

Yemen Gap Analysis
Strategic Planning & Analysis Division
E&E Bureau
USAID
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Highlights. Yemen is confronted with substantial economic, political, social, and security development gaps compounded by depleting vital resources. Its current multi-faceted crisis has been in train for a number of years.

(1)Yemen's development gaps. Drawing on USAID/E&E's *Monitoring Country Progress* indices, Yemen trails behind all countries in a Middle East and North Africa (MENA) sample of eleven countries in *investing in people*, and is trailed only by Syria in *governing justly and democratically*, and Iraq in *economic performance*. It is among the least *peaceful and secure* countries worldwide, and scores particularly poorly on the government's capacity to counter terrorism as well as in its ability to combat weapons of mass destruction.

Yemen has the lowest per capita income, the greatest gender disparities, the highest under-five mortality rate, the lowest life expectancy, the most significant environmental health challenges, and the lowest education enrollments rates of the MENA countries. It has had the lowest five year per capita economic growth average of the MENA region, and, alongside Iraq, has the largest economic disparities. Yemen is among the poorest performers worldwide in the development of an independent media, in the rule of law, and in the control of corruption.

(2)Yemen's economic (and resource) crisis. Economic stagnation has been the norm in Yemen's economy for years. In only two years since 1999 has Yemen's economy expanded on a per capita basis in excess of 1%. Yemen's poor economic performance is attributed in no small part to its substantial dependency on two global primary commodity markets which are characterized by excessively volatile prices: oil and food. Hydrocarbons account for 30 percent of GDP, nearly 75 percent of government revenues, and over 90 percent of foreign exchange earnings. Up to 30 percent of Yemen's merchandise imports are food imports.

Yemen is on track to run out of oil, perhaps by 2020. Yemen's steady decline in oil production began in 2003. The extreme fluctuations in the price of oil in recent years have to some extent masked the challenges and harmful impact of being dependent on such a critical depleting resource. Today the price of oil is higher in inflation-adjusted terms than it has ever been. The historically high price of oil boosts Yemen's economic and fiscal prospects in the immediate term, though likely to the detriment of Yemen's medium-term and long-term economic prospects.

Food imports in Yemen have increased substantially since 2002 in dollar terms. Much of that increase is likely attributed to substantially increasing food prices. Global food prices rose gradually from 2003 to 2006 and then, to a great extent mirroring oil price trends, increased substantially in 2007 to early 2008, decreased substantially in the latter half of 2008, only to resume price increases in 2009 through 2011. As with oil prices, food prices are currently at historic highs.

Yemen's economic crisis is partly a fiscal crisis brought on in no small by falling oil exports and growing food imports. Yemen's fiscal crisis has been in the making for a number of years. Both the current account balance and the fiscal balance have been deteriorating since the early 2000s.

Yemen is also on track towards depleting its supply of fresh water. This resource constraint may ultimately be more challenging than oil. There are alternatives to oil; there are no alternatives to fresh water. Internal renewable fresh water per capita in Yemen is among the lowest worldwide, and usage has been exceeding the rate of renewal. Yemen has the sixth highest rate of water depletion in the world, with over 50% of its territory affected by overuse.

(3) Yemen's social (and food security) crisis. There is evidence that alongside a stagnating economy, Yemen's poverty rate has increased and with it, food insecurity. While the poverty rate varies widely across the governorates, from over 65% in Amran to under 15% in Al-Maharah, poverty increased across all the governorates from 2005 to 2010 except for one, Shabwah.

A macro measure of food security is an economy's total exports relative to food imports. In 2002, it took 14% of Yemen's export revenues to pay for food imports. By 2009, it took 33% of export revenues to pay for food imports. More recently, with higher food prices and fewer oil exports, food insecurity by this measure is likely greater still. The International Food Policy Research Institutes' *2010 Global Hunger Index* designates Yemen's food security challenges as "alarming," comparable to food security challenges found in much poorer Sub-Saharan African countries as well as in Haiti. The percentage of stunting in children under five years of age is estimated to be 56% in Yemen, second only in the world to Afghanistan, and the percentage of underweight children is 46%, the third highest rate after India and Bangladesh.

As with poverty rates, food insecurity varies widely within Yemen, across its governorates. Most governorates (12 out of 19 for which data were available) had at least 30% of its population deemed food insecure in 2009 by the World Food Programme (WFP). According to the WFP, increasing food prices in 2009 were perceived to be problematic for far more households than the significant challenges stemming from water scarcity, high fuel prices, or high health expenditures. Given the significant rise in food prices since then, current concerns about rising food prices and the possible repercussions from those concerns are likely only to be heightened further still in today's Yemen.

Introduction. This analysis attempts to examine the available evidence of key development trends and gaps in Yemen. This includes: (1) Yemen’s development profile and salient gaps compared primarily to the Middle East; (2) evidence of Yemen’s worsening economic and social crises; and (3) contributing factors behind the current crises in Yemen, including trends towards the depletion of key resources (oil and water), food insecurity, and the considerable economic and social disparities within Yemen.

Yemen vs. the Middle East (Figures 1-7, Tables 1-5). We draw on the dataset and methodology of the Europe & Eurasia Bureau’s *Monitoring Country Progress* (MCP) system for this first part of the analysis. The core of the MCP system consists of five indices: (1) economic reforms; (2) governing justly and democratically; (3) economic growth and performance; (4) investing in people; and (5) peace and security. We use readily available public data and standardize the metrics to a 1 to 5 scale in which a 5 represents the most advanced standards worldwide. Primary sources of data for MCP Global include the World Bank, Freedom House, UNDP, UNICEF, UNODC, U.S. Department of State, U.S. Department of Commerce, and USAID. The Appendix elaborates on the sources of data, the indicator definitions, and the MCP methodology.

Figure 1 provides an overview of Yemen’s development progress across four of the five MCP indices compared to progress on average of the eleven-country Middle East and North Africa (MENA) region. The MENA region includes Iraq, Syria, West Bank/Gaza, Yemen, Lebanon, Egypt, Morocco, Jordan, Algeria, Tunisia, and Turkey. Each circle on this chart represents a country observation, and hence provides a view of the distribution of performance across the Middle East. Yemen’s development progress lags well behind the MENA average on all four dimensions: on economic reforms; governing justly & democratically; economic growth & performance; and in investing in people. Yemen lags the most in investing in people (i.e., in health, education, per capita income, and gender inequality).

Figures 2 and *3* (and *Tables 1-4*) reinforce the results of *Figure 1*, and identify specific country results in the MENA region as well as in a handful of comparison countries outside the region. Yemen trails behind all other MENA countries in investing in people. Of the MENA countries, only Syria lags more than Yemen in governing justly and democratically, and only Iraq lags more in economic performance. *Figure 4* and *Table 5* show the results of the MCP peace and security index with a limited global dataset. The results underscore, not surprisingly, that Yemen is among the least peaceful and secure countries worldwide, though, at least according to these largely 2009-2010 data, Yemen is not the least peaceful and secure in the world; Pakistan secures that distinction.

Figures 5-7 show the components of the five MCP indices in a series of “spider” charts. The blue area denotes Yemen’s progress on that dimension; the greater the blue area, the greater the progress. The red lines represent the progress of other countries so as to compare. The overall picture is one of a country with considerable challenges across the development spectrum, a country which is among the poorest performers worldwide on a host of dimensions (i.e., with scores of a “1” or close to a “1”).

In economic reforms, Yemen lags the most in economic governance and effectiveness, and in fiscal reform. It is currently in fiscal crisis and has incurred significant fiscal deficits in recent

years. In governing justly, Yemen is among the poorest performers worldwide in the development of an independent media, in the rule of law, and in the control of corruption. Results from a World Bank enterprise survey shown in *Figure 8* underscore the challenges stemming from corruption and inadequate rule of law. In investing in people, Yemen has the lowest per capita income, the greatest gender disparities, the highest under-five mortality rate, the lowest life expectancy, the most significant environmental health challenges, and the lowest education enrollments rates (primary, secondary, and tertiary rates combined) of the MENA countries (*Table 4*).

Macroeconomic performance gaps are also significant. Yemen has had the lowest five year per capita economic growth average of the MENA region. Alongside Iraq, it has the highest economic disparities between ethnic and religious groups (i.e., “uneven development”). It has among the least developed financial sector in the region (i.e., extremely low domestic credit as a % of GDP), and the least developed export sector (only about 2% of its exports are manufactured goods). Yemen scores higher than or close to the MENA average on three macroeconomic performance indicators: environmental sustainability; energy security; and macroeconomic stability. However, as will be elaborated below, progress in all three aspects is likely to be short-lived at best. On peace and security, Yemen scores particularly poorly on the government’s capacity to counter terrorism as well as in its ability to combat weapons of mass destruction.

Yemen’s economic (and resource) crisis (Figures 9-21). Over the medium term, Yemen’s economy has been keeping pace with global economic growth (*Figure 8*). From 1999 through forecasts to 2012, economic growth in Yemen is estimated to be 3.6% compared to 3.8% world economic growth. However, this comparison masks that Yemen’s economy actually accelerated its growth during the global economic crisis (from 2008 to 2010), and that during the several years prior to the global economic crisis (from 2004-2007 in particular) as well following the crisis (forecasted trends in 2011-2012), Yemen’s economy has performed or is performing well below global standards.

Economic crisis or at least economic stagnation in Yemen becomes apparent when Yemen’s rapid population growth is taken into account. Population growth in Yemen is among the highest worldwide. From 1990-2009, average annual population growth in Yemen was 3.4%. This compares to 0.7% growth among the high income developed countries of the world, 2.0% in the Middle East and North Africa, and 2.3% in all the low-income developing countries of the world. Current estimates of population growth in Yemen range from 2.9% to 3.2%. Hence per capita economic growth in Yemen is much lower than economic growth, and compares much less favorably to global standards than GDP expansion alone (*Figure 10*). More specifically, in only two years since 1999 has Yemen’s economy expanded on a per capita basis in excess of 1% (in 2000, 2% and 2010, 3%). On a per capita annual average basis, Yemen’s economy is likely to expand by only 0.4% from 1999-2012. It is currently contracting. *Figure 11* provides another basis of comparison: Yemen’s per capita economic growth of 0.4% during 1999-2012 compared to 5.4% in Tunisia, Morocco, and Lebanon on average.

Yemen’s poor economic performance is attributed in no small part to its dependency on and vulnerability towards two global primary commodity markets which are characterized by excessively volatile prices: oil and food (*Figure 12*). Hydrocarbons account for 30 percent of

GDP, nearly 75 percent of government revenues, and over 90 percent of foreign exchange earnings. Twenty-five to thirty percent of Yemen's merchandise imports are food imports.

Yemen is on track to run out of *oil* (*Figure 13*). Drawing on production estimates from the Economist Intelligence Unit, extrapolating them forward, and assuming no additional oil is discovered in Yemen (obviously important and very plausibly inaccurate), we estimate that oil production could cease by 2020. Yemen's steady decline in oil production began in 2003. Ironically, another contributing factor is the impact of the current crisis in Yemen which has resulted in a reduction in oil production, perhaps significantly. If this trend is sustained, oil depletion in Yemen will be slowed though obviously at substantial short-term costs.

While the volume of oil production in Yemen has been declining since 2003, Yemen's oil exports (in \$) continued to increase significantly from 2003 to 2008 (*Figures 14 and 15*). These exports dropped substantially in 2009 and, at least according to forecasts for 2011 and 2012 from the Economist Intelligence Unit's March 2011 *Yemen Country Report*, are likely to remain relatively low in the near future. The price of oil accounts for much of these trends and the extreme fluctuations (*Figure 16*). From 2003-2008, the price of oil skyrocketed to historic levels, then plummeted in 2009 only to increase rapidly again in 2010 and to date in 2011. Today the price of oil is higher in inflation-adjusted terms than it has ever been. The historically high price of oil boosts Yemen's economic and fiscal prospects in the immediate term, though likely to the detriment of Yemen's medium-term and long-term economic prospects.

Food imports in Yemen have increased substantially since 2002 in dollar terms (*Figure 17*). Much of that increase is likely attributed to substantially increasing food prices (*Figure 18*). According to the Food and Agricultural Organization's food price index, global food prices rose gradually from 2003 to 2006 and then, to a great extent mirroring oil price trends, increased substantially in 2007 to early 2008, decreased substantially in the latter half of 2008, only to resume price increases in 2009 through 2011. As with oil prices, food prices by this measure are currently at historic highs. As a percentage of total merchandise imports, food imports in Yemen are currently close to 30%, up from 25% in recent years past.

Yemen's economic crisis is partly a fiscal crisis brought on in no small by falling oil exports and growing food imports. *Figures 19 and 20* suggest that Yemen's fiscal crisis has been in the making for a number of years. Both the current account balance and the fiscal balance have been deteriorating since the early 2000s; the surpluses of the late 1990s and early 2000s have given way to growing and consecutive deficits which are ultimately not sustainable. With the current crisis, government spending has apparently increased substantially, and tax revenues have decreased; i.e., the fiscal deficit in 2011 may be notably greater than projected in *Figure 20*.

Yemen is also on track towards depleting its supply of *fresh water*. This resource constraint may ultimately be more challenging than oil. There are alternatives or energy substitutes to oil; there are no such alternatives to fresh water. Internal renewable fresh water per capita in Yemen is among the lowest worldwide (*Figure 21*); according to the World Bank, in only four countries in 2007 (latest year of available data) was it lower than in Yemen: Egypt; Kuwait; Qatar; and the United Arab Emirates.

Moreover, fresh water usage in Yemen has been exceeding the rate at which water is being renewed. Yale and Columbia University scholars have developed the *Environmental Performance Index* which includes two indicators which pertain to water depletion. One is referred to as the water scarcity index; this is essentially the ratio of fresh water usage to the renewal of fresh water for a given country as a whole. The second indicator is referred to as the water stress index; this is the proportion of a given country's territory where water is being overused (where usage exceeds renewal). A country can have a certain proportion of its territory which is overusing water and yet not be depleting its fresh water overall.

According to the data from the *Environmental Performance Index* (which draws from the FAO's Aquastat dataset), there are twenty five countries (out of the global sample of 156 countries) where fresh water depletion is occurring. We show those countries in two charts. *Figure 22* highlights the top six water depleting countries of the world (employing the water scarcity index) and couples those data with the proportion of the country's territory which is affected by overuse (i.e., the water stress index). By these calculations, the United Arab Emirates has the highest rate of water depletion in the world. Yemen has the sixth highest rate of water depletion, with over 50% of its territory affected by overuse. *Figure 23* repeats the results of Yemen and Qatar and brings in the remaining countries which are incurring water depletion. All except two of the twenty-five countries are in the Middle East and North Africa or in Central Asia. The two exceptions are Bulgaria and Belgium. *Figure 24* shows the trends of renewable water resources per capita over time in six of these water depleting countries. The trends are largely consistent with the results in *Figures 22* and *23*, namely, renewable water resources on a per capita basis have been declining in these countries since at least 1992. The decline in renewable water resources per capita in Yemen is among the more pronounced of the six countries.

A number of reports and/or articles have contended that Sanaa, Yemen's capital, may run out of water ranging in time from 2017 to 2025. Two pieces of evidence to support this are found in *Figure 25*. One, groundwater levels in the Sanaa basin have presumably dropped from less than 30 meters below the surface in the early 1970s to around 270 meters by 2010. The water supply has become increasingly inaccessible. Two, the demand for that water has grown substantially; population growth in Sanaa is reportedly 7 percent per year, by at least one account, the fastest growing population of any capital city in the world.

Yemen's social (and food security) crisis. As noted above (and shown in *Table 4*), Yemen's social indicators are dismal. On most dimensions in health and education, poverty and income, Yemen is the least developed of the MENA region. Gender disparities are a key part of that. Females in Yemen are much less likely to participate in the education system or in the work force than are males (*Figures 26* and *27*). For Yemeni women, the contraceptive prevalence rate is 27.7% compared to the regional average of 42.8%, and the fertility rate for adolescent girls is 80 (number of births per 1000 girls aged 15-19) compared to the regional average of 35. Approximately 36% of births are accompanied by a skilled birth attendant (regional average of 59%).

Still, some of Yemen's social indicators have shown progress in recent years. From 1999-2009, life expectancy in Yemen increased by 4 years, from 59 to 63. During the same time period, life expectancy in Tunisia increased by 1 year, from 73 to 74; Egypt by 2 years, from 68 to 70. From

2000 to 2009, under-five mortality rate decreased in Yemen by 34 deaths per 1,000 live births, from 100 to 66. During the same time period, under-five mortality rate decreased by 6 deaths in Tunisia, from 27 to 21; in Egypt, by 26 deaths, from 47 to 21. From the early 2000s to 2008-2009, adult literacy rate increased by 7 percentage points in Yemen, from 55% to 62%; in Tunisia by 4 percentage points, from 74% to 78%.

However, there is also evidence that alongside a stagnating economy, Yemen's poverty rate has increased and with it, food insecurity. *Figure 28* shows estimates of Yemen's poverty rates across the 21 governorates in two time periods. By this measure, 43% of Yemen's population was in poverty in 2010, an increase from 35% in 2005. While the poverty rate varies widely across the governorates, from over 65% in Amran to under 15% in Al-Maharah, poverty increased across all the governorates during this time period except for one, Shabwah.

A macro measure of food security is an economy's total exports relative to food imports. The lower is this ratio, the greater is the proportion of export revenues needed to pay for food imports. For Yemen in recent years, the ratio of exports to food imports peaked in 2002 and has substantially fallen since then through 2009, latest year of available data (*Figure 29*). In 2002, it took 14% of Yemen's export revenues to pay for food imports. By 2009, it took 33% of export revenues to pay for food imports. More recently, with higher food prices and fewer oil exports, food insecurity by this measure is likely greater still.

Figure 30 provides another measure of food security which allows for cross-country comparisons. This is the International Food Policy Research Institute's *2010 Global Hunger Index (GHI)*. The GHI incorporates three hunger-related indicators: the proportion of undernourished in the population; the prevalence of underweight in children, and the mortality rate of children. The 2010 GHI reflects data from 2003-2008 and is calculated for 122 countries. Results in the scores range from "<5" (for 38 countries which include 6 of the eleven MENA countries, Algeria, Egypt, Jordan, Libya, Tunisia, and Turkey) to 41 (the Democratic Republic of Congo). Five categories are assigned to the scores: low; moderate; serious; alarming; and extremely alarming.

Figure 30 shows Yemen as the significant "outlier" of the MENA region; the poorest country and the one with much greater food security challenges than the rest. More specifically, Yemen scores a 27.3 which falls inside the "alarming" range (of 20.0-29.9).¹ Of the 122 country sample, only 4 countries are considered to have "extremely alarming" food security situations: the Democratic Republic of Congo, Burundi, Eritrea, and Chad. Yemen's hunger challenges by this measure are comparable to those found mostly in Sub-Saharan Africa, including Angola, the Central African Republic, and Madagascar. Comoros, Haiti, and Sierra Leone have GHI scores only slightly worse than Yemen's; Niger, Liberia, and Zambia have GHI scores only slightly better. Most of these comparison countries are also much poorer by per capita income standards than is Yemen. Compare Yemen's per capita income of \$2,330 with average income in the

¹ The data underlying the index in the case of Yemen are: 32% of the population undernourished in 2004-2006 (an increase from 30% in 1990-1992); 43.1% of underweight children under five years in 2003-2008 (down from 47.7% in 1988-1992); and an under five mortality rate of 69 deaths per 1,000 live births in 2008 (down from 127 deaths in 1990).

Central African Republic (\$750), Madagascar (\$990), Niger (\$680), Comoros (\$1,180), Sierra Leone (\$790), Zambia (\$1,280), and Liberia (\$290). (Oil-rich Angola has a per capita income of \$5,190 and is a salient exception to this trend). Overall, this suggests that Yemen's food insecurity challenges are greater than one would expect given its level of per capita income.

The percentage of stunting (low height for age) in children under five years of age is estimated to be at 56%, second only in the world to Afghanistan, and the percentage of underweight children is 46%, the third highest rate after India and Bangladesh. Over 43% of Yemen's population is under age 14; the median age of Yemen's population is 18 years.

As with poverty rates, food insecurity varies widely within Yemen, across its governorates. The World Food Programme estimated that the proportion of the population which was food insecure in 2009 varied from almost 55% in Raymah to less than 10% in Sanaa City (*Figure 31*). Sixty-one percent of Yemen's malnourished children and 57% of Yemen's malnourished women are found in five of the governorates: Raymah, Hajjah, Ibb, Ad Dali, and Amran. Still, most governorates (12 out of 19 for which data were available) had at least 30% of its population deemed food insecure, and country-wide, 32% of the population was considered food-insecure in 2009 by this measure.

Not surprisingly, the governorates with higher poverty rates tend to have greater food insecurity (*Figure 32*). Two governorates stand out as outliers. While the poverty rates in Raymah and Hadramaut were essentially the same in 2010, close to 45%, Raymah had the highest proportion of its population suffering from food insecurity in 2009 of all the governorates (53%), while Hadramut had the lowest proportion of food insecurity (at 10%), save Sanaa City (at 8%).

Finally, it is instructive to add household perceptions of the most significant difficulties faced by Yemen households into the analysis (*Figure 33*). In 2009, regardless of whether households were considered food insecure or food secure, the increase in food prices was perceived to be problematic for far more households than the significant challenges stemming from water scarcity, high fuel prices, or high health expenditures. Given the significant rise in food prices in 2010 (as shown in *Figure 18*), a trend which has so far continued into 2011, and given the high and likely rising poverty rate of the population, the concerns about rising food prices and the possible repercussions from those concerns are likely only to be heightened further still in today's Yemen as compared to 2009.



