

CSIS

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**The Middle East:
The Broader Forces
Shaping Terrorism and
Regional Stability**

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Arleigh A. Burke Chair in Strategy**

May 15, 2003

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Introduction

The Iraq War has again triggered a wide ranging debate over the future of the Middle East, most of it focusing on its political systems and Islam. Yet, the outcome of the Iraq War does not affect any of the larger forces for change and instability in the Middle East. It has removed a major tyrant and a key proliferator, but it has not fundamentally changed the Middle East or even disturbed most fracture lines. In any case, it will be several years before the victory in Iraq, and the nation-building that follows can be a key example of anything. Even when this “message of the war is clear, it seems doubtful that it will have a definitive impact on any of the other 22 countries in the region, each of which has its own problems, goals, and imperatives. It will be a factor, but only a factor.

The following presentation shows that the broader forces that shape the Middle East are too powerful for any one conflict or example to reshape the region. These factors include massive population growth, and the failure of effective economic development and reform in virtually every country in the region. They include the precipitous decline of agriculture, war shortages, urban migration, hyperurbanization, and the destruction of traditional social structures and force restructuring of extended families.

The World Bank’s report on Global Economic Development 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 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.

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 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,

Social turbulence is compounded by this 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.

The “Usual Suspects” in Explaining Instability

- **Succession Issues**
- **Internal Politics**
- **Arab-Israeli Conflict**
- **Islamic Extremism**
- **Rogue States: Iran, Iraq, Libya, and Syria**
- **Intra-Southern Gulf Tensions**
- **Corruption**
- **Water**
- **Lack of Democracy**
- **Terrorism**
- **Human Rights**

Broader Sources of Change and Instability

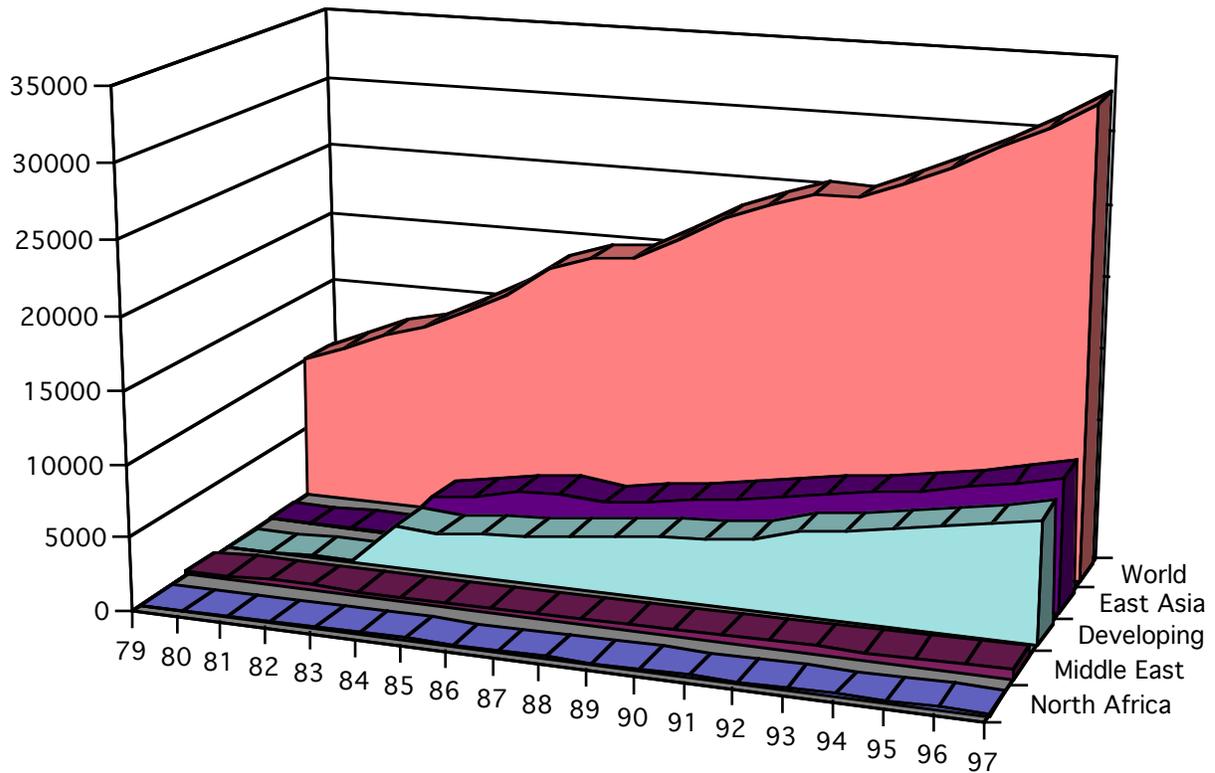
- **Patriarchal structure of governments**
- **Lack of rule of law**
- **High population growth rate**
- **Excessive state sector/government control of economy**
- **Over-reliance on oil and gas sectors coupled to uncertain long-term energy development**
- **Over-reliance on non-productive service sectors**
- **Excessive government employment/ false jobs**
- **Structural and disguised unemployment**
- **Lack of global competitiveness**
- **Regionalism and Pan-Arabism**
- **Mismanagement of agricultural sector**
- **Failure to reduce dependence on water**
- **Desertification**
- **Other religious divisions (e.g. Islamic extremism, Jewish extremism, Sunni vs. Shi'ite, Christian ethnocentrism)**
- **Ethnic/racial divisions (e.g. Arab vs. Berber, Arab vs. Black)**
- **Tribalism/clans/family nepotism**
- **Over-urbanization/concentration in capital**
- **Inadequate infrastructure/inadequate infrastructure**
- **Failure of educational system/inadequate educational infrastructure**
- **Failure to offer opportunities to native youth**
- **Displacement and alienation**
- **Over-reliance on foreign labor**
- **Labor migration**
- **Excessive military spending and arms imports**
- **Proliferation**
- **Transfer of advanced conventional weapons and technologies**
- **Border disputes**

Economic Development Has Lagged

- **The real GDP of the Middle East and North Africa “flat-lined” during 1979-2000, compared to growth in East Asia, the developing world and the developed world.**
- **The US and World Bank project improvements during the 1990s to 2015, but estimates differ sharply and the Middle East will not catch up with that of high growth regions like East Asia.**
- **The great uncertainties are:**
 - **Oil revenues and external demand.**
 - **Rates of economic reform.**
 - **Population trends.**
 - **Impact of war.**
 - **Internal stability.**
- **Past World Bank, IMF, country, and US estimates exaggerated recovery in the out years.**
- **No one as yet has a convincing model of oil demand, prices, and revenue flows**
- **Some countries are talking up virtually the same economic reform plan for the third to fifth time.**

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

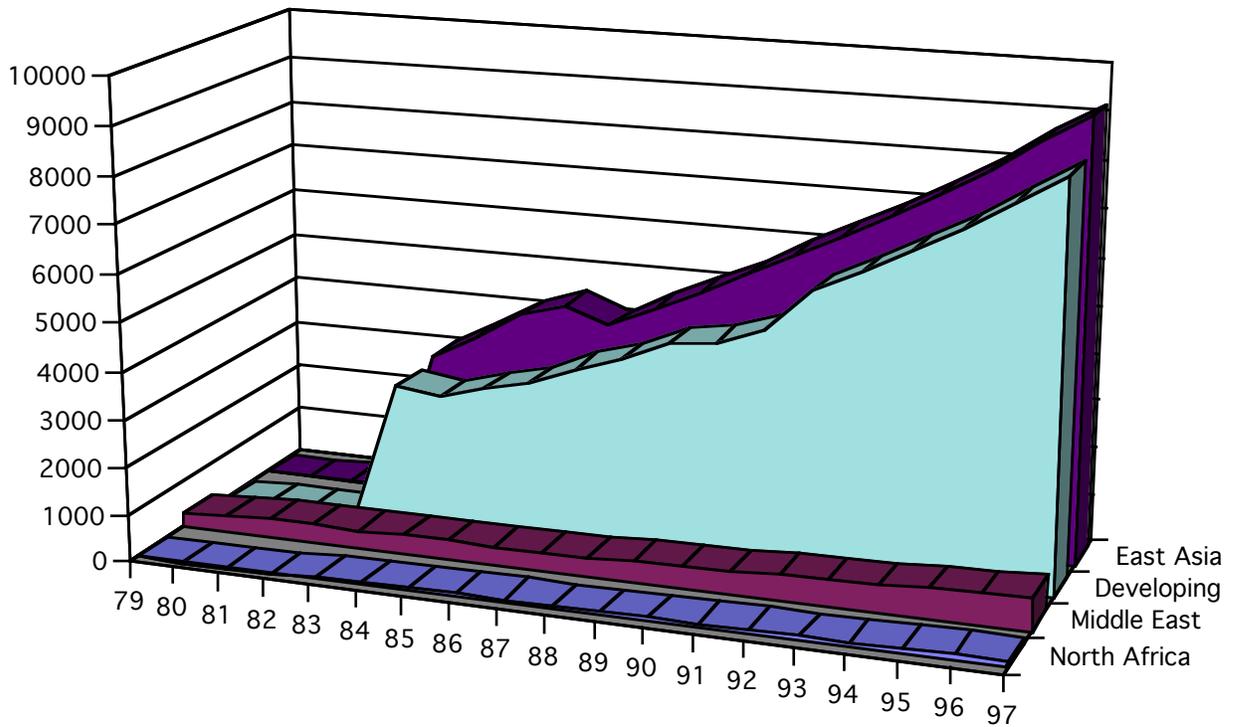
The GNP of the Middle East Relative to World Total in \$US Current Billions)



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.

Comparing Total Middle Eastern and North African GNP Growth to The Overall Trend in Developing States:

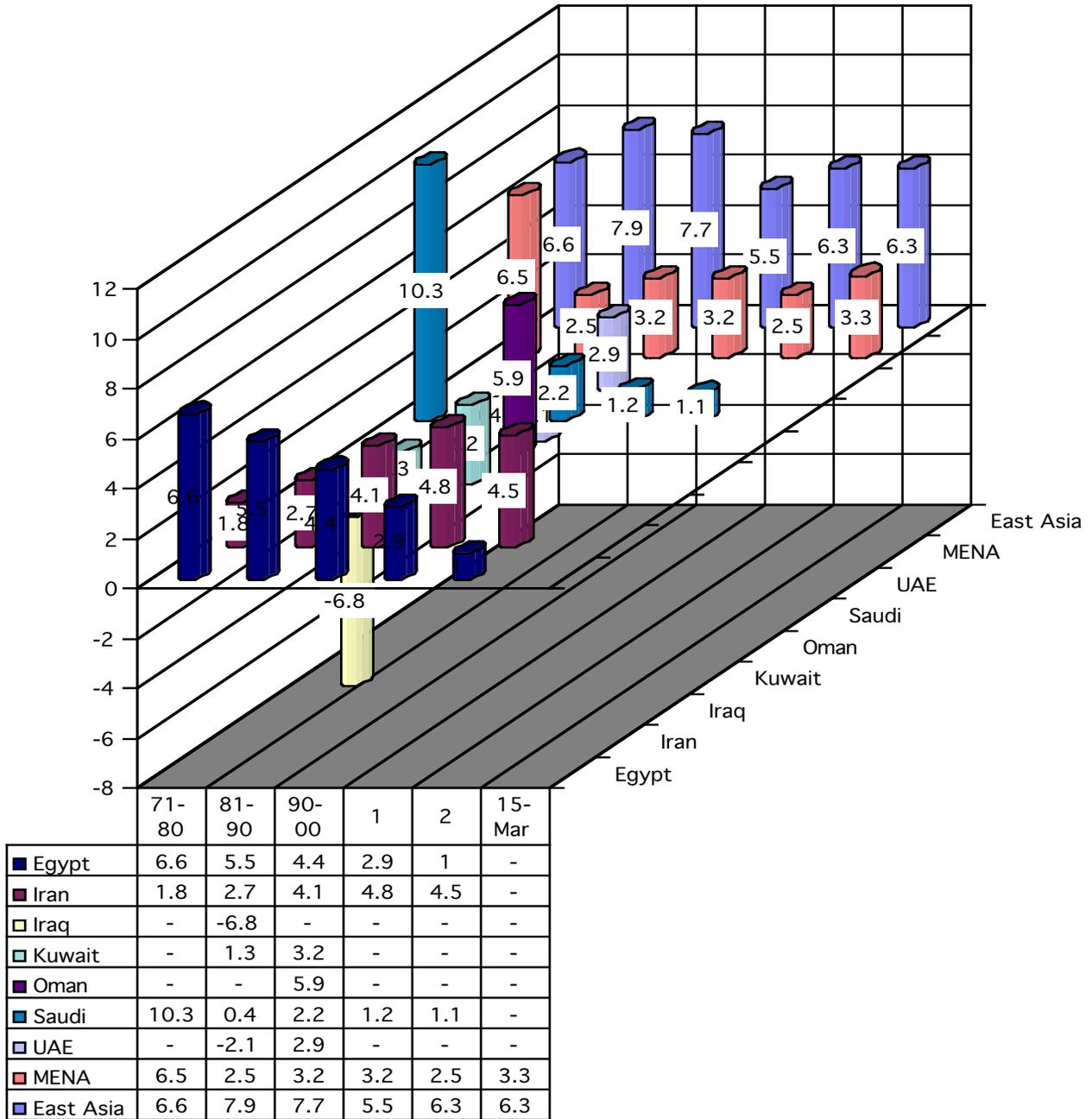
(\$Current Billions)



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.

GDP Growth of the Gulf and MENA States: The Lag Behind East Asia

(Percent of Real Annual Change during 1980-2000)



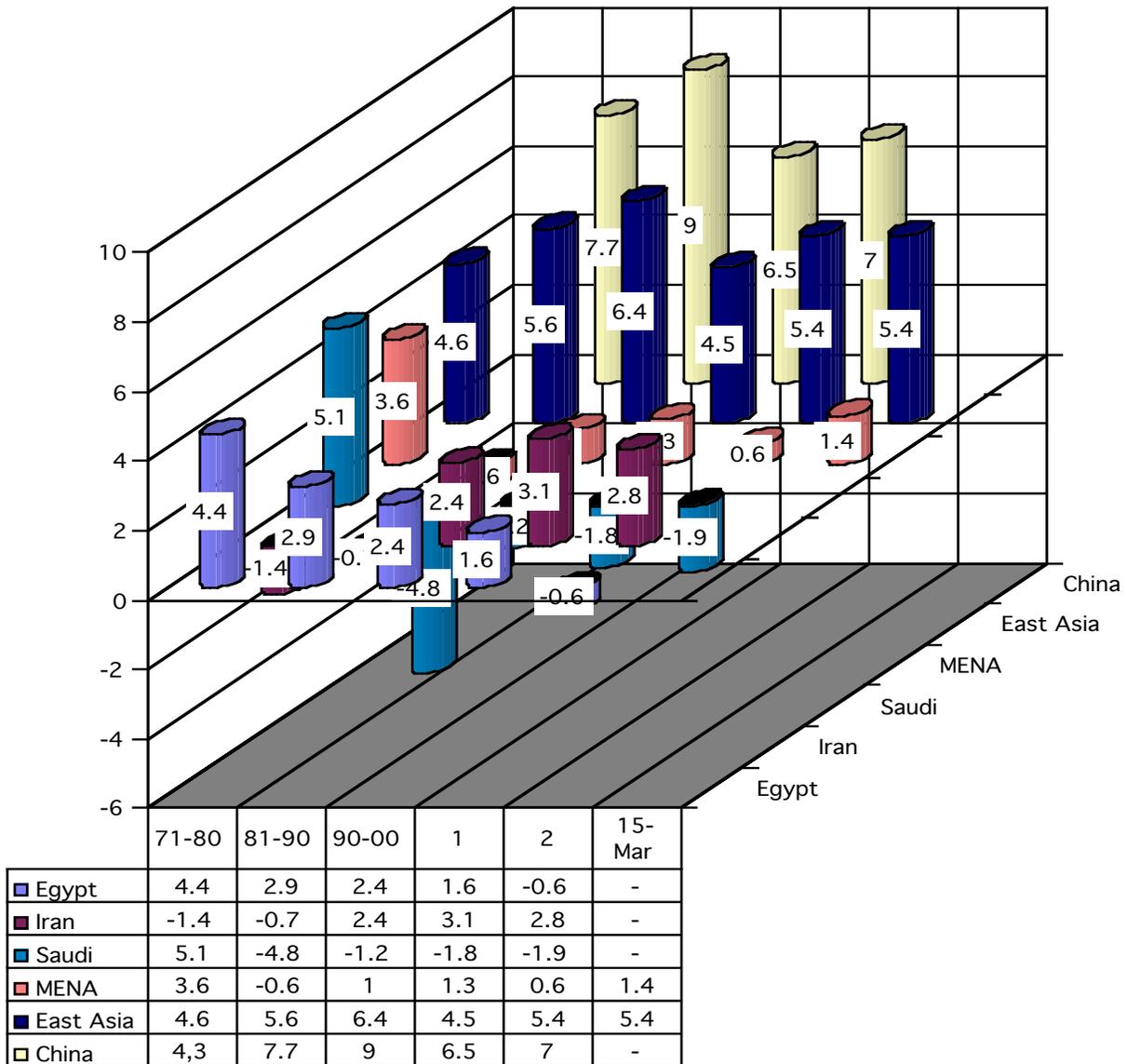
Adapted by Anthony H. Cordesman from World Bank, *World Development Indicators*, 2002, pp. 204-206, and *Global Economic Prospects*, 2003, p. 204.

