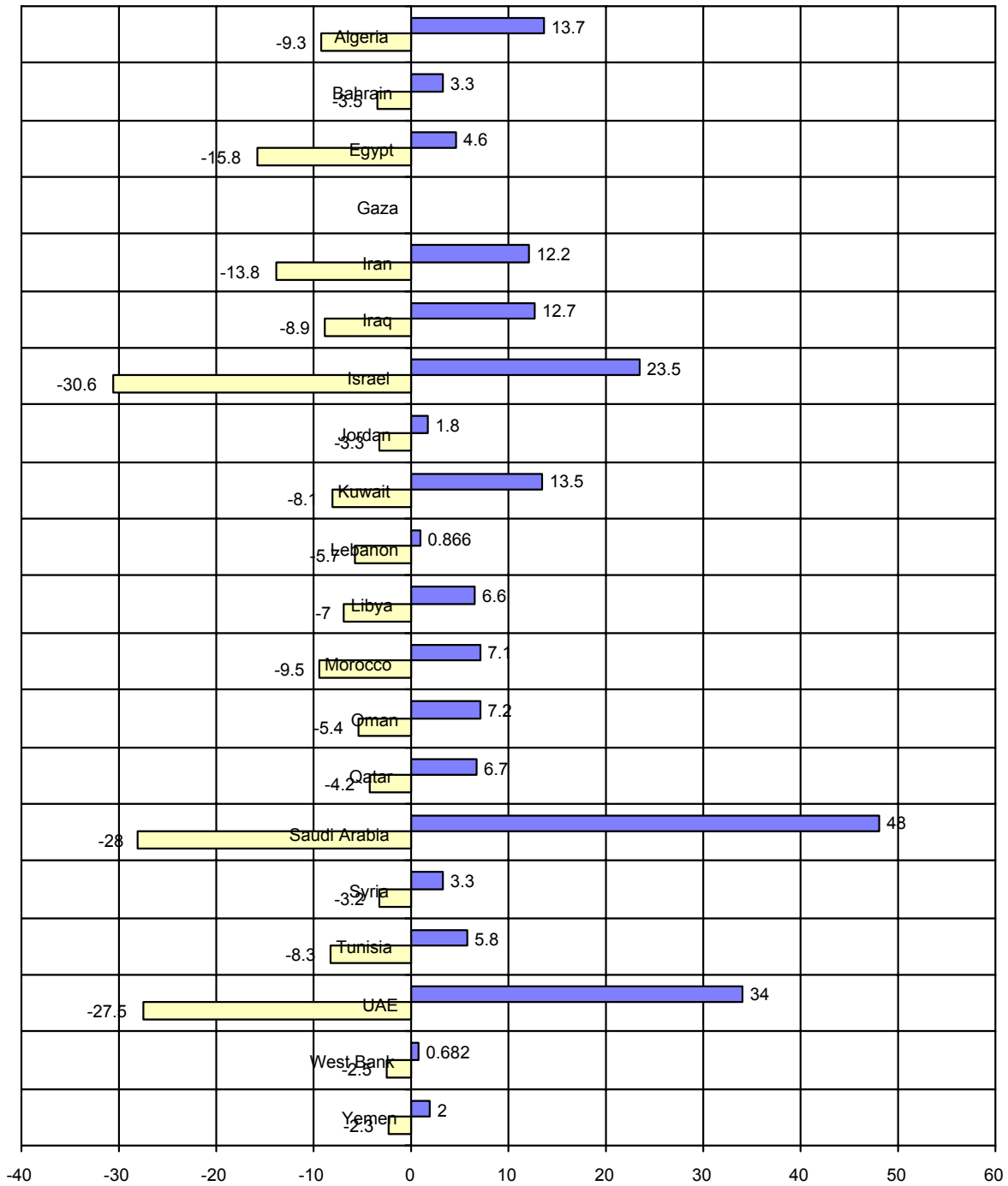


Adapted by Anthony H. Cordesman from World Bank, Global Economic Prospects, 2003, Washington, World Bank, 2003, pp. 208-211.

Chart III.18

Countries Differ Radically in Volume of Trade and Trade Balances Are Uncertain Except in Years With High Oil Revenues

(Exports and Imports in 2000 in \$US Current Billions)



Adapted by Anthony H. Cordesman from CIA, World Factbook, 2000

The Impact of Oil and Gas Export Revenues

If oil revenues are a blessing in terms of past and present income and development, the previous charts have shown they can also be a curse if nations rely on oil rather than diversified development. This will be even truer in the future. In spite of the projected rises in MENA energy exports, the resulting export revenues will not meet the needs of Middle Eastern states with high population growth and economies with limited diversification. Violent swings between “oil crash” and “oil boom” have not helped the situation. They tend to undercut economic reform in “boom” years and make it unaffordable or politically impossible in bust years.

One such “oil bust” took place in 1997-1999 only to be followed by a short “oil boom” in 2000-2001, which has been followed by relatively high prices ever since. The “oil crash” that began in 1997 led to a series of unexpected cuts in oil prices that reached lows of \$10 a barrel and cuts in annual oil revenues that approached 30-40%. As a result, OPEC oil revenues swung from \$148.7 billion in 1997 to \$99.9 billion in 1998. These cuts in oil revenues affected every major oil and gas producer in the Middle East and have reduced the region’s ability to maintain both welfare payments and entitlements, and short-term investment. The “oil crash” of 1997-1998 had a particularly dire impact on those MENA economies that had failed to modernize and diversify, and/or were affected by the impact of sanctions on several critical suppliers. They led to sharp cuts in the estimated size of the future demand for exports, in national policies to increase production and export capacity, and the ability to obtain the investment necessary to implement those policies. They affected political stability and influenced a wide range of social problems, most importantly the impact of very high rates of population growth, the inability to sustain past welfare and entitlement programs, and the need to create new economic structures which offer suitable employment and incentives for investment.

The cycle soon swung back in the other direction. Upward swings in oil revenues began to ease the situation in the spring of 1999. In March 1999, oil OPEC’s member countries, together with some important outside producers, settled on a program of stringent oil production cuts. Following the implementation of cutbacks, the price of crude oil rose sharply over the course of 1999 and eventually reached levels in 2000 that had not been seen since the 1990-1991

Persian Gulf crisis. They were , they then dropped back to \$190.7 billion in 2001, and \$187 billion in 2002, with an estimated total of 223 billion in 2003.²

These swings in oil revenues are typical of other cycles in oil revenues that have long contributed to the problems in part Middle Eastern economic growth and the problems the region faces in dealing with its youth explosion and in funding both future development and expanded petroleum production and exports..

OPEC oil revenues were worth around \$102.8 billion in constant 2000 dollars in 1972. After the October War and the 1974 oil embargo, they leapt to levels of around \$443.4 billion and then dropped back to an average of \$365.5 billion during 1975-1978. The fall of the Shah of Iran and the start of the Iran-Iraq War drove them to a new peak in 1980, when they were worth \$597.5 billion. An oil price collapse began in 1985, and revenues dropped to \$117.2 billion in 1986. They gradually rose back to levels of around \$171.46 billion a year in early 1997, but a new “oil crash” began late that year. Major production cuts led to a rise in oil prices in 1999, but total revenues in nominal dollars still only reached \$143.9 billion in 1999 and \$226.6 in 2000.^b They were \$117.2 billion in \$US 2000 in 2002 and projected to be \$208.7 billion in 2003.³ Many countries are beginning to rethink their plans to increase production capacity and their attitudes towards private and foreign investment.

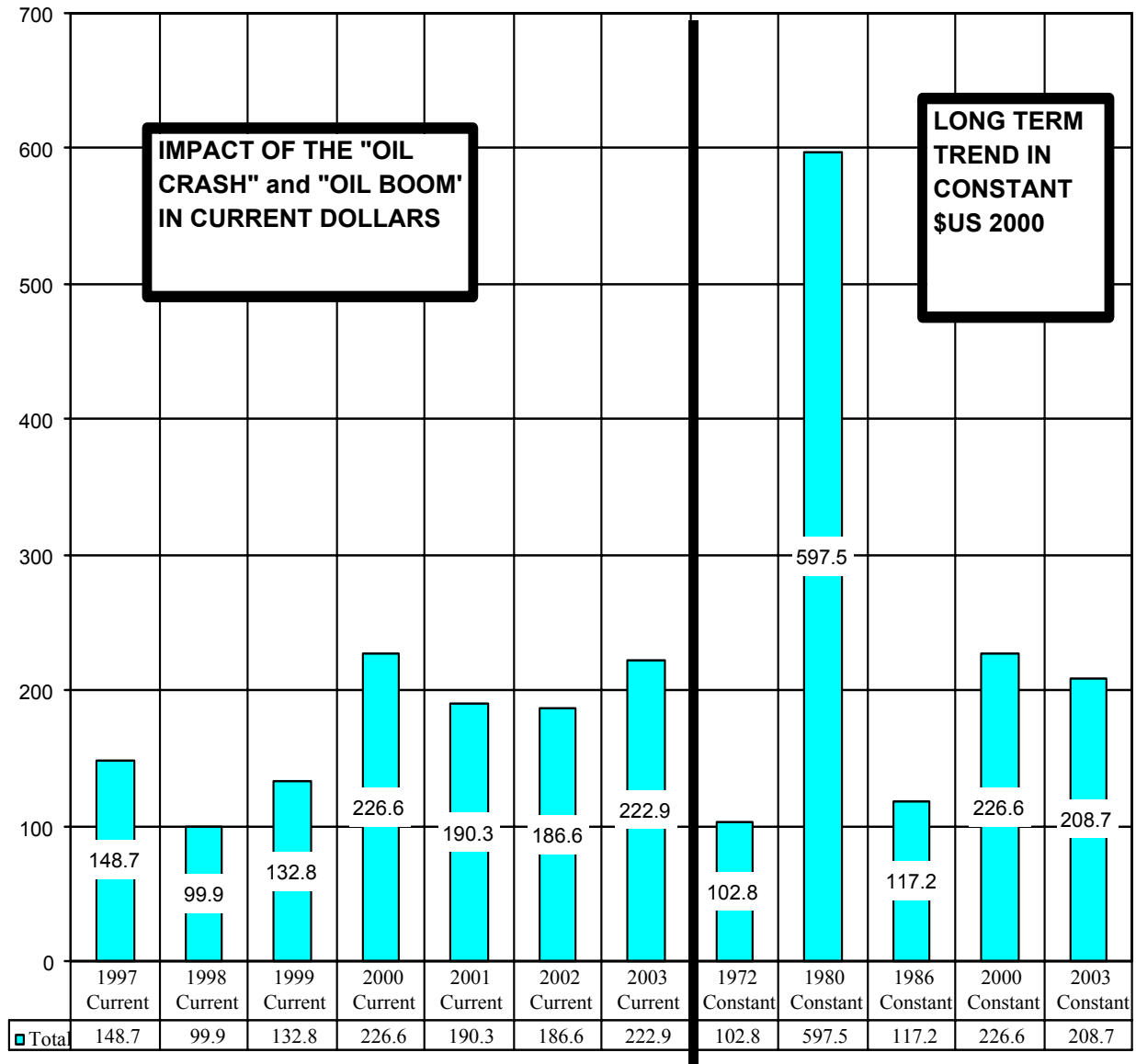
The region’s economic and budget problems have been shaped by years of over-reliance on oil wealth, economic mismanagement, massive population growth, mismanaged government spending, and the failure of regional governments to realistically plan and budget for the future. Some key Middle Eastern governments have had a decade of nearly continuous budget deficits. Saudi Arabia and Iraq are key cases in point. Other countries are in major structural crisis. They cannot afford to implement their five-year plans, and cannot fund both their present levels of entitlements and investment. Cases in point include Algeria, Syria, Bahrain, Iran, Oman, and Yemen. Most Middle Eastern governments now face a major short-term budget crisis, and this seems to include even states with relatively high ratios of exports to population: Kuwait, Qatar, and the emirates other than Abu Dhabi and possibly Dubai.