Yemen MCP Gap Analysis Update

USAID

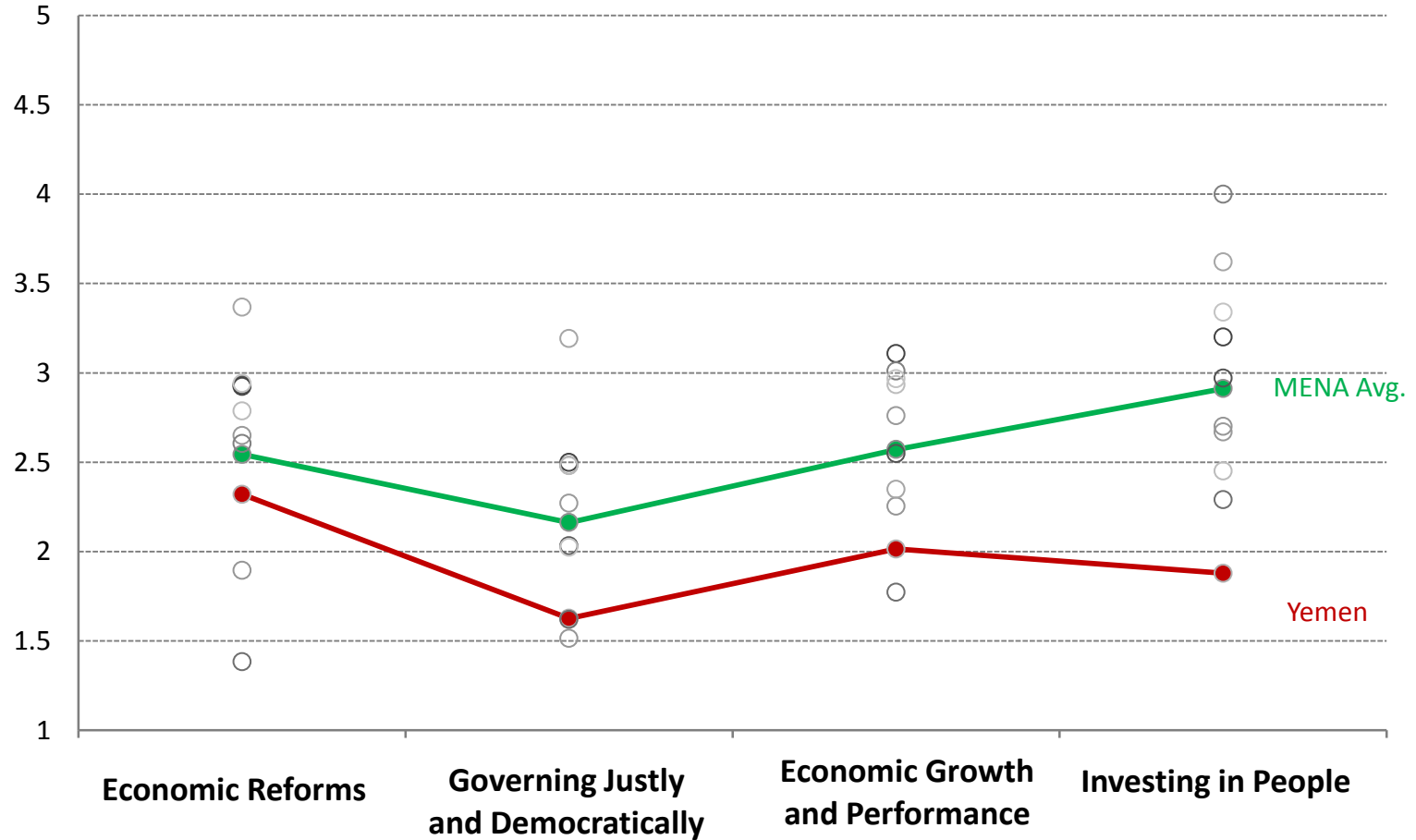
E&E Bureau

Strategic Planning and Analysis Division

April 2011

Figure 1

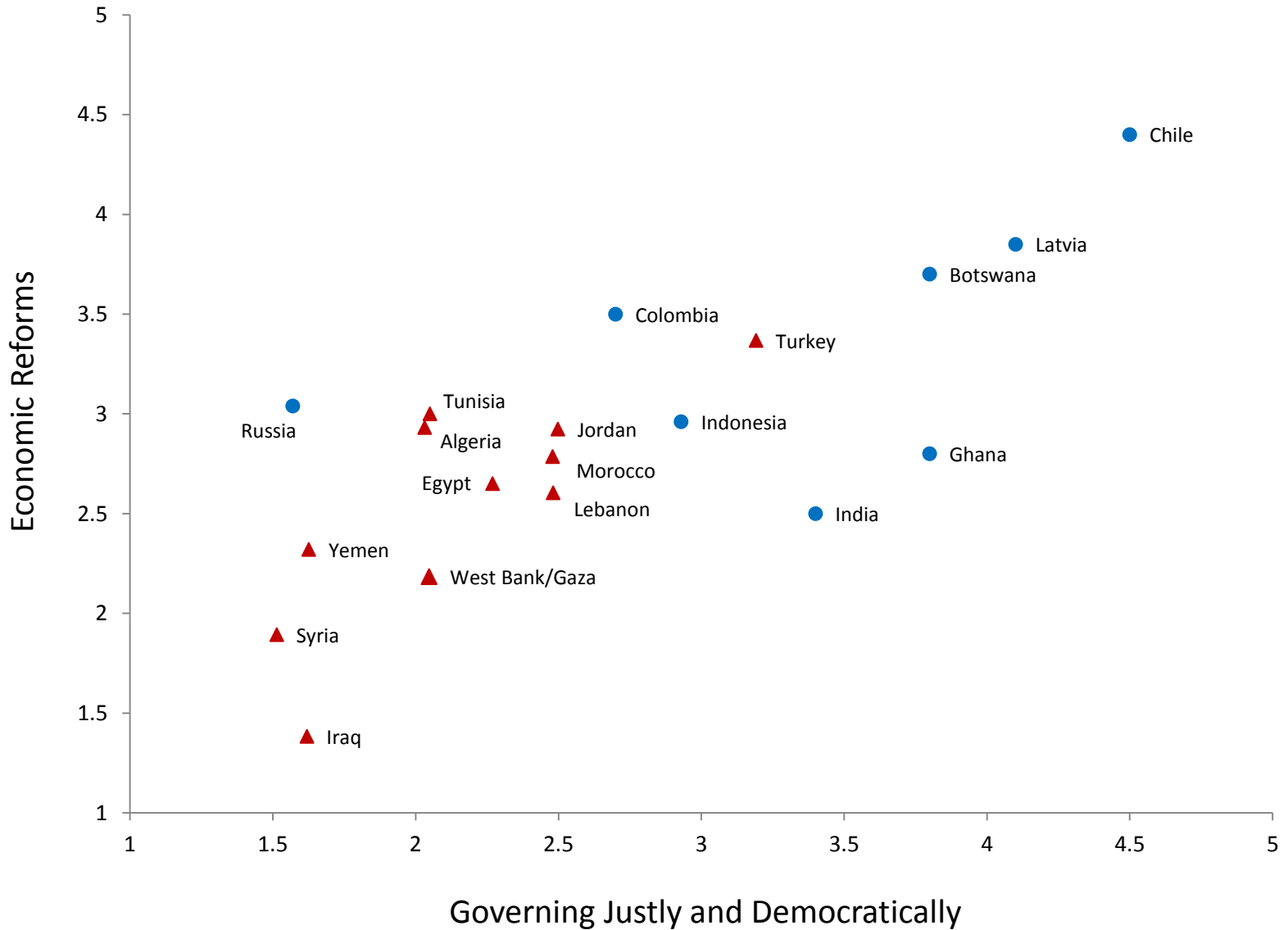
Yemen's Development Profile 2009-2010



Ratings are based on a 1 to 5 scale, with 5 the most advanced worldwide. See appendix for elaboration of indicator definitions and data sources. Middle East and North Africa (MENA): Iraq; Syria; West Bank/G.; Yemen; Lebanon; Egypt; Morocco; Jordan; Algeria; Tunisia; Turkey.

Figure 2

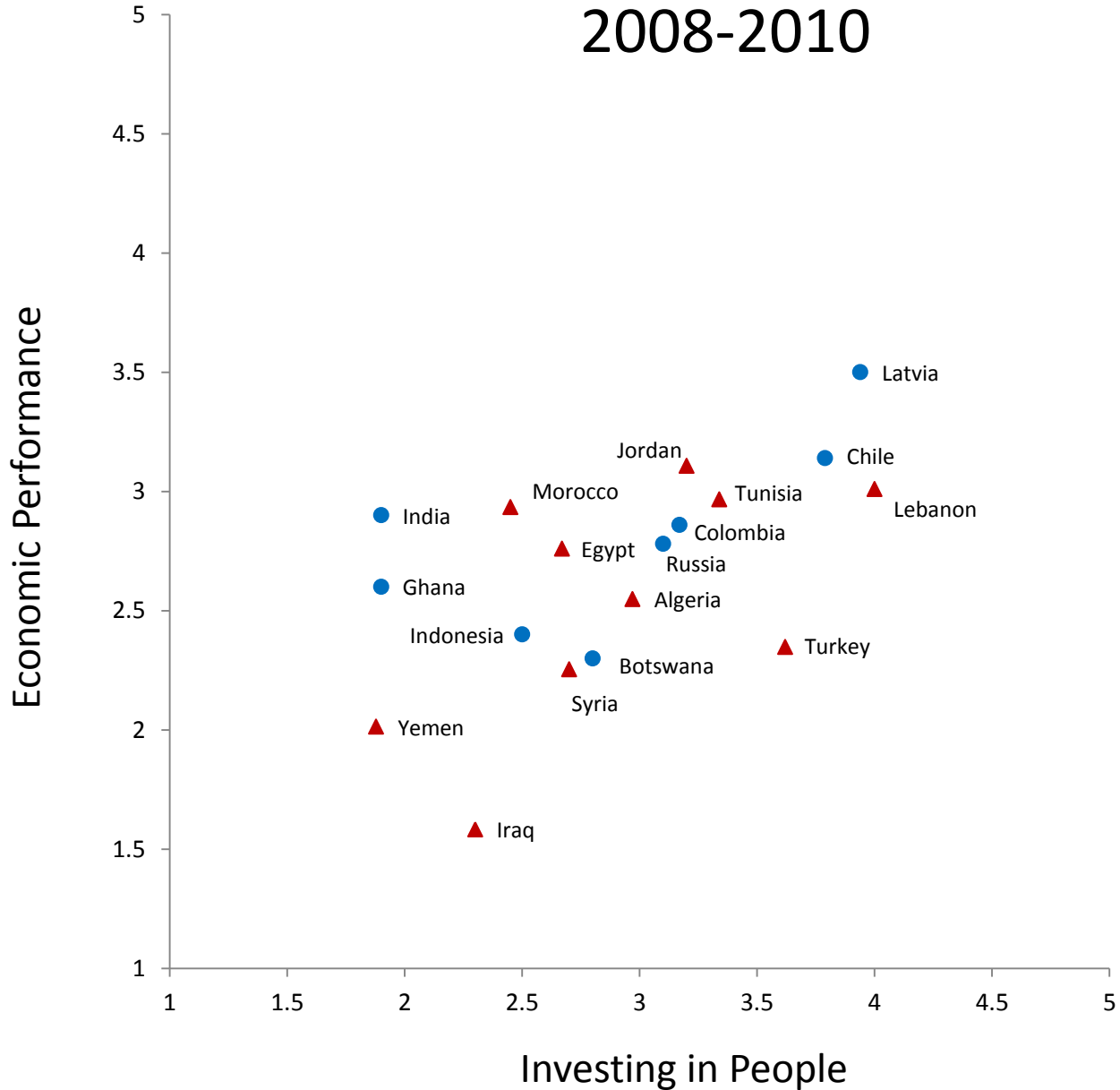
Economic Reforms and Governing Justly & Democratically in 2009-2010



Ratings are based on a 1 to 5 scale, with 5 the most advanced worldwide. See appendix for elaboration of indicator definitions and data sources.

Figure 3

Economic Performance and Investing in People, 2008-2010

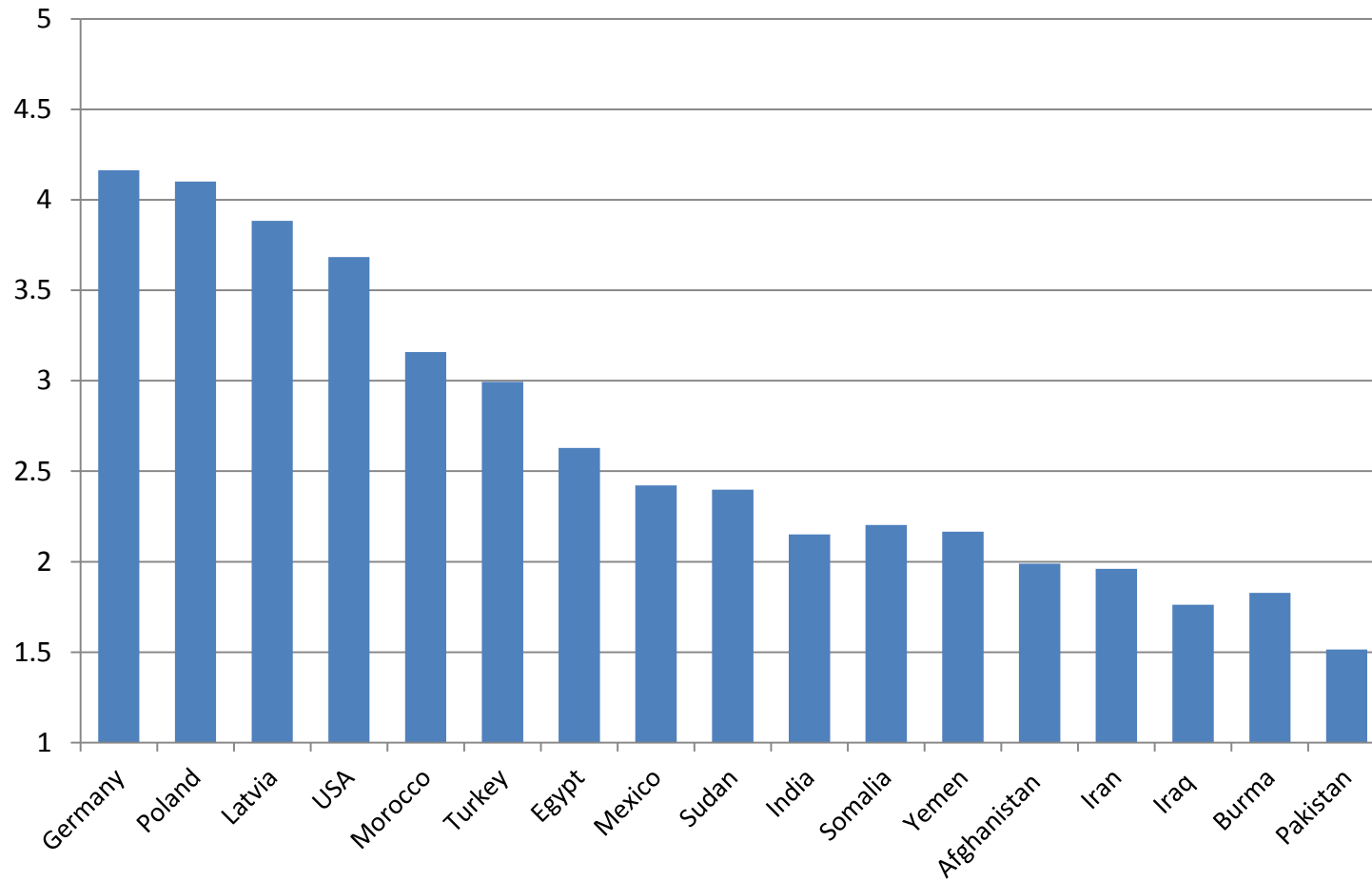


Ratings are based on a 1 to 5 scale, with 5 representing the most advanced worldwide. See appendix for elaboration of indicator definitions and data sources.

Figure 4

Peace and Security

Regional and Global Comparison

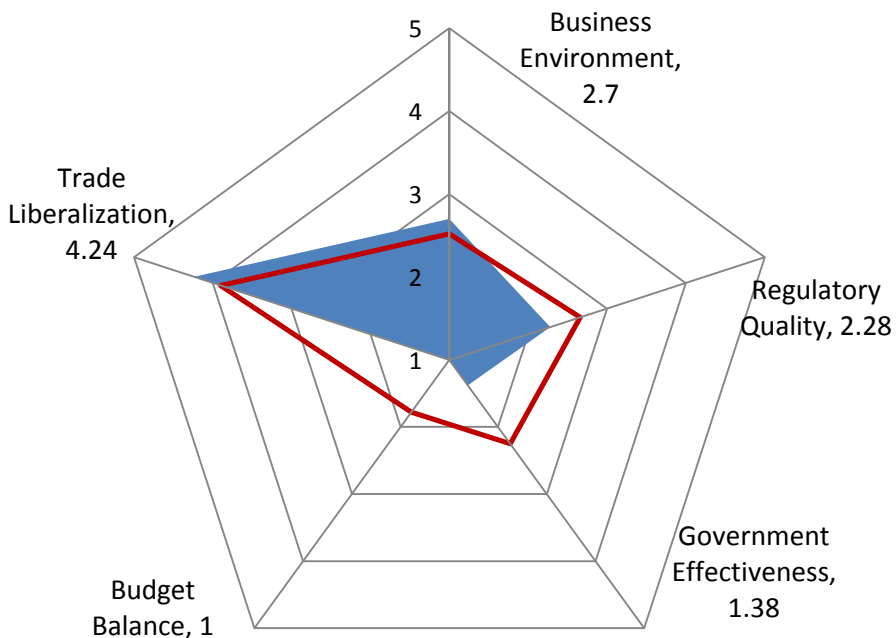


Ratings are based on a 1 to 5 scale, with 5 the most advanced worldwide. See appendix for elaboration of indicator definitions and data sources.

Figure 5

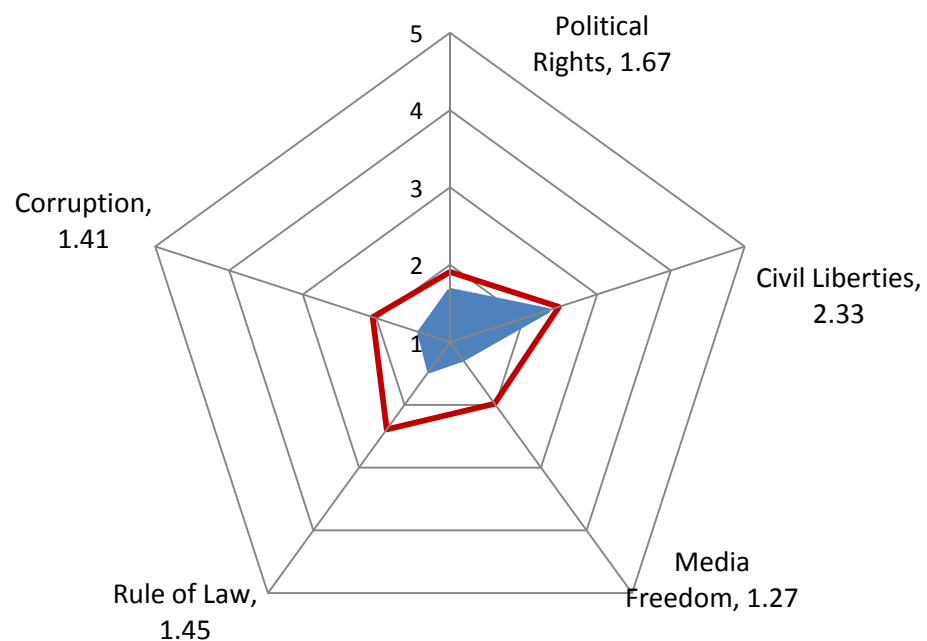
Yemen's Development Gaps Versus Middle East/North Africa Average

Economic Reforms



MENA

Governing Justly and Democratically



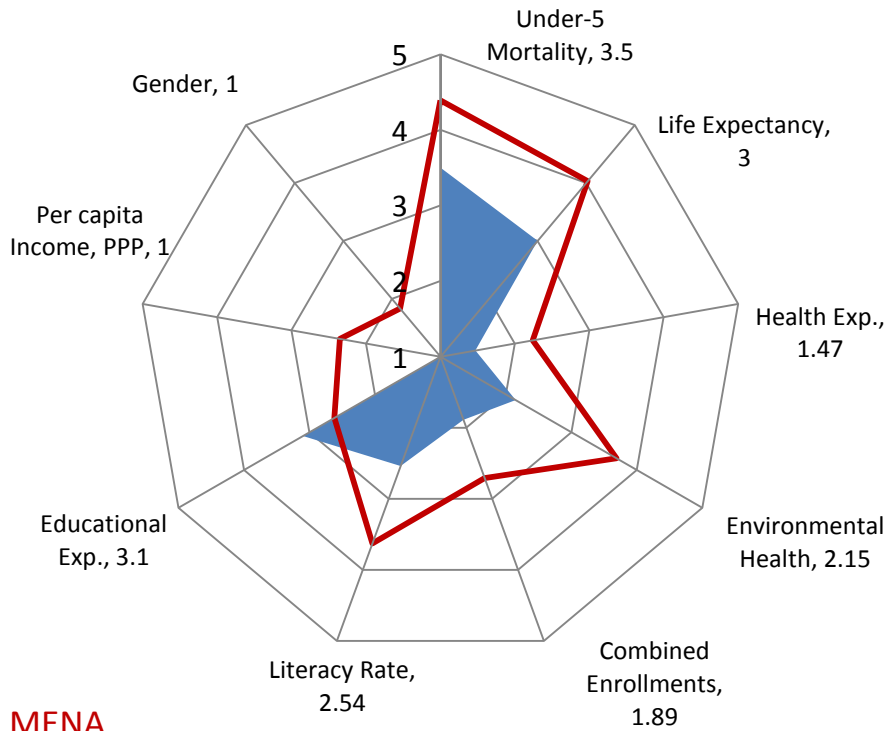
MENA Average

Ratings are based on a 1 to 5 scale, with 5 the most advanced worldwide. See appendix for elaboration of indicator definitions and data sources. Middle East and North Africa (MENA): Iraq; Syria; West Bank/G.; Yemen; Lebanon; Egypt; Morocco; Jordan; Algeria; Tunisia; Turkey.