Increases in Real Per Capita Income Lag Badly Behind Absolute Growth

- **The Middle East and North Africa lagged the entire world during 1980-1991.**
- **Real per capita income declined by well over 25% during the 1980s.**
- **The situation has improved since 1991, but there is still little real growth.**
- **Many of the oil exporting states still have a real per capita income less than 50% of their peak annual level during the oil boom of the early 1980s.**
- **The real problems in per capita income are further disguised by:**
- **The “Youth Bulge” that is going to enter the work force and need homes and infrastructure;**
- **Urbanization and rising expectations due to world media.**
- **Maldistribution of income.**
- **Lack of achievement-oriented hiring and promotion.**
- **Chronic underestimation of problems because of difficulties in analyzing trends in purchasing power parity terms**

Trend in GDP Per Capita of Gulf and MENA States

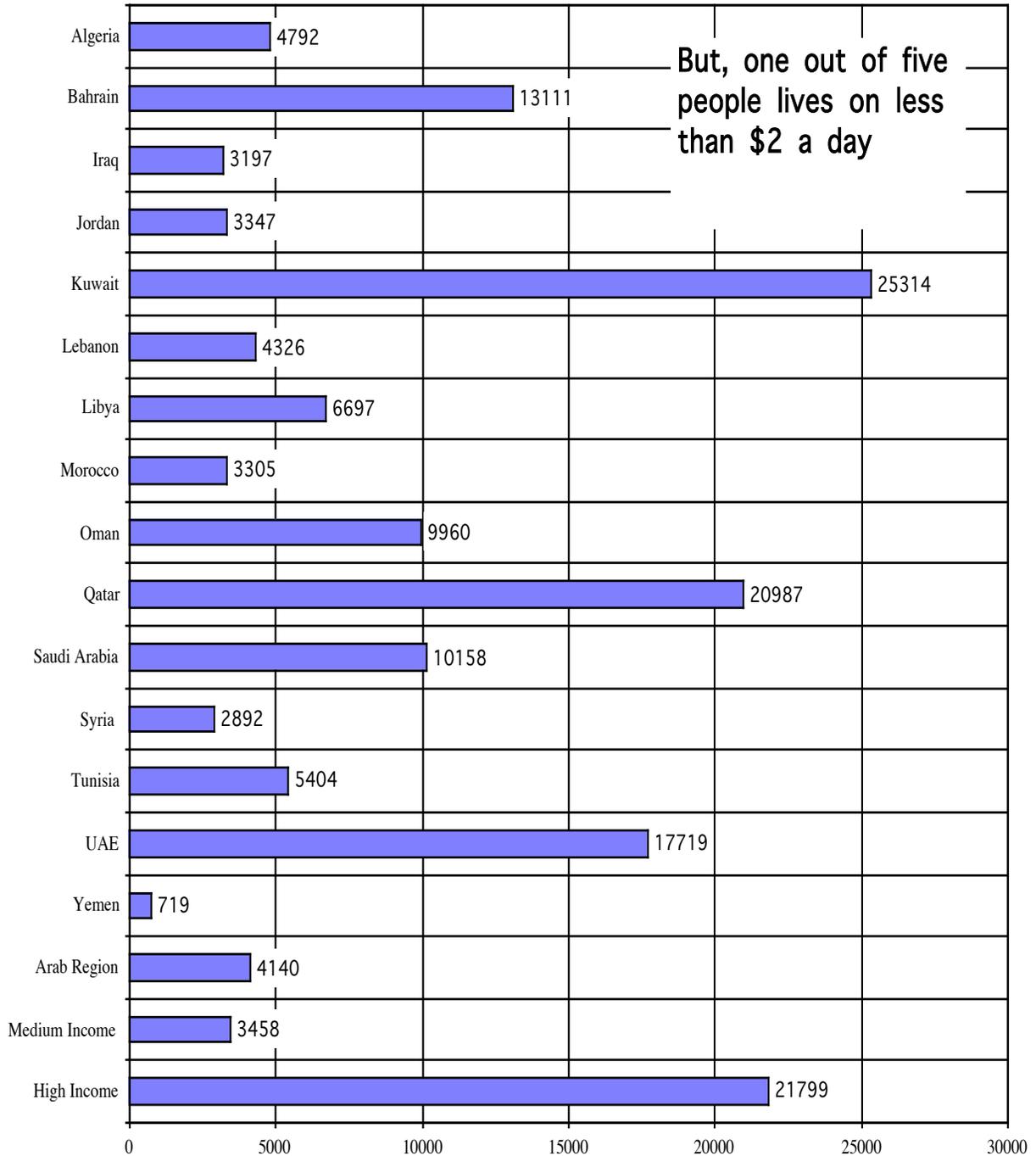
(Percent of Real Annual Change during 1980-2000)



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

Average Per Capita Income Remains High By Developing Country Standards in PPP Terms

(\$Current)



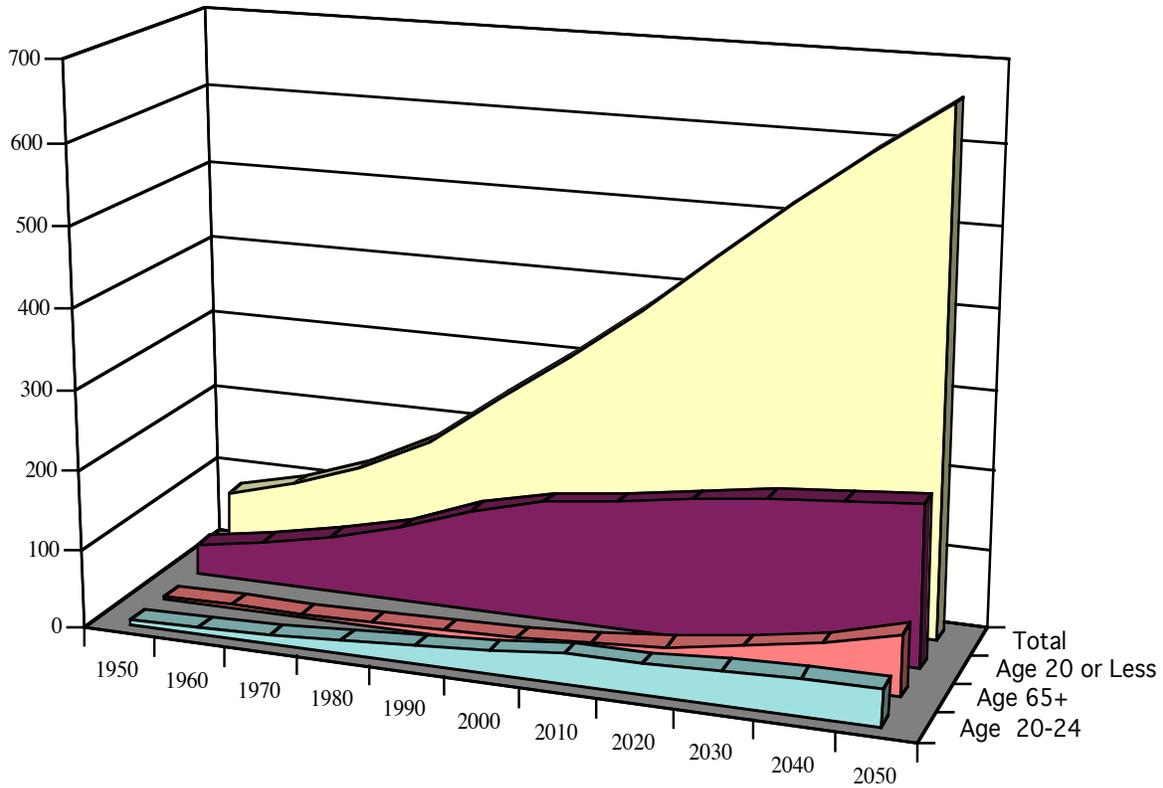
Adapted by Anthony H. Cordesman from *Arab Human Development Report, 2202*, p. 5, 143.

Demographics, Economics, and Stability

- **Population growth sometimes exceeds 3% annually and often exceeds or equals real economic growth.**
- **True development normally requires 2% more annual growth than population growth.**
- **The population is very young: 40% or more is 14 years of age or younger.**
- **The Southern Gulf states are grossly over-dependent on foreign labor.**
- **Women have very low productivity gain as part of the work force.**
- **“Statism” means many jobs are frustrating disguised unemployment or underemployment.**
- **Jobs in the private service tend to emphasize imports and related service sectors; not real economic development.**
- **Education is slipping in quality and economic relevance; real job experience is dropping as a training tool, and Islamic education tends to have little economic value.**
- **Failure of its political leaders, intellectuals, and religious leaders to come to grips with population planning!**

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

(UN Estimate - Population in Millions)

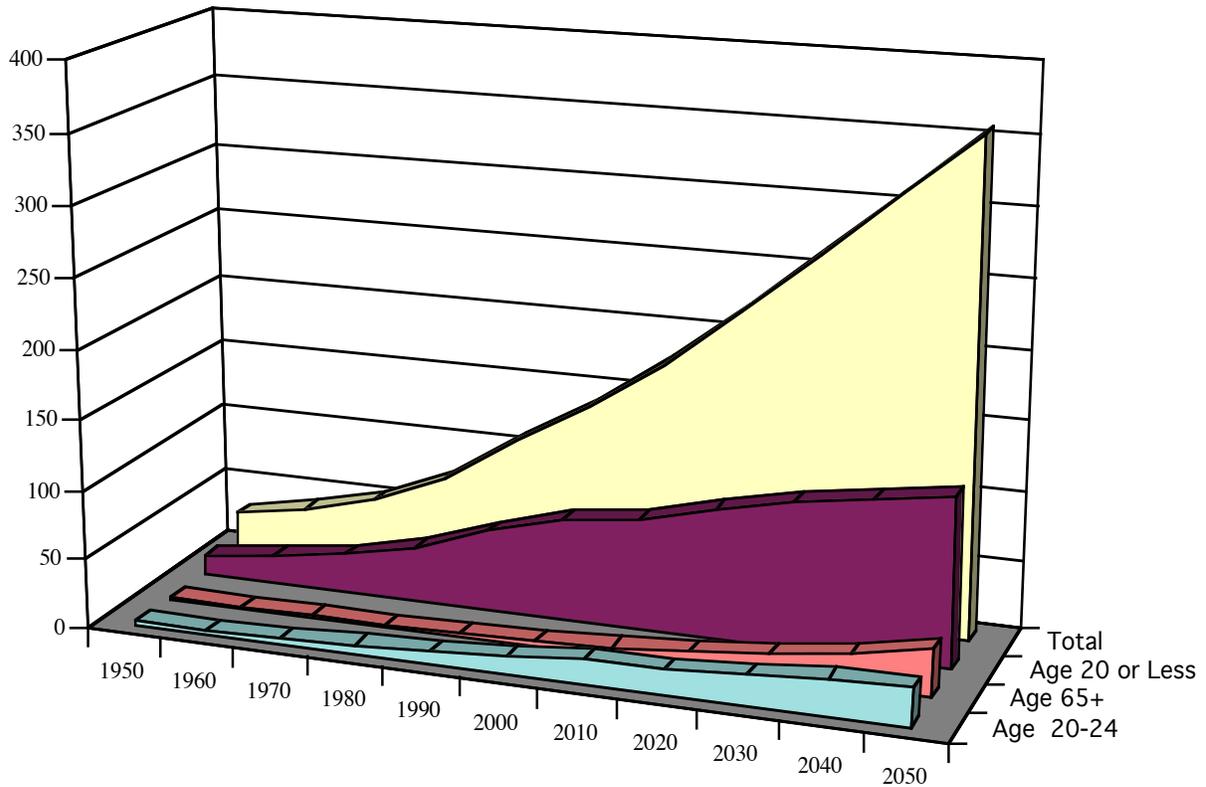


	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
Age 20-24	6.8	8.4	10.9	16.2	21.9	28.7	37.9	38.6	42.7	46.4	48.3
Age 65+	3.1	3.6	5.1	6.4	8.2	11.3	15.5	24.6	38	53.9	77.9
Age 20 or Less	39.9	53.6	73.1	96.2	128.4	151	161.7	175.7	187.6	196.5	203.6
Total	78.7	101.2	133	177.9	244.8	307.7	376.2	449.3	522.4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

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

Population Growth in the Gulf

(UN Estimate - Population in Millions)



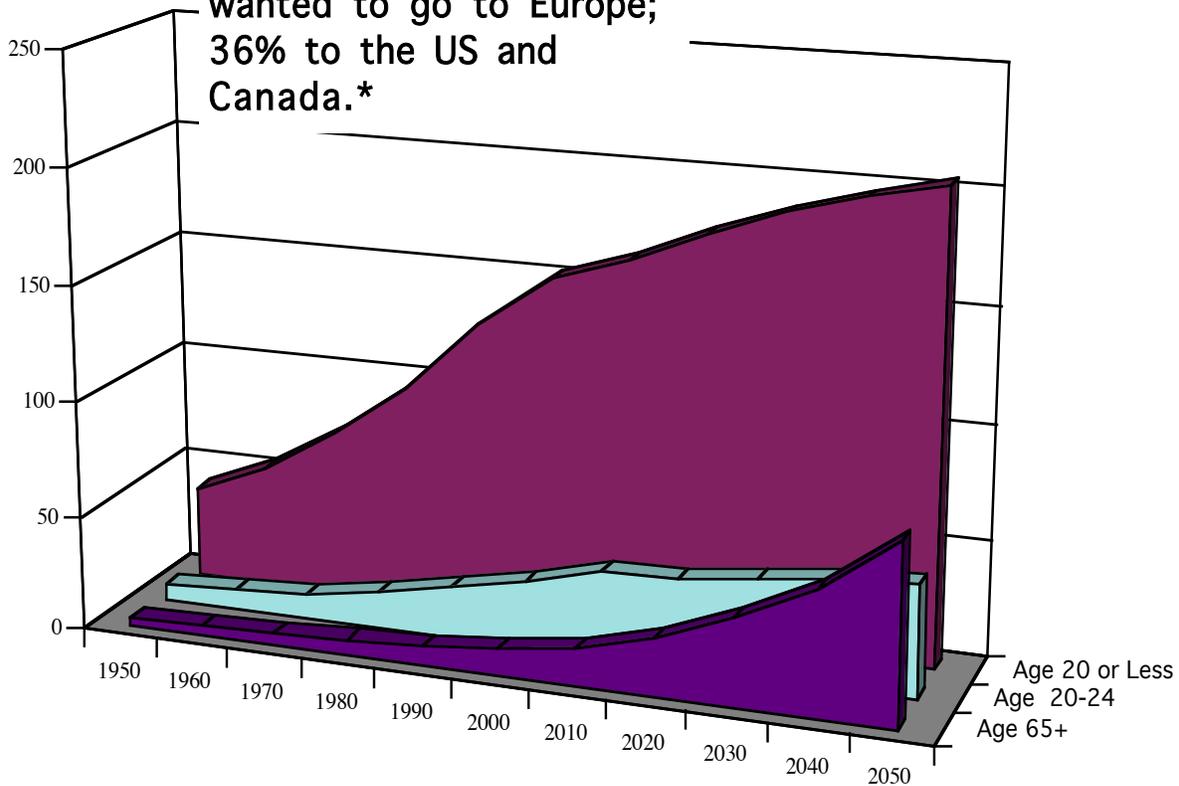
	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
□ Age 20-24	2.5	3.2	4.5	6.5	9.4	12.6	18.2	18.7	22.4	26.2	27.8
■ Age 65+	1.3	1.4	1.7	2.2	3	4.3	6.5	10.9	16.5	23.1	34.5
■ Age 20 or Less	15.4	20.9	28.8	40.9	59	73.7	80.9	94	106	114.1	121.2
□ Total	30.4	39	52.3	74	109.6	140.2	176.1	219.4	264.6	310.3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

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

MENA Youth Explosion and the Pensioner Burden

(UN Estimate - Population in Millions)

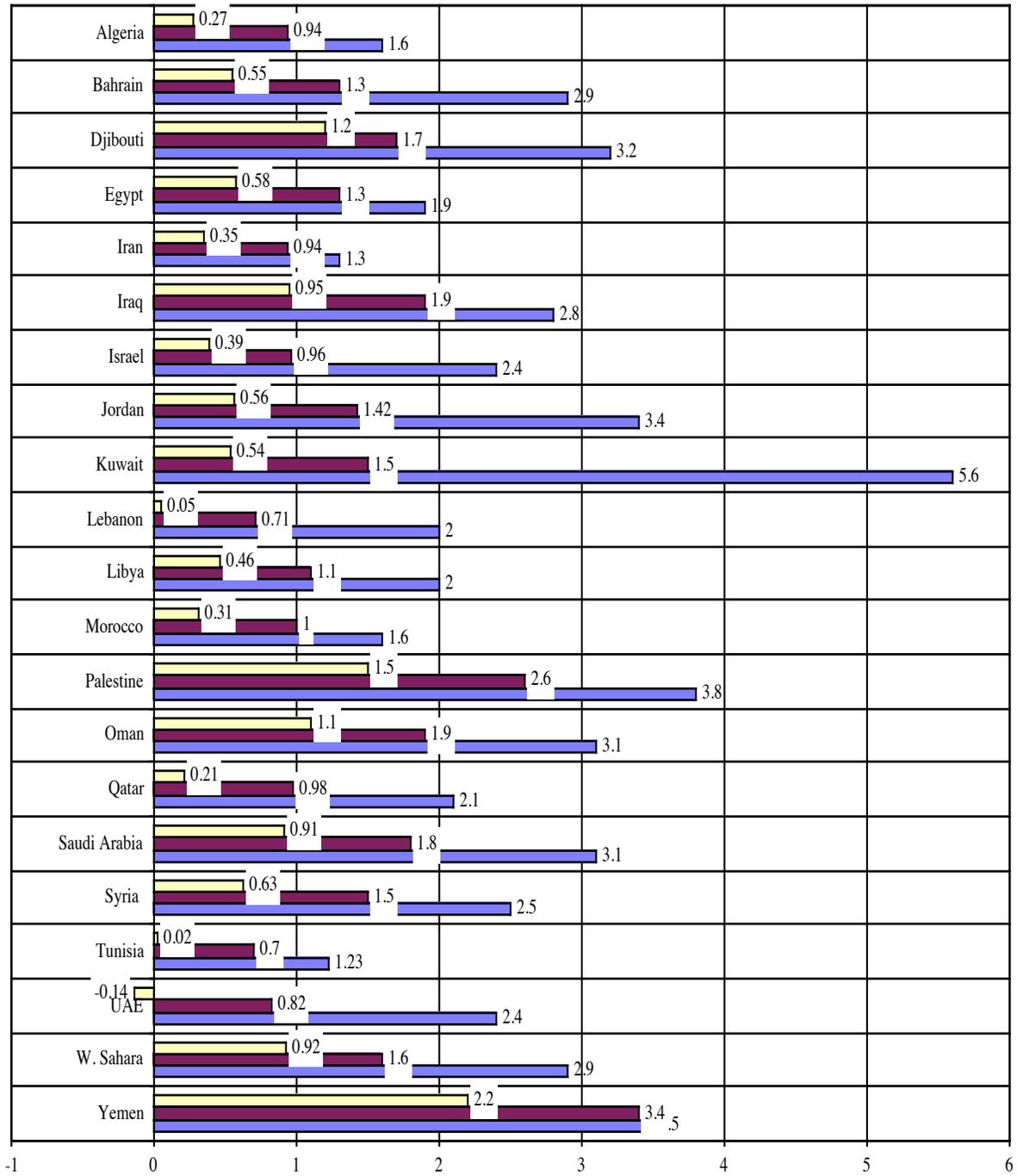
Roughly 51% of older youths polled expressed a desired to emigrate to other countries. 46% wanted to go to Europe; 36% to the US and Canada.*