Past drops in oil revenue, and the resulting budget problems have already led to under-investment in infrastructure, economic diversification, and state industries other than the

petroleum sector in many states. Even the petroleum sector has been under funded in some cases, although “starving the hand that feeds you” presents obvious enough problems for most Middle Eastern states to think twice. In short, the traditional rentier patriarchy of most MENA oil exporting states no longer has all the money it needs to function, and cannot attract enough outside or internal investment to meet national needs, and many are further crippled by a reliance on inefficient state industries.

Chart III.19

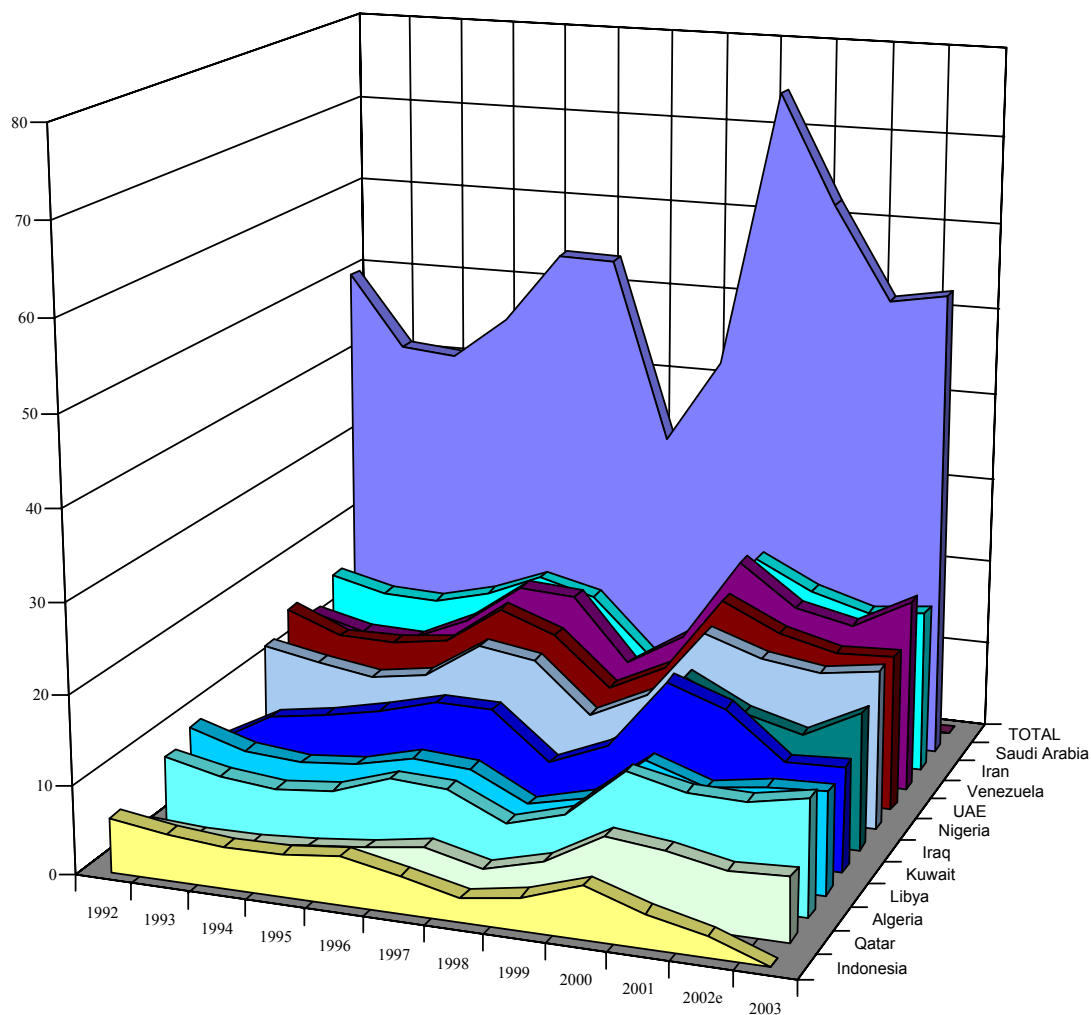
OPEC Oil Export Revenues: Investment and Stability versus Interruptions: Total
(in \$US Current and 2000 Constant Billions)



Source: Adapted by Anthony H. Cordesman from data provided by the EIA.

Chart III.20

Demographics and Oil Wealth
“Oil Crash” to “Oil Boom” in 1992-2001: Even in Peacetime, Oil Revenues are Unpredictable and Have Massive Regional Macroeconomic Impacts
 (In US Current Billions)

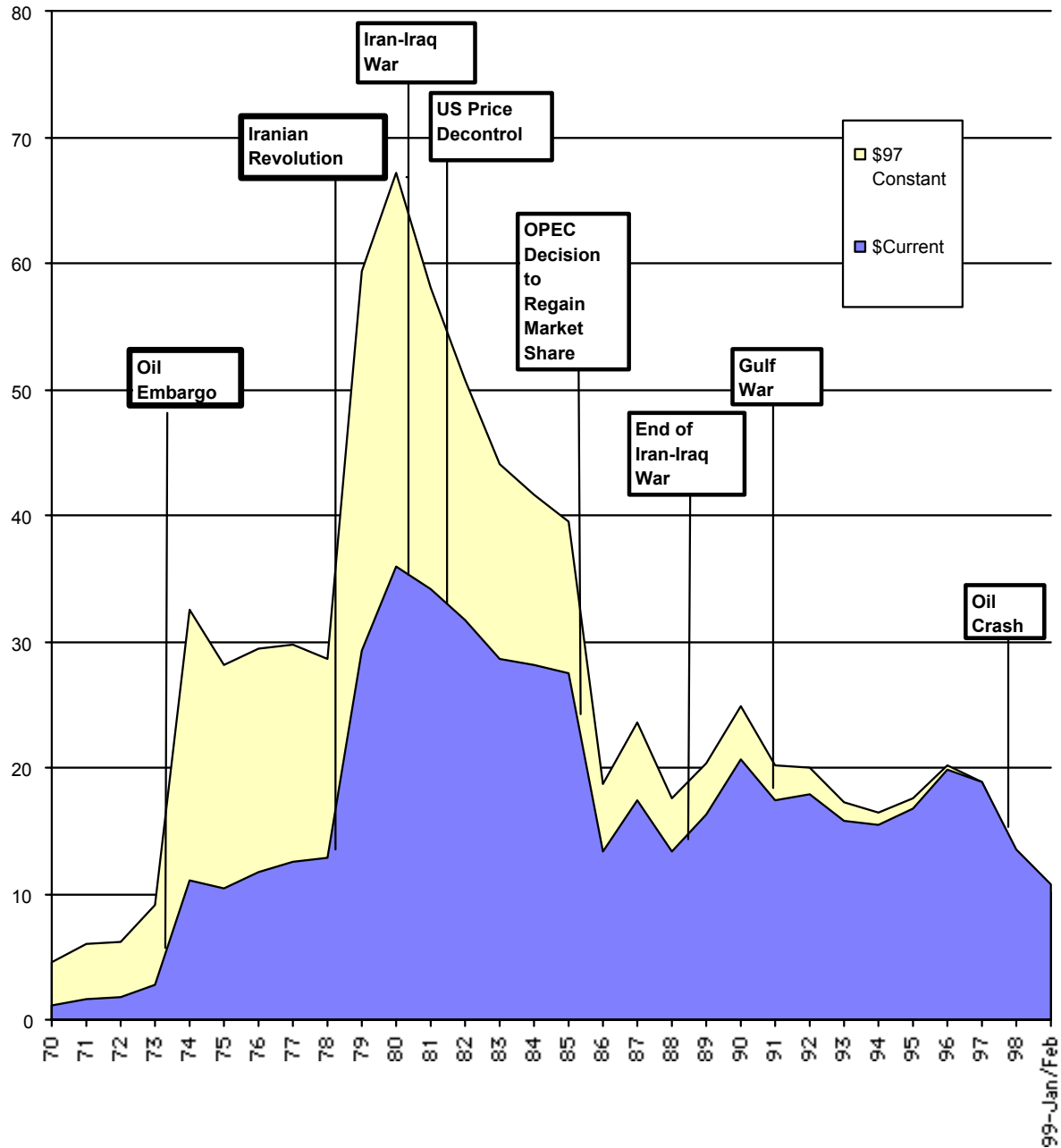


	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002e	2003
Indonesia	6.1	5.2	4.6	4.8	5.4	4.2	2.7	3.7	5.9	3.8	2.3	
Qatar	2.9	2.7	2.7	3.2	3.9	4.8	3.4	5.1	8.7	8.1	6.7	7.1
Algeria	8.4	7	6.4	7.1	9.2	8.9	5.9	7.9	13.4	12	11.8	13.1
Libya	9.6	7.7	7.1	7.7	9.3	8.9	5.7	7.3	12.3	10.1	11	11.4
Kuwait	5.9	9.4	10.3	11.7	13.5	13.3	8.2	10.9	18.9	16.6	11.5	11.8
Iraq	0.5	0.4	0.4	0.5	0.7	3.5	5.6	9.9	17.2	13.9	12.3	15.5
Nigeria	12.7	11.5	10.6	11.5	15.7	14.8	9.1	12.4	20.1	18	17.2	18
UAE	15.2	12.7	12.6	13.5	18.1	15.8	10.2	13.3	21.9	18.9	17.3	17.7
Venezuela	12.8	11.2	11.2	14	18.7	18.3	11.1	15	24.5	19.8	18.5	21.9
Iran	15.5	14	13.8	15.4	18	16.3	10.1	13.9	23	19.9	18	18.7
Saudi Arabia	50.7	42.5	41.9	46.9	54.9	54.7	34.2	43.9	75.3	63.1	52.6	53.8
TOTAL	*140.4	*124.3	*121.4	*136.3	*165.5	*163.5	*106.2	*143.2	*241.2	*204.2	*179.6	*191.5

Source: Adapted by Anthony H. Cordesman from projections by the EIA in various editions of its “OPEC Revenues Sheet,” and from Cambridge Energy Associates (CERA), “OPEC Tilts to Market Share,” *World Oil Watch*, Winter 2002, p. 28.