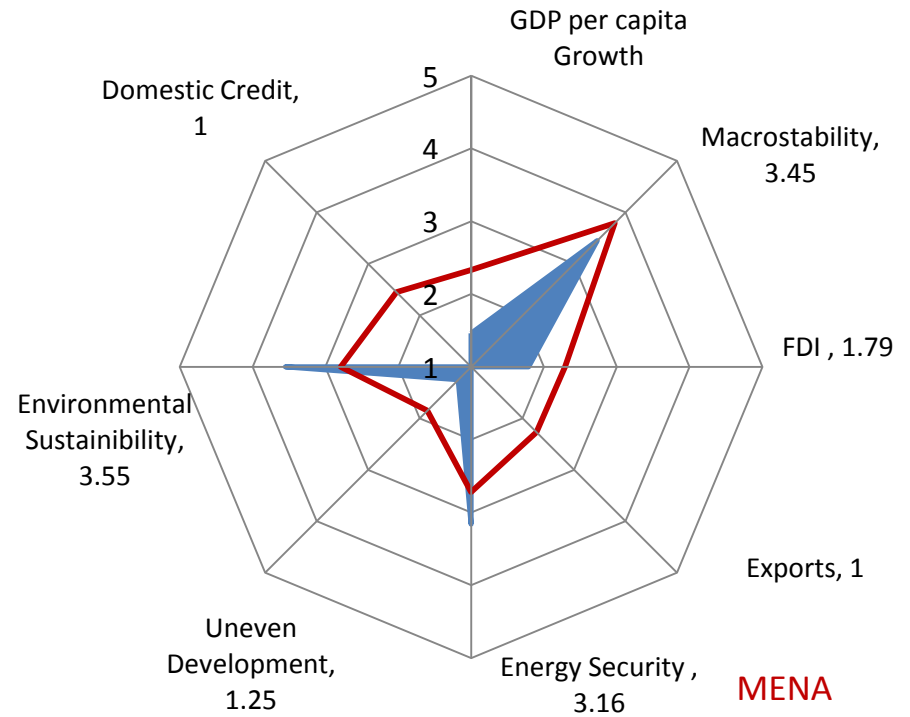
Figure 6

Yemen's Development Gaps Versus Middle East/North Africa Average

Investing in People



Economic Performance



MENA

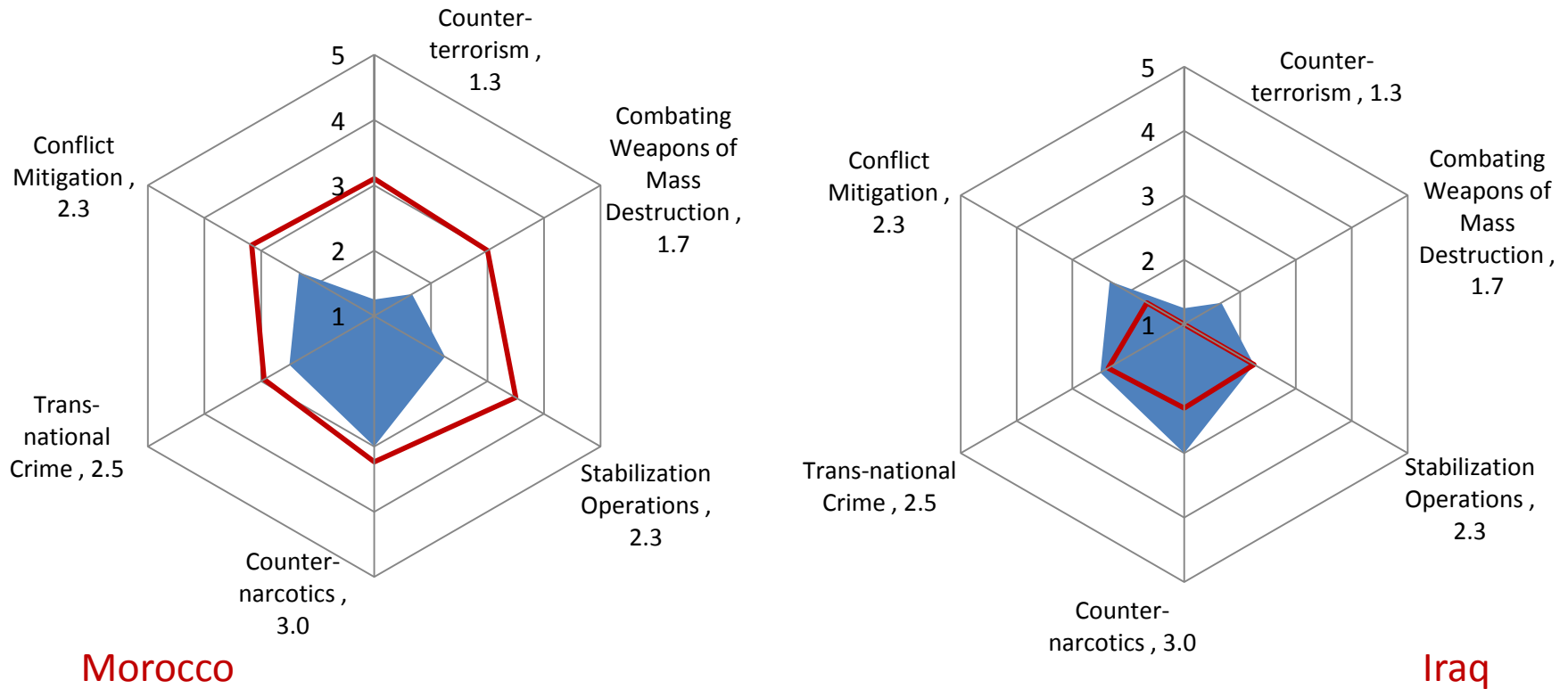
MENA

Ratings are based on a 1 to 5 scale, with 5 the most advanced worldwide. See appendix for elaboration of indicator definitions and data sources. Middle East and North Africa (MENA): Iraq; Syria; West Bank/G.; Yemen; Lebanon; Egypt; Morocco; Jordan; Algeria; Tunisia; Turkey

Figure 7

Peace & Security in Yemen

Versus Morocco and Iraq



Ratings are based on a 1 to 5 scale, with 5 the most advanced worldwide. See appendix for elaboration of indicator definitions and data sources.

Figure 8

Yemen Business Constraints

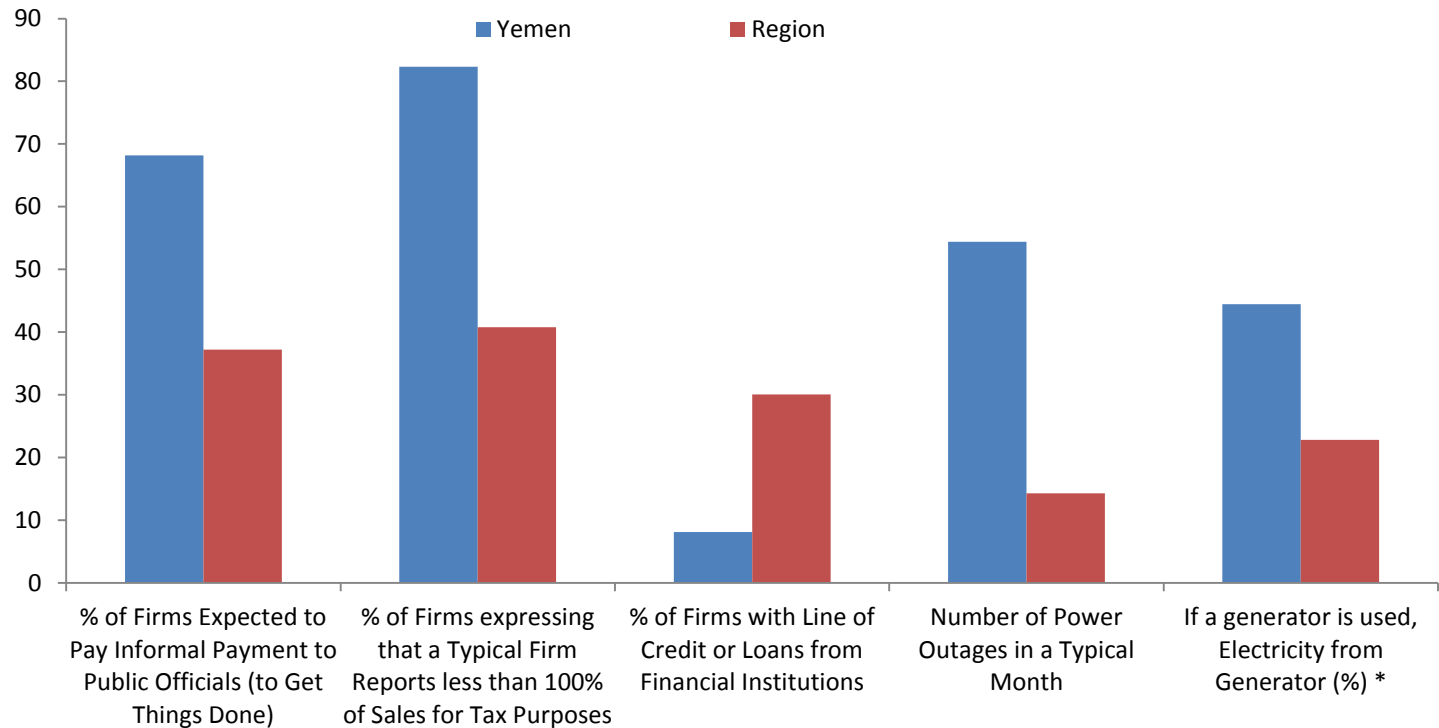


Figure 9

Economic Growth in Yemen & the World 1999-2012

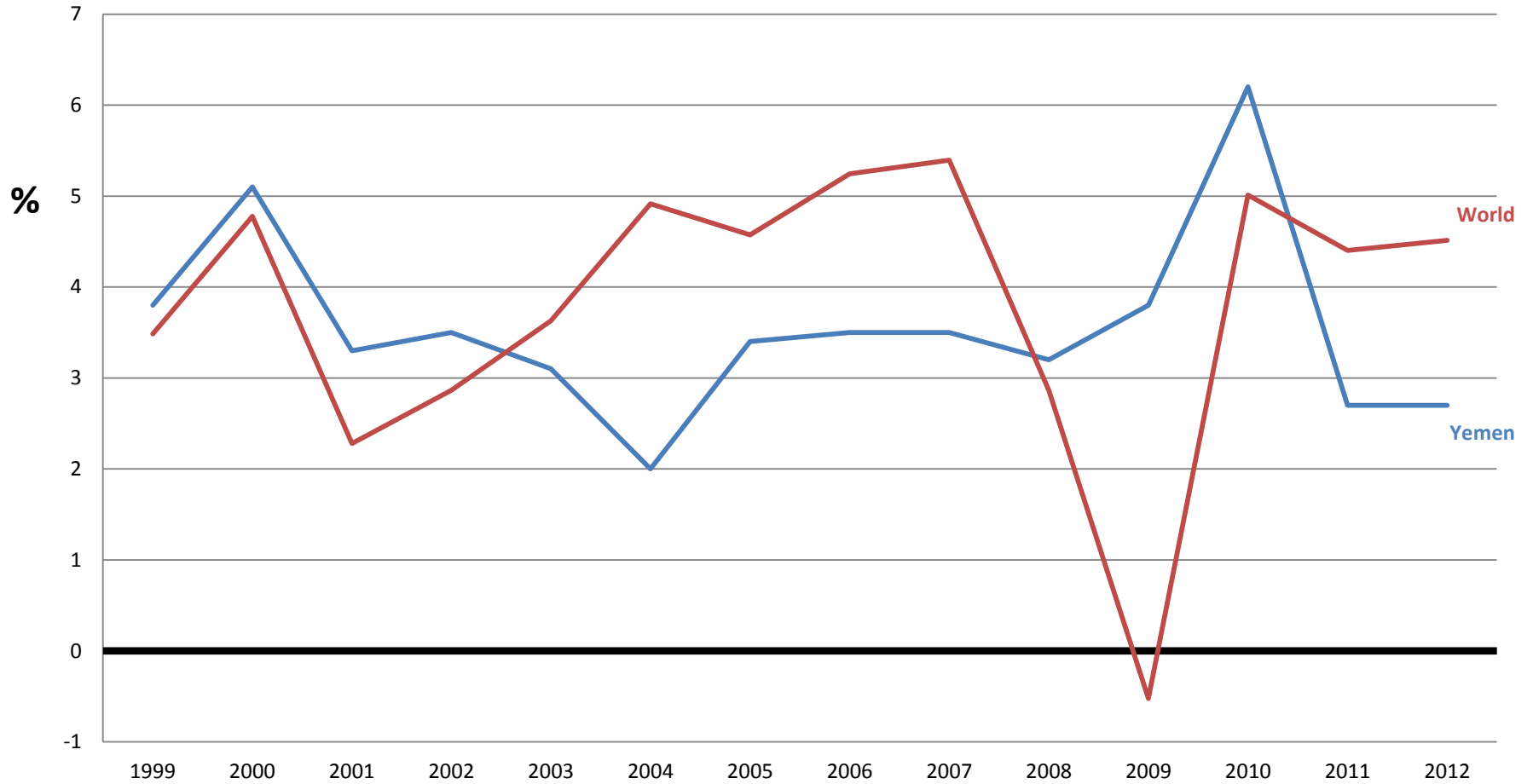


Figure 10

Per Capita Economic Growth in Yemen & the World 1999-2012

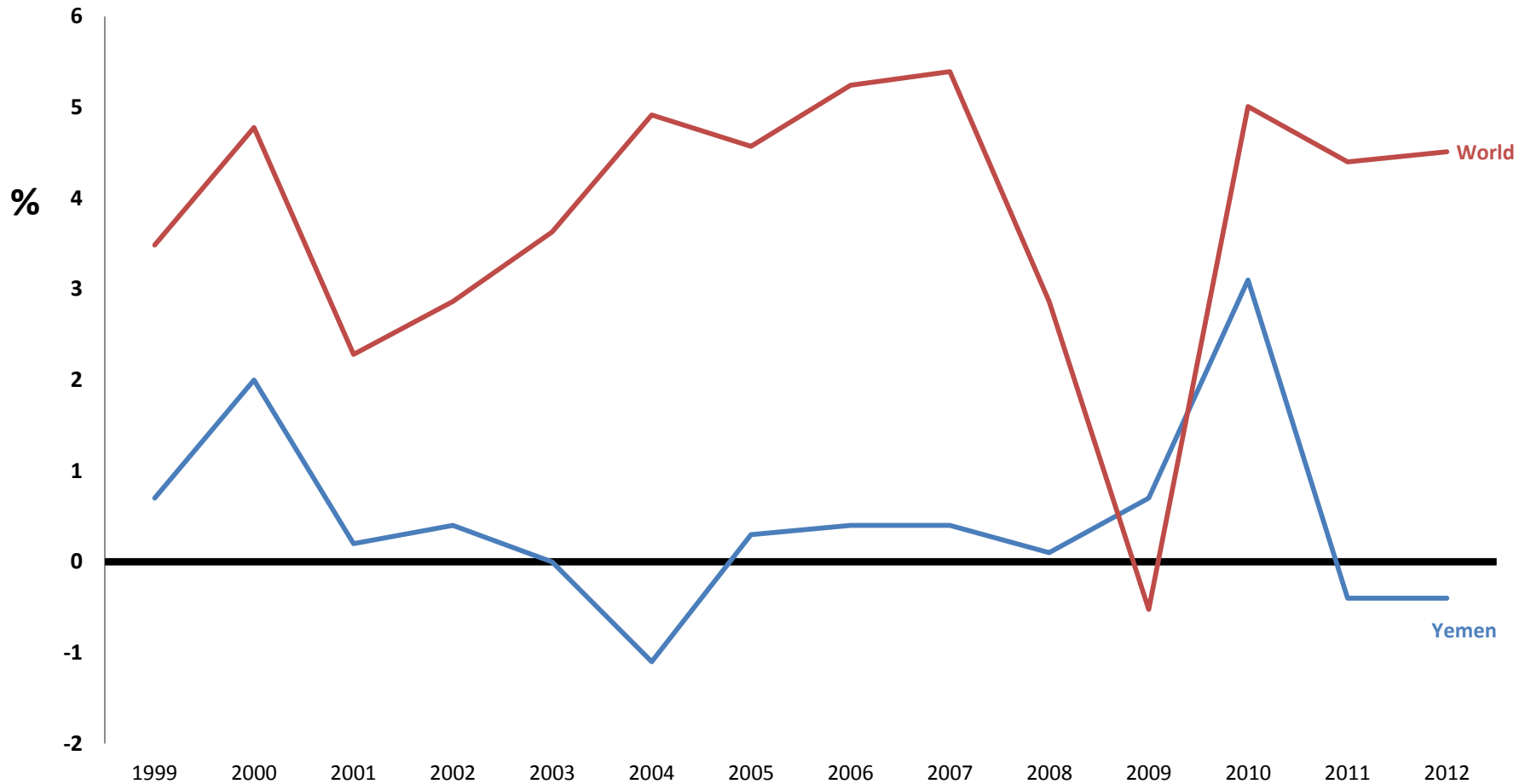


Figure 11

Per Capita Economic Growth in Yemen & Advanced Middle East and North Africa, 1999-2012