	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

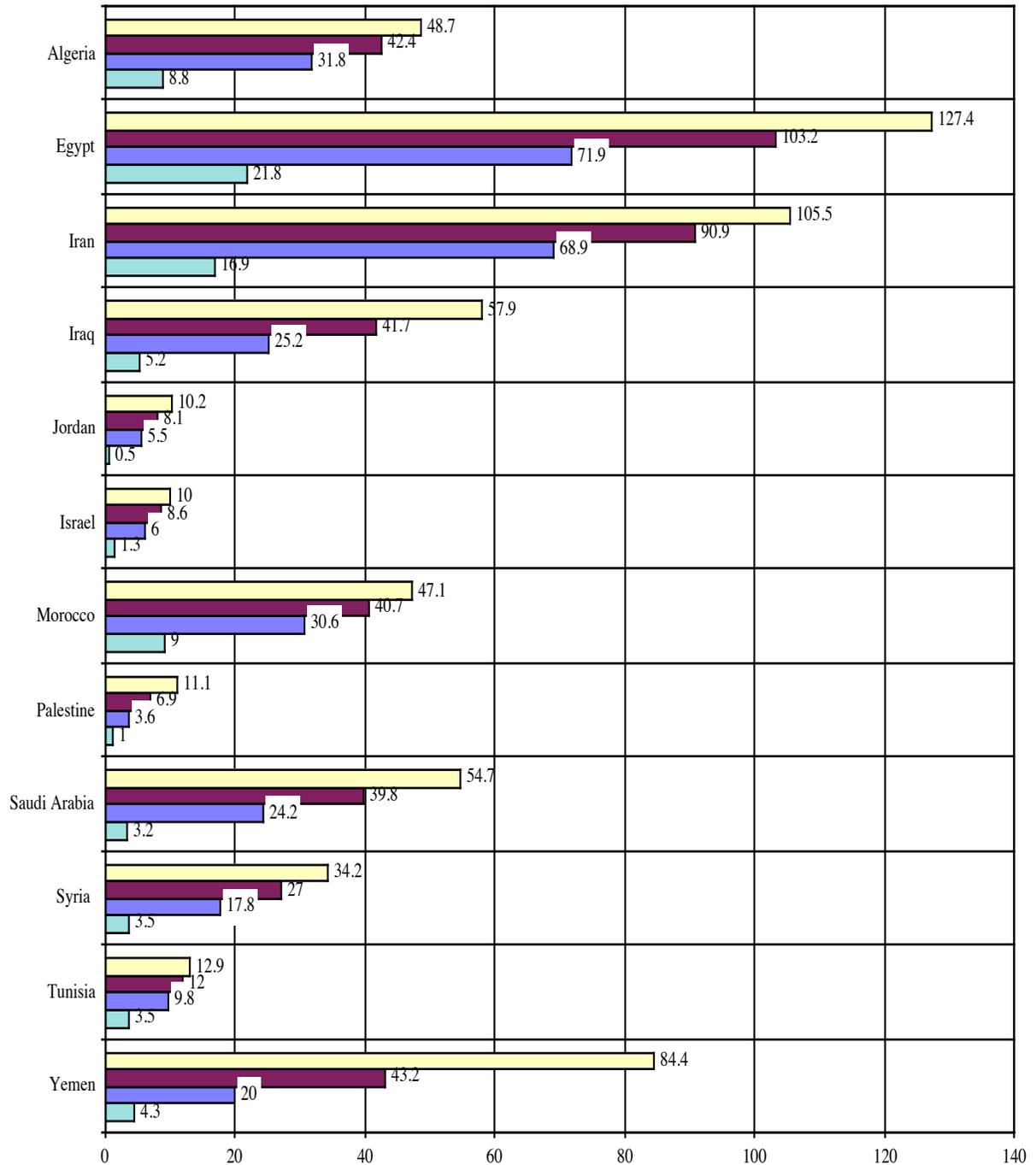
Adapted by Anthony H. Cordesman from data provided by the US Census Bureau. * From Arab Human Development Report, 2202, p. 30.

Population Growth Rates Do Decline



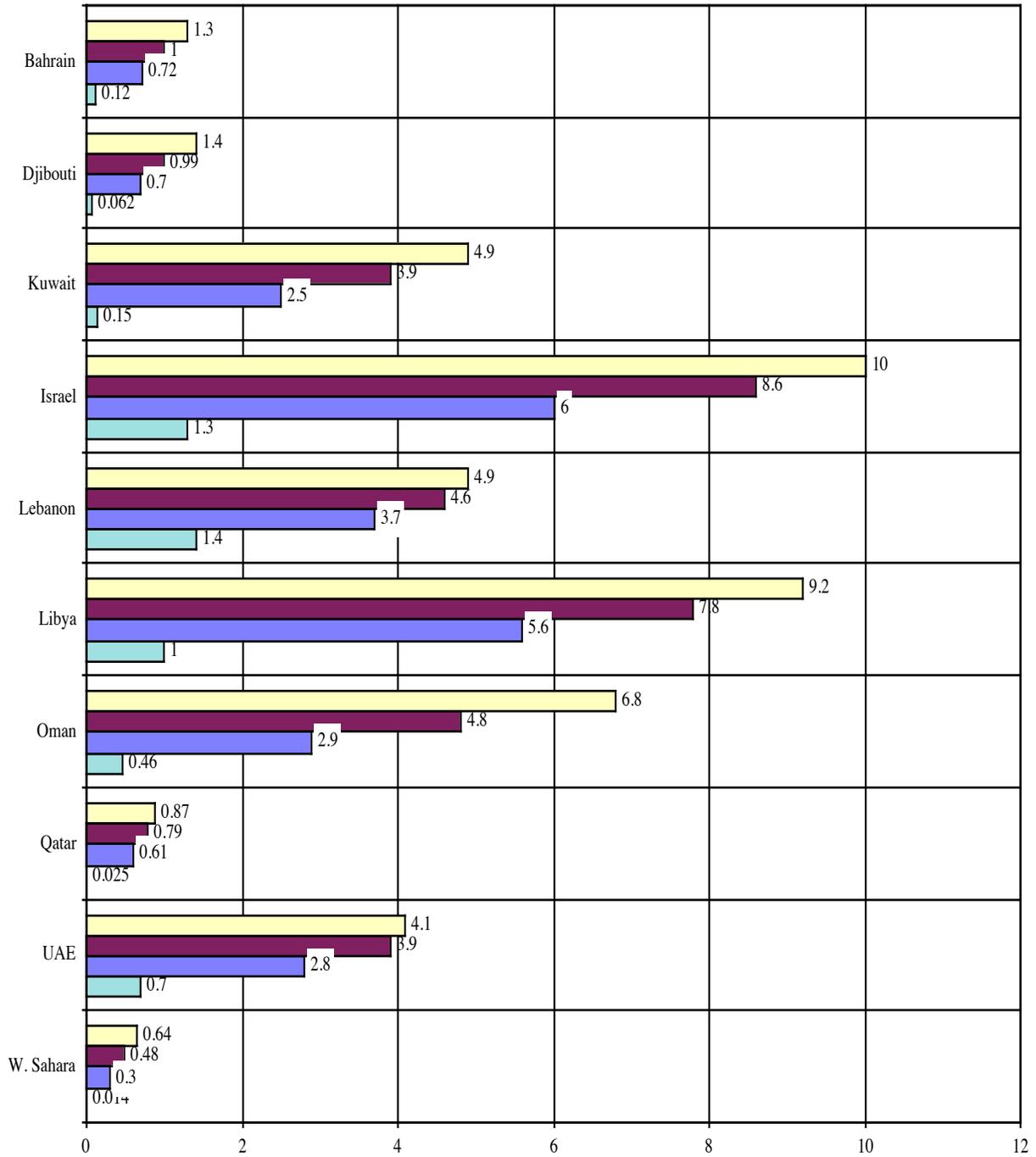
Adapted by Anthony H. Cordesman from United Nations, World Population Prospects, The 2002 Revision, New York, United Nations, ESA/WP 180 February 26, 2003.

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



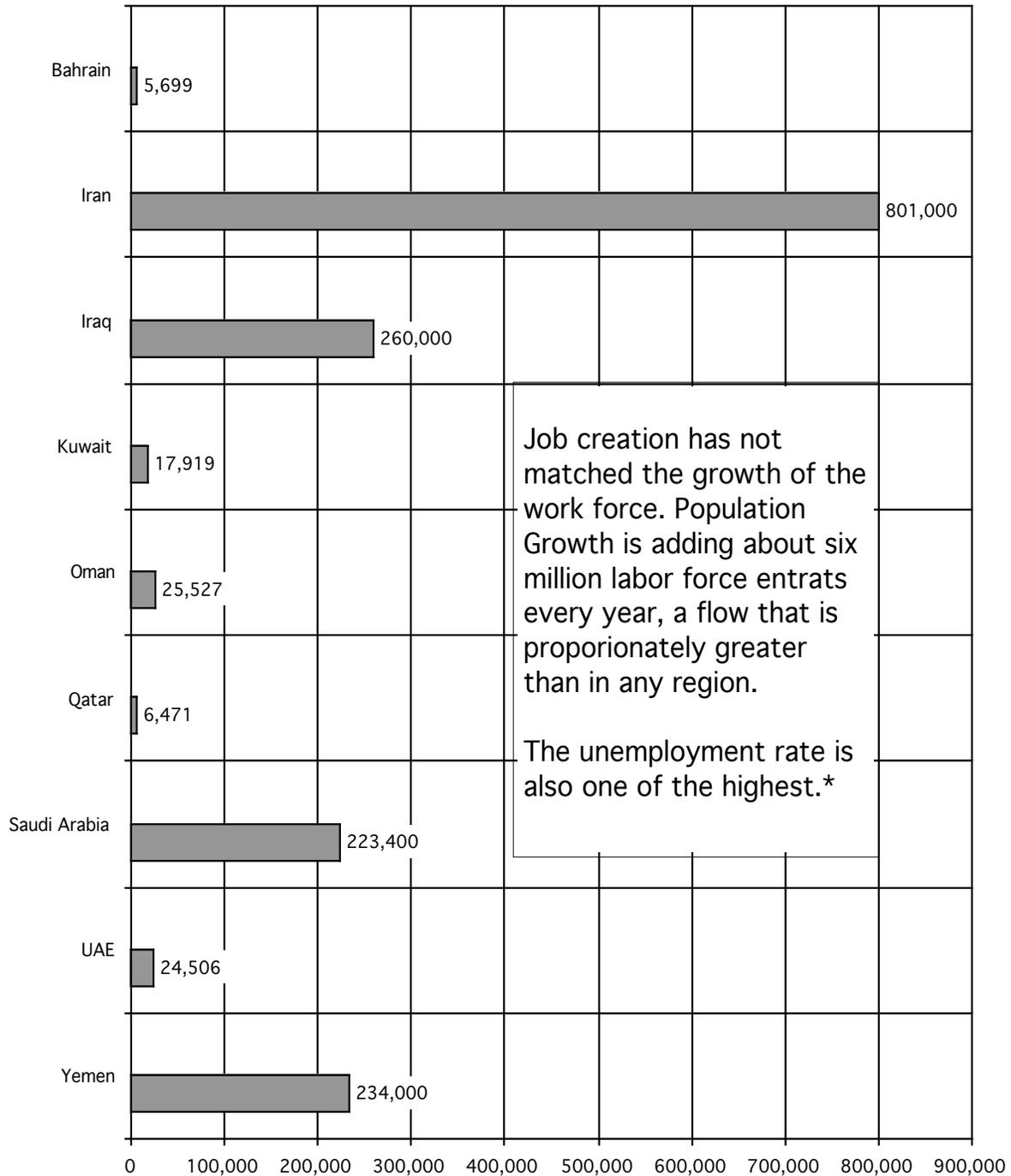
Adapted by Anthony H. Cordesman from United Nations, World Population Prospects, The 2002 Revision, New York, United Nations, ESA/WP 180 February 26, 2003.

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.

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

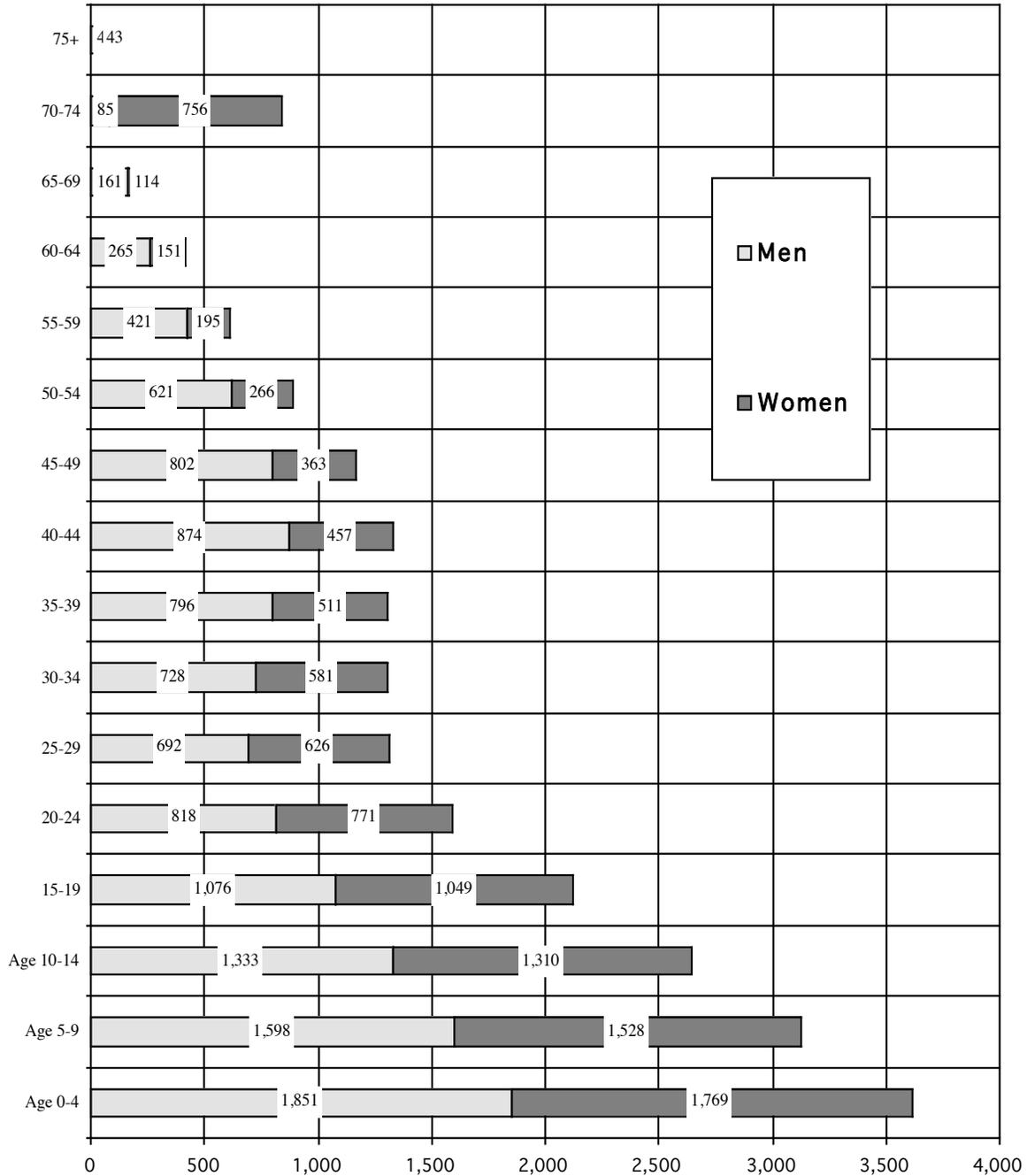


Adapted by Anthony H. Cordesman from CIA, *World Factbook*, 2002;. * from *Arab Human Development Report*, 2002, p. 10.

The “Youthening” of Saudi Arabia – Case Example

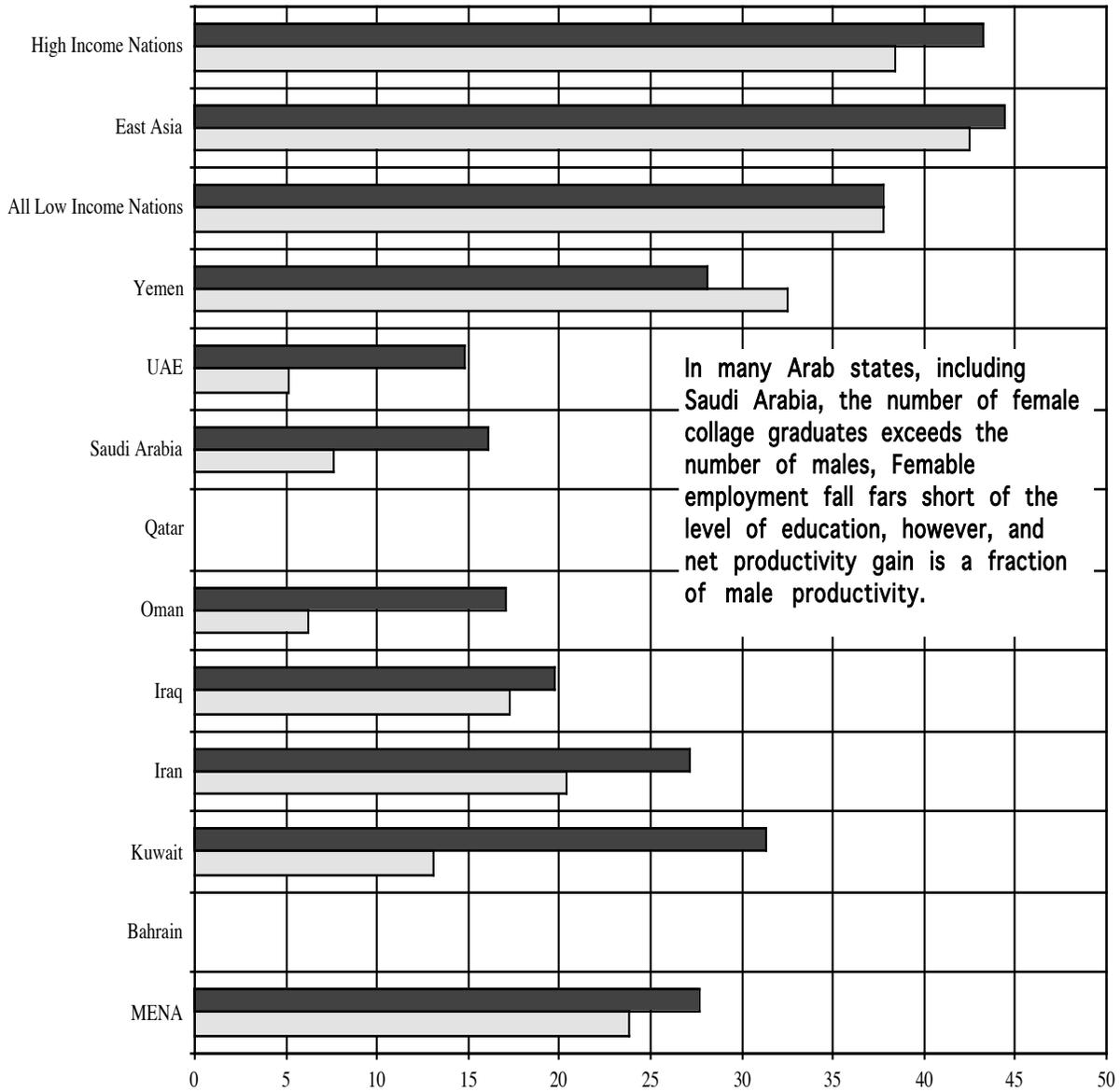
Estimate of the Distribution of the Total Native and Foreign Population by Age and Sex in 2000