Chart III.21

**Beyond Market Forces: Oil is a Conflict-Driven Business:
Politics, War, and the Trends in the Price of Saudi Arabia Light Crude: 1970-1999**
(\$US Current and \$US 1997 Constant)

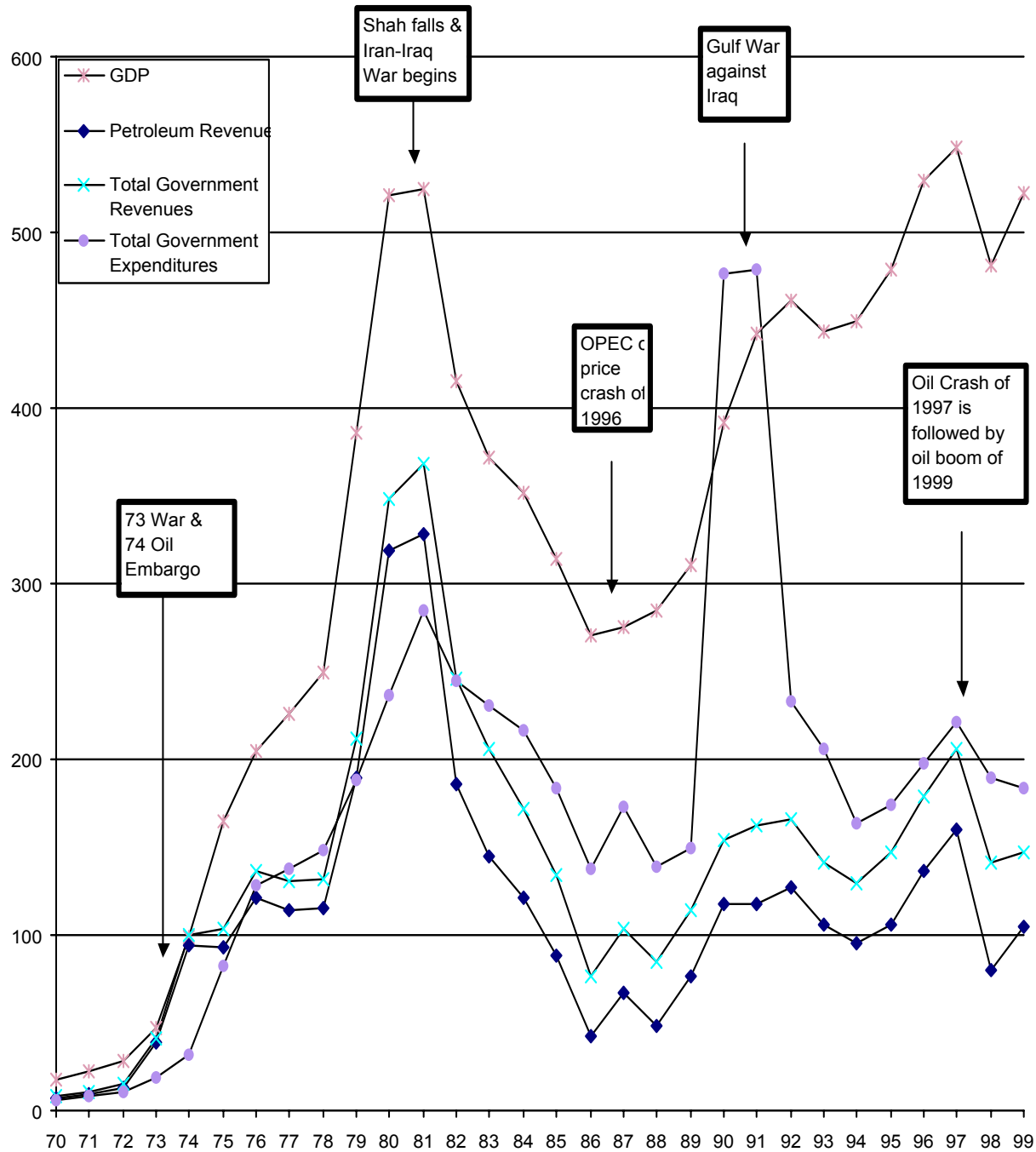


Total ME												
OPEC	13/31	18/87	17/91	9/53	15/19	14.77	15.99	16.75	16.84	16.99	17.18	18.30
Total ME	13.95	19.57	18.40	10.25	16.49	16.19	17.43	18.34	18.59	18.84	19.08	20.16

Adapted by Anthony H. Cordesman from Cambridge Energy Associates, World Oil Trends, 1998, Cambridge, Mass., 1998, pp. 26

Chart III.22

The Impact of Oil Wealth on the Saudi GDP and Government Expenditures: 1970-1999



Source: Adapted by Anthony H. Cordesman from Saudi Arabian Monetary Agency, *36th Annual Report- 1421H (2000G)*, Riyadh, SAMA, 2001, pp. 343-346, 360-361, 393-395. Note that the Saudi budget cycle was changed in 1990, and the period from 1990-1991 is reported as a single year.

The Interaction Between Oil Revenues, Economic Development, and Demographics

Demographics compound the impact of low oil and gas export revenues on regional economies, and increase the risk of political unrest. Oil income per capita drops because of the “youth explosion” discussed earlier. At the same time, some 40% of the region’s population is now under 15 years of age, and rates of population growth are projected to be high enough in a number of countries so that the number of people entering the labor force will often double over a period of a decade. The region’s educational system is already under extreme stress, and real and disguised unemployment for males between 18 and 25 years probably averages over 20%.⁴ The percent of urbanization in the total population rose from 41% in 1970 to 59% in 2000, and will probably rise to well over 70% by 2020.^f

These problems are further compounded by labor migration and the slow breakdown of the region’s traditional family, clan, and tribal system, which is based on villages and the extended family. They are also compounded by hyperurbanization, shift away from agriculture, and the need to absorb an increasingly well educated population of women both for social reasons and to create productive economies that are globally competitive.

Virtually all Southern Gulf states, are heavily dependent on foreign labor at a time when many of their own younger citizens lack not only jobs but also the training and work ethic to get them. In many cases, these problems are reinforced by poor immigration policies that are routinely violated by the toleration of illegal immigrants, the issue of visas for money, and the existence of laws that require major benefit packages for native labor, thus making it difficult to hire or fire native labor. Some countries are trying to solve the problem with erratic purges of foreign labor, but most still lack consistent policies.

At present, many MENA oil-exporting states can get by in spite of these problems. If low or low-to-moderate oil revenues should suddenly become the normal long-term case again, the resulting cut in government revenues will force many such countries to cut their budgets and development plans in ways that result in significant economic, social, and political tradeoffs. The International Monetary Fund stated in May 1998 that the decline in oil export revenues “would pose a serious risk to the growth outlook” for the Persian Gulf region, “and particularly for the region’s largest oil exporters such as Saudi Arabia and Kuwait ...if sustained.” This warning is

just as true today, and it is clear from the economic history of the region, and virtually every current projection of future oil revenues, that population growth will outpace increases in oil revenues, and cut per capita oil wealth indefinitely into the future.

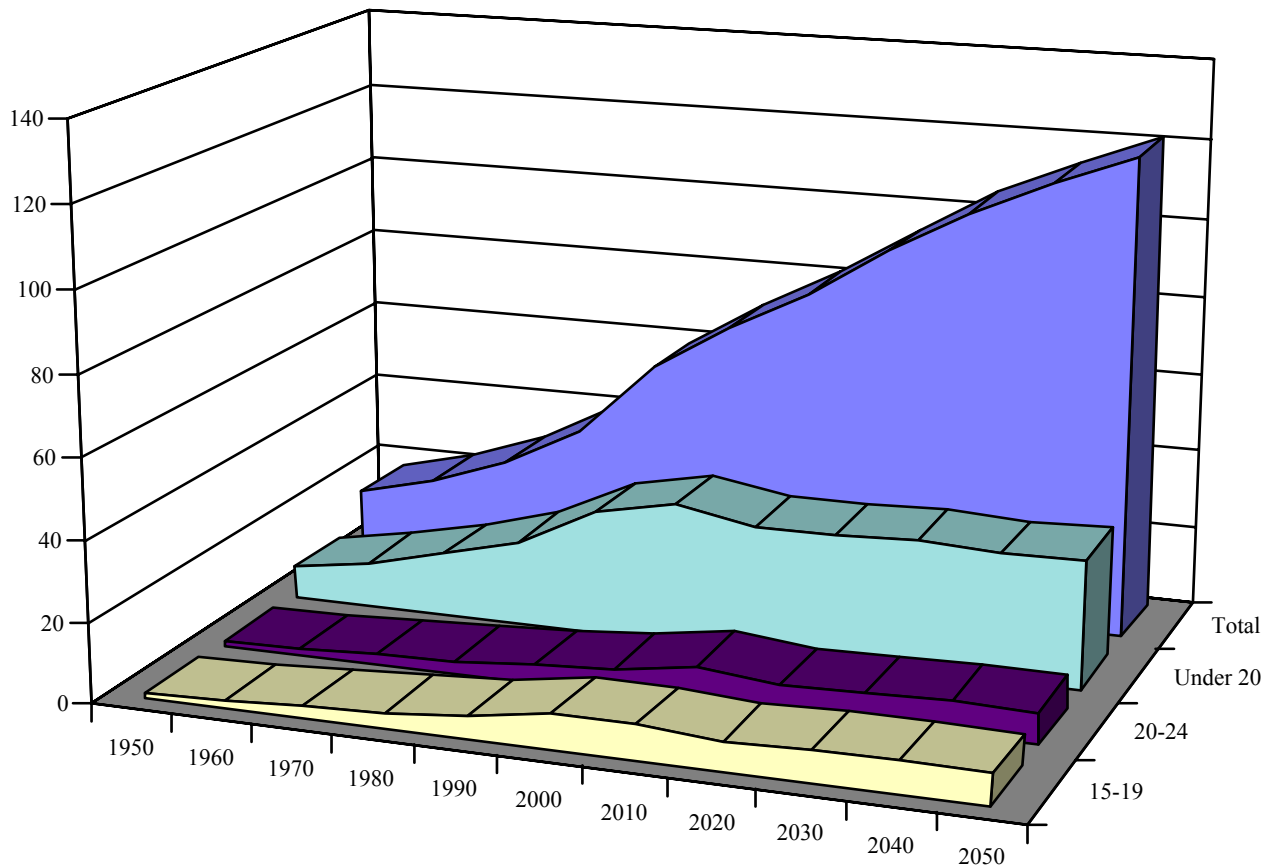
- Chart III.23 shows the rate of the youth explosion in Iran, and the critical impact it will have during 2000-2050. Even with one of the lowest rates of population increase in the Gulf, Iran will become a nation of over 100 million by 2030, which compares with 40 million at the time of the Shah's fall from power.
- Chart III.24 shows similar data for Iraq. It shows an extremely rapid rate of growth in spite of war and sanctions. Iraq is also projected to continue rapid growth through 2030, which will present major problems for reconstruction and nation building.
- Chart III.25 shows the impact of population growth and the "youth explosion" in Saudi Arabia. Saudi Arabia not only is the region's most critical energy exporter, it is the country with one of the most critical population problems. Saudi Arabia already has real oil revenue per capita about one-fifth of its peak in 1980. Current projections of Saudi exports and export earnings show little chance of a recovery in real dollar terms through 2030.
- Chart III.26 shows the increase in jobs required to deal with population growth in 2003. This number will often double by 2030, and would double again if women were employed on globally competitive terms.
- Chart III.27 shows the overall level of dependence on foreign labor in the Gulf region; a dependence that blocks job creation for native youth, lowers labor costs to the point where many native youths will not accept jobs and the resulting drop in social status. Undermines the create of a modern work ethic, and pushes youths toward radicalism.
- Chart III.28 uses Saudi Arabia as a case study. It also shows that in many cases, abolishing foreign jobs will not create local jobs because many are maid and housework jibs for women.
- Chart III.29 shows the MENA region is incapable of competing in global terms because of its low rate of employment and productive use of women. This is crippling in many countries because they have reverse the norm. Rather than undereducated women, they have social structures where women have far few social outlets than men but the opportunity to learn. The result is that women are becoming the best-educated part of the labor force only to have their productivity largely wasted.
- Chart III.30 shows that some MENA countries are so dependent on foreign male labor that it has created a serious imbalance in the distribution of the sexes, and potential for social unrest.
- Chart III.31 shows the dynamics of urbanization and the decline in agriculture, making the MENA region heavily dependent on food imports, break up traditional social patterns and the security of the extended family, and pushing labor towards market-driven jobs to survive.
- Chart III.32 reflects similar trends in the labor force.
- Chart III.33 indicates the overall rate of urbanization by country.
- Chart III.34 shows that urbanization and flight from the land have led to a net decline in arable land, made worse by the shift of water to urban populations. This internal competition for water would be much sharper if MENA economies successfully diversified and increased industrial use of water,

although the industrial use of water generally makes desalinized water economic while industrial use does not.