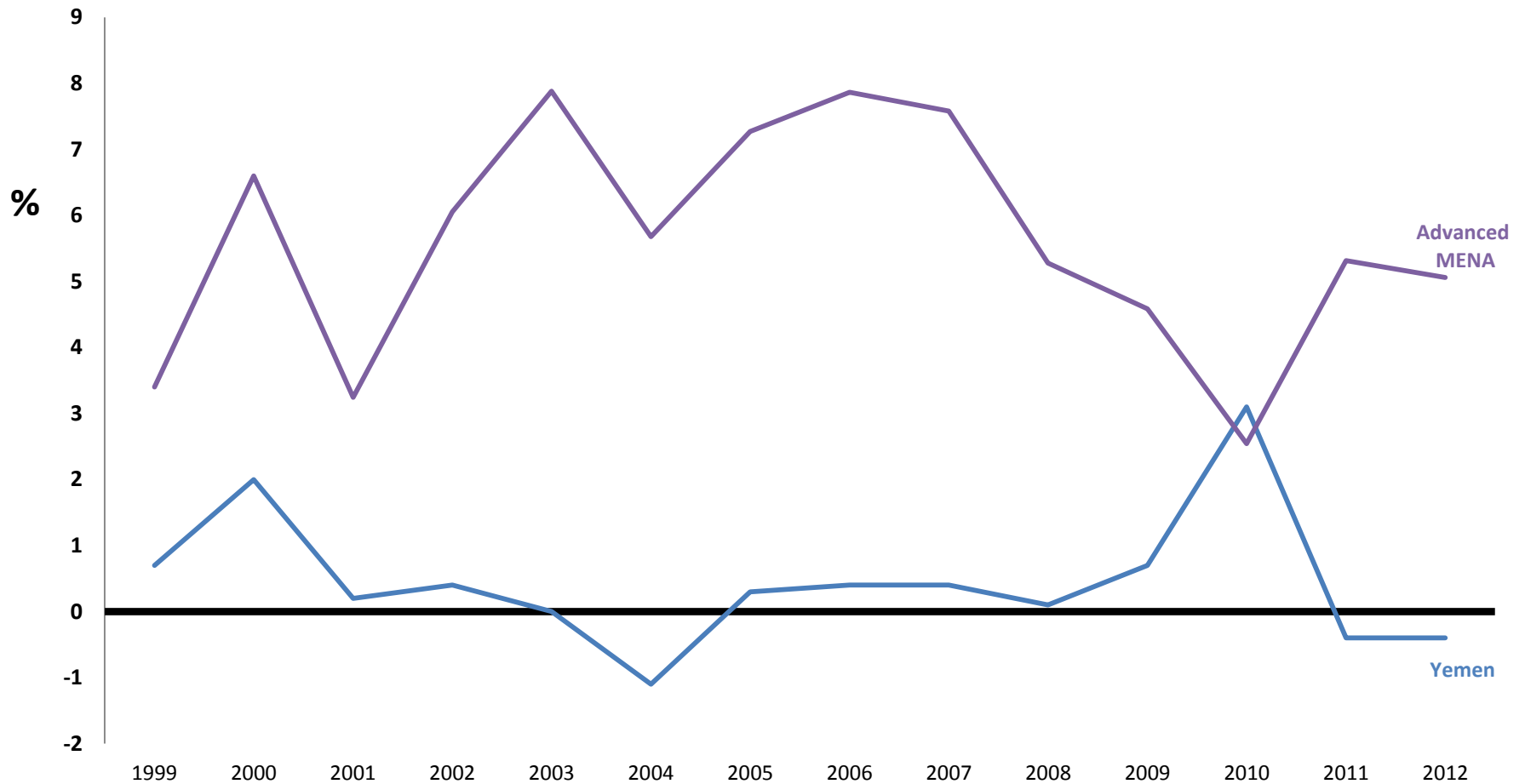
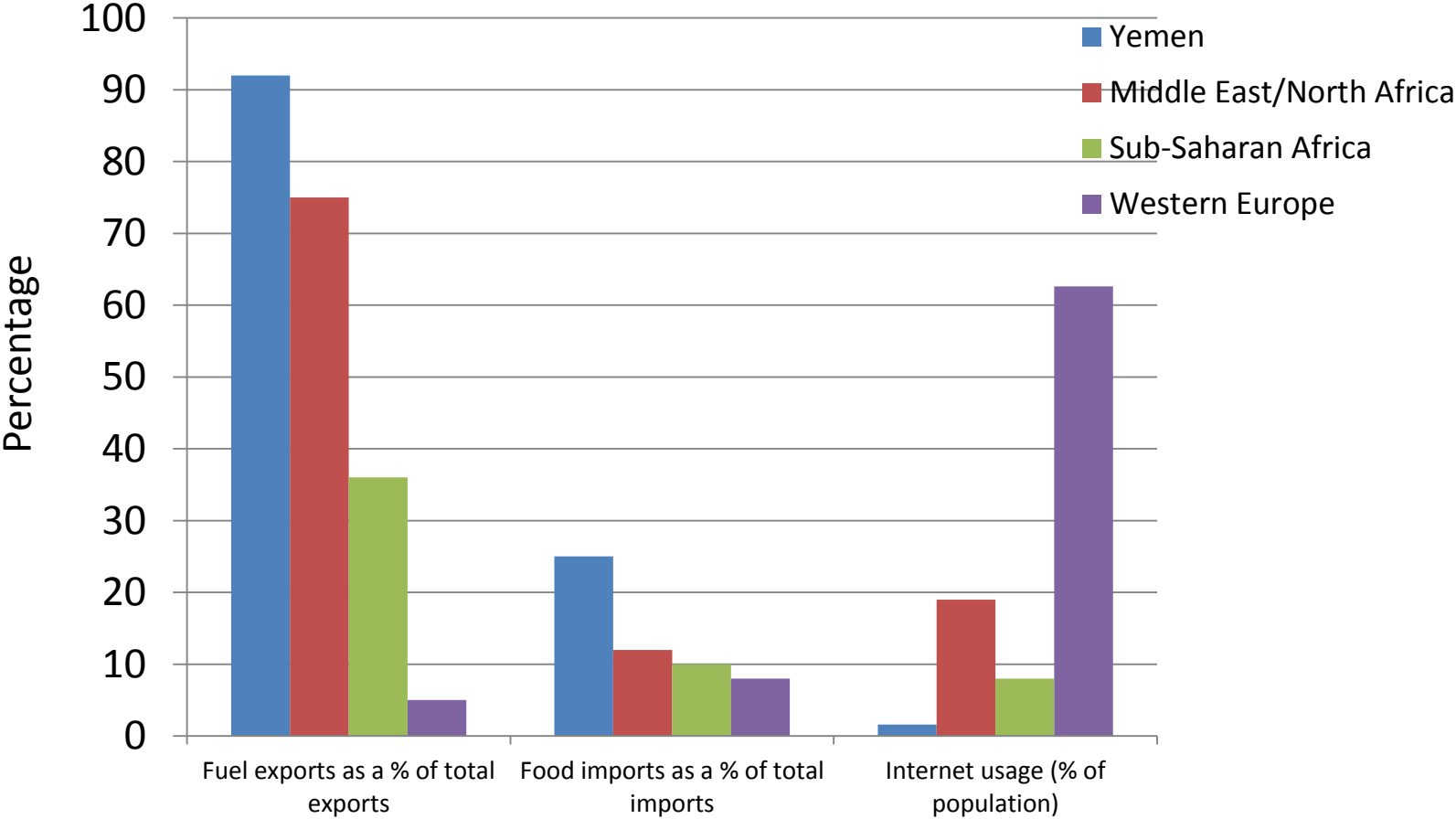


Figure 12

Global Economic Integration



Source: World Bank, *World Development Indicators* (2009) .

Figure 13

Oil Production in Yemen, 1999-2020

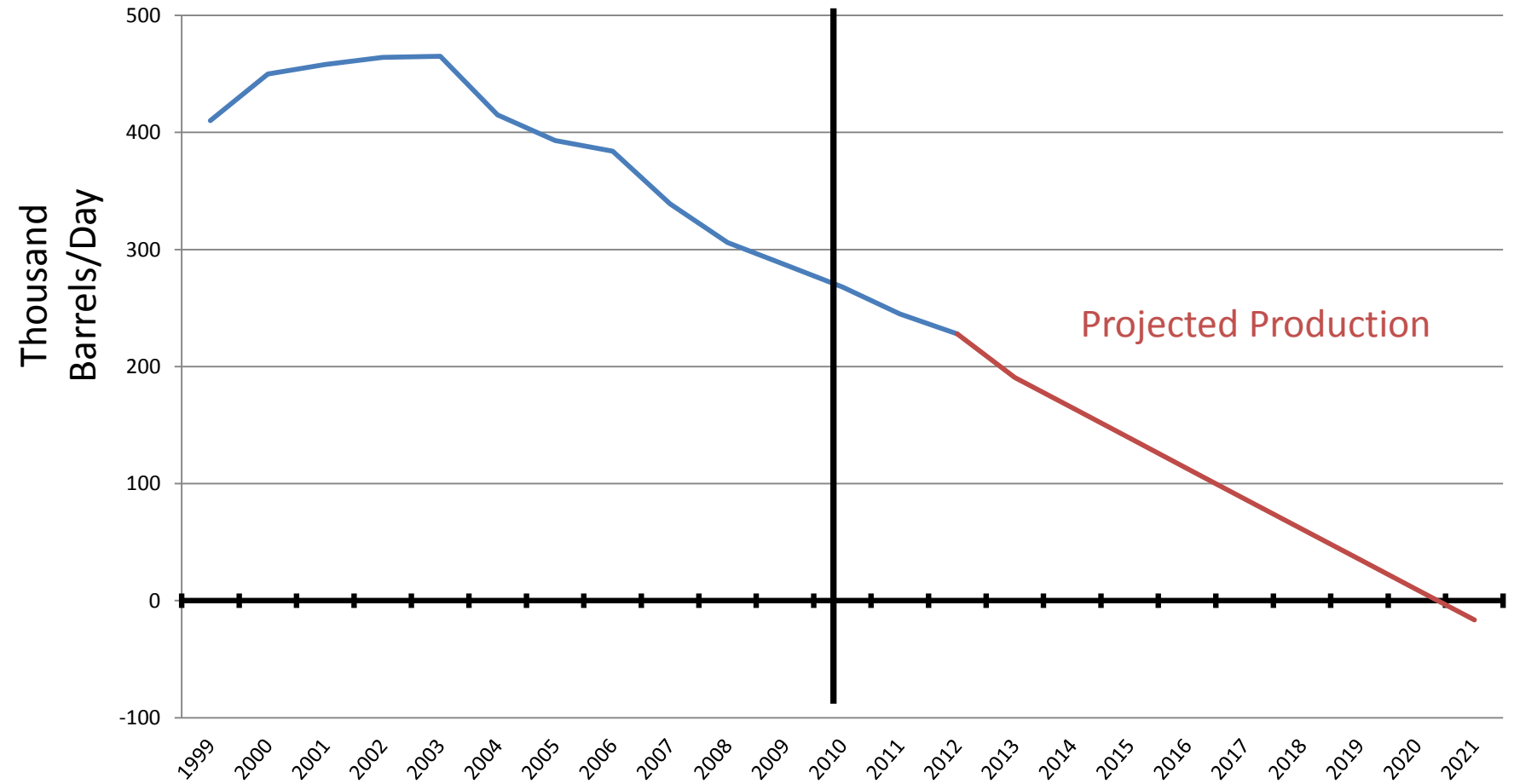


Figure 14

Yemen Oil Exports 1999-2012 (U.S. \$)