(In Thousands)



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

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



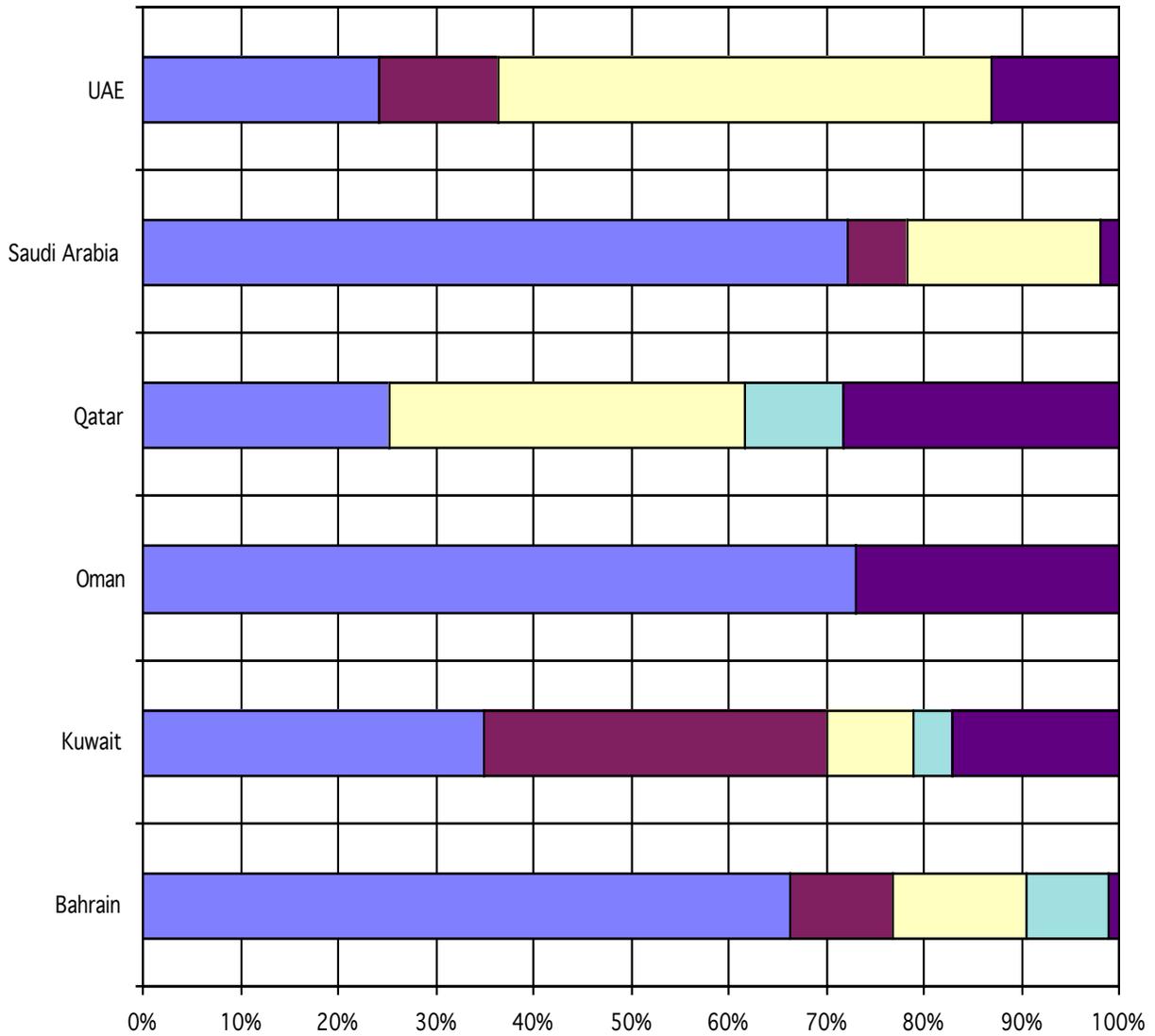
In many Arab states, including Saudi Arabia, the number of female collage graduates exceeds the number of males, Femable employment fall fars short of the level of education, however, and net productivity gain is a fraction of male productivity.

	MENA	Bahrain	Kuwait	Iran	Iraq	Oman	Qatar	Saudi Arabia	UAE	Yemen	All Low Income Nations	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

Foreign Population in Selected Countries in the Gulf

(in percentages of total population)

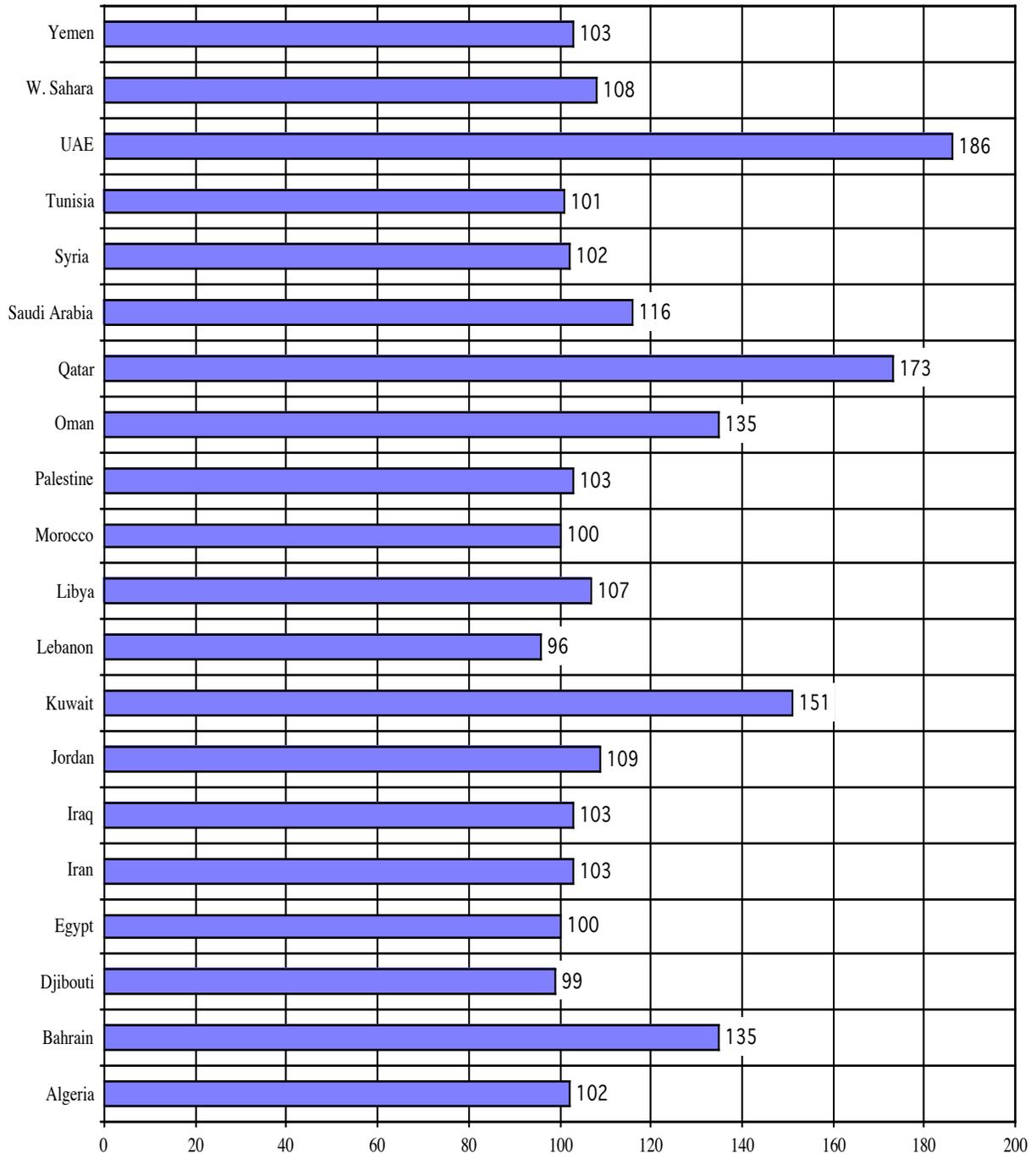


	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
Other	1	17	27	28	2	13
Iranian	8	4		10		
South Asian	13	9		36	20	50
Foreign Arab	10	35			6	12
Native Arab	63	35	73	25	73	24

Note: Iran is 51% Persian, 24% Azeri, 8% Gilaki/Mazandarani, 7% Kurdish, 2% Lurm and 2% Turkman; 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.

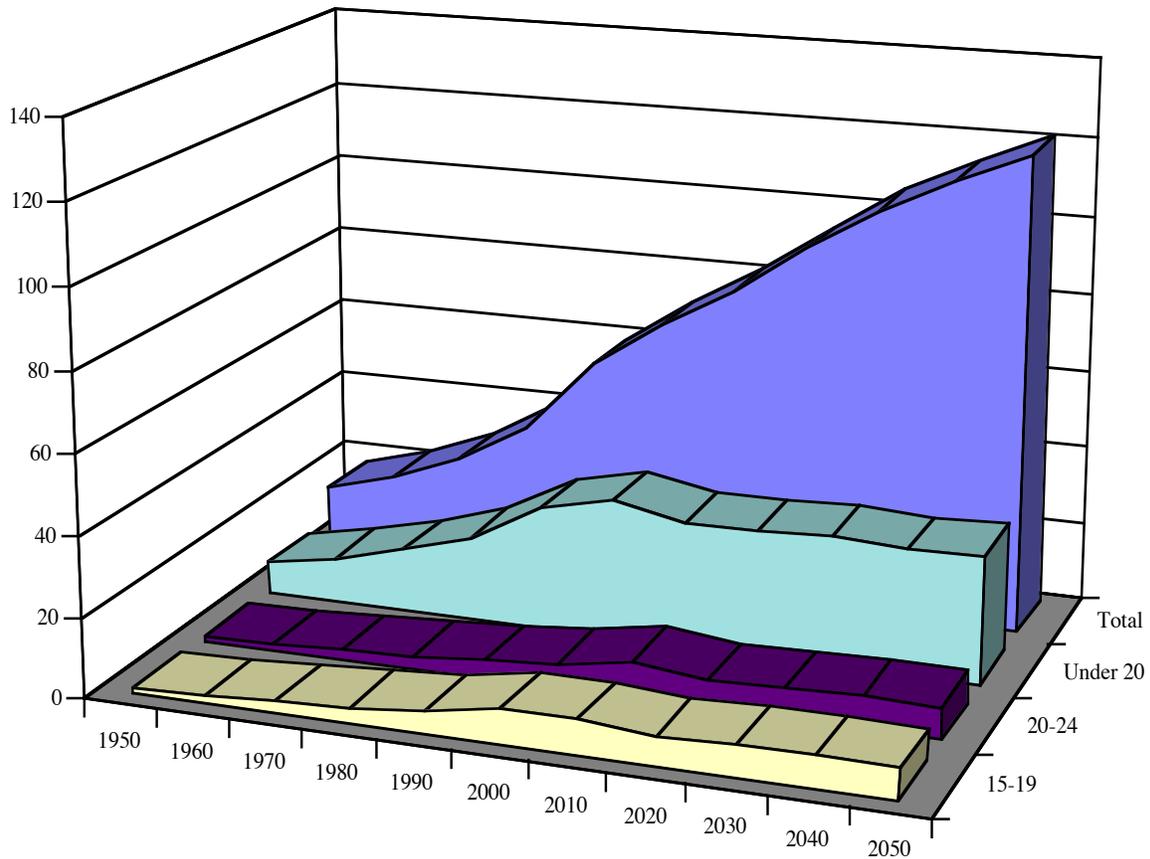
Foreign Labor Impact on Sex Ratio Issues: Men as a Percent of the Total Population in 2003



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

Case Examples: Population Growth and the Youth Explosion in Iran

(UN Estimate - Population in Millions)

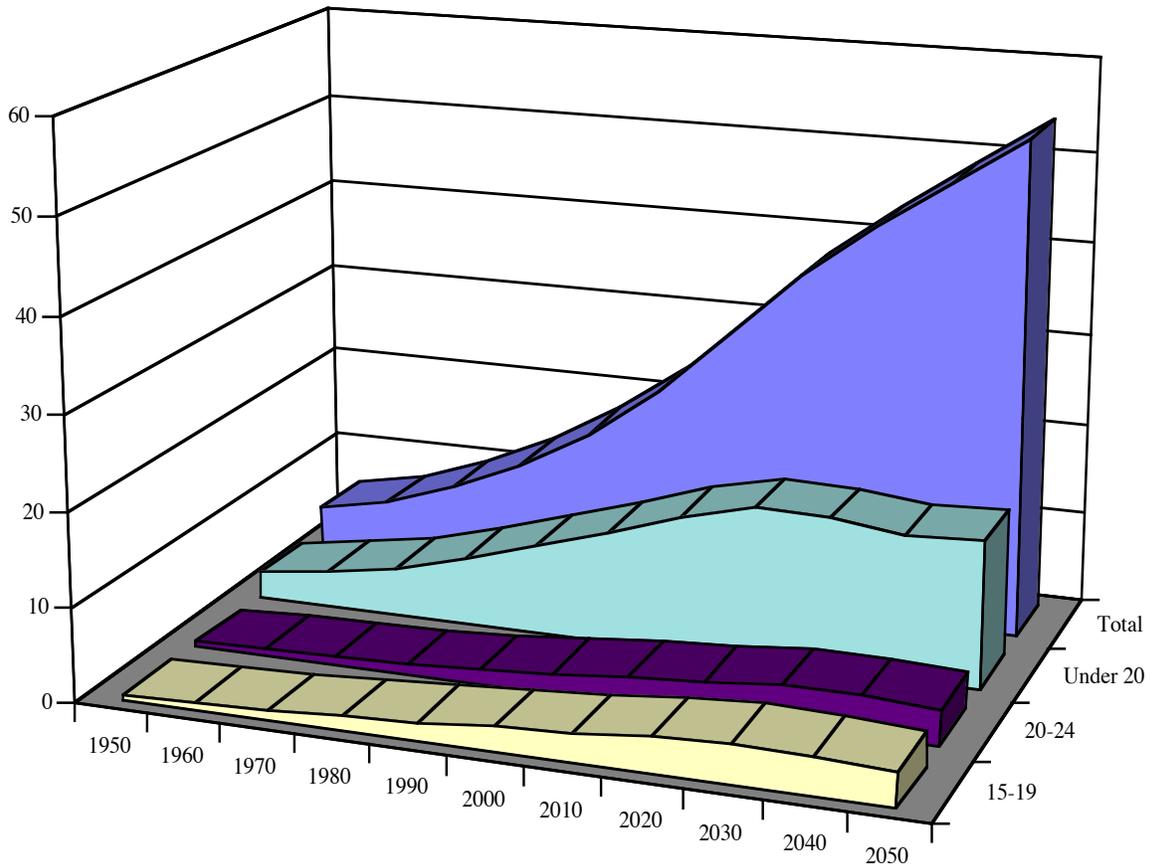


	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
15-19	1.6	2	3.1	4.1	5.8	9	8.9	7.6	8.2	8.2	7.8
20-24	1.4	1.7	2.5	3.5	5.1	6.4	9.5	7.4	7.7	8.5	7.8
Under 20	8.2	11.5	16	21.5	31.4	35.3	31.8	32.2	32.9	31.9	32.3
Total	16.9	21.7	28.8	39.1	58.4	70.3	80.8	93.5	104.5	113.5	121.4

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

Case Examples: Population Growth and the Youth Explosion in Iraq

(UN Estimate - Population in Millions)

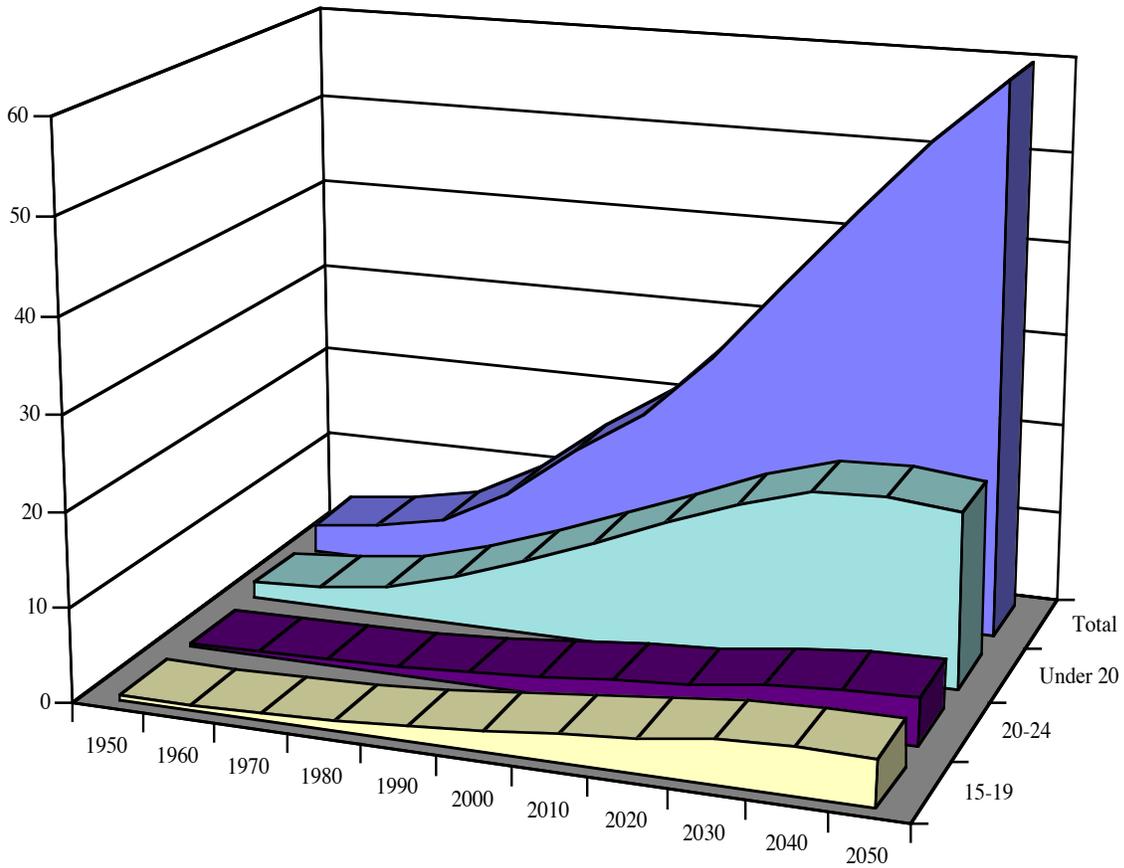


	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
15-19	0.54	0.72	0.98	1.4	1.9	2.5	3	3.8	4.2	4	3.6
20-24	0.45	0.6	0.82	1.1	1.6	2.1	2.9	3.5	4.1	4.2	3.7
Under 20	2.9	3.9	5.3	7.3	9.6	12	14.6	16.5	16.3	15.4	15.7
Total	5.2	6.8	9.4	12.9	17.3	22.9	29.9	37.1	43.1	48.4	53.6