- Chart III.35 shows a rough estimate of both direct and disguised unemployed (employment with little or no productive output.) Unfortunately, MENA countries are unwilling to report accurately in these areas, and generally fail to analyze and report on disguised unemployment – a problem that casts serious doubt on the quality and value of economic analysis and planning in virtually every MENA country.

Chart III.23

Case Examples: Population Growth and the Youth Explosion in Iran
(UN Estimate - Population in Millions)



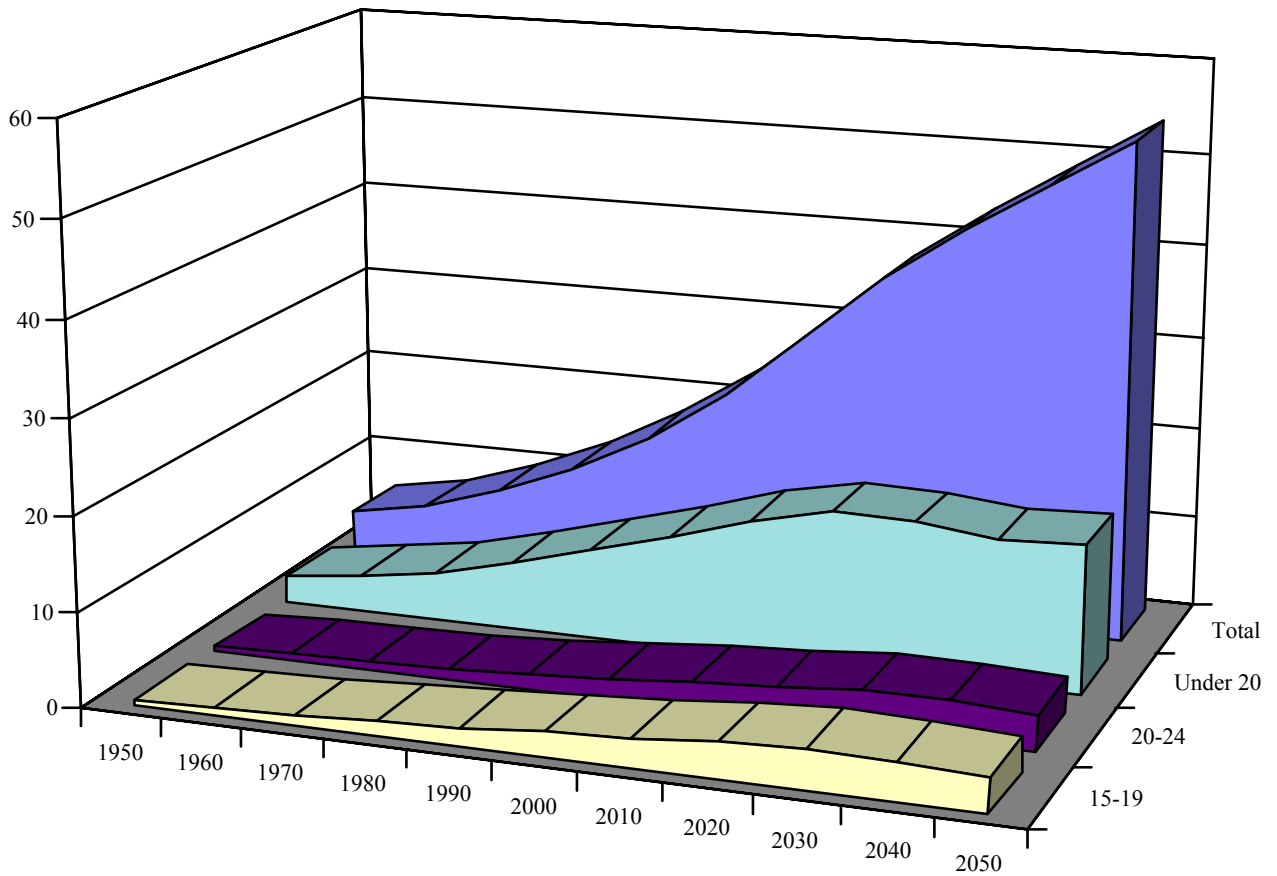
	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
15-19	1.6	2	3.1	4.1	5.8	9	8.9	7.6	8.2	8.2	7.8
20-24	1.4	1.7	2.5	3.5	5.1	6.4	9.5	7.4	7.7	8.5	7.8
Under 20	8.2	11.5	16	21.5	31.4	35.3	31.8	32.2	32.9	31.9	32.3
Total	16.9	21.7	28.8	39.1	58.4	70.3	80.8	93.5	104.5	113.5	121.4

Adapted by Anthony H. Cordesman from data provided by the United Nations.

Chart III.24

Case Examples: Population Growth and the Youth Explosion in Iraq

(UN Estimate - Population in Millions)

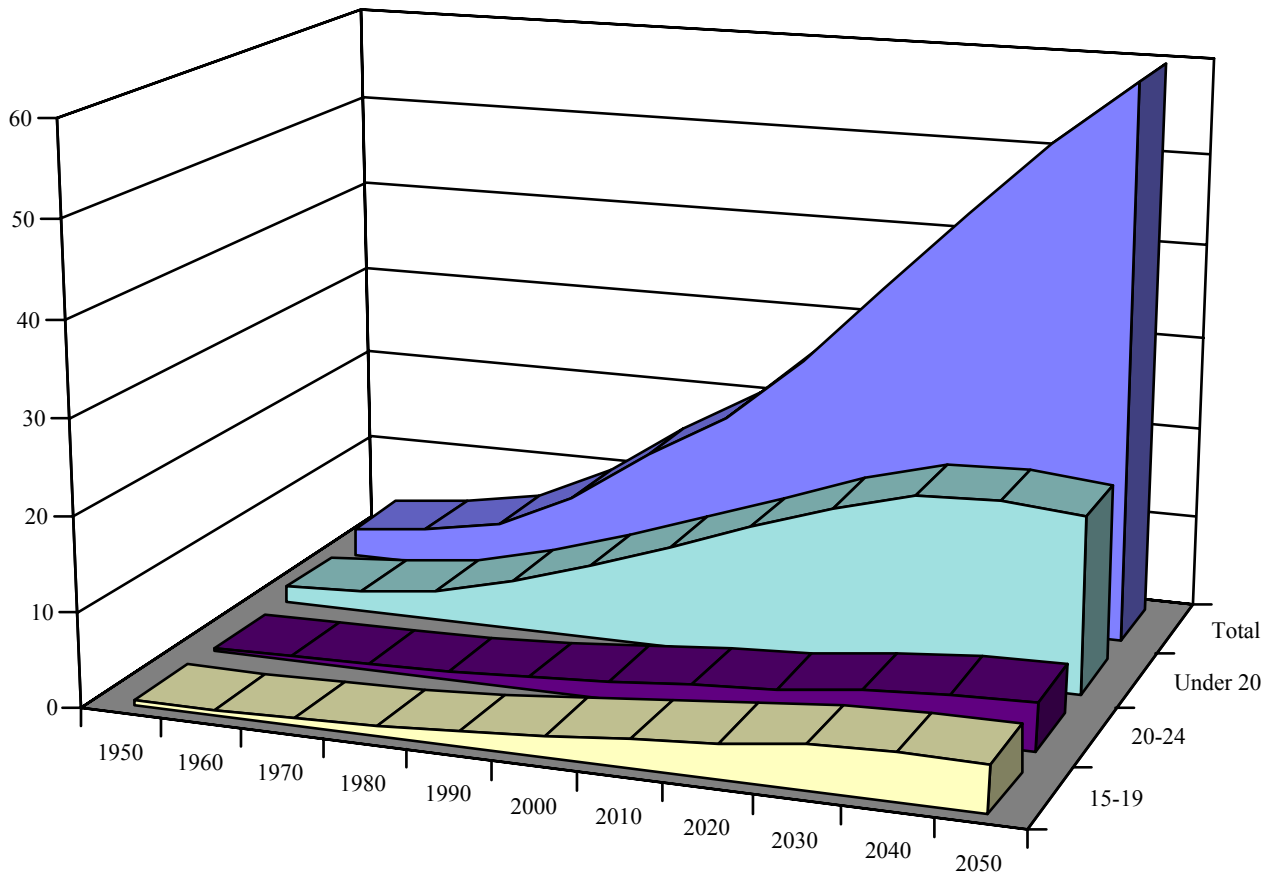


	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
■ 15-19	0.54	0.72	0.98	1.4	1.9	2.5	3	3.8	4.2	4	3.6
■ 20-24	0.45	0.6	0.82	1.1	1.6	2.1	2.9	3.5	4.1	4.2	3.7
■ Under 20	2.9	3.9	5.3	7.3	9.6	12	14.6	16.5	16.3	15.4	15.7
■ Total	5.2	6.8	9.4	12.9	17.3	22.9	29.9	37.1	43.1	48.4	53.6

Adapted by Anthony H. Cordesman from data provided by the United Nations.