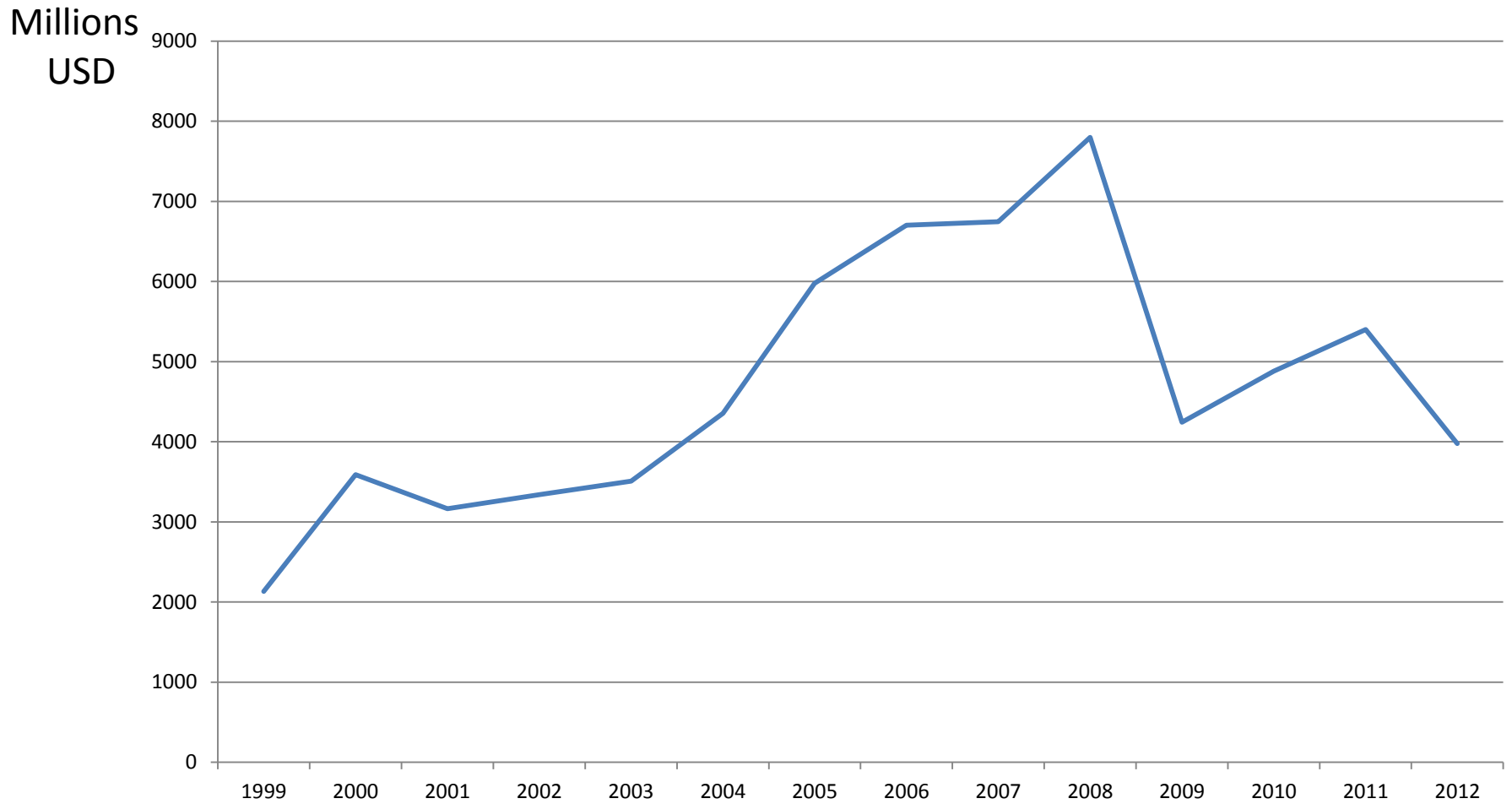


Figure 15

Oil Production and Export Revenue Yemen, 1999-2020

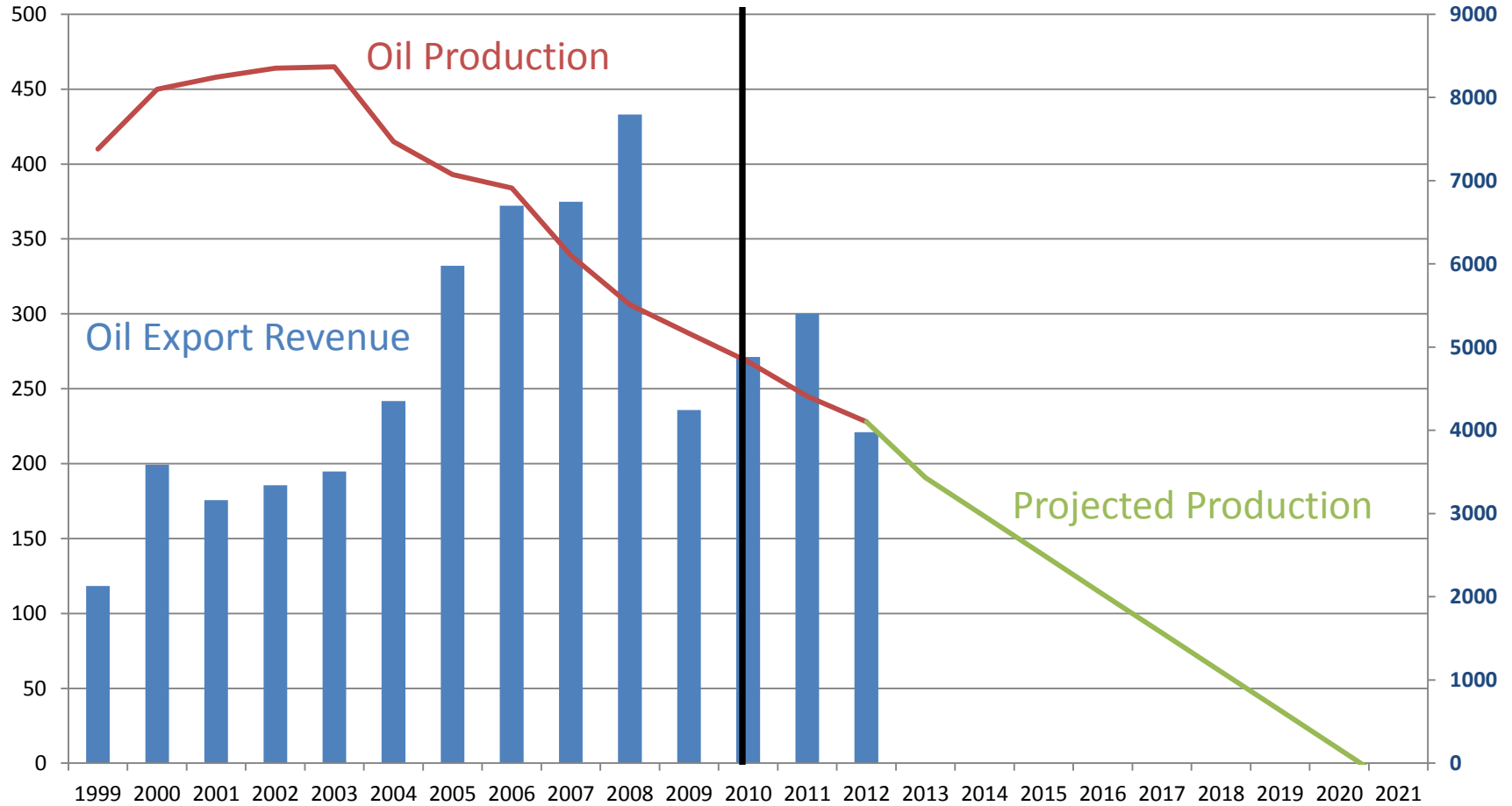


Figure 16

The Price of Oil

Inflation Adjusted

USD

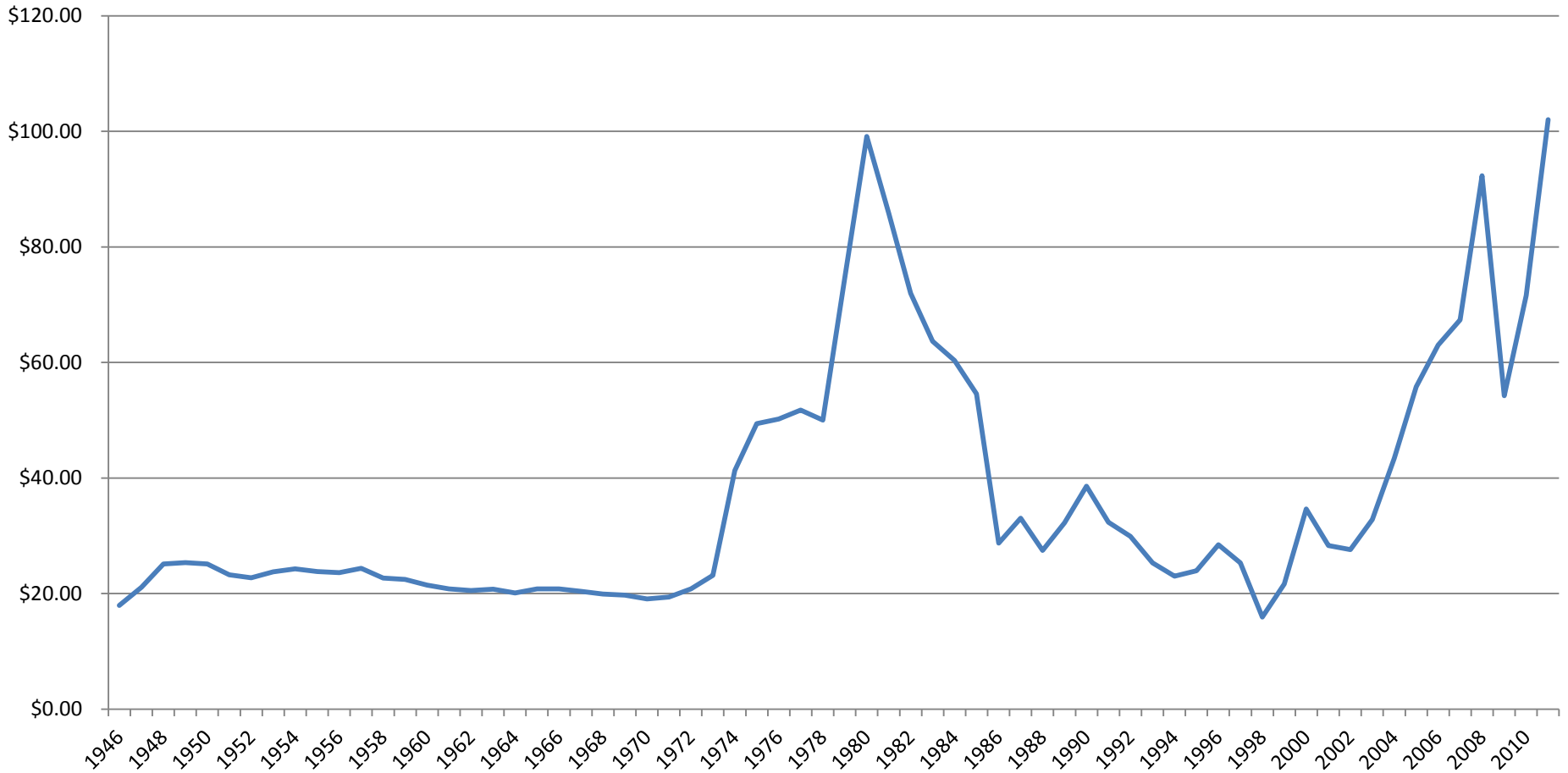


Figure 17

Yemen Food Imports 1996-2009

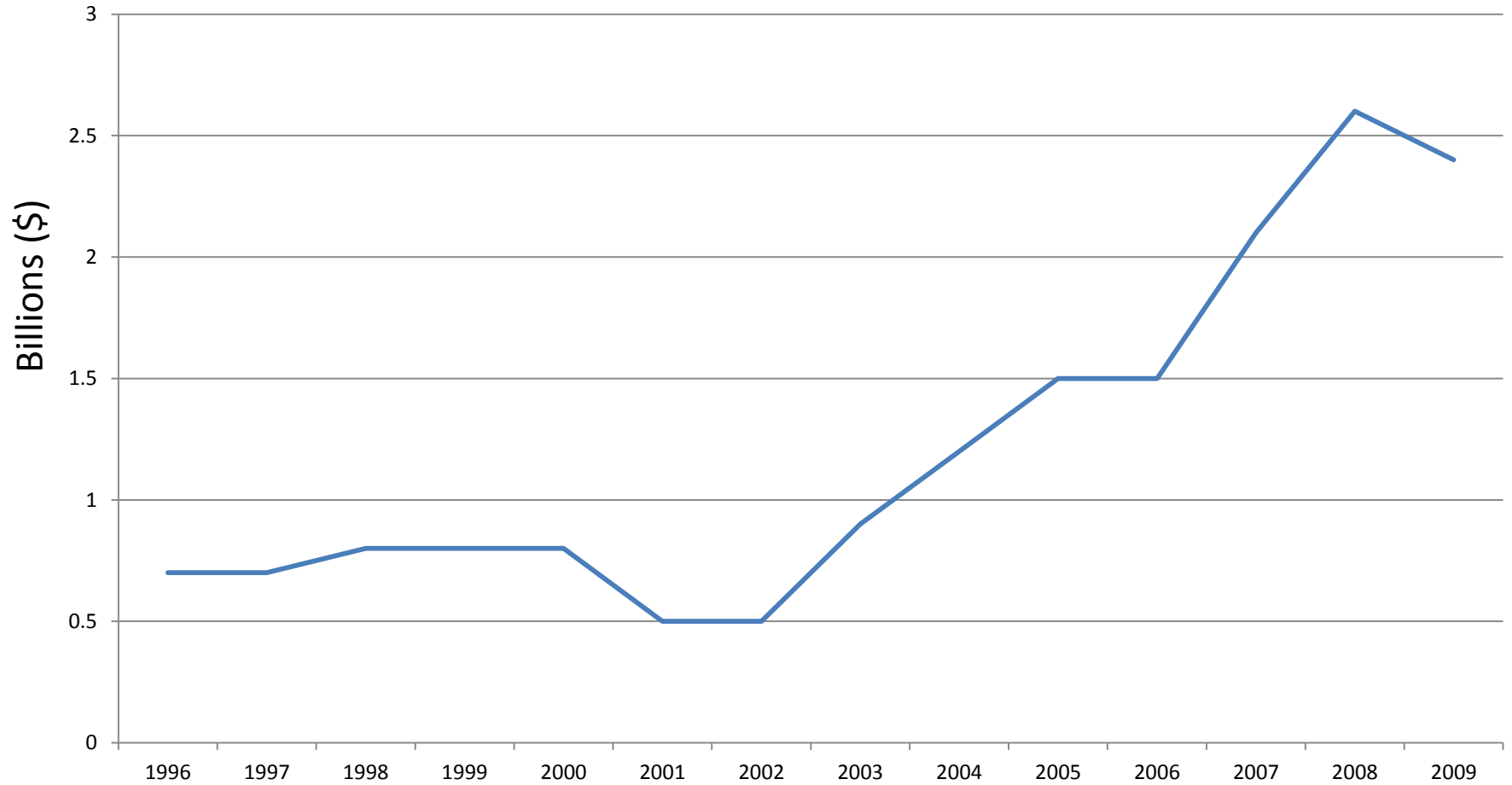


Figure 18

Food Price Index

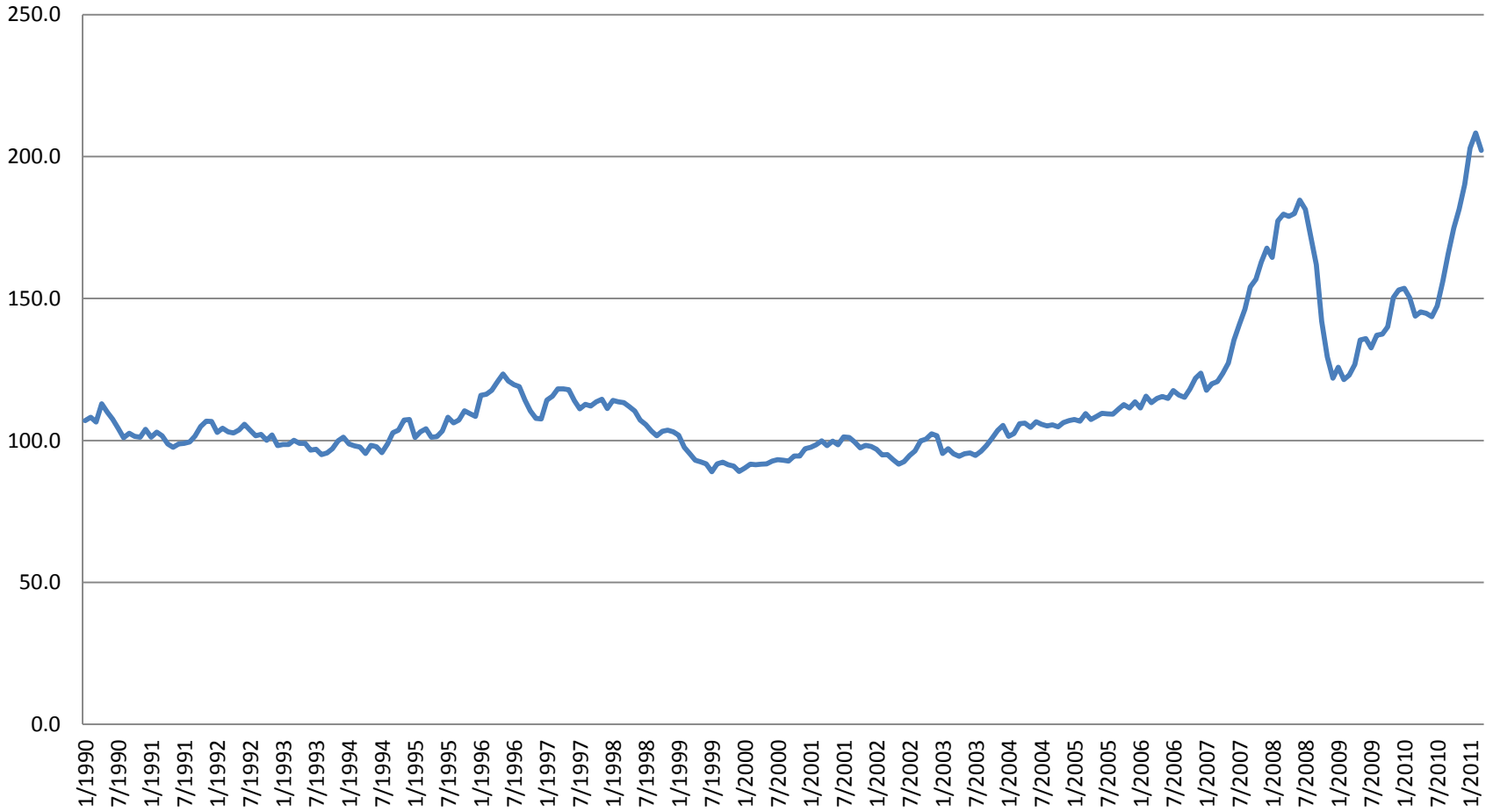


Figure 19

Current Account Balance – Yemen 1999-2012

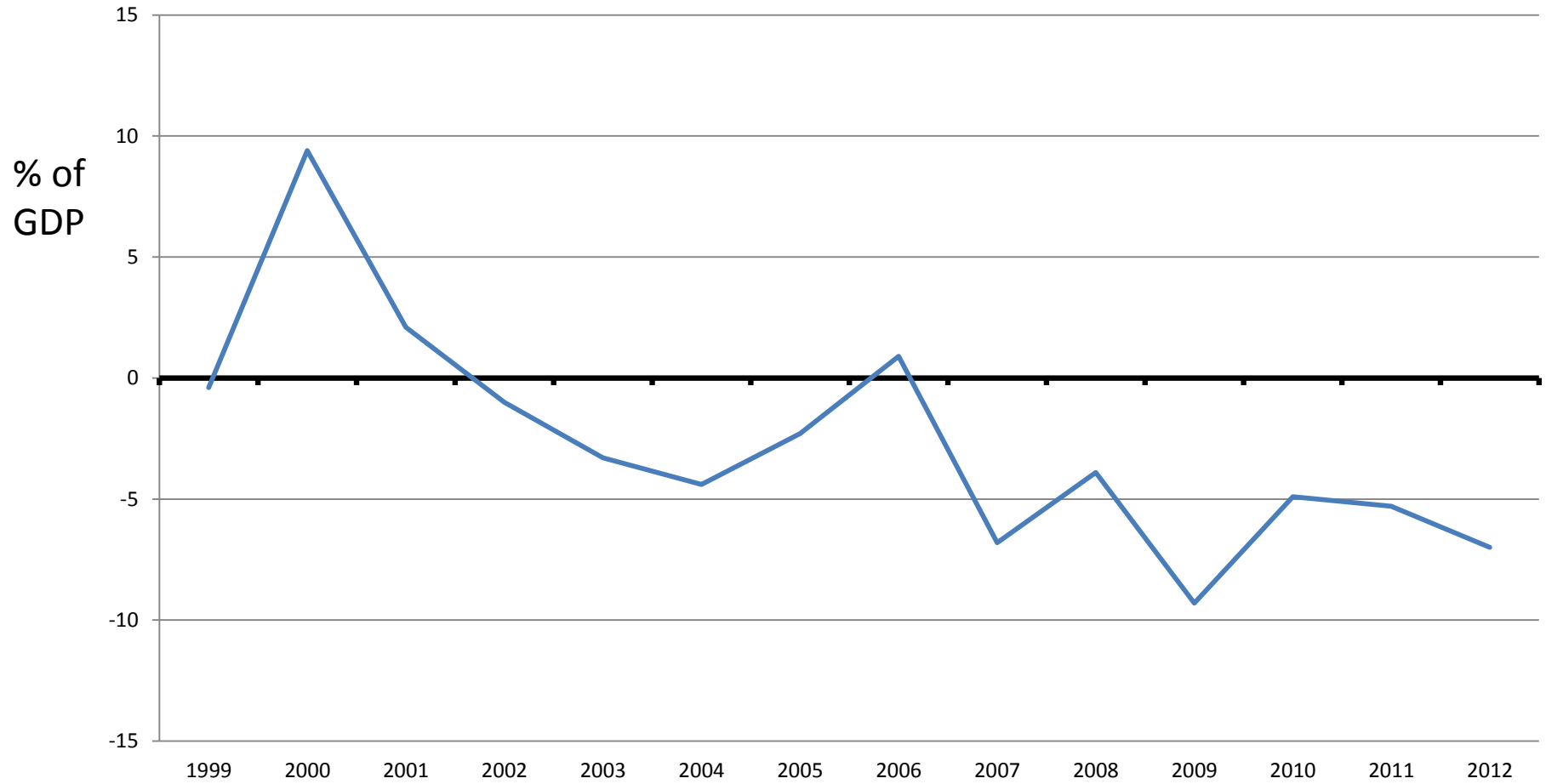


Figure 20

Budget Balance – Yemen 1999-2012

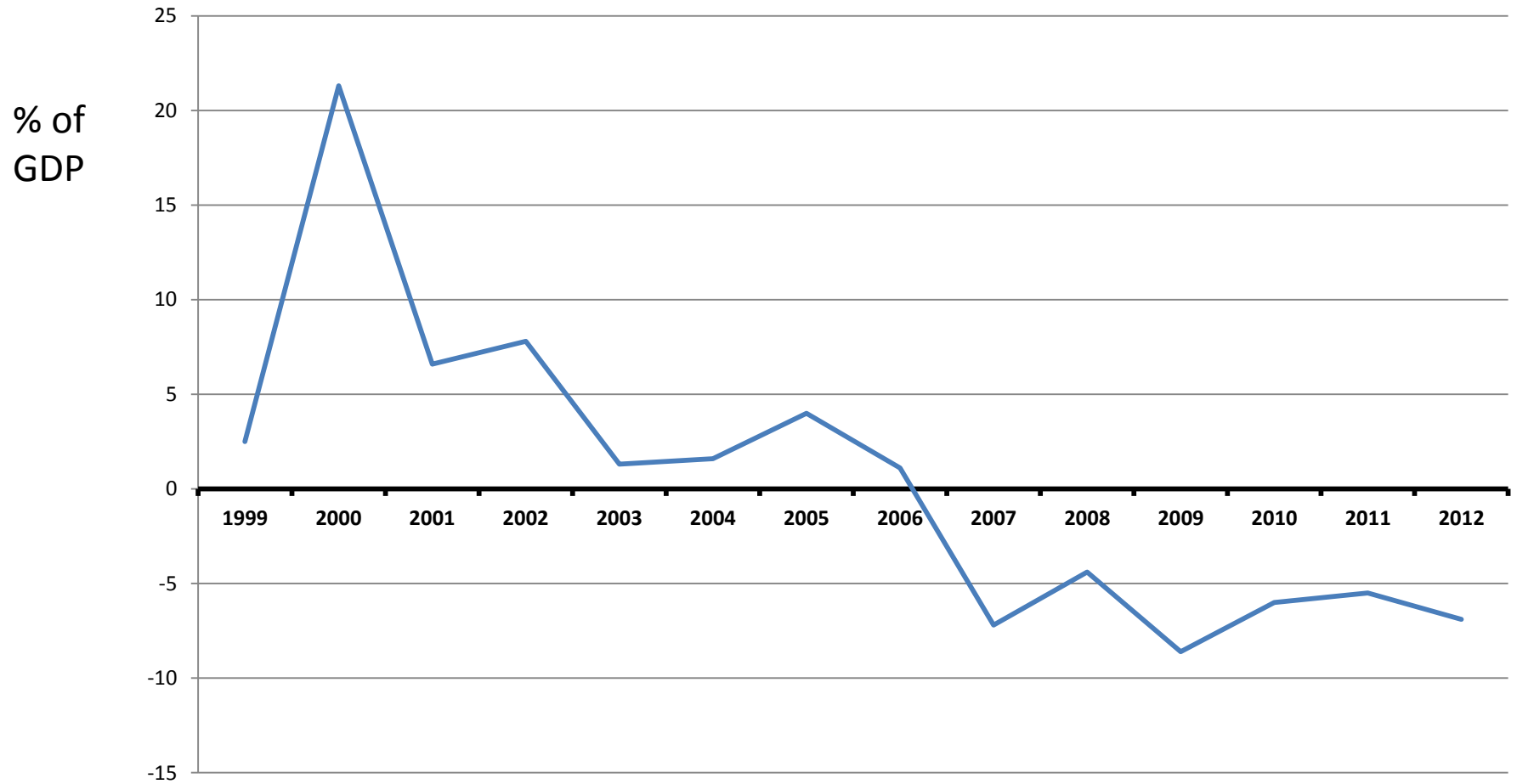
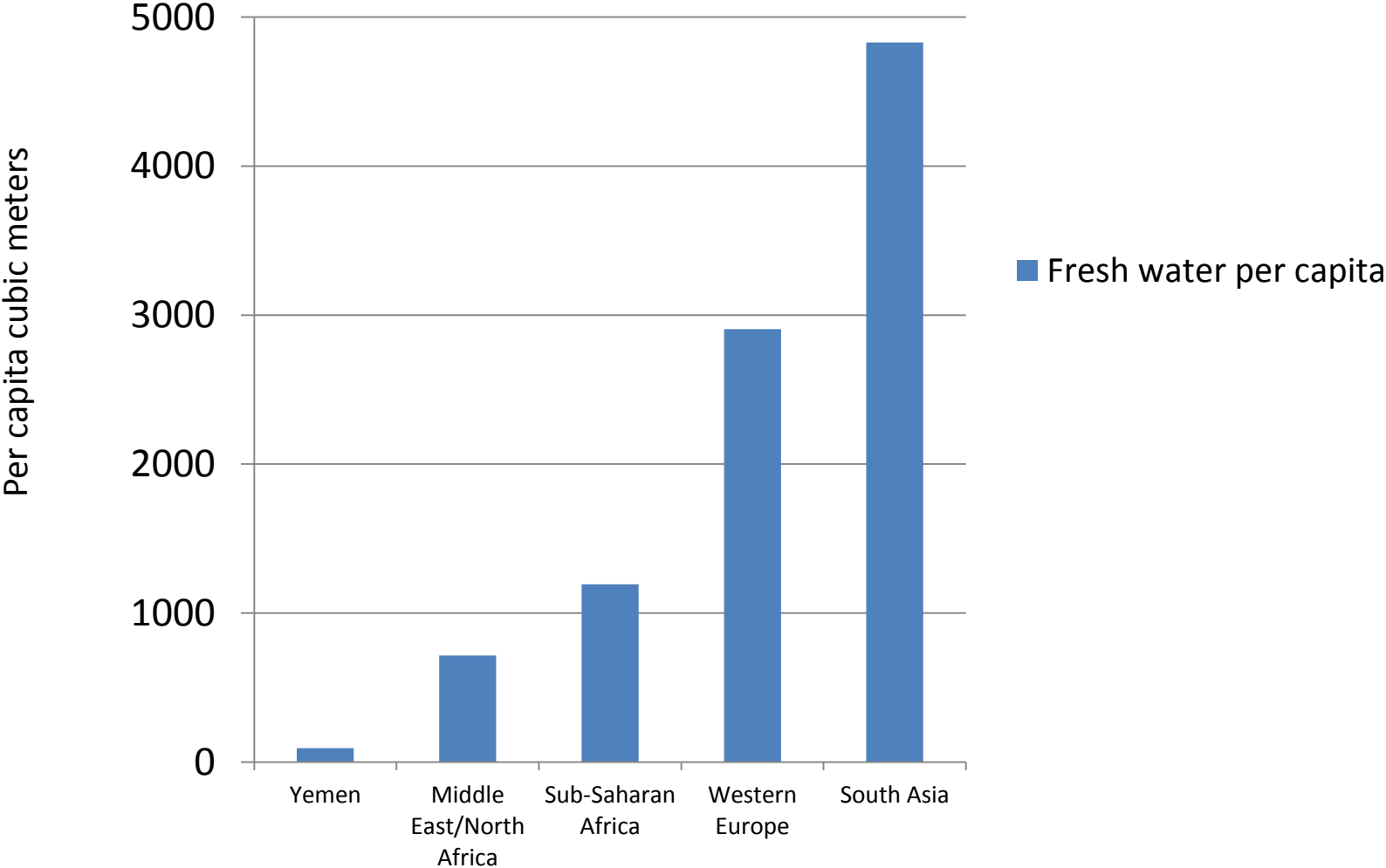


Figure 21

Natural Resource Constraints

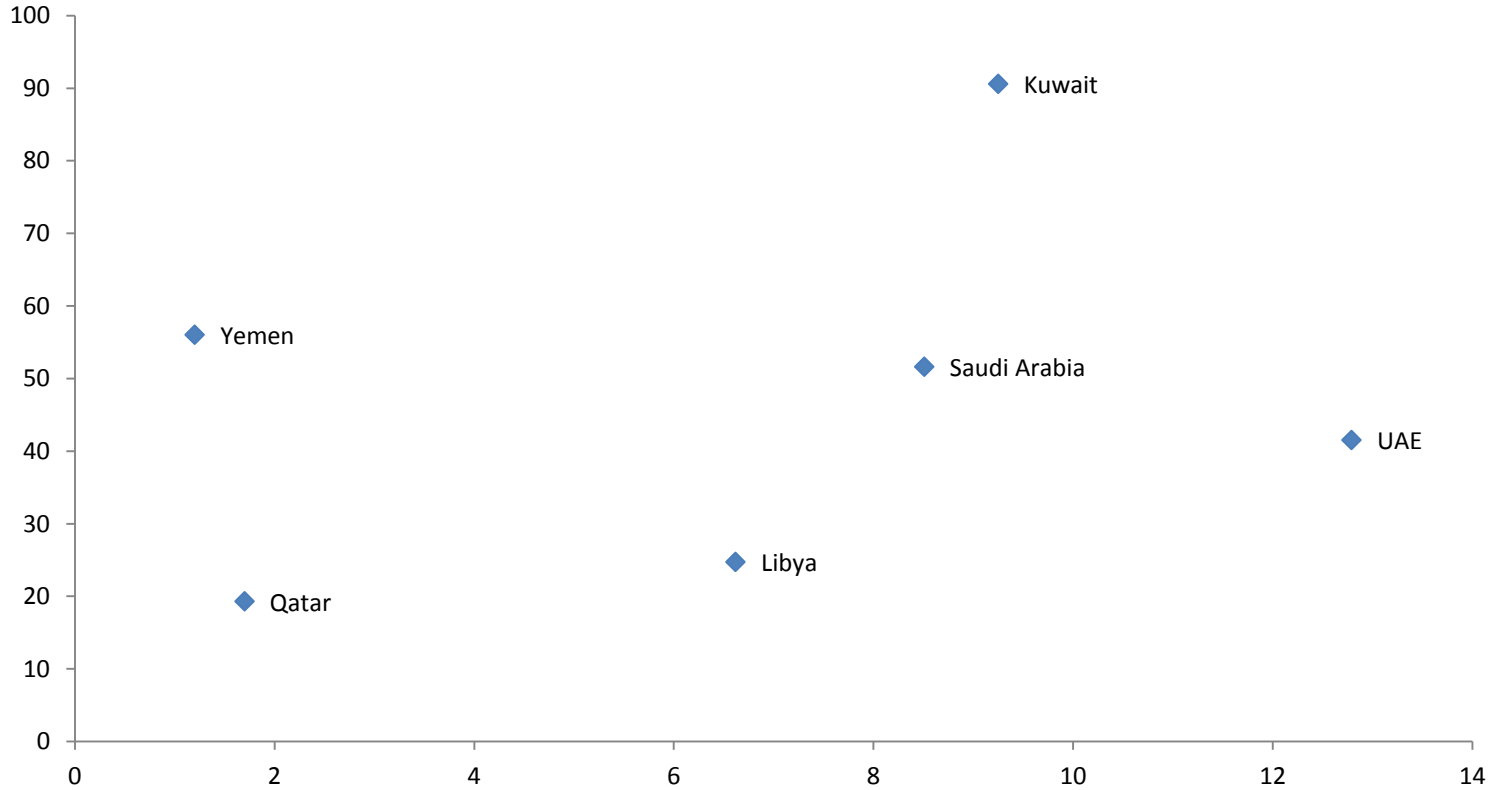


Source: World Bank, *World Development Indicators* (2009).