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

Case Examples: Population Growth and the “Youth Explosion” in Saudi Arabia

(US Census Bureau Estimate - Population in Millions)

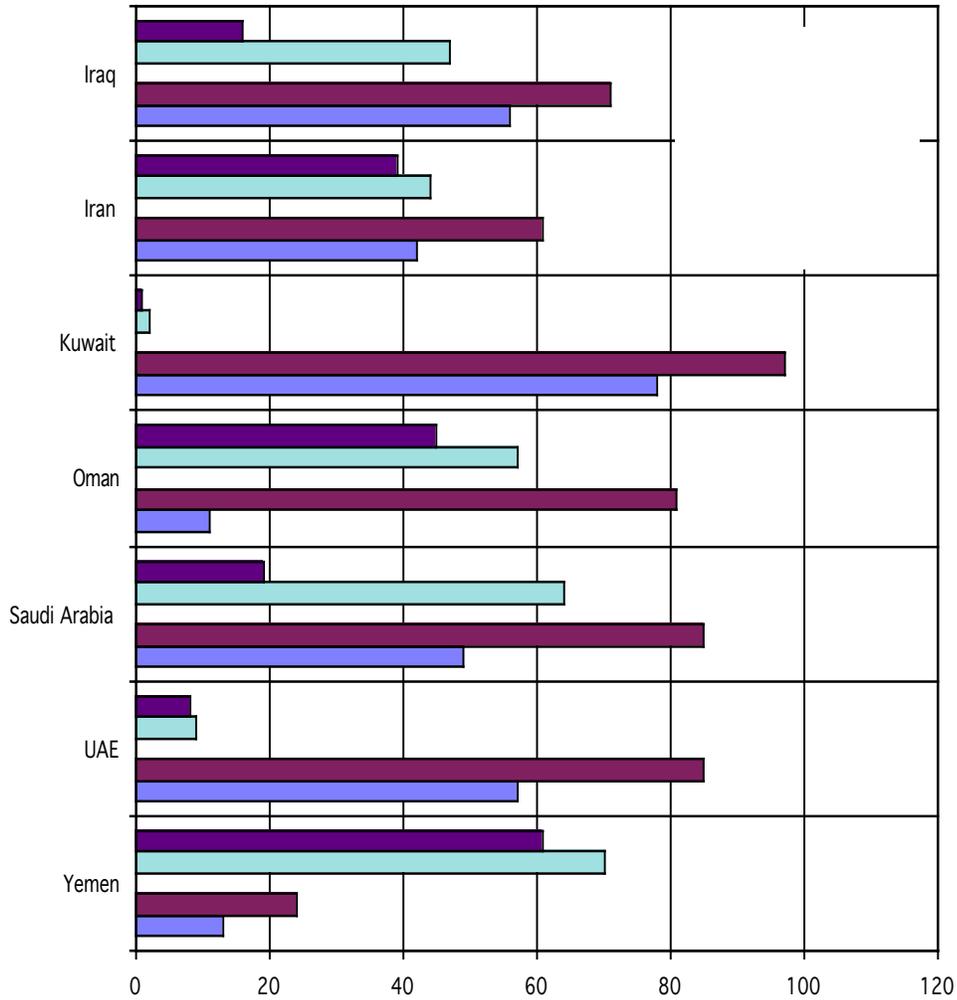


	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
15-19	0.32	0.41	0.57	0.91	1.4	2.1	2.9	3.6	4.5	4.9	4.9
20-24	0.27	0.35	0.49	0.87	1.2	1.8	2.6	3.2	4.1	4.8	5
Under 20	1.7	2.2	3.1	5.2	8	10.8	13.9	17	19.2	19.5	18.7
Total	3.2	4.1	5.7	9.6	15.4	20.3	27.6	36.1	44.8	52.7	59.7

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

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)

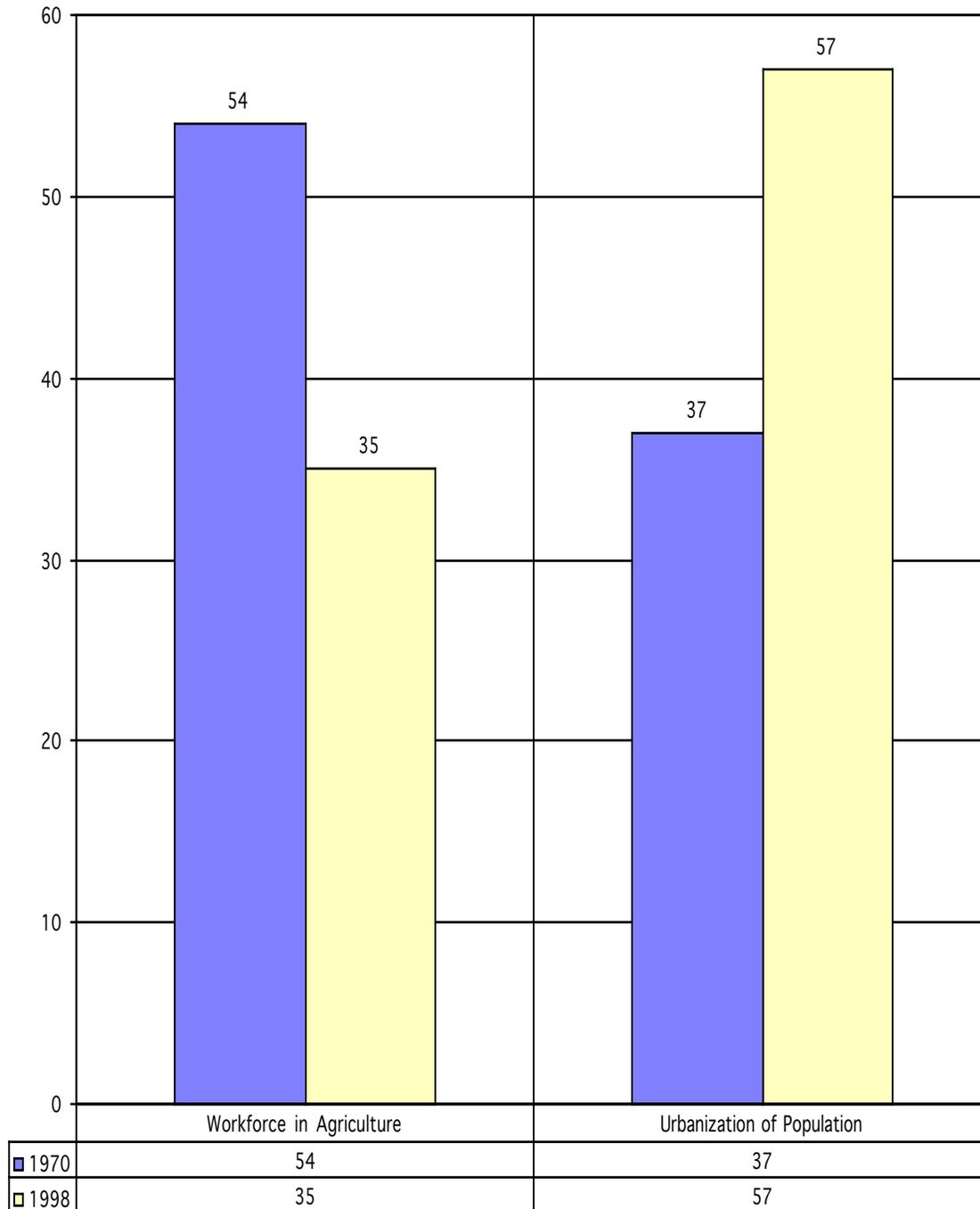


	Yemen	UAE	Saudi Arabia	Oman	Kuwait	Iran	Iraq
■ Labor in Agriculture in 1998	61	8	19	45	1	39	16
■ Labor in Agriculture 1970	70	9	64	57	2	44	47
■ .							
■ Urbanization in 1998	24	85	85	81	97	61	71
■ Urbanization in 1970	13	57	49	11	78	42	56

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

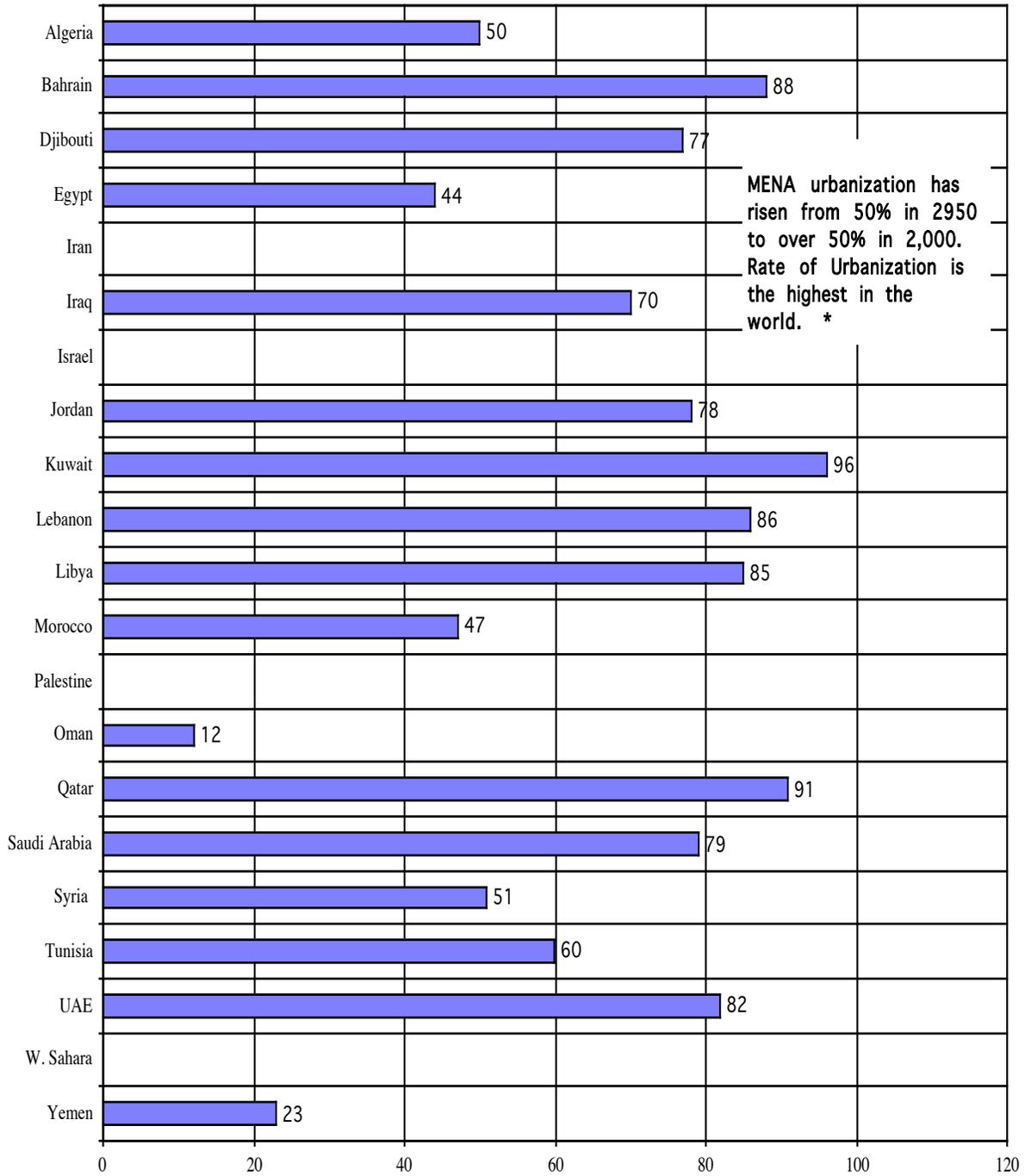
Percent of Urbanization and Percent of Labor Force in Agriculture: Shaping the Pace of Social Change in the MENA Region

(in percent)



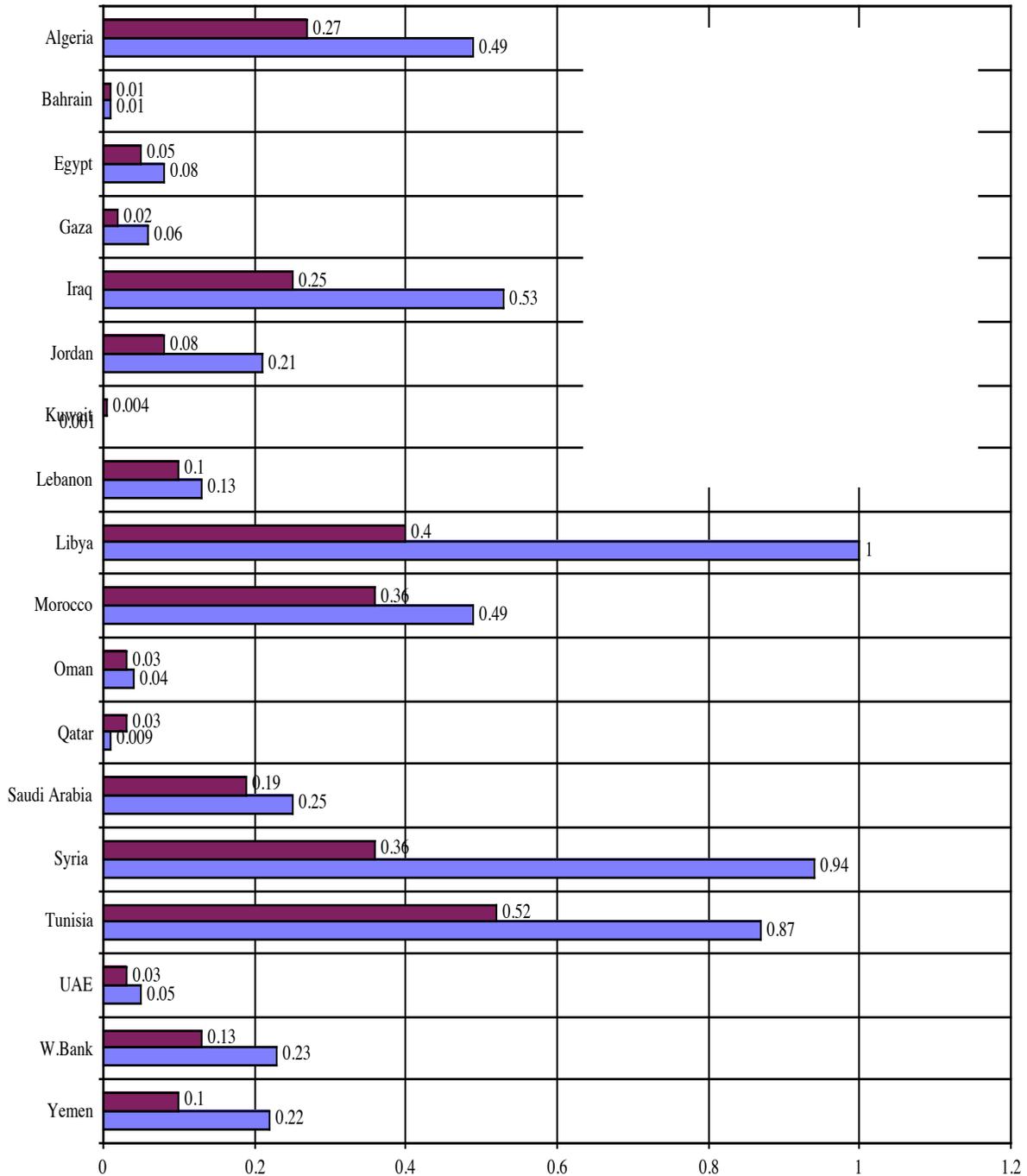
Source: Adapted by Anthony H. Cordesman World Bank, World Development Indicators, 1998 and 2000.

Arab Development Report Estimate of Urbanization



Adapted by Anthony H. Cordesman from Arab Human Development Report, 2002, p. 143. * From Arab Human Development Report, 2002, p. 45.