Chart III.25

Case Examples: Population Growth and the “Youth Explosion” in Saudi Arabia
 (US Census Bureau Estimate - Population in Millions)

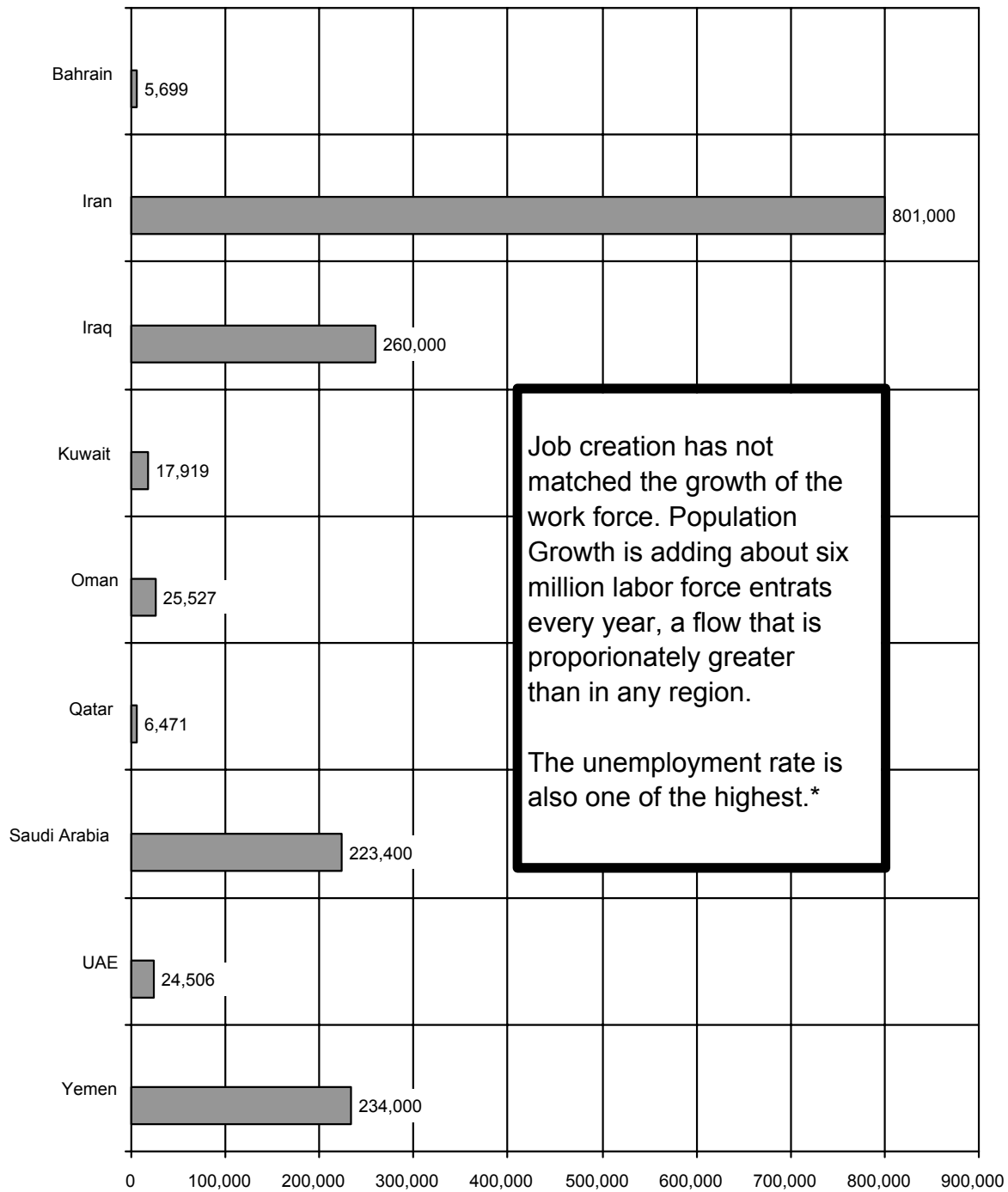


	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
15-19	0.32	0.41	0.57	0.91	1.4	2.1	2.9	3.6	4.5	4.9	4.9
20-24	0.27	0.35	0.49	0.87	1.2	1.8	2.6	3.2	4.1	4.8	5
Under 20	1.7	2.2	3.1	5.2	8	10.8	13.9	17	19.2	19.5	18.7
Total	3.2	4.1	5.7	9.6	15.4	20.3	27.6	36.1	44.8	52.7	59.7

Adapted by Anthony H. Cordesman from data provided by the US Census Bureau.

Chart III. 26

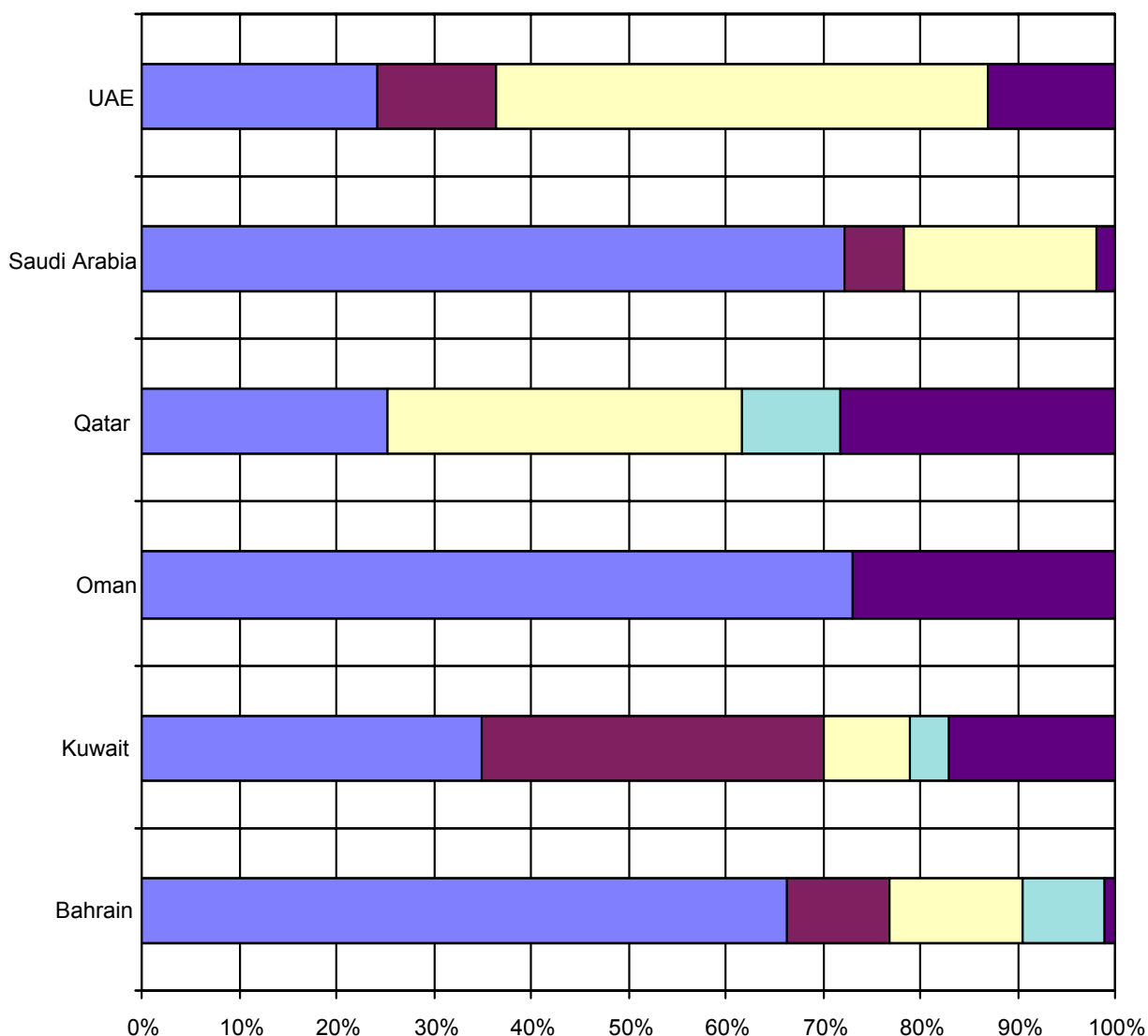
The Search for Jobs: CIA Estimate of Number of Young Males Entering the Labor Market Each Year



Adapted by Anthony H. Cordesman from CIA, World Factbook, 2002; * From Arab Human Development Report, 2002, p. 10.

Chart III.27

Foreign Population in Selected Countries in the Gulf
(in percentages of total population)



	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
Other	1	17	27	28	2	13
Iranian	8	4		10		
South Asian	13	9		36	20	50
Foreign Arab	10	35			6	12
Native Arab	63	35	73	25	73	24

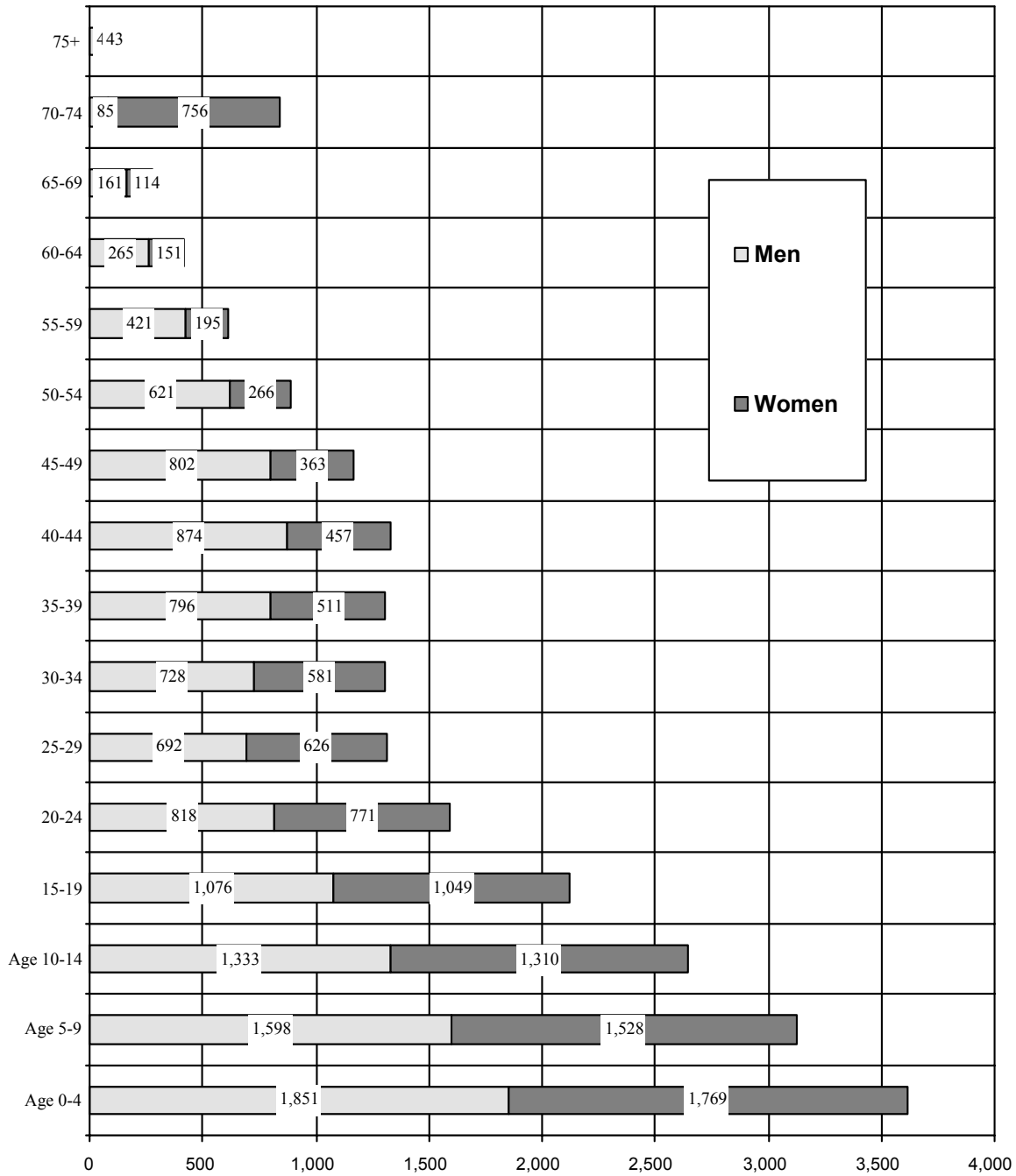
Note: Iran is 51% Persian, 24% Azeri, 8% Gilaki/Mazandarani, 7% Kurdish, 2% Lurm and 2% Turkoman; Iraq is 75-80% Arab, of which some 55% are Shi'ite and 45% Sunni) and 20-25% Kurdish and other minority.