Figure 22

Top six water depleting countries of The World

% of country affected by overuse

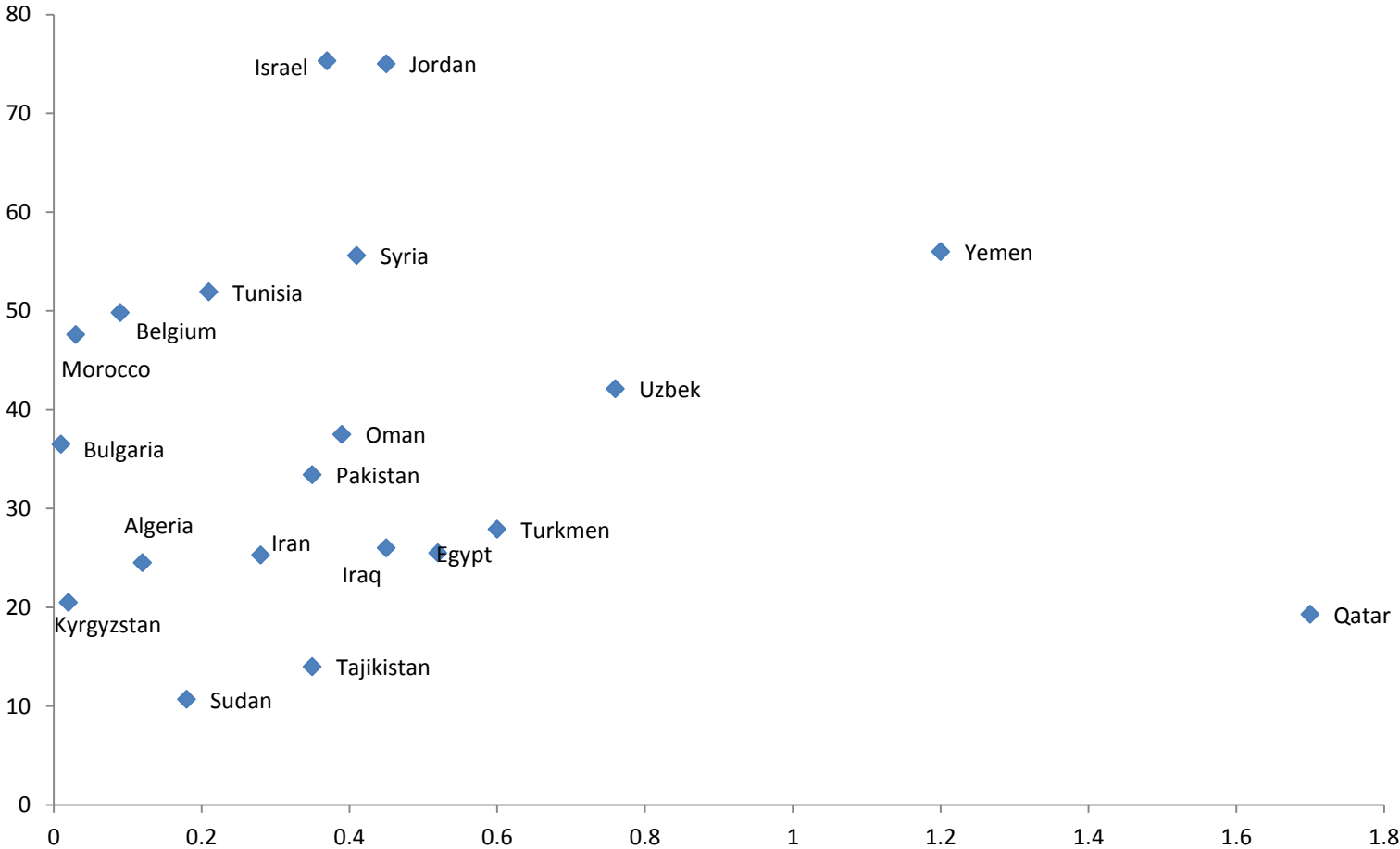


Overall Rate of Water Depletion

Figure 23

Water depleting countries of The World (less top four)

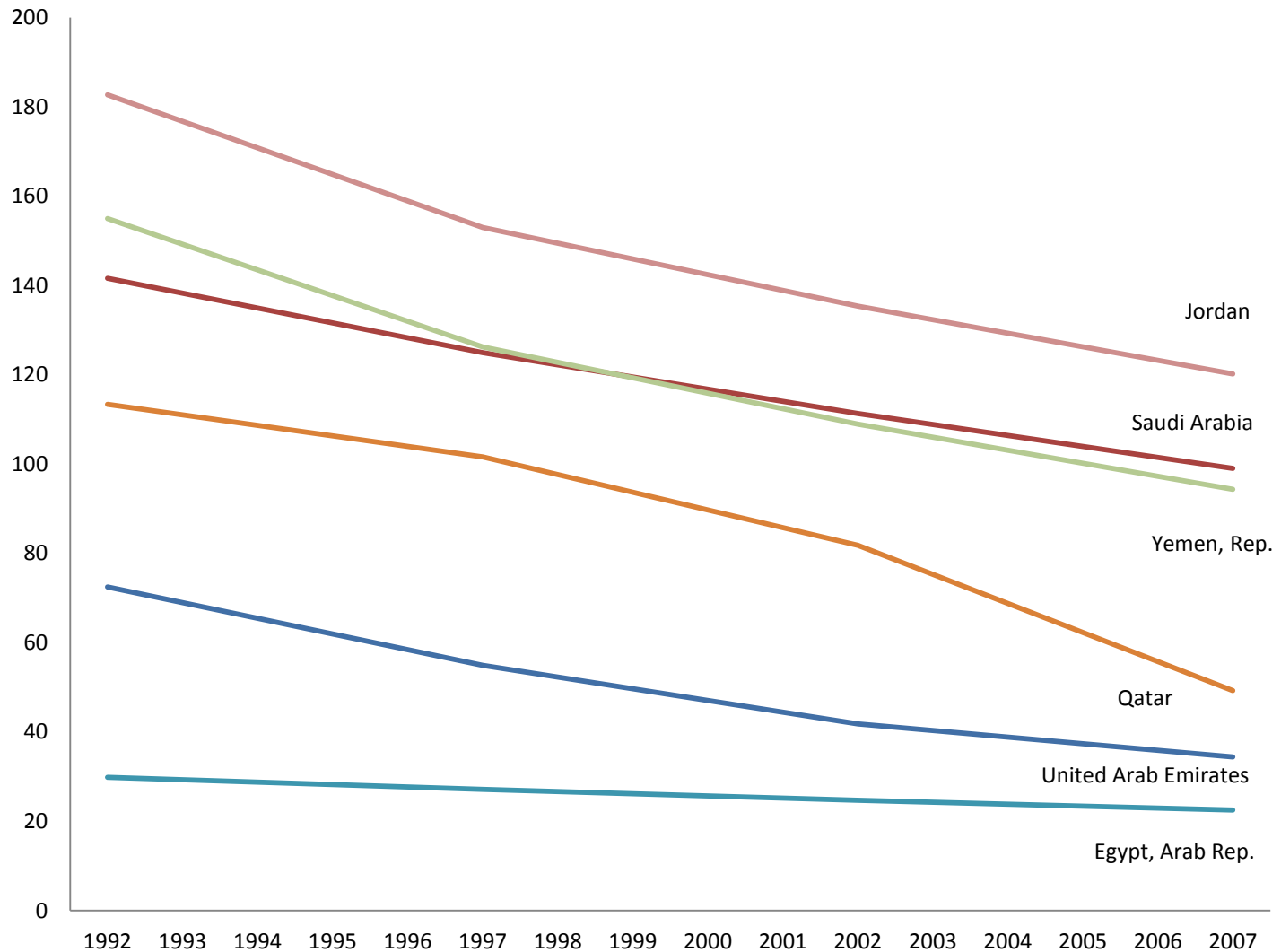
% of country affected by overuse



Overall Rate of Water Depletion

Figure 24

Renewable Water Resources Per Capita



Renewable
Cu. Meter
Water/
Inhabitant

Figure 25

Well Depth and Population in Sana'a

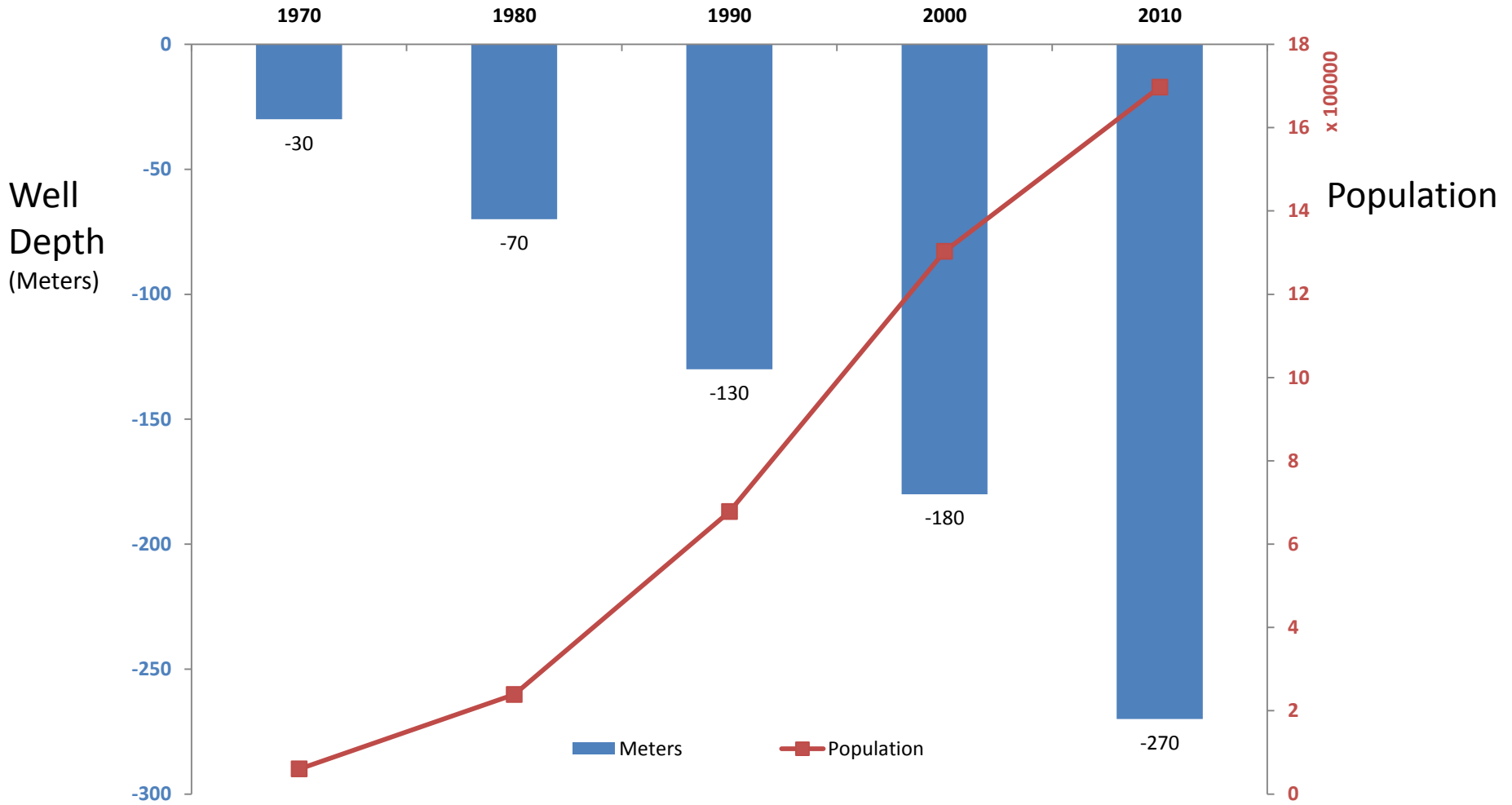
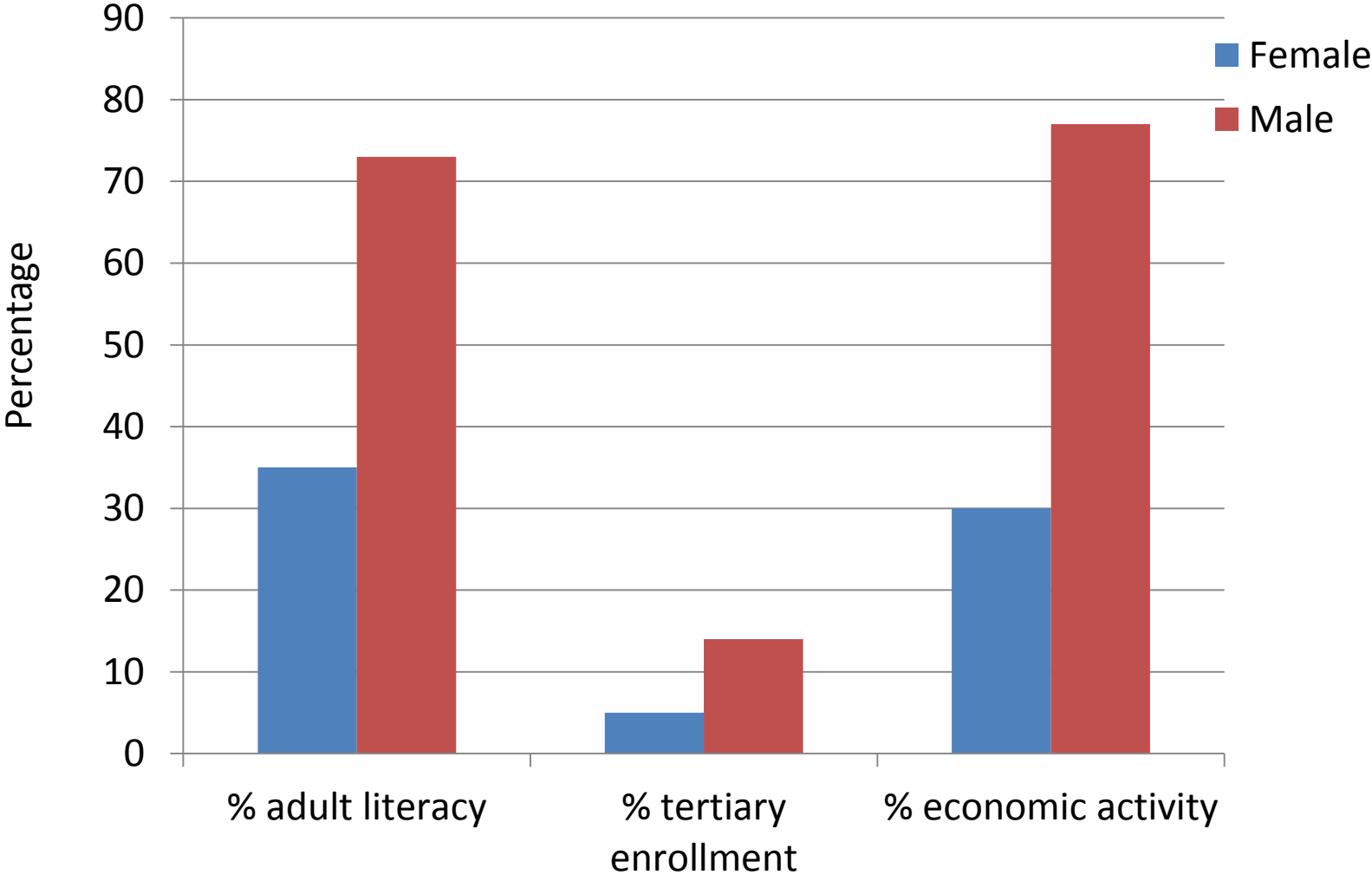


Figure 26

Gender Disparities in Yemen



Source: World Bank, *World Development Indicators* (2009).

Figure 27

Youth in Yemen (age 15-29)

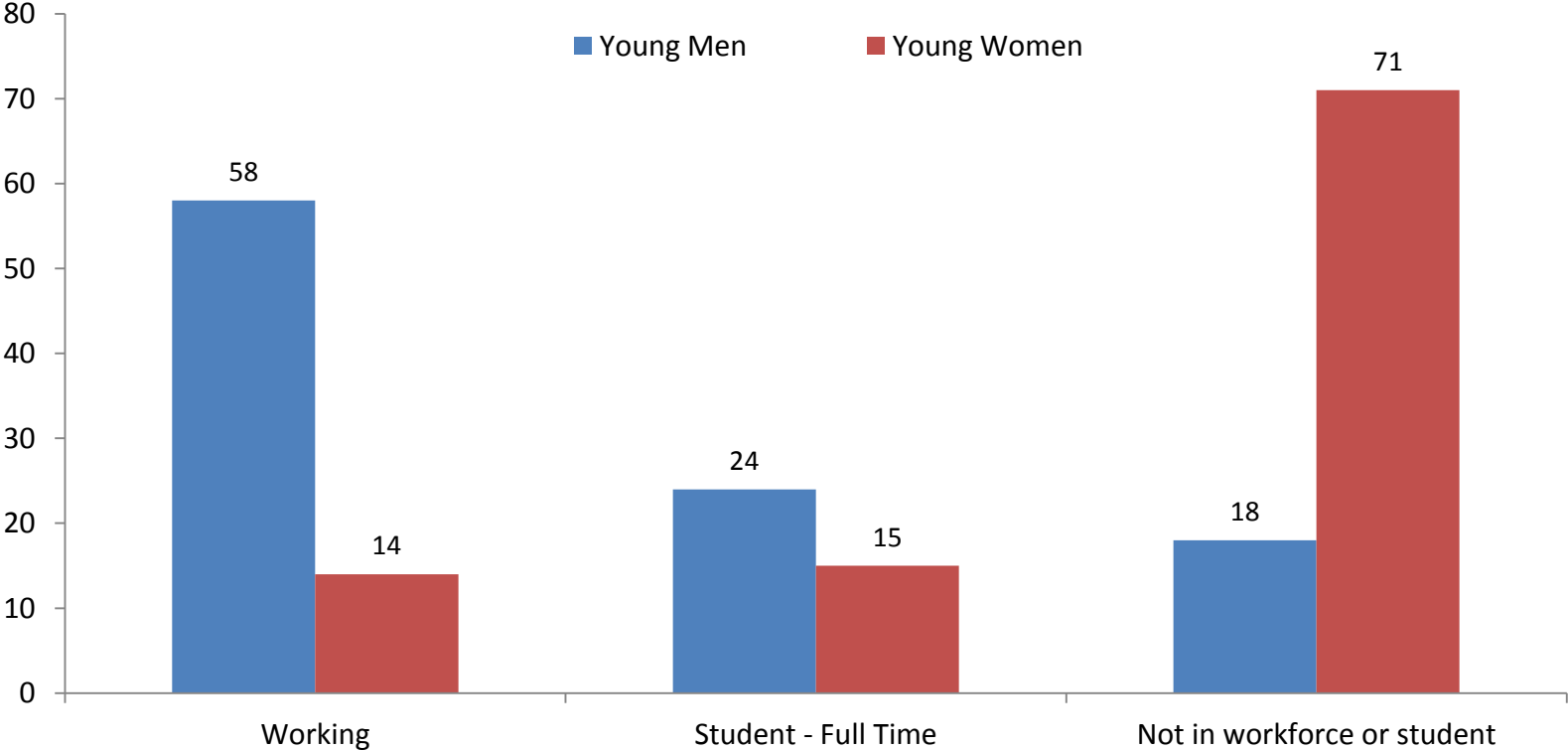
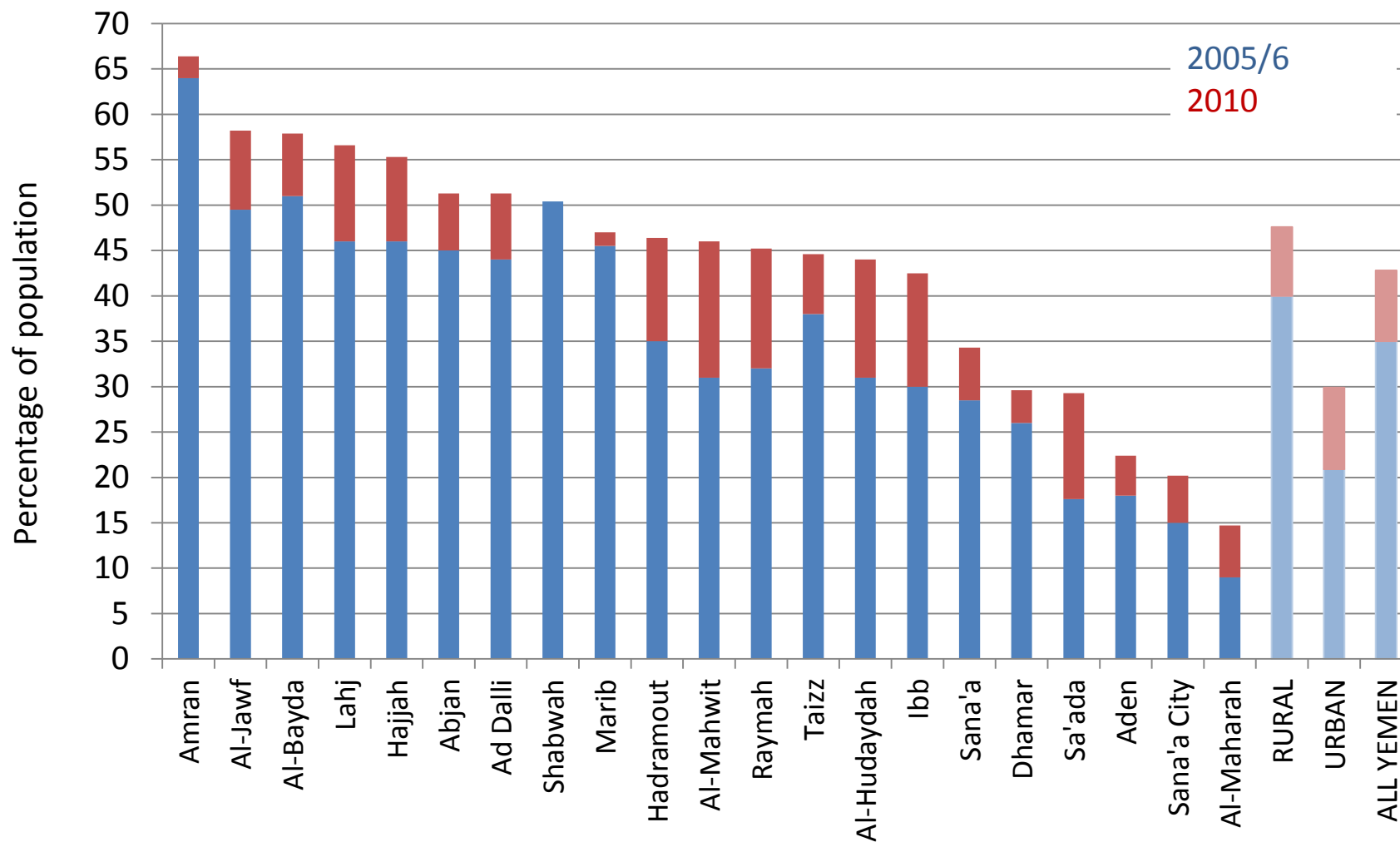


Figure 28

Absolute Poverty Prevalence

2005/6 versus 2010



Source: IFPRI, *National Food Security Strategy*, Part 1, February 2010; WFP, *CFSS*, 2010.