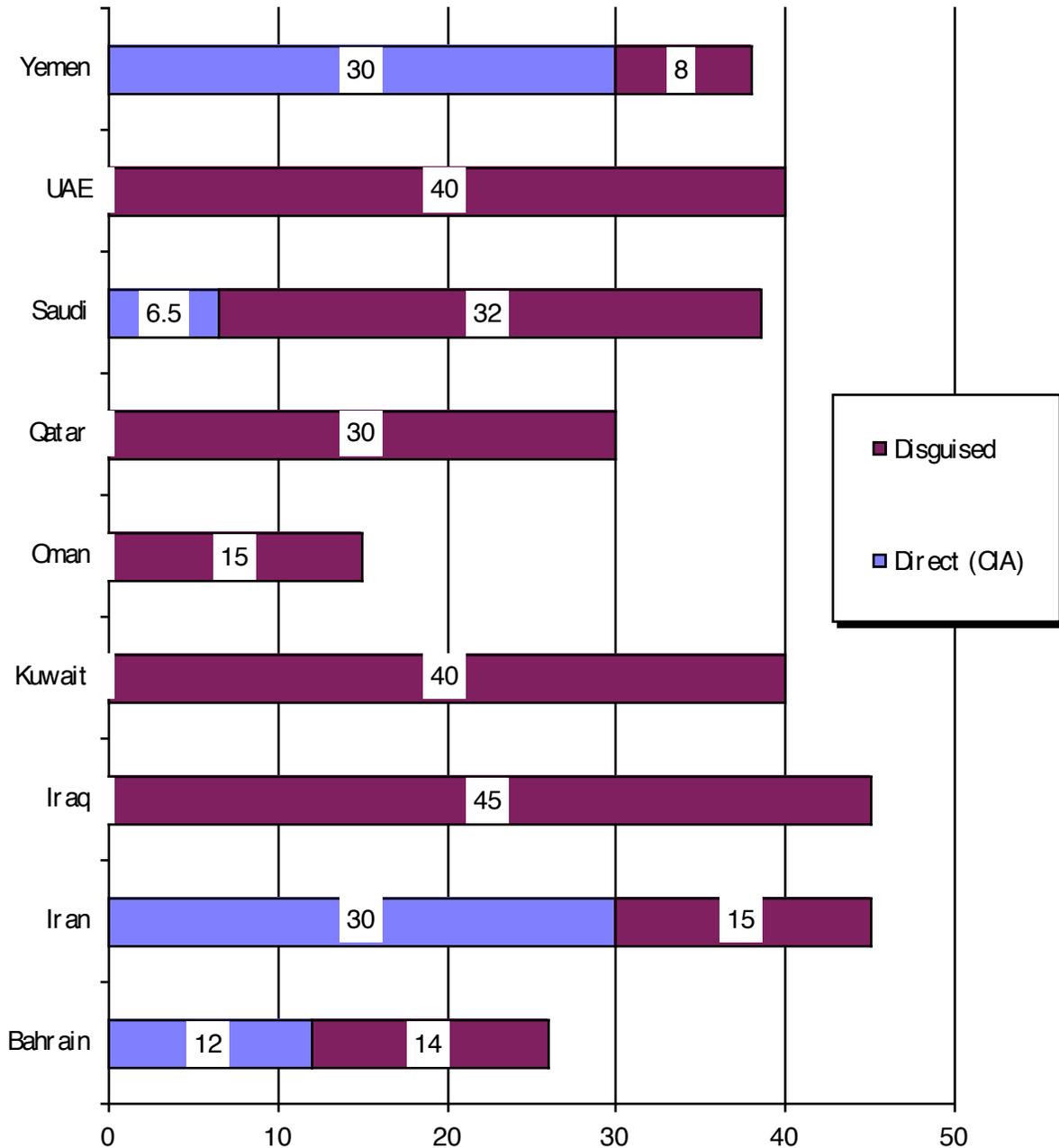
Arab Development Report Estimate of Decline in Arable Land Per Capita



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

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)



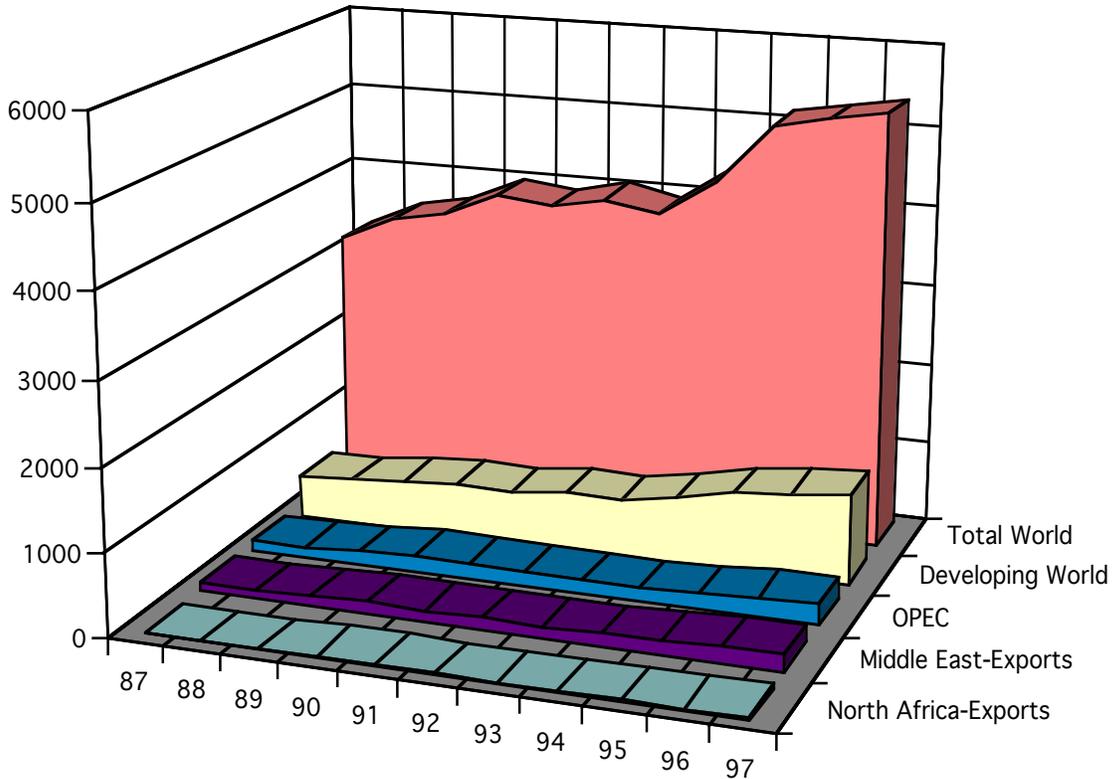
Rough estimate by Anthony H. Cordesman based on CIA and World Bank estimates for 2002. Disguised includes public sector, civil service, and private sector jobs with no use economic output.

The Region Failed to Compete in World Trade

- **Trade has “flatlined” compared to world trade and the overall patterns in developing regions.**
- **Trade surpluses have largely vanished, particularly if debt and foreign investment are included.**
- **The petroleum sector drives virtually all trade due to the lack of regional development and comparative advantage.**
- **But, Gulf countries remain a major market and trading partner.**

The Middle East and North Africa Badly Lagged in the Growth of World Trade: 1986-1997

(In Constant \$1997 US Billions)

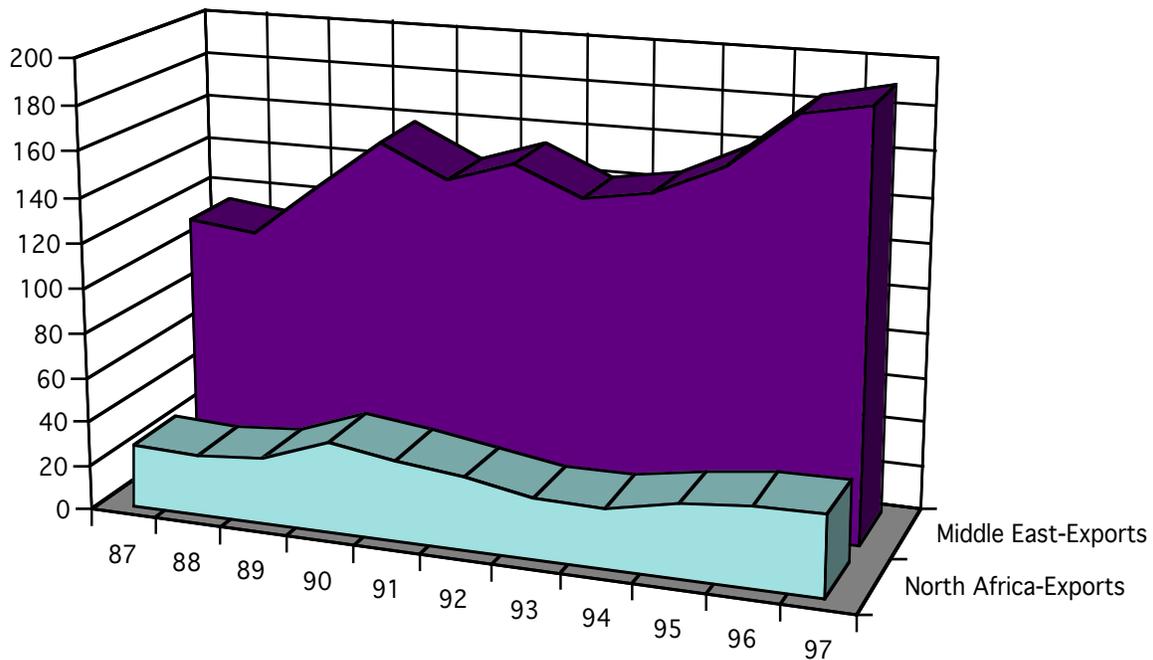


	87	88	89	90	91	92	93	94	95	96	97
North Africa-Exports	27.8	26.3	29	39.8	36	32.2	27.6	26.7	32.2	35.7	36.4
Middle East-Exports	114	110.3	134.1	157.1	143	152.4	140.3	144.7	158.9	183.2	189.5
OPEC	157.2	149.8	177.8	221.9	201.8	209.7	193.2	195.6	214.9	254.3	262.4
Developing World	519.1	558.5	607.1	667.2	648	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 ACDA, World Military Expenditures and Arms Transfers, various editions. Middle East does not include North African states other than Egypt.

The Middle East Has Exhibited Consistent Growth in Exports; North Africa Has Not

(In Constant \$1997 US Billions)

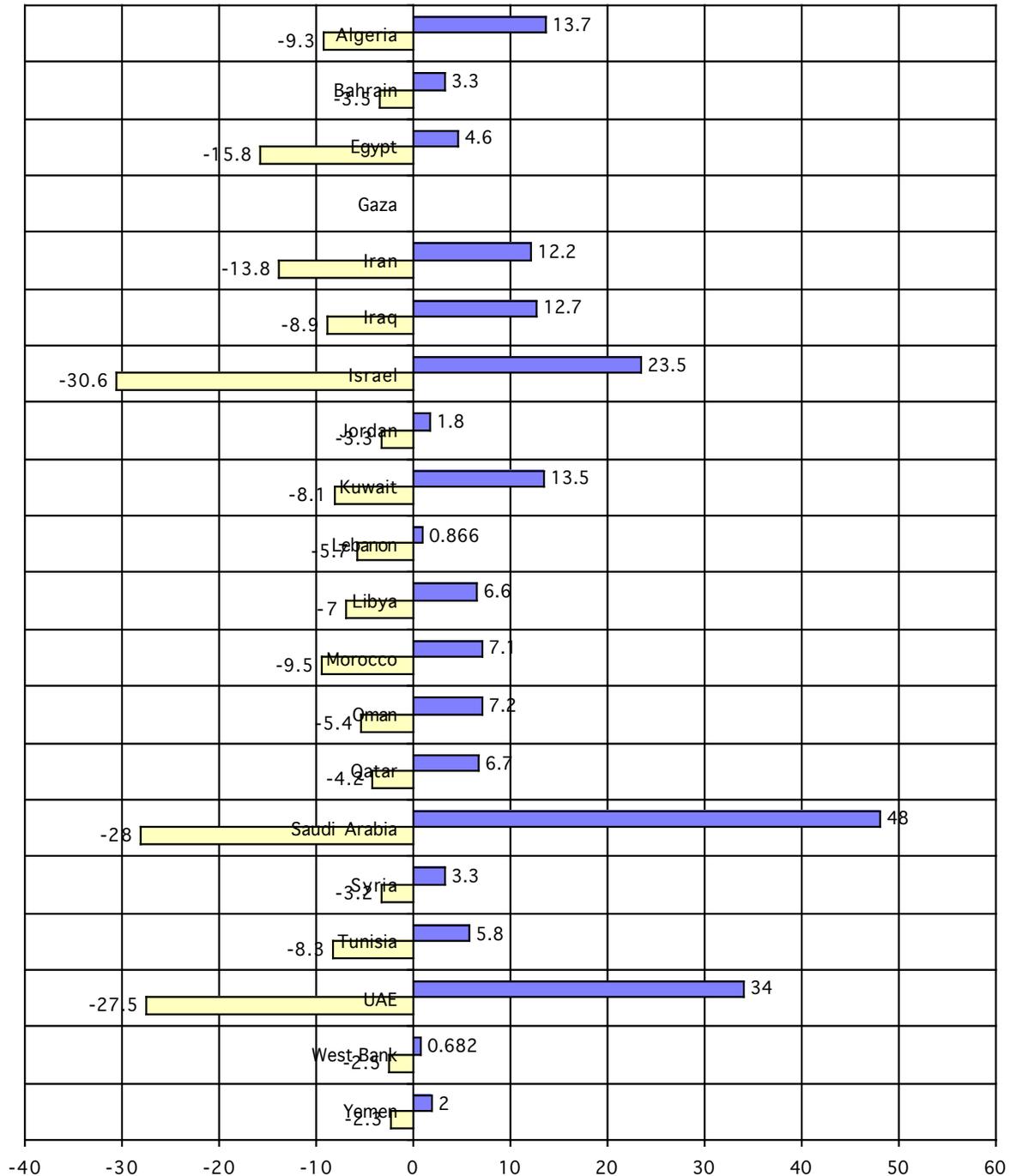


	87	88	89	90	91	92	93	94	95	96	97
■ North Africa-Exports	27.8	26.3	29	39.8	36	32.2	27.6	26.7	32.2	35.7	36.4
■ Middle East-Exports	114	110.3	134.1	157.1	143	152.4	140.3	144.7	158.9	183.2	189.5

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.

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

Oil Exports and Imports: The Future

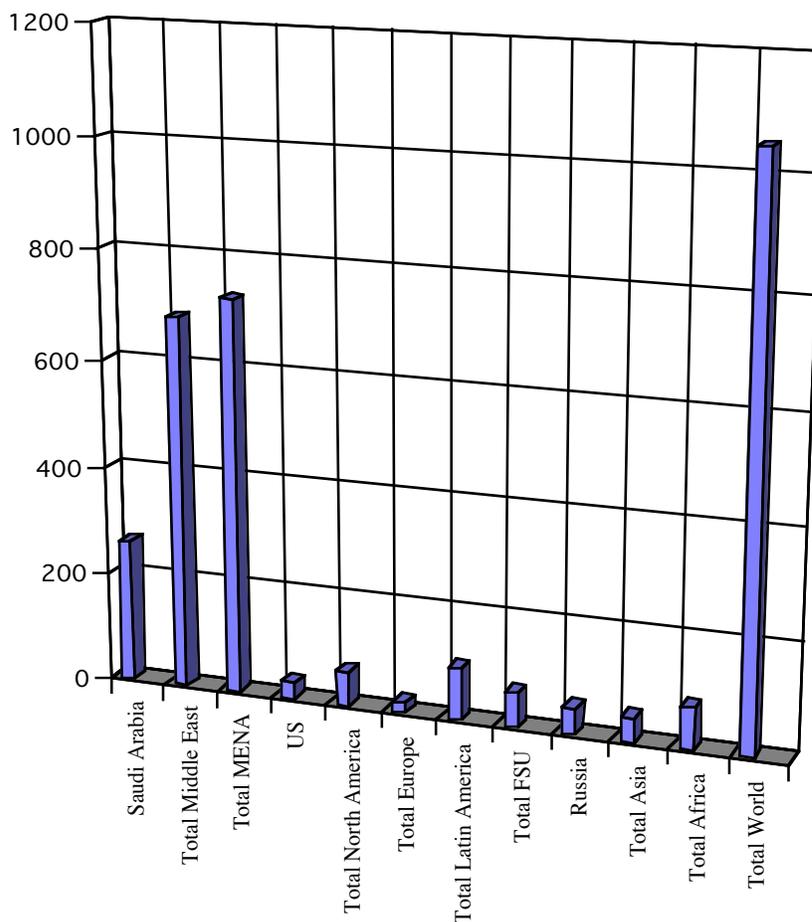
- After nearly three decades of intense effort to find commercial viable proven oil reserves outside the Middle East.
 - Current estimates indicate that the Middle Eastern and North African Arab states have between 68% and 70% of the world's reserves – a percentage nearly 10% higher than in the 1970s, when this exploration effort began.
- The Gulf alone has 65% of the world's proven reserves.
 - Russia – a high cost producer with an inefficient oil production infrastructure – may be able to sustain high levels of production for a while, but it only has 4.6% of the world's reserves.
 - The entire reserves of the Caspian and Central Asian states of the FSU only add another 2.3%.
 - The US has only 2.9%.ⁱ In contrast Saudi Arabia alone has at least 25% and probably well over 30% Iran, Iraq, Kuwait, and the UAE each have some 8-11%..ⁱⁱ
- The Department of Energy's Energy Information Agency (DOE EIA) forecasts call for significant additional energy efficiency and conservation, and increases in other fuels and renewables, Nevertheless, they still call for US direct imports of oil to increase from roughly 9.2 MMBD in 2002 to a best estimate of 26 MMBD in 2020 (a 183% increase over less than two decades), and to a range from 25 to 29 MMBD.
 - Yet, such estimates still grossly understate America's true dependence on oil imports. The US now imports around \$1.2 trillion worth of goods and services a year.ⁱⁱⁱ Many are manufactured goods from Europe and Asia that are critically dependent on imported oil, and it is clear that they would add at least another 1 MMBD to the US import level – far more oil than either the Bush energy policy or Congressional

variation on this policy in the 2002 energy bill – would save in terms of energy imports.

- If the world economy is to keep growing a moderate average rate during the next two decades, the EIA indicates that:
 - Total Middle Eastern oil production capacity must increase from 29 MMBD in 2002 to 51 MMBD by 2020 – a more than 75% increase.
 - Total Gulf capacity must rise from 24 MMBD to 43 MMBD – a nearly 80% increase. Saudi capacity alone must increase from 11.4 to 22.1 MMBD – a 93% increase.^{iv}
- World demand for oil exports will continue to steadily increase in spite of major projected increases in gas, renewables, other fuels, and energy efficiency and conservation.
- Total petroleum exports are projected to increase from 42.4 to 70.9 MMBD (a 67% increase), and exports from the Gulf from 14.8 MMBD to 33.5 MMBD (a 126% increase).
- While the US and other industrialized nations will consume part of this increase, most will be vital to the growth of less developed nations. The EIA projected that industrialized states will need another 6.2 MMBD by 2020, but that developing nations will need an increase of 17 MMBD. China alone will need 7.2 MMBD.

Middle Eastern Oil Reserves Continue to Dominate Total World Reserves

(In Billions of Barrels)



	Saudi Arabia	Total Middle East	Total MENA	US	Total North America	Total Europe	Total Latin America	Total FSU	Russia	Total Asia	Total Africa	Total World
■ Billions of Barrels	261.8	685.6	727	30.4	63.9	18.7	96	64.4	48.6	43.8	76.7	1050
■ % of World	*24.9	*65.3	*68.9	*2.9	*6.1%	*1.8	*9.1	*6.2	*4.6	*4.2%	*7.3	*100
□ R/P Ratio	*85.0	*86.8	-	*10.7	*13.5	*7.8	*38.8	*21.1	*19.1	*15.6	*27.4	*40.3

Source: BP Amoco, Statistical Review of World Energy, 2002, June 2002, www.bpamoco.com/alive.