Source: Adapted by Anthony H. Cordesman from CIA, *World Factbook, 2002*, and IISS, *Military Balance, 2002-2003*.

Chart III. 28

**The “Youthening” of Saudi Arabia – Case Example
Estimate of the Distribution of the Total Native and Foreign Population by Age and Sex in 2000**

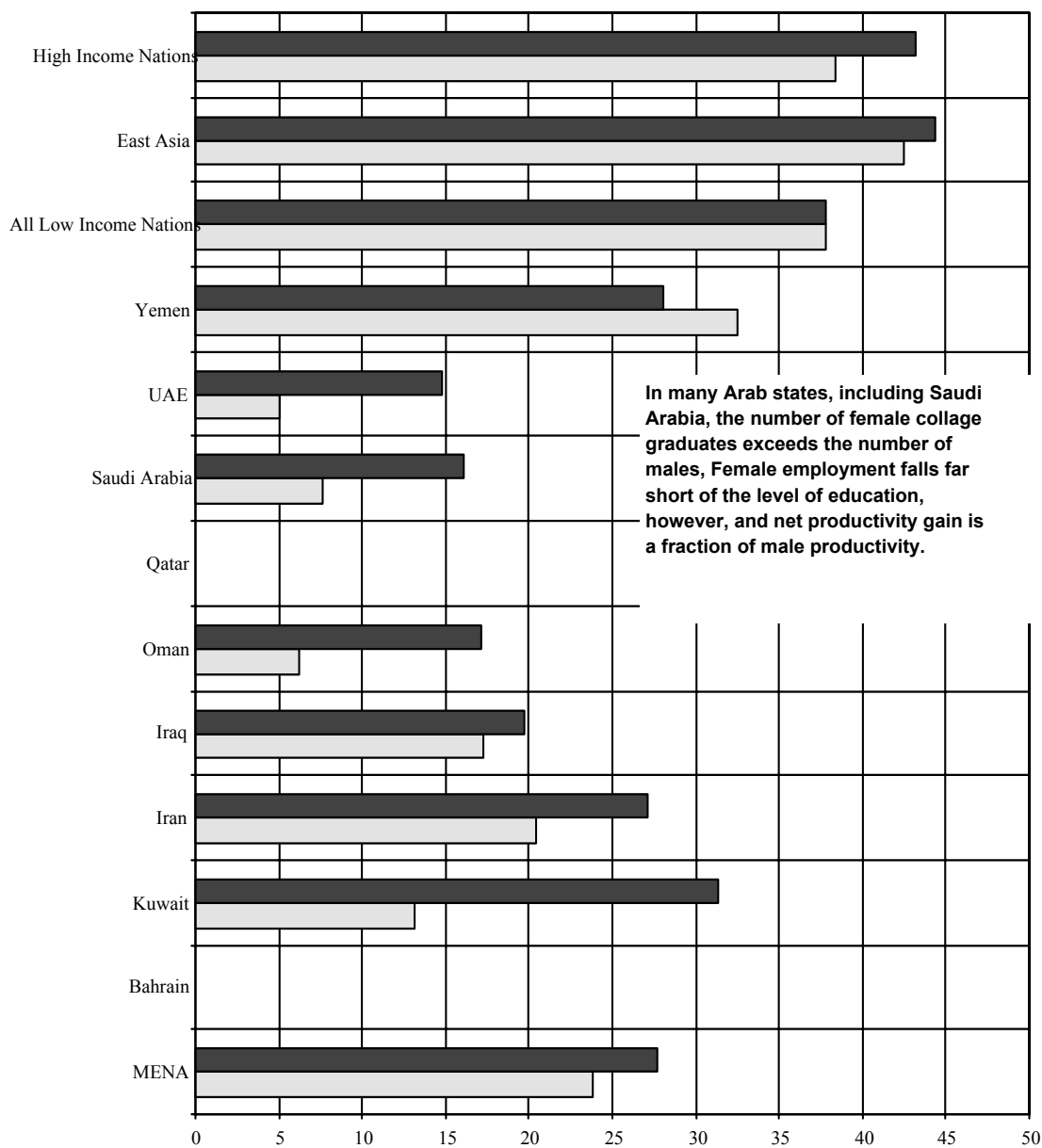
(In Thousands)



U.S. Census Bureau, IDB Summary Demographic Data for Saudi Arabia, May, 2001, www.census.gov/cgi-bin/ipc/idbsum?cty=SA.

Chart III. 29

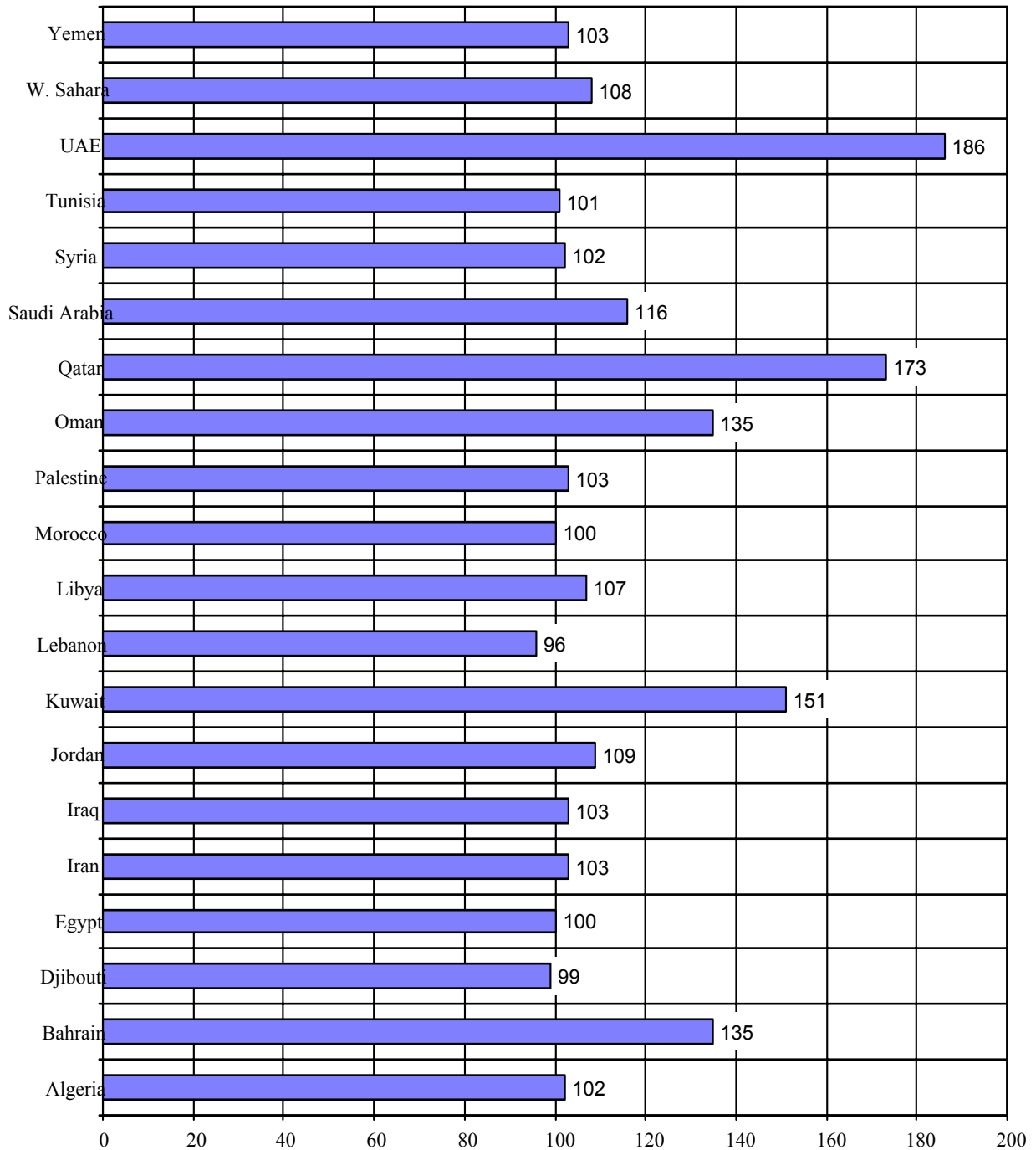
Women as a Percent of the Labor Force: Pace of Social Change



In many Arab states, including Saudi Arabia, the number of female collage graduates exceeds the number of males, Female employment falls far short of the level of education, however, and net productivity gain is a fraction of male productivity.

	MENA	Bahrain	Kuwait	Iran	Iraq	Oman	Qatar	Saudi Arabia	UAE	Yemen	All Low Income	East Asia	High Income Nations
■ 2000	27.7	-	31.3	27.1	19.7	17.1	-	16.1	14.8	28.1	37.8	44.4	43.2
□ 1980	23.8	-	13.1	20.4	17.3	6.2	-	7.6	5.1	32.5	37.8	42.5	38.4

Adapted by Anthony H. Cordesman from World Bank, World Development Indicators, 2000, pp. 46-48; World Bank, World Development Indicators, 2002, pp. 52-54

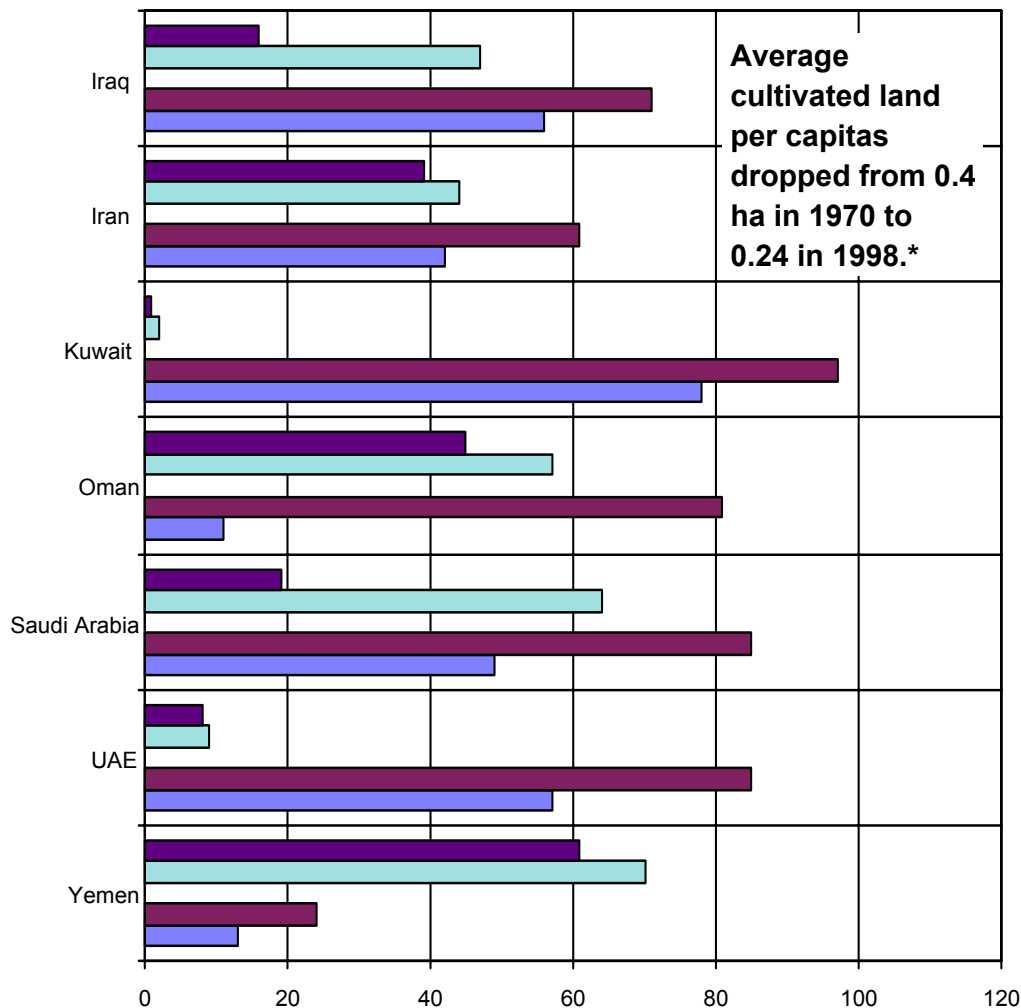
Chart III.30**Foreign Labor Impact on Sex Ratio Issues: Men as a Percent of the Total Population in 2003**

Adapted by Anthony H. Cordesman from United Nations, World Population Prospects, The 2002 Revision, New York, United Nations, ESA/WP 180 February 26, 2003.