Figure 29

Food Security in Yemen

Total Exports/ Food Imports

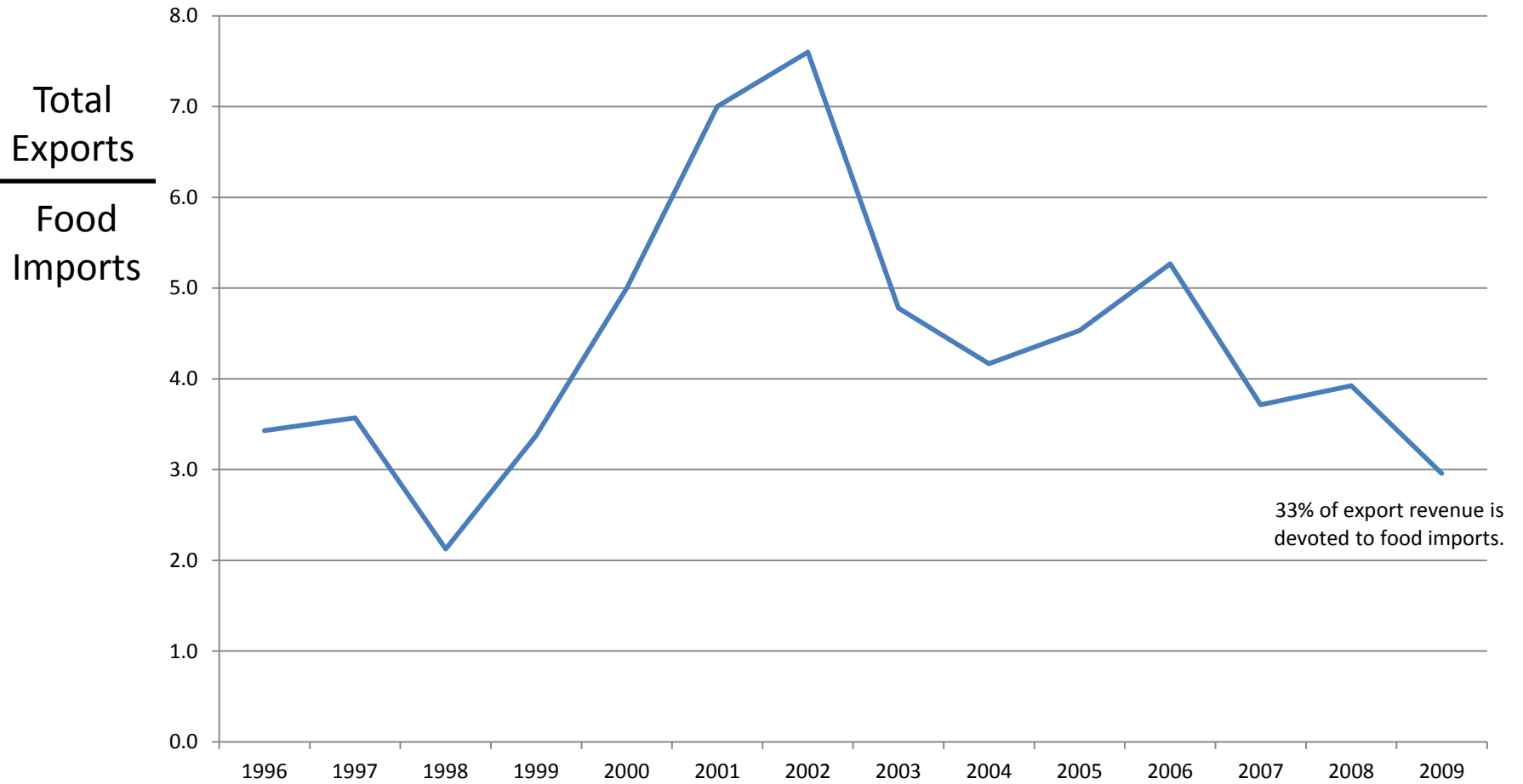
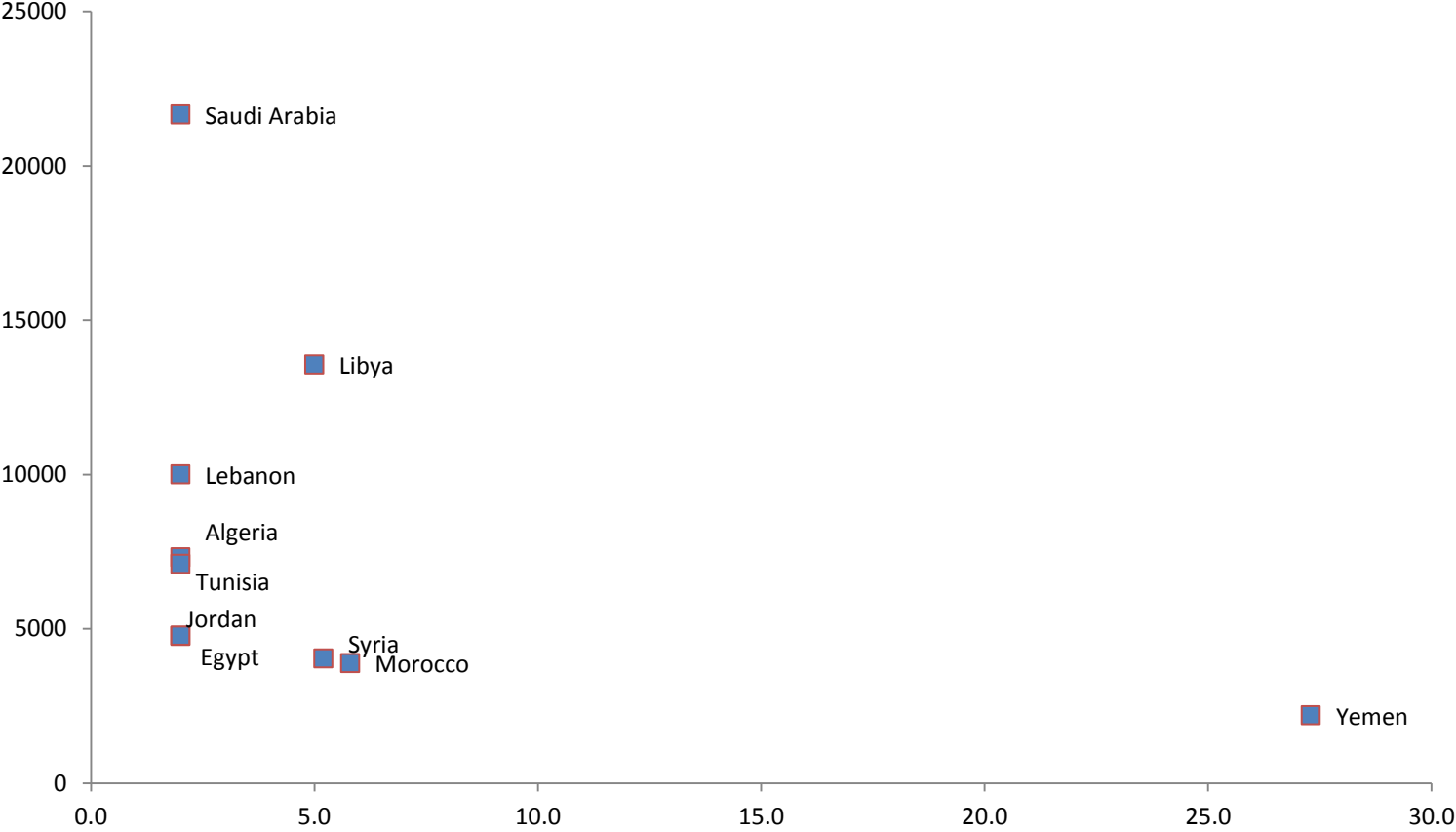


Figure 30

Global Hunger Index vs. Per Capita Income in MENA

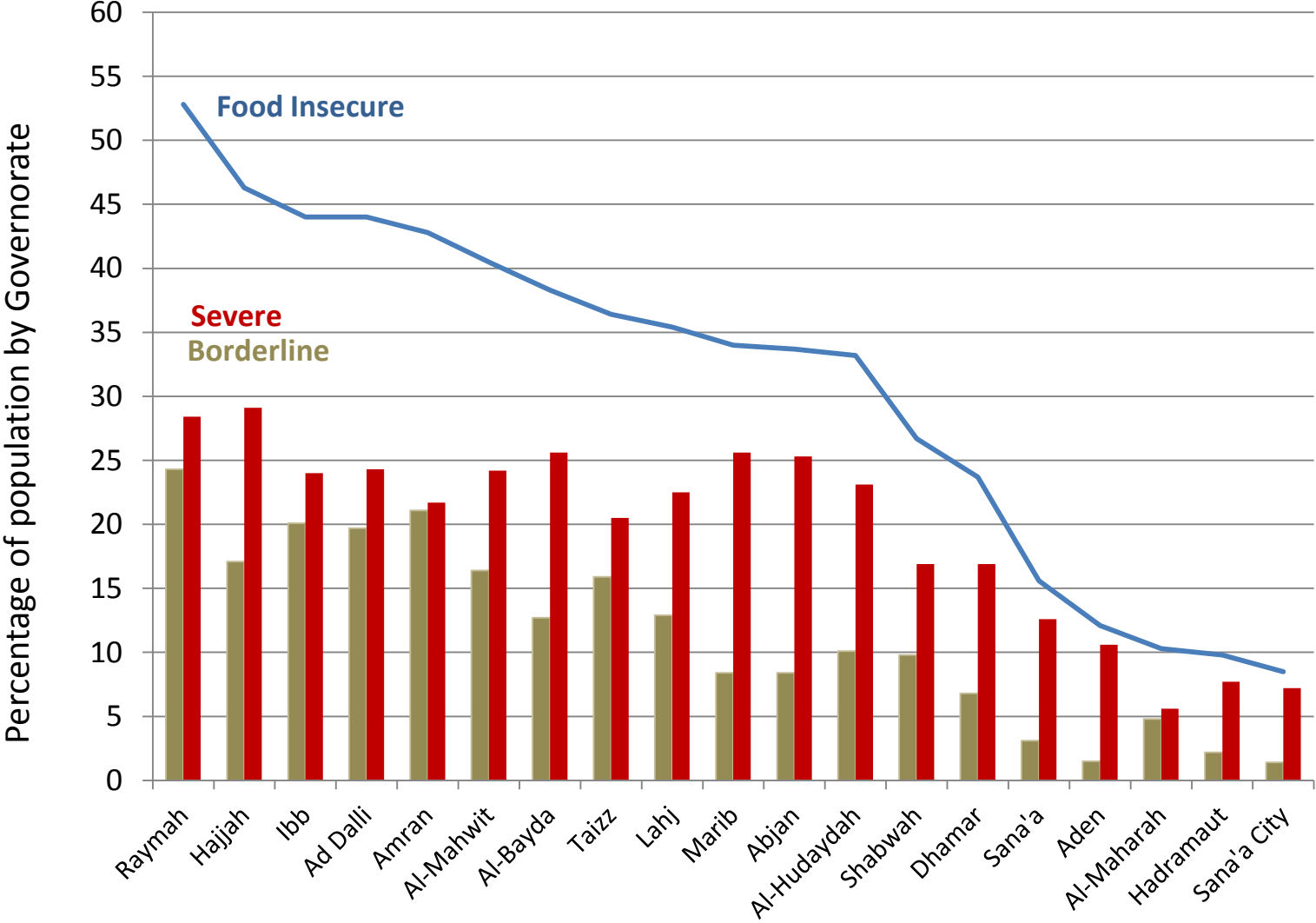
Income
Per
Capita



Global Hunger Index

Figure 31

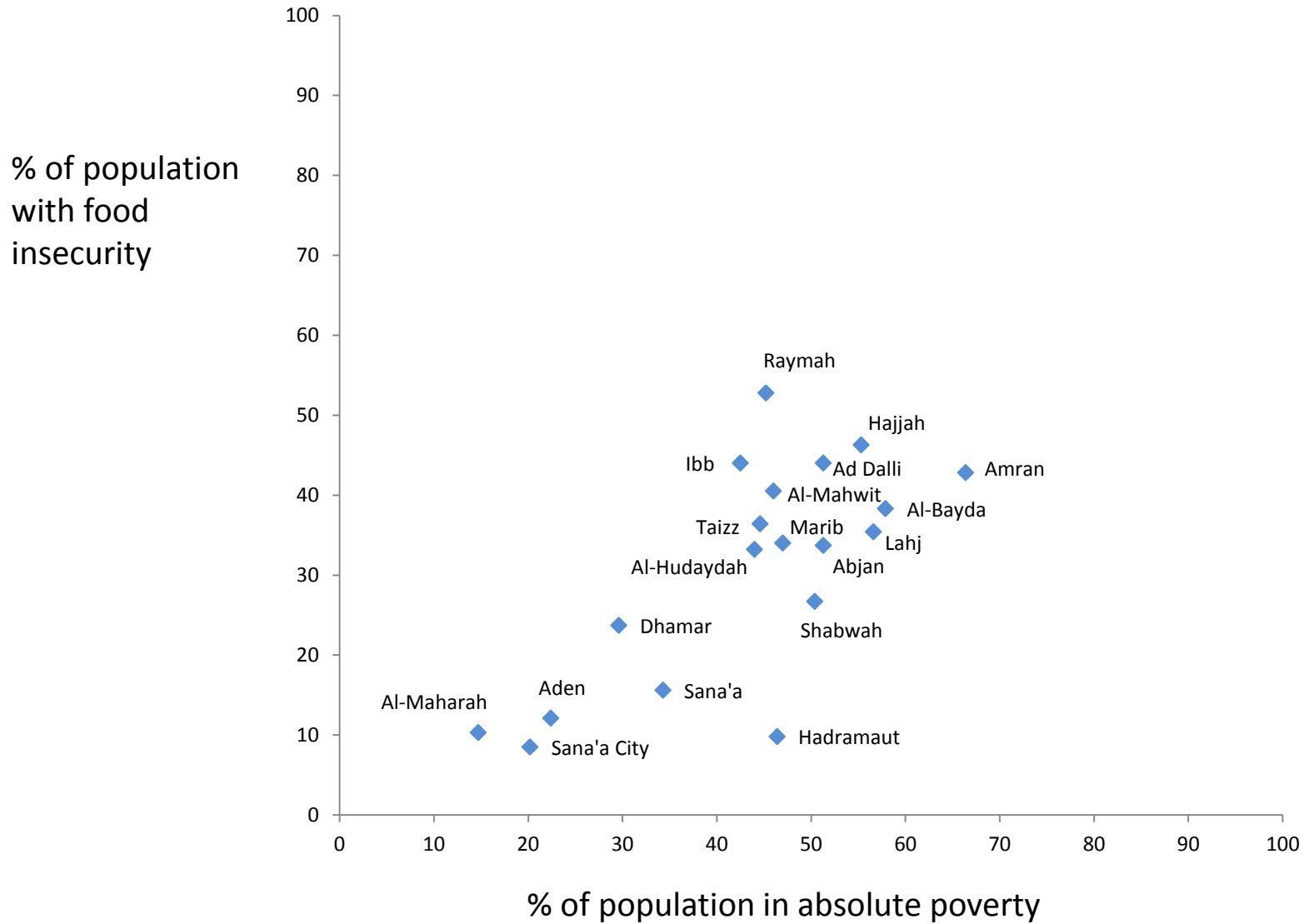
Food Insecurity in Yemen



World Food Program, Yemen Comprehensive Food Security Survey (March 2010).

Figure 32

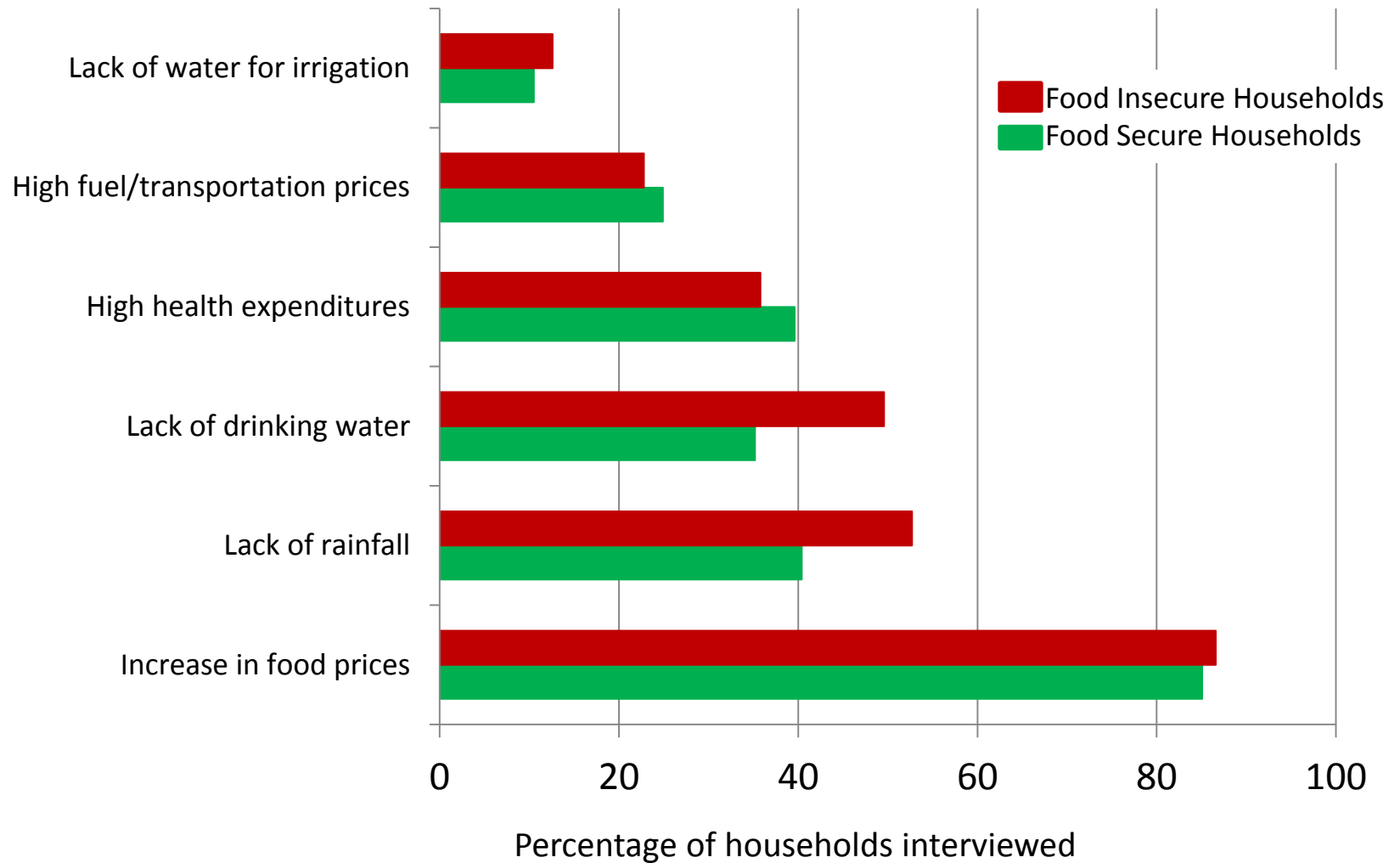
Food Insecurity vs. Absolute Poverty



Source: IFPRI, *National Food Security Strategy*, Part 1, February 2010; WFP, *CFSS*, 2010.

Figure 33

Household Perceptions of Most Significant Difficulties, 2009



Source: WFP, Yemen Comprehensive Food Security Survey, 2010.