Comparative Oil Reserves and Production Levels of the Gulf States – Part One Comparative Reserves

Comparative Oil Reserves in Billions of Barrels

<u>Country</u>	<u>Identified</u>	<u>Undiscovered</u>	<u>Identified + Undiscovered</u>	<u>Proven</u>	<u>% of World Total</u>
Bahrain	-	-	-	.2	(-0.05%)
Iran	69.2	19.0	88.2	89.7	8.6%
Iraq	90.8	35.0	125.8	112.5	10.8%
Kuwait	92.6	3.0	95.6	96.5	9.2%
Oman	-	-	-	5.5	0.5%
Qatar	3.9	0	3.9	13.2	1.3%
Saudi Arabia	265.5	51.0	316.5	261.7	25.0%
UAE	61.1	4.2	65.3	97.8	9.3%
Total	583.0	112.2	695.2	677.1	64.7%
Algeria	-	-	-	9.2	0.9%
Egypt	-	-	-	2.9	0.3%
Libya	-	-	-	29.5	2.9%
Syria	-	-	-	2.5	0.2%
Tunisia	-	-	-	0.3	(-0.05%)
Yemen	-	-	-	4.0	0.4%
Total Middle East & North Africa	-	-	-	725.5	69.4%
Rest of World	-	-	-	320.9	31.4%
(US)	-	-	-	29.76	2.8%
(North America)	-	-	-	64.4	6.1%
(Russia)	-	-	-	48.6	4.6%
(FSU)	-	-	-	65.3	6.4%
World	-	-	-	1,046.4	100.0%

Source: Adapted by Anthony H. Cordesman from estimates in US Geological survey, World Petroleum Assessment 2000, usgs.gov/energy/WorldEnergy/DDS-60; and BPAmoco, [Statistical Review of World Energy, 2001](http://www.bpamoco.com/alive), June 2001, www.bpamoco.com/alive.

Comparative Oil Reserves and Production Levels of the Gulf States Comparative Production and Production Capacity

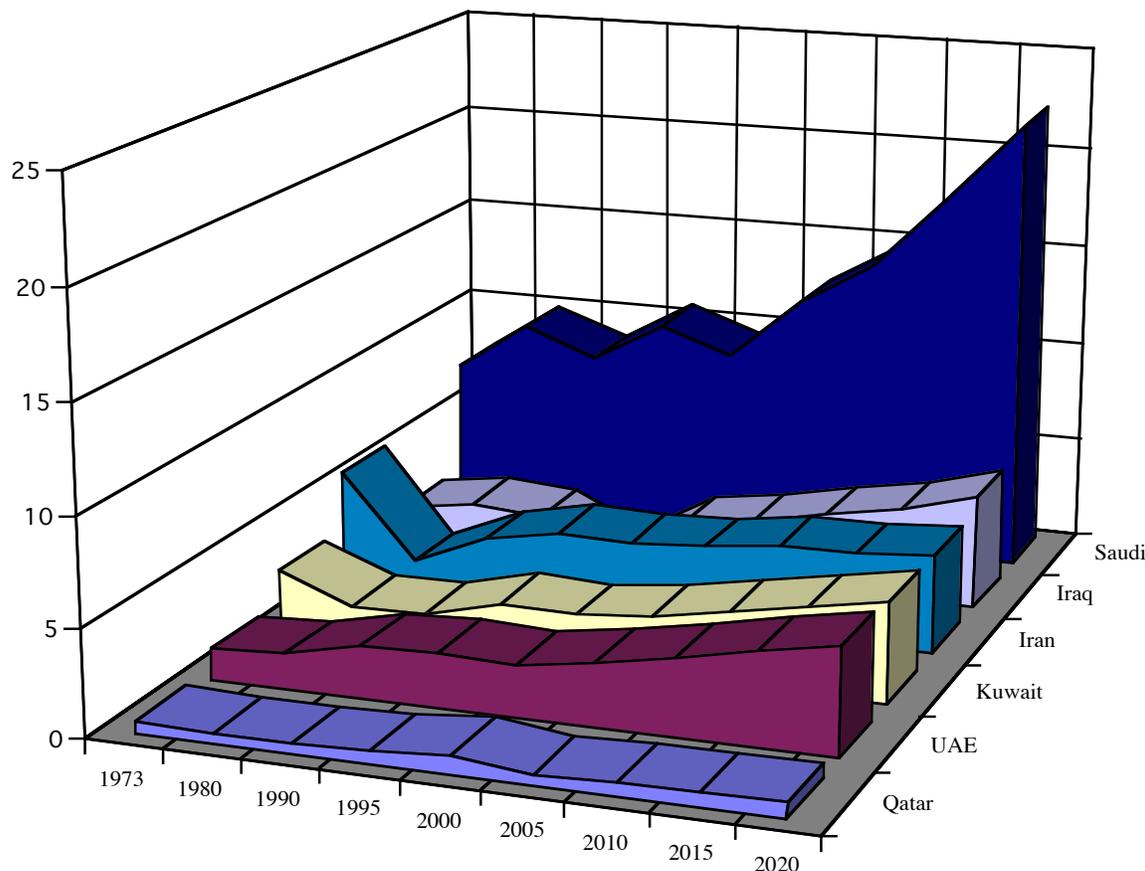
Comparative Oil Production Capacity (In Millions of Barrels Per Day)

Country	DOE Reference Case Estimate of Maximum Sustainable Production Capacity							Actual		
	1990	1995	2000	2005	2010	2015	2020	1990	1995	2000
Bahrain	-	-	-	-	-	-	-	-	-	-
Iran	3.2	3.9	3.9	4.0	4.4	4.5	4.7	3.2	3.7	3.8
Iraq	2.2	0.6	2.8	3.1	3.9	4.5	5.5	2.2	0.6	2.6
Kuwait	1.7	2.6	2.6	2.8	3.5	4.1	4.8	1.7	2.1	2.5
Oman	-	-	-	-	-	-	-	-	0.9	0.9
Qatar	0.5	0.6	0.6	0.5	0.6	0.7	0.7	0.5	0.5	0.7
Saudi Arabia	8.6	10.6	11.4	12.5	14.6	18.2	22.1	8.6	8.9	9.4
UAE	2.5	2.6	2.7	3.0	3.7	4.4	5.1	2.5	2.5	2.5
Total Gulf	18.7	20.9	24.0	25.9	30.7	36.4	42.9	18.7	19.6	21.7
Other Middle East	1.4	1.6	1.9	2.2	2.4	2.5	2.4	1.4	1.1	2.0
Algeria	1.3	1.4	1.4	1.9	2.2	2.3	2.5	1.3	1.3	1.4
Libya	1.5	1.5	1.5	2.1	2.5	2.8	3.2	1.5	1.4	1.5
Total North Africa	2.8	2.9	2.9	4.0	4.7	5.1	5.7	2.8	2.7	2.9
Total Middle East & North Africa	22.9	25.4	28.8	32.1	37.8	44.0	51.0	22.9	23.4	26.6
World	69.4	73.0	78.7	88.0	98.4	109.8	121.3	69.4	68.0	77.4
(Saudi Arabia as % Of World)	12.4%	14.5%	14.5%	14.2%	14.8%	16.5%	18.2%	12.4%	13.0%	12.1%

Source: Adapted by Anthony H. Cordesman from estimates in DOE/EIA, *International Energy Outlook, 2002*, Washington, DOE/EIA, p. 235.

The US Projects Massive Increases in Gulf Oil Production Capacity in Order to Meet Global Demand: 2000-2020

(EIA Reference Case in MMBD)



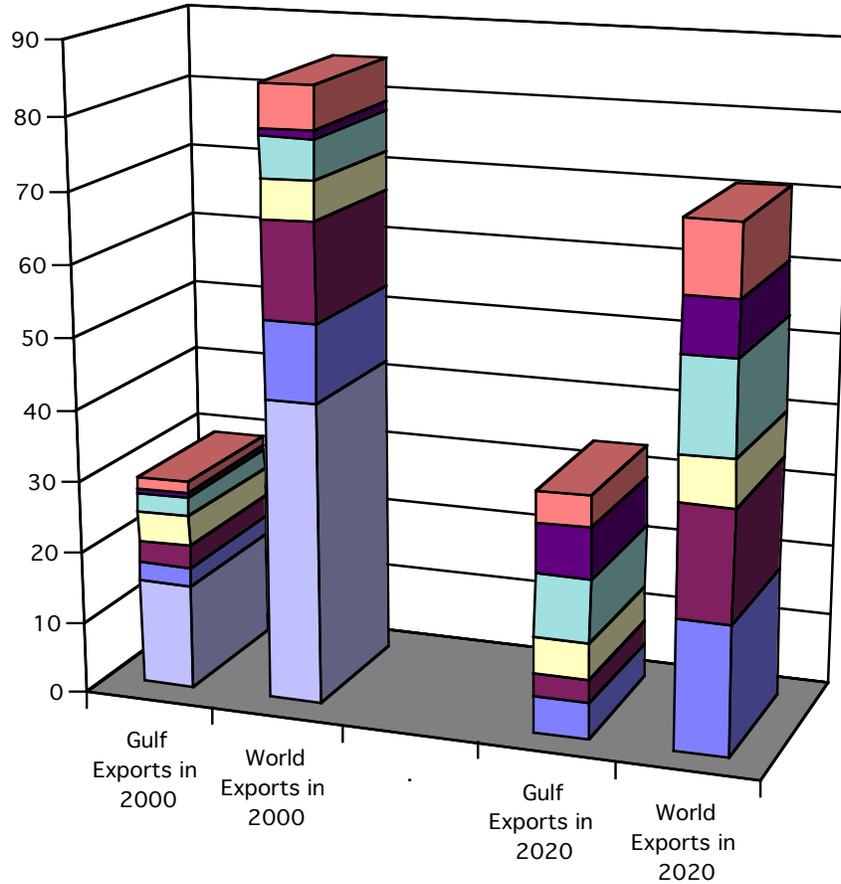
	1973	1980	1990	1995	2000	2005	2010	2015	2020
■ Qatar	0.57	0.472	0.5	0.6	0.9	0.5	0.6	0.7	0.7
■ UAE	1.533	1.709	2.5	2.6	2.5	3	3.7	4.4	5.1
■ Kuwait	3.02	1.656	1.7	2.6	2.5	2.8	3.5	4.1	4.8
■ Iran	5.8	1.662	3.2	3.9	3.8	4	4.4	4.5	4.7
■ Iraq	2.018	2.514	2.2	0.6	2.6	3.1	3.9	4.5	5.5
■ Saudi	7.596	9.9	8.6	10.6	9.4	12.5	14.6	18.2	22.1

Total Gulf	-	18.7	-	21.7	25.9	30.7	36.4	42.9
Saudi Arabia as % of Total	-	45.95	-	43.35	48.2	47.6	50.0	51.53
Total OPEC	-	27.2	-	31.4	38.4	44.8	52.0	60.2
Total World	-	69.4	-	77.4	88.0	98.4	109.8	121.3
Saudi Arabia as % of Total	-	12.4	-	12.1	14.25	14.8	16.6	18.21

Source: Adapted by Anthony H. Cordesman from EIA, *International Energy Outlook, 1997*, DOE/EIA-0484 (97), April 1997, pp. 157-160, and EIA, *International Energy Outlook, 2002*, DOE/EIA-0484 (2002), March 2002, Table D1.

The Same is True of US Projections of Gulf Oil Exports: Daily Imports by Region 2000 versus 2020

(In Millions of Barrels Per Day)



	Gulf Exports in 2000	World Exports in 2000		Gulf Exports in 2020	World Exports in 2020
Rest of World	1.5	5.9		4.3	9.9
China	0.7	1.1		7.1	7.6
Pacific Rim	2.7	5.6		8.7	13.1
Industrial Asia	4.1	5.4		5	6.5
Western Europe	3.2	13.7		3.5	15.6
North America	2.6	10.7		4.9	18.2
TOTAL	14.8	42.4		*33.5	*70.9

Gulf as % of World

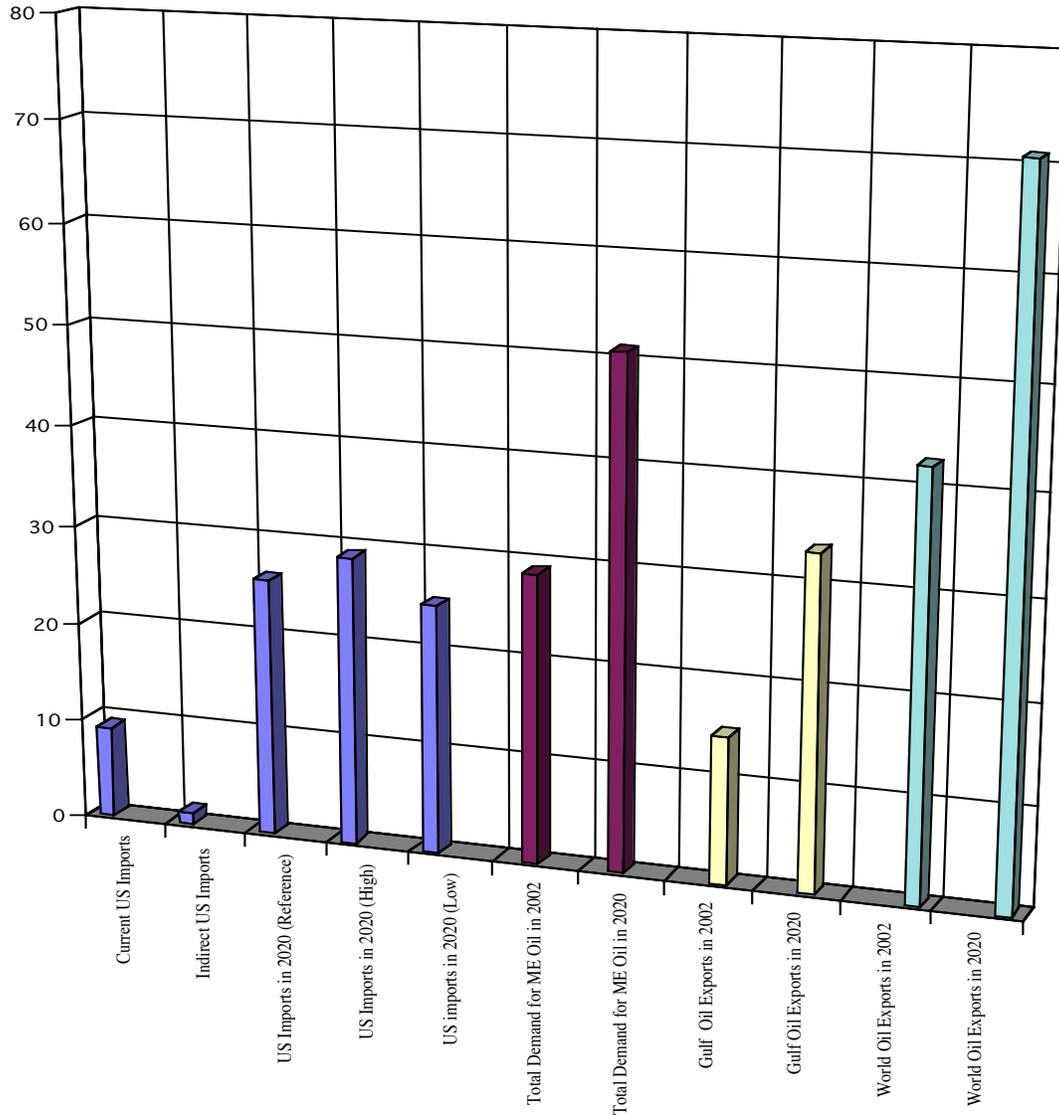
34.9%

47.2%

Source: Adapted by Anthony H. Cordesman from US Department of Energy, *International Energy Outlook, 2002*, Washington, Energy Information Agency, March 2002, Table 13, p. 38.

The Net Result is Massive Increases in US and Other Industrialized Nation Energy Dependence on Imported Oil

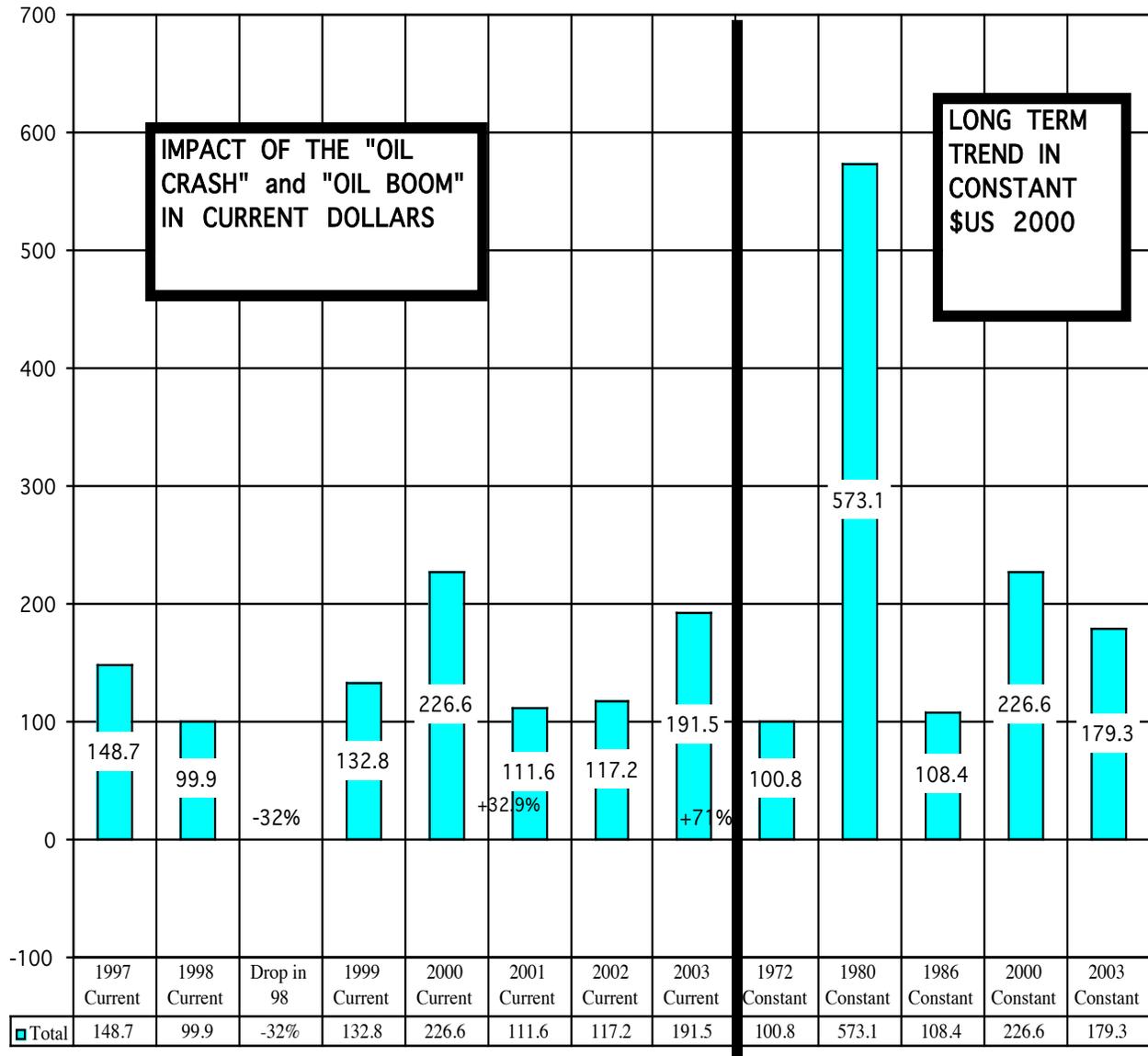
(in Millions of Barrels)



	Current US Imports	Indirect US Imports	US Imports in 2020 (Reference)	US Imports in 2020 (High)	US imports in 2020 (Low)	Total Demand for ME Oil	Total Demand for ME Oil	Gulf Oil Exports in 2002	Gulf Oil Exports in 2020	World Oil Exports in 2002	World Oil Exports in 2020
■	9.2	1.2	26	29	25						
■						29	51				
■								14.8	33.5		
■										42.4	70.9

Source: DOE/EIA, International Energy Outlook, June 2002, www.bpamoco.com/alive.