Chart III.31

Massive On-Going Pressures for Social Change: Massive Urbanization and Sharp Decline in the Role of Agriculture

(Labor in Agriculture in Percentages of labor force and Urbanization as Percent of Total Population)

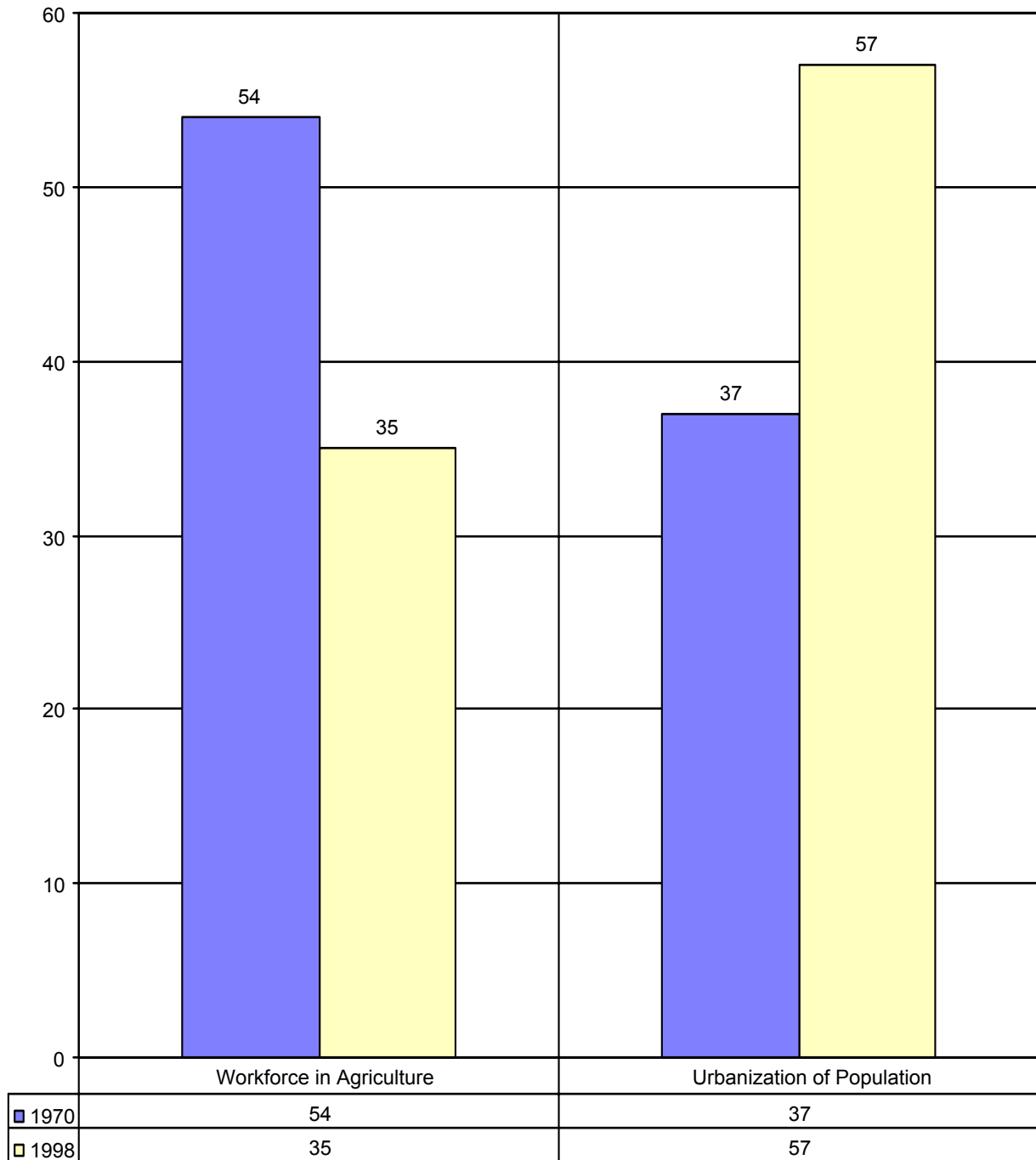


	Yemen	UAE	Saudi Arabia	Oman	Kuwait	Iran	Iraq
■ Labor in Agriculture in 1998	61	8	19	45	1	39	16
□ Labor in Agriculture 1970	70	9	64	57	2	44	47
■ Urbanization in 1998	24	85	85	81	97	61	71
□ Urbanization in 1970	13	57	49	11	78	42	56

Source: Adapted by Anthony H. Cordesman World Bank, *World Development Indicators, 2000*, pp. 26-28.

Chart III.32

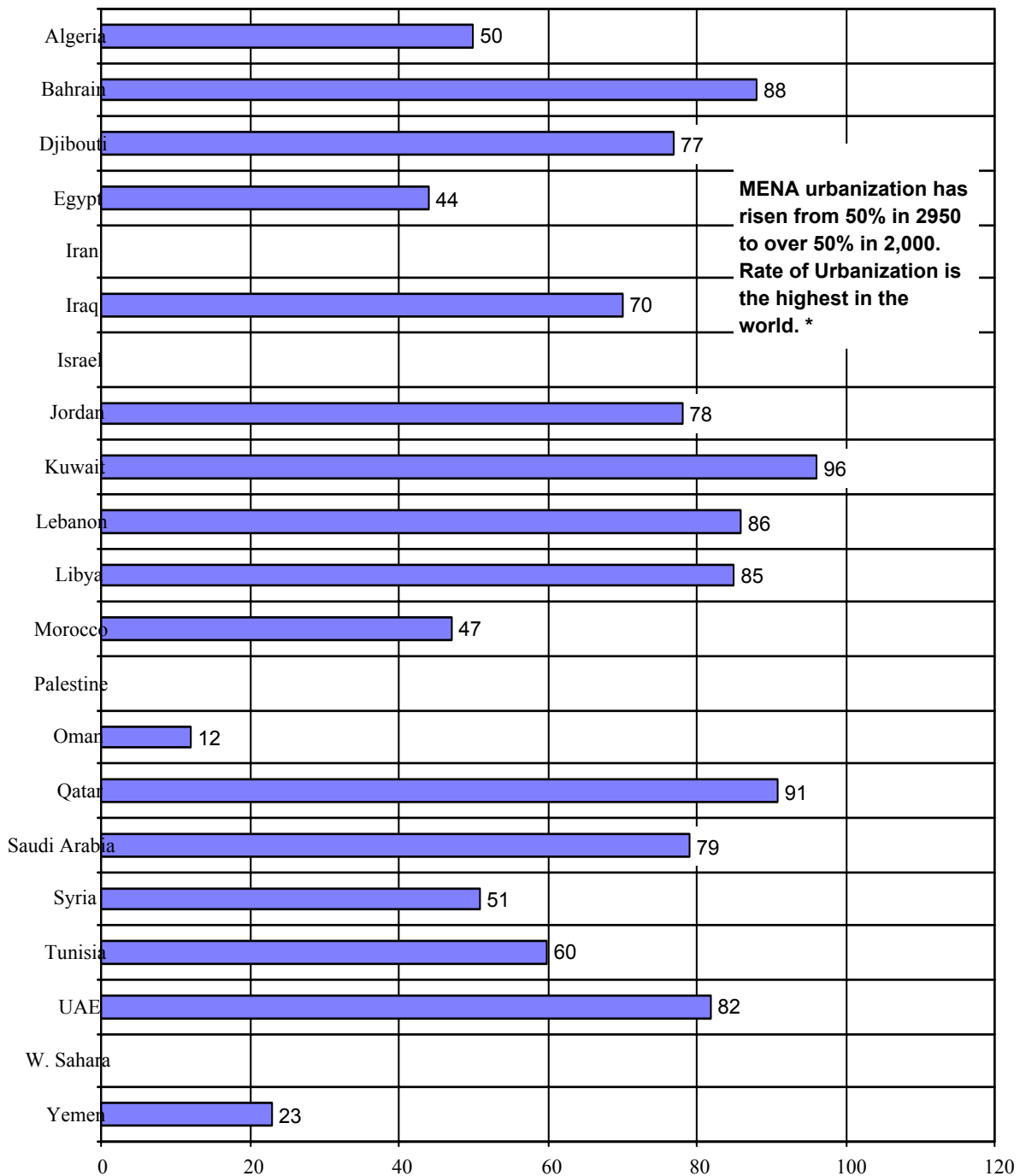
Percent of Urbanization and Percent of Labor Force in Agriculture: Shaping the Pace of Social Change in the MENA Region
(in percent)



Source: Adapted by Anthony H. Cordesman World Bank, World Development Indicators, 1998 and 2000.

Chart III. 33

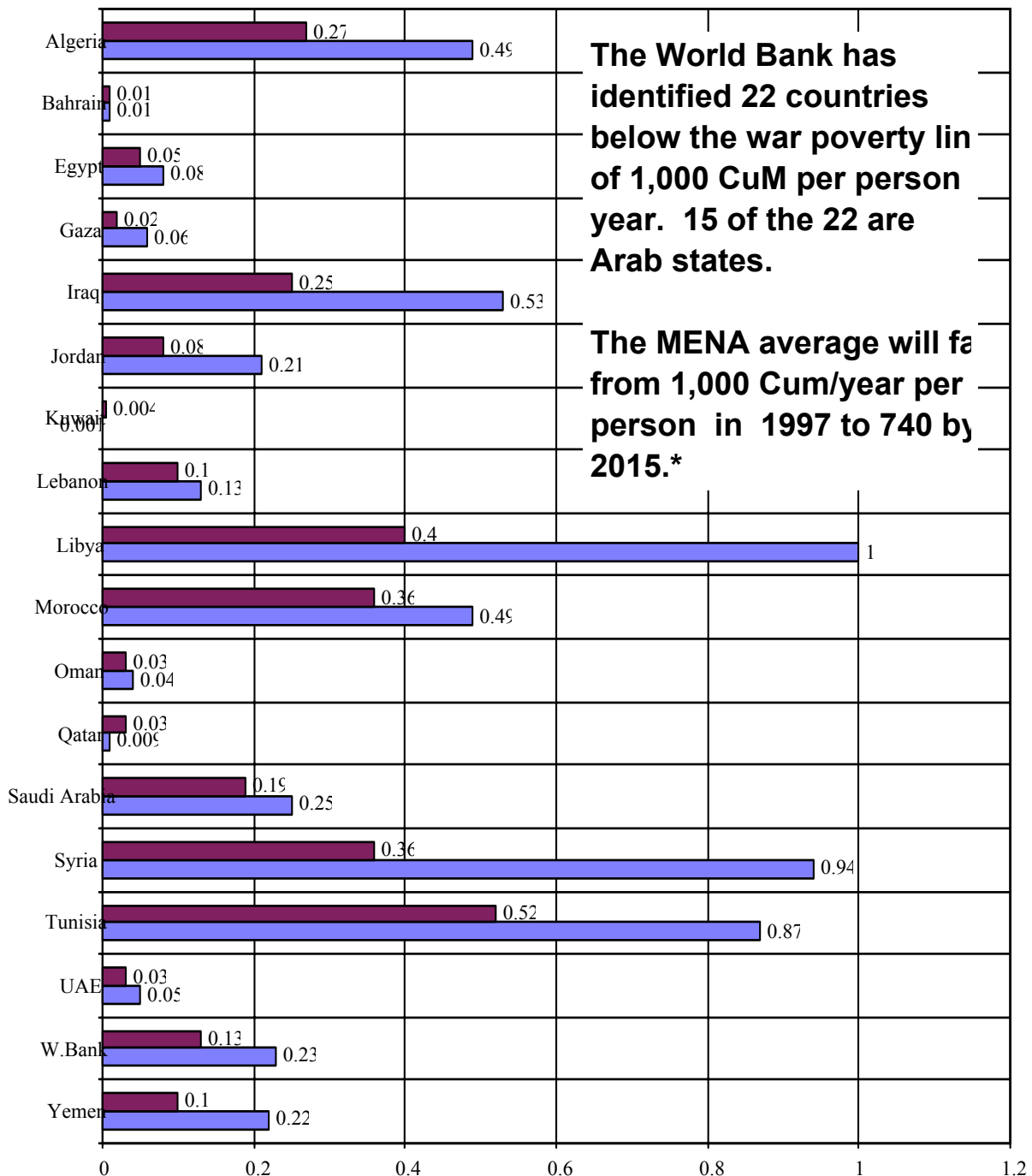
Arab Development Report Estimate of Urbanization



Adapted by Anthony H. Cordesman from Arab Human Development Report, 2202, p. 143. * From Arab Human Development Report, 2202, p. 45.

Chart III.34

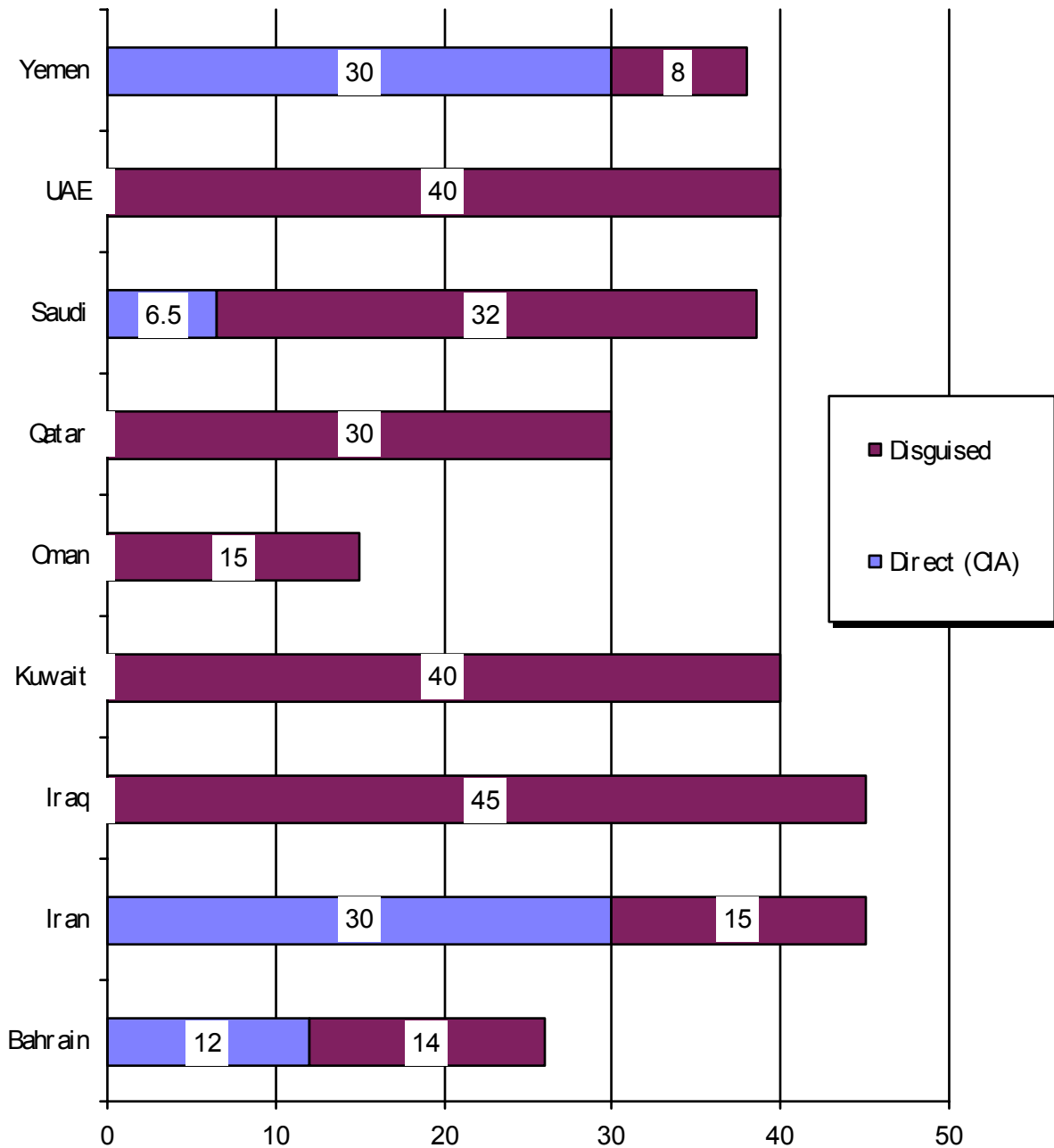
Arab Development Report Estimate of Decline in Arable Land Per Capita



Adapted by Anthony H. Cordesman from Arab Human Development Report, 2202, p. 143. * from Arab Human Development Report, 2202, p. 44.

Chart III. 35

Over-Dependence on Non-Productive Government Jobs Has a Cost: Estimated Comparative Direct and Disguised Unemployment Rate in the Middle East; A Rough Estimate
 (Rate measured in Percent)



Rough estimate by Anthony H. Cordesman based on CIA and World Bank estimates for 2002. Disguised includes public sector, civil service, and private sector jobs with no use economic output.

Ability to Fund Investment to Increase Oil and Gas Production

As is discussed in more detail in a later chapter, these uncertainties surrounding future demand and future oil and gas export revenues do more than affect regional stability in ways that could lead to oil interruptions. They may also be creating serious long-term problems in financing the expansion of MENA oil and gas production capacity. Unfortunately, an examination of current estimates of energy investment costs indicates that there is little recent effort to estimate the cost of the required future regional and country-specific investment requirements beyond relatively near term projects, to determine how well countries can finance development on their own through cash flow, loans, and various cash back or production sharing arrangements.

The International Energy Agency made a major effort to examine these issues in 2003, in a study called World Energy Investment Outlook, 2003 Insights. This work, however, is a global study of all energy resources and is necessarily limited in covering the Middle East.⁵ It also uses nominal costs for investment that seem to badly understate the recent cost of exploration and development activity in the MENA region. The US badly needs to give this kind of “what if” modeling high priority and to consider just how much investment and reform is needed in each key producer country.

Two critical factors could affect the ability to fund investment in increased oil and gas production. One is the growing limits on the budgets and investment capabilities of MENA energy exporting states caused by the lack of economic diversification and moderate oil prices. The second is the slowly increasing structural economic problem caused by rising populations, high welfare and entitlement programs, high military and arms expenditures, and low long-term revenues.

Market forces and state driven energy investment may still be enough. Most Middle Eastern states have been relatively successful in using state revenues to fund energy investments in the past. It now seems likely, however, that their cash flow and savings will not be adequate to meet both their other spending and investment needs and energy investment needs. Foreign investment, and the domestic private sector may have to assume a much larger share of the burden if the region is to produce anything like the energy output projected in DOE and IEA

estimates. Relying on market forces might still lead to enough cost-effective investment, particularly given the oil industries history of investing in reserves, future market share, and development even in periods of low oil income.

The era of being able to safely rely on state oil and gas revenues to fund other state expenditures and investments may well be over. Middle Eastern governments do not need to abandon state industries, state investment, and state control over energy resources, but fundamental reforms are needed to increase the ratio of foreign and domestic private investment. There currently, however, is no Middle Eastern country where market forces are allowed to operate without serious state interference. However, only a few oil exporting countries – Bahrain, Egypt, Qatar, and Oman – are making serious progress. This helps explain why nearly all oil producing countries in the Middle East are currently examining ways in which to privatize some aspects of its energy investment and obtain foreign investment.

At this point in time, there is no meaningful way to predict whether Middle Eastern Oil Exporting States will persist in these plans if oil and gas revenues rise, how successful they will be in obtaining the energy investment and other capital they need, how much money any given country requires, and how well investments will be managed. Middle Eastern regimes tend to back-peddle on reform the moment oil revenues rise to moderate levels, and many face resistance from nationalists, Pan-Arab socialists, state-oriented technocrats, and Islamists. Virtually all states want to maximize revenues, but also have powerful elements that want to conserve resources for the future.

¹ This analysis can only touch upon some of the human development issues involved. For more depth, see the excellent work in the Arab Human Development reports., especially United Nations Development Programme, Arab Fund for Economic and Social Development, Arab Human Development Report 2003: Building a Knowledge Society, UNDP, New York, 2003. Additional country-by-country background can be found in the annual Human Rights report of the US State Department.

² Energy Information Agency, OPEC Revenues Fact Sheet, June 2003, <http://www.eia.doe.gov/emeu/cabs/opecrev.html>; and data provided to the author by EIA.

³ Energy Information Agency, OPEC Revenues Fact Sheet, June 2003, <http://www.eia.doe.gov/emeu/cabs/opecrev.html>; and data provided to the author by EIA.

⁴ There are considerable uncertainties in this estimate. The figures shown are the author's estimate, based on various editions of the CIA, World Factbook, World Bank, World Development Indicators, IISS, Military Balance, and IMF, World Economic Outlook.

⁵ International Energy Agency, World Energy Investment Outlook, 2003 Insights, IEA, Paris, 2003