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



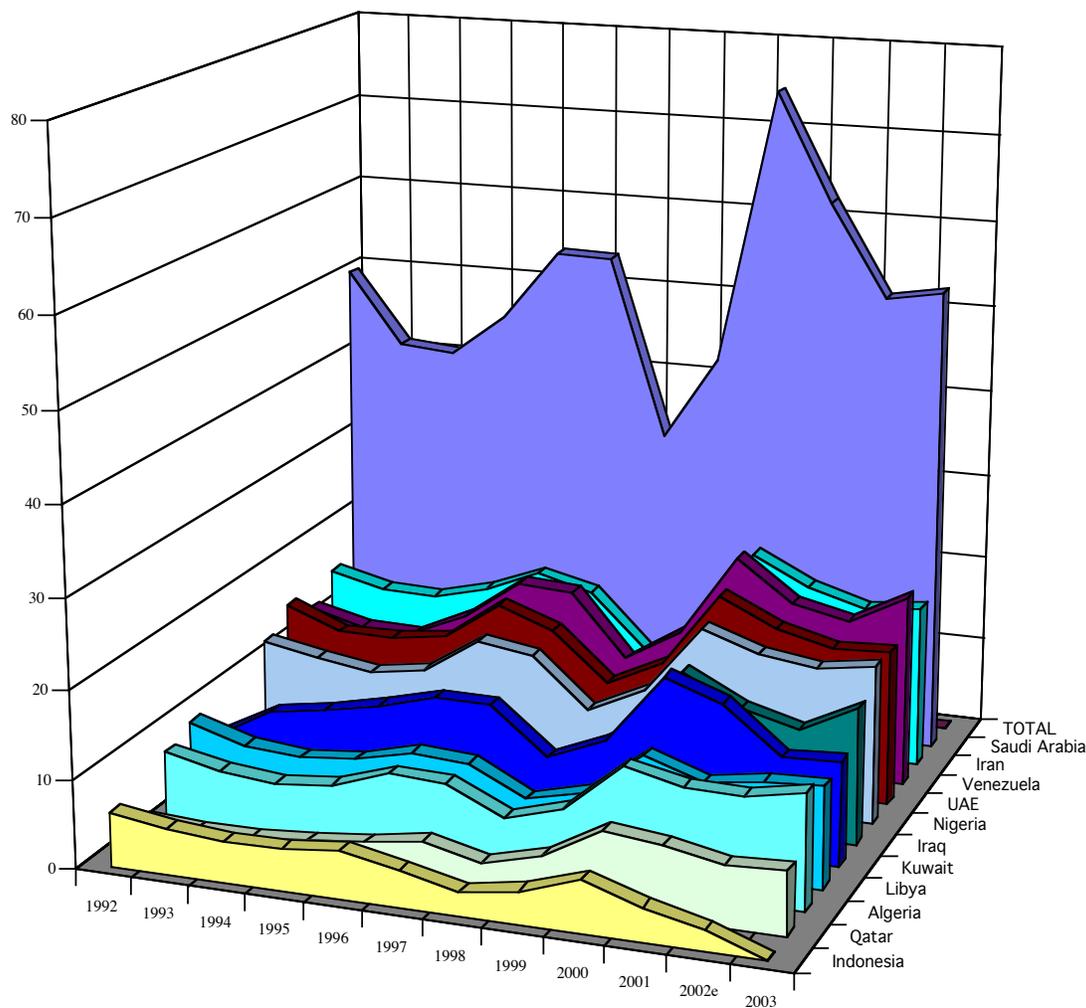
Source: Adapted by Anthony H. Cordesman from data provided by the EIA.

Demographics and Oil Wealth

- **In inflation adjusted terms, OPEC per capita oil export revenues are far below the peaks reached in the late 1970s/early 1980s.**
- **For OPEC as a whole, per capita oil export revenues (in constant \$2000) are projected at \$338 for 2003, up 2% from 2002, but, and less than one-fifth the \$1,816 per capita revenues achieved in 1980.**
 - **Iraqi oil export income was \$700 per capita in 2002 in 2000 constant dollars versus over \$9,000 in 1980..**
 - **Saudi oil export income was \$2,563 in 2001, 2000 constant dollars, versus \$23,820 in 1980.**
- **This has significant implications for OPEC oil price preferences and policies, especially combined with the fact that OPEC countries' populations are growing rapidly, and that many OPEC countries, despite their seeming oil wealth, are heavily indebted (in part as a result of low oil prices for most of the period from the mid 1980s through the late 1990s, combined with economic mismanagement, war, corruption, etc.).**
- **Models of future oil revenues relative to population through 2020 show that even Saudi Arabia's per capita oil export income will only break even in spite of major projected increases in exports because of population growth.**

“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)

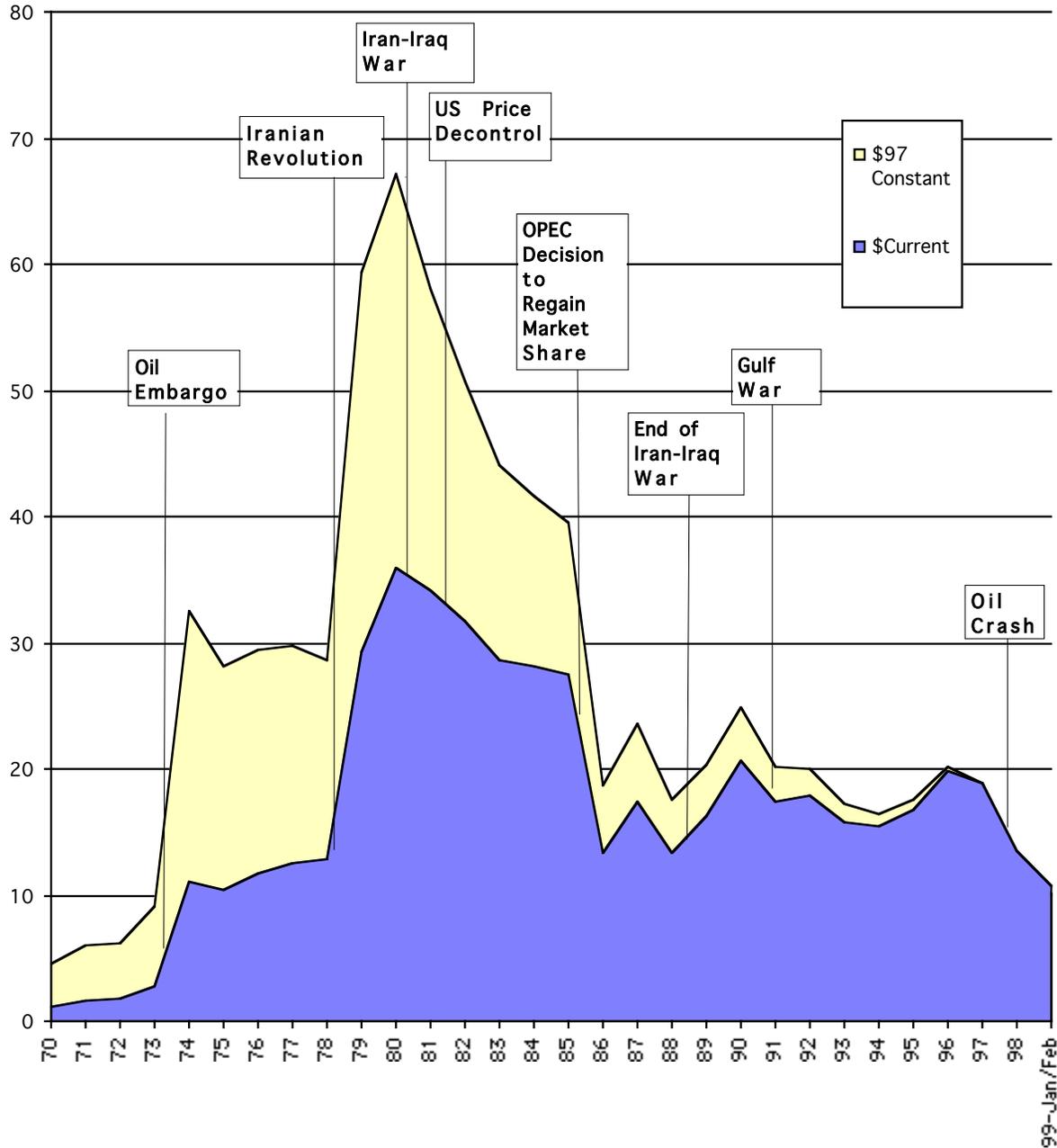


	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002e	2003
Indonesia	6.1	5.2	4.6	4.8	5.4	4.2	2.7	3.7	5.9	3.8	2.3	
Qatar	2.9	2.7	2.7	3.2	3.9	4.8	3.4	5.1	8.7	8.1	6.7	7.1
Algeria	8.4	7	6.4	7.1	9.2	8.9	5.9	7.9	13.4	12	11.8	13.1
Libya	9.6	7.7	7.1	7.7	9.3	8.9	5.7	7.3	12.3	10.1	11	11.4
Kuwait	5.9	9.4	10.3	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.

Beyond Market Forces: Oil is a Conflict-Driven Business: Politics, War, and the Trends in the Price of Saudi Arabia Light Crude: 1970-1999

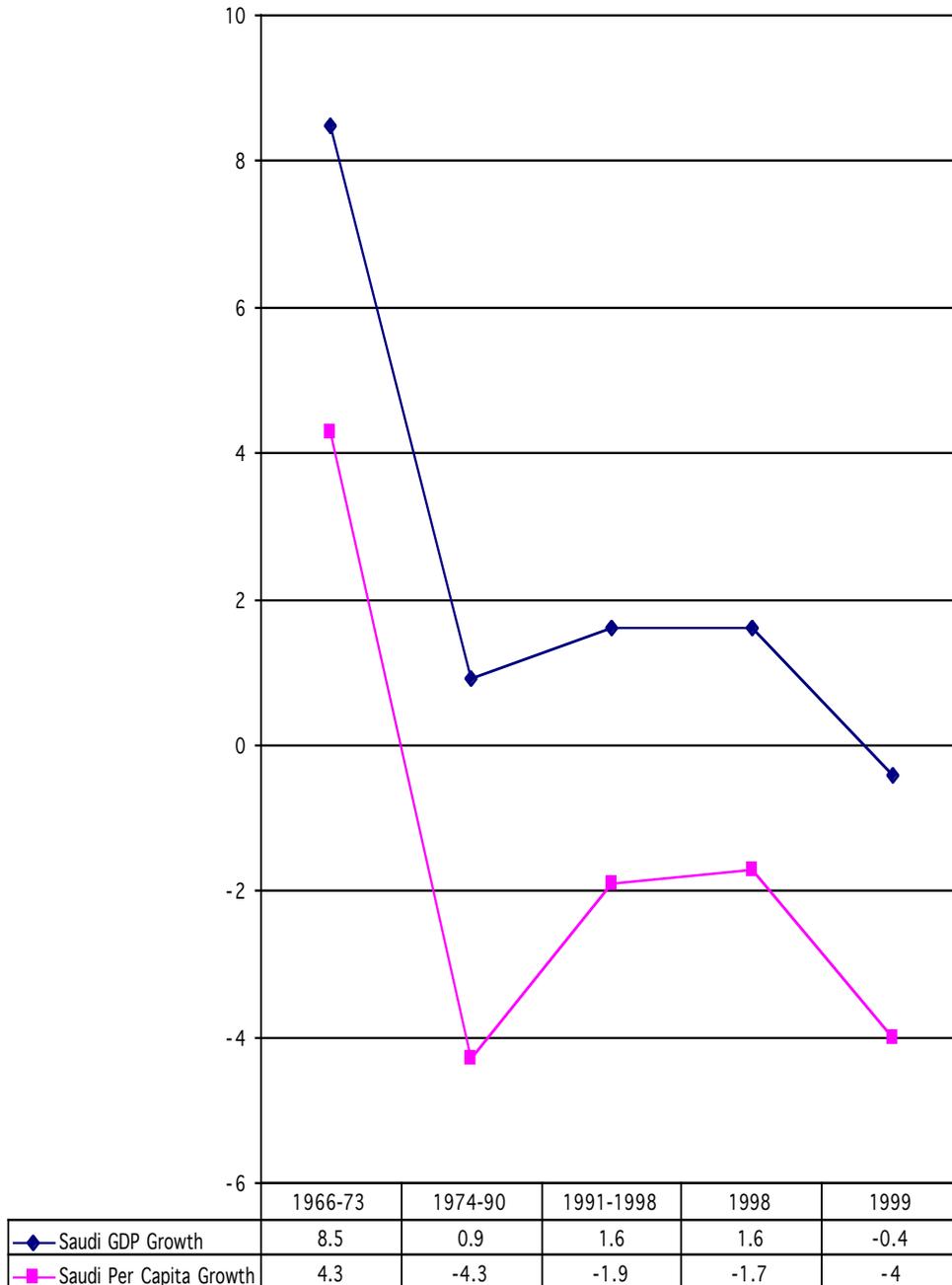
(\$US Current and \$US 1997 Constant)



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

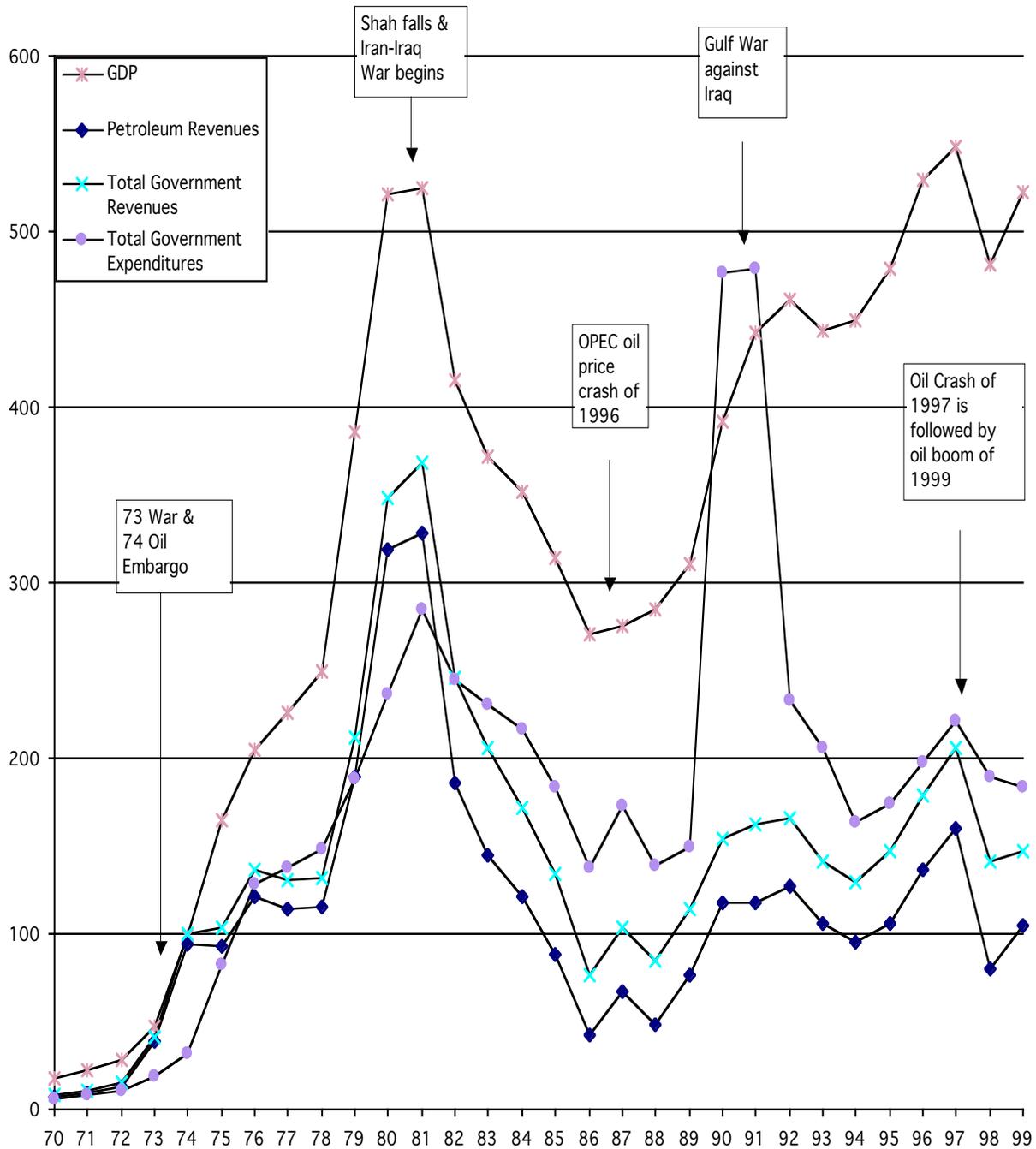
Adapted by Anthony H. Cordesman from Cambridge Energy Associates, World Oil Trends, 1998, Cambridge, Mass., 1998, pp. 26

Saudi Annual Growth in GDP and GNP Per Capita: 1966-1999 (In Percent)



Adapted by Anthony H. Cordesman from World Bank, Global Economic Prospects: 2000, Washington, World Bank, pp. 152-153

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.

ⁱ These figures are based on the estimates in the BP Statistical Review of World Energy, June 2002.

ⁱⁱ BP Statistical Review of World Energy, June 2002

ⁱⁱⁱ CIA, World Factbook 2002.

^{iv} These data, and the following figures, are based on the reference case projections by DOE EIA in International Energy Outlook, 2002.