Monitoring Country Progress in the Middle East & North Africa

1. Economic Reforms, 2009-10											
	Business Environment (1 to 183)	MCP score 1 to 5	Regulatory Quality (-2.5 to 2.5)	MCP score 1 to 5	Government Effectiveness (-2.5 to 2.5)	MCP score 1 to 5	Budget Balance, 3-yr avg. (% of GDP)	MCP score 1 to 5	Trade Liberalization (1 to 100)	MCP score 1 to 5	Total MCP Score
Turkey	65	3.77	0.31	3.40	0.35	3.17	3.6	1.5	86.4	5.00	3.4
Tunisia	55	3.81	0.10	3.14	0.41	3.25	2.9	2.0	53.5	2.50	2.9
Algeria	136	1.92	0.94	1.86	0.59	2.03	9.8	5.0	70.7	3.85	2.9
Jordan	111	2.62	0.36	3.46	0.28	3.09	10.1	1.0	78.8	4.45	2.9
Morocco	114	2.45	0.01	3.01	0.11	2.61	2.0	2.0	71.2	3.86	2.8
Egypt	94	2.94	0.14	2.85	0.30	2.38	7.1	1.0	74.0	4.08	2.7
Lebanon	113	2.57	0.07	2.94	0.67	1.93	8.6	1.0	80.5	4.58	2.6
Yemen	105	2.7	0.60	2.28	1.12	1.38	6.0	1.0	76.1	4.24	2.3
West Bank/Gaza	135	1.99	0.12	2.87	0.87	1.69	--	--	--	--	2.2
Syria	144	1.72	1.07	1.70	0.61	2.01	3.6	1.5	54.0	2.54	1.9
Iraq	166	1.19	1.03	1.74	1.26	1.22	--	--	--	--	1.4

See Appendix for data sources and explanations.

1A. Budget Balance, 3-year average (% of GDP)							
	2006	2007	2008	2009	2010	3 year average	MCP score
Algeria	13.9	6.1	9.3	--	--	9.8	5.0
Morocco	2.1	0.2	0.4	2.1	4.3	2.0	2.0
Tunisia	2.7	2.8	0.8	3.0	5.0	2.9	2.0
Syria	3.5	3.1	2.5	3.9	4.5	3.6	1.5
Turkey	0.6	1.6	1.8	5.5	3.6	3.6	1.5
Egypt	8.2	7.3	6.8	6.6	8.0	7.1	1.0
Jordan	7.0	7.9	9.6	12.3	8.4	10.1	1.0
Lebanon	13.5	10.3	9.7	8.6	7.4	8.6	1.0
Yemen	1.0	5.9	3.7	9.3	4.9	6.0	1.0
Iraq	--	--	--	--	--	--	--
West Bank/Gaza	--	--	--	--	--	--	--

See Appendix for data sources and explanations.

Monitoring Country Progress in the Middle East & North Africa

2. Governing Justly and Democratically, 2009-10											
	Political Rights (1 to 7)	MCP score 1 to 5	Civil Liberties (1 to 7)	MCP score 1 to 5	Media Freedom (1 to 100)	MCP score 1 to 5	Rule of Law (-2.5 to 2.5)	MCP score 1 to 5	Corruption (-2.5 to 2.5)	MCP score 1 to 5	Total MCP Score
Turkey	3	3.67	3	3.67	51	2.86	0.12	3.02	0.09	2.74	3.2
Jordan	6	1.67	5	2.33	63	2.21	0.38	3.34	0.27	2.94	2.5
Lebanon	5	2.33	3	3.67	55	2.64	0.64	2.09	0.80	1.68	2.5
Morocco	5	2.33	4	3.00	66	2.04	0.16	2.68	0.23	2.35	2.5
Egypt	6	1.67	5	2.33	60	2.37 -	0.03	2.84 -	0.41	2.14	2.3
West Bank/Gaza	6	1.67	5.5	2.00	--	-- -	-0.37	2.42 -	0.44	2.10	2.0
Algeria	6	1.67	5	2.33	64	2.15 -	0.73	1.97 -	0.49	2.04	2.0
Tunisia	7	1.00	5	2.33	85	1.00	0.22	3.14 -	0.02	2.65	2.0
Yemen	6	1.67	5	2.33	80	1.27 -	1.15	1.45 -	1.03	1.41	1.6
Iraq	5	2.33	6	1.67	65	2.10	1.83	1.00	1.38	1.00	1.6
Syria	7	1.00	6	1.67	83	1.11 -	0.47	2.30 -	0.96	1.49	1.5

See Appendix for data sources and explanations.

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Monitoring Country Progress in the Middle East & North Africa

3. Economic Growth and Performance, 2009-10														
	GDP per Capita Growth (% 5-year avg.)	MCP score 1 to 5	Macro-stability MCP score 1 to 5	FDI (% of GDP, 5-year avg.)	MCP score 1 to 5	Exports MCP score 1 to 5	Energy Security MCP score 1 to 5	Uneven Development (1 to 10)	MCP score 1 to 5	Environmental Sustainability (25 to 100)	MCP score 1 to 5	Domestic Credit (% of GDP)	MCP score 1 to 5	Total MCP Score
Jordan	4.42	3.32	3.50	14.16	4.91	3.07	1.54	7.2	2.13	35.6	1.68	78.95	4.5	3.1
Lebanon	3.75	2.97	3.29	11.9	4.28	2.55	3.01	7.2	2.13	38.5	1.89	74	4	3.0
Tunisia	3.53	2.86	3.74	5.2	2.44	3.31	2.945	7	2.25	44	2.29	68.37	4	3.0
Morocco	3.18	2.67	4.09	2.8	1.77	2.91	2.64	7.6	1.88	57.8	3.27	79.7	4.5	2.9
Egypt	3.9	3.03	3.67	5.83	2.61	2.05	2.45	7.4	2.00	60.97	3.50	42.80	2.50	2.8
Algeria	1.33	1.70	4.75	1.29	1.36	2.29	3.99	7.1	2.19	67.2	3.95	13.16	1	2.5
Turkey	2.42	2.27	3.56	2.5	1.69	2.32	2.825	7.8	1.75	46.3	2.45	32.59	2	2.3
Syria	1.77	1.93	4.05	2.43	1.67	2.23	2.11	7.8	1.75	55.5	3.11	15.82	1.5	2.3
Yemen	0.88	1.46	3.45	2.87	1.79	1.00	3.16	8.6	1.25	61.7	3.55	7.37	1	2.0
Iraq	1.40	1.74	--	1.45	1.4	1.00	2.495	8.8	1.12	42.4	2.17	4.08	1	1.6
West Bank/Gaza	1.32	1.70	--	1.16	1.32	--	--	--	--	--	--	7.52	1	--

See Appendix for data sources and explanations.

3A. Macroeconomic stability							
	External Debt (% of GDP)	MCP score 1 to 5	Inflation (% 3-year avg.)	MCP score 1 to 5	Current Account Balance (3-year avg.)	MCP score 1 to 5	Average MCP Score
Algeria	3.83	5.00	3.70	4.26	14.40	5.00	4.75
Morocco	26.43	4.65	2.10	4.58	3.57	3.05	4.09
Syria	10.28	5.00	7.08	3.58	0.63	3.58	4.05
Tunisia	58.16	3.82	3.39	4.32	3.29	3.09	3.74
Egypt, Arab Rep.	17.64	4.88	11.35	2.73	-0.8	3.40	3.67
Turkey	41.20	4.26	7.54	3.49	4.65	2.92	3.56
Jordan	28.30	4.60	6.65	3.67	10.26	2.22	3.50
Yemen	25.50	4.68	9.63	3.07	7.11	2.61	3.45
Lebanon	70.70	3.49	1.86	4.63	14.00	1.75	3.29
Iraq	--	--	--	--	29.29	3.28	--
West Bank/Gaza	--	--	--	--	-28.69	1.00	--

See Appendix for data sources and explanations.

3B. Exports							
	Export share of GDP (%)	MCP score 1 to 5	Hi Tech Exports (% of total exports)	MCP score 1 to 5	Manufacturing Exports (% of total exports)	MCP score 1 to 5	Average MCP Score
Tunisia	28.4	3.70	3.49	1.68	75.40	4.33	3.31
Jordan	23.8	3.40	0.67	1.1	73.30	4.24	3.07
Morocco	15.6	2.46	0.0	1.0	65.45	3.88	2.91
Lebanon	12.2	1.75	0.0	1.0	72.45	4.20	2.55
Turkey	12.7	1.72	1.41	1.3	80.20	4.55	2.32
Algeria	2.3	2.94	0.0	1.0	1.56	1.00	2.29
Syria	18.5	2.65	0.0	1	33.00	2.40	2.23
Egypt, Arab Rep.	33.0	2.22	0.0	1.0	37	2.75	2.05
Iraq	--	--	0.0	1.0	0.17	1.00	1.00
Yemen	--	--	0.01	1.0	1.67	1.00	1.00
West Bank/Gaza	--	--	--	--	--	--	--

See Appendix for data sources and explanations.

3C. Energy Security					
	Energy Imports (% of energy use)	MCP score 1 to 5	Energy Efficiency (GDP per unit of energy use)	MCP score 1 to 5	Average MCP Score
Algeria	345.70	4.50	6.72	3.48	3.99
Yemen	128.80	2.79	6.82	3.53	3.16
Lebanon	94.80	1.02	10.53	5.00	3.01
Tunisia	10.59	1.68	8.22	4.21	2.95
Turkey	72.73	1.19	8.74	4.46	2.83
Morocco	95.45	1.01	8.34	4.27	2.64
Iraq	216.90	3.48	2.69	1.51	2.50
Egypt, Arab Rep.	22.34	1.94	5.67	2.97	2.45
Syria	24.00	1.96	4.22	2.26	2.11
Jordan	96.15	1.01	3.84	2.07	1.54
West Bank/Gaza	--	--	--	--	--

See Appendix for data sources and explanations.

Monitoring Country Progress in the Middle East & North Africa

4. Investing in People, 2009-10										
	Under-five mortality (per 1,000)	MCP score 1 to 5	Life Expectancy	MCP score 1 to 5	Health Expenditures (% of GDP)	MCP score 1 to 5	Environmental Health (25 to 100)	MCP score 1 to 5	Combined Enrollments (%)	MCP score 1 to 5
Lebanon	12	4.80	72.0	4.14	8.82	3.88	77.30	4.27	78.0	3.16
Turkey	20	4.60	71.9	4.12	4.98	2.00	74.50	4.12	71.1	2.79
Tunisia	21	4.60	74.3	4.42	5.96	2.48	77.20	4.26	76.2	3.06
Jordan	25	4.50	72.7	4.22	8.90	3.92	76.70	4.23	78.7	3.20
Algeria	32	4.30	72.4	4.18	4.36	1.70	67.58	3.78	73.6	2.92
Egypt	21	4.57	70.1	3.90	6.26	2.63	63.04	3.55	76.4	3.08
Syria	16	4.70	74.2	4.41	3.59	1.33	73.70	4.08	65.7	2.50
Morocco	38	4.20	71.3	4.05	4.98	2.00	73.40	4.07	61.0	2.24
Iraq	44	4.10	67.9	3.63	2.50	1.00	39.60	2.38	60.5	2.22
Yemen	66	3.50	62.9	3.00	3.88	1.47	35.00	2.15	54.4	1.89
West Bank/Gaza	30	4.40	73.5	4.31	--	--	--	--	--	--

Monitoring Country Progress in the Middle East & North Africa

4. Investing in People, 2009-10 (Continued)									
	Literacy Rate (%)	MCP score 1 to 5	Educational Expenditures (% of GDP)	MCP score 1 to 5	Per Capita Income, PPP	MCP score 1 to 5	Gender (0 to 1)	MCP score 1 to 5	Total MCP Score
Lebanon	89.6	4.35	2.05	1.03	13400	4.5	--	--	4
Turkey	88.7	4.29	2.86	1.56	13500	4.5	0.621	2.140	3.6
Tunisia	78.0	3.62	7.19	4.38	7810	2.5	0.515	2.960	3.3
Jordan	92.2	4.51	--	--	5730	2	0.616	2.180	3.2
Algeria	72.6	3.28	4.27	2.48	8110	2.5	0.594	2.350	3.0
Egypt	66.5	2.89	3.76	2.15	5680	2	0.714	1.431	2.7
Syria	83.6	3.97	4.85	2.86	4620	1.5	0.687	1.640	2.7
Morocco	56.4	2.26	5.71	3.42	4400	1.5	0.693	1.590	2.5
Iraq	77.6	3.59	--	--	3330	1.5	0.751	1.150	2.3
Yemen	60.9	2.54	5.22	3.10	2330	1.0	0.853	1.000	1.9
West Bank/Gaza	94.1	4.63	--	--	--	--	--	--	--

See Appendix for data sources and explanations.

Monitoring Country Progress in the Middle East & North Africa

5. Peace & Security, 2009-10							
	Counter- terrorism (MCP score 1 to 5)	Combating Weapons of Mass Destruction (MCP score 1 to 5)	Stabilization Operations and Defense Reform, (MCP score 1 to 5)	Counter- narcotics (MCP score 1 to 5)	Trans- national Crime (MCP score 1 to 5)	Conflict Mitigation (MCP score 1 to 5)	Total MCP Score
Ghana	4.0	3.0	3.8	3.4	3.4	4.7	3.7
Ukraine	3.5	5.0	3.1	2.5	2.3	3.0	3.2
Morocco	3.1	3.0	3.5	3.2	2.9	3.2	3.2
Albania	3.0	2.0	4.4	2.7	3.0	3.8	3.2
Mongolia	3.8	2.0	3.6	2.5	3.2	3.7	3.1
Uganda	2.0	3.0	2.4	3.5	3.1	3.5	2.9
Peru	2.8	3.0	3.3	2.6	2.5	3.2	2.9
Sri Lanka	2.6	3.0	2.4	3.6	2.8	2.3	2.8
Cambodia	3.3	3.0	2.8	2.6	2.4	2.7	2.8
Ecuador	2.5	3.0	2.3	2.3	2.4	3.8	2.7
Egypt	2.6	2.0	3.4	2.9	2.4	2.5	2.6
Bangladesh	2.3	3.0	3.1	2.7	2.5	2.0	2.6
Ethiopia	2.8	3.0	2.0	3.1	3.0	1.7	2.6
Philippines	1.5	3.0	2.3	2.8	1.9	3.2	2.4
Sudan	1.3	3.0	2.0	3.8	3.1	1.3	2.4
Russia	2.0	3.7	2.2	2.7	1.6	2.2	2.4
Yemen	1.3	1.7	2.3	3.0	2.5	2.3	2.2
India	1.3	3.0	2.4	2.3	1.9	2.0	2.2
Afghanistan	1.0	2.0	3.0	2.4	2.2	1.3	2.0
Iraq	1.0	1.0	2.3	2.3	2.4	1.7	1.8
Burma	1.8	2.0	2.0	2.3	2.0	1.0	1.8
Pakistan	1.1	1.0	1.8	2.0	1.5	1.7	1.5

See Appendix for data sources and explanations.

Yemen Gap Analysis

Appendix

April 2011

This appendix includes: (1) a general overview of the Monitoring Country Progress (MCP) system; (2) indicator definitions of the components of the MCP indices; (3) an explanation of the method used to convert the initial data to a “1” to “5” scale; and (4) the weighting schemes for each of the MCP indices.

General Overview of the MCP system

The core of the MCP system consists of five indices: (1) economic reforms; (2) governing justly and democratically; (3) macroeconomic growth and performance; (4) investing in people; and (5) peace and security. For each index, primary data are converted to a “1” to “5” scale, where a “1” represents the worst country performances on that indicator worldwide and a “5” represents the best worldwide. Three indices (economic reforms, governing justly and democratically, and peace & security) are calculated by equally weighting the components. The weighting schemes for the other two indices (economic growth and performance, and investing in people) are more complex and attempt to reflect an iterative process of analysis and feedback among many colleagues in the U.S. government and beyond. *Figures 1-3* provide the specifics of the weighting schemes for each of the five indices.

MCP draws on publicly-available standardized (i.e., cross-country) data from a variety of sources including international organizations (such as the World Bank, the International Monetary Fund, the World Health Organization (WHO), the United Nations Office on Drugs and Crime (UNODC), and the United Nations Children Fund (UNICEF)), various U.S. government sources and reports (such as from USAID, U.S. Department of State, U.S. Department of Commerce, U.S. Defense Department, and U.S. Trade Representative), as well as think tanks and universities (such as Freedom House, Transparency International, Fund for Peace, Binghamton University, and George Mason University).

Sequencing of progress by the sectors is an important aspect in the MCP system application. First, sufficient progress in peace and security needs to precede or at the least accompany progress in economic and democratic reforms. Second, progress in economic and democratic reforms needs to precede or at the least accompany macroeconomic performance and investing in people. Countries may do relatively well on the MCP macroeconomic performance and investing in people scores in the absence of adequate reform progress, but such conditions cannot be sustained over the long term without reform progress.

Additionally, sustainability of the gains in any one sector (or any one index) is less likely to occur if other sectors are lagging considerably. The sustainable development path necessarily involves economic and democratic reforms progressing together in the medium term if not year-to-year; similarly, relatively balanced results and progress are needed between economic performance and investing in people.

Indicator Definitions of the Components of the MCP Indices

1. Economic Reforms Index

(1) Business environment. This indicator is an average rank of nine business environment areas measured by the World Bank's *Doing Business*. Each of these nine areas in turn is an average ranking of a number of components: (1) *starting a business* averages the country rankings of procedures, days, cost and minimum capital requirement to register a business; (2) *dealing with construction permits* averages the country rankings of number of procedures to get a license, number of days to get it, and the cost; (3) *registering property* is an average rank based on procedures, time and cost to register property; (4) *access to credit* includes credit information availability and legal rights for borrowers and lenders; (5) *protecting investors* ranks the World Bank's disclosure index (which measures the extent to which businesses disclose ownership and financial information); (6) *paying taxes* includes number of payments per year; hours per year in dealing with taxes, and the total tax rate; (7) *trading across borders* includes the number of documents needed to trade, the time and cost involved in dealing with the bureaucracy; (8) *enforcing contracts* averages the country rankings on the procedures, time and cost to enforce an overdue payment through the courts; and (9) *closing a business* is an average rank of the time, cost, and recovery rate to close a business via bankruptcy. Possible score: 1 to 183. 2009 data.

(2) Regulatory quality. This indicator is from the World Bank Institute (*Governance Matters*) and is an index of surveys which attempts to measure the incidence of market-unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development. Possible score: -2.5 to 2.5. 2009 data.

(3) Government effectiveness. This indicator is also from the World Bank Institute (*Governance Matters*). It is an index of surveys that rates countries on the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies. Possible score: -2.5 to 2.5. 2009 data.

(4) Central government budget balance. Budget balance equals central government revenues minus expenditures as a percent of GDP. Primary source is the World Bank's *World Development Indicators*. 2009 data.

(5) Trade Liberalization. This indicator from the Heritage Foundation, *Index of Economic Freedom*, attempts to measure the extent of a country's tariff and non-tariff barriers. Possible score: 1 to 100. 2009 data.

2. Governing Justly and Democratically Index

(1) Political rights. This indicator comes from Freedom House's annual *Freedom in the World*. Political rights are rated by independent experts and include the extent to which elections (national and local) are free, fair, and competitive; the ability of citizens to form political parties; freedom from domination by the military, foreign power, totalitarian parties, religious hierarchies and economic oligarchies; and political rights of the minority groups. Two general criteria are used to rate progress: policy (the laws) and practice (the implementation of laws). Possible score: 1 to 7. 2010 data.

(2) Civil liberties. This is also from Freedom House's *Freedom in the World*. Independent experts rate freedom of expression; association and organizational rights; rule of law and human rights; and personal autonomy and economic rights. Two general criteria are used to rate progress: policy (the laws) and practice (the implementation of laws). Possible score: 1 to 7. 2010 data.

(3) Media freedom. This Freedom House indicator is assessed worldwide annually in *Freedom of the Press*. Countries are scored on the basis of 23 questions divided into three subcategories: (1) legal environment (an examination of the laws and regulations that could influence media content and the government's inclination to use these laws and legal institutions to restrict the media's ability to operate); (2) political environment (an evaluation of the degree of political control over the content of news media); and (3) economic environment (an examination of the structure of media ownership; transparency and concentration of ownership; the costs of establishing media as well as of production and distribution; the selective withholding of advertising or subsidies by the state or other actors; the impact of corruption and bribery on content; and the extent to which the economic situation in a country impacts the development of the media). Possible score: 0 to 100. 2010 data.

(4) Rule of law. This World Bank Institute indicator is an index of surveys that rates countries on the extent to which the public has confidence in and abides by rules of society; incidence of violent and non-violent crime; effectiveness and predictability of the judiciary; and the enforceability of contracts. Possible score: -2.5 to 2.5. 2009 data.

(5) Control of corruption. From the World Bank Institute, this index of surveys rates countries on various forms of corruption, including petty and grand corruption and state

capture (which is the private sector capturing the state by illegally influencing the implementation of laws). Possible score: -2.5 to 2.5. 2009 data.

3. Macroeconomic Performance Index

(1) GDP per capita growth. This indicator is measured as a five year average; World Bank, *World Development Indicators*. 2005-2009 average data.

(2) Macroeconomic stability. This index includes three indicators: inflation (three-year average, 2007-2009 data, consumer price index), World Bank, *World Development Indicators*; external debt (as a percentage of GDP, 2009 data), World Bank, *World Development Indicators*; and current account balance (three year average, 2007-2009 data), World Bank, *World Development Indicators*.

(3) Foreign direct investment. This indicator measures average net flows as a percent of GDP five year average, 2005-2009 data; World Bank, *World Development Indicators*.

(4) Exports. This indicator combines the size of the export sector (export share of GDP, 2008 data) with the composition of exports (manufactured export as percent of total exports, 2009 data, and high-tech exports as percent of total exports, 2008 data); World Bank, *World Development Indicators*.

(5) Energy security. This index combines energy dependency (net energy imports as percent of energy use) with energy efficiency (GDP per unit of energy use); World Bank, *World Development Indicators*. 2007 data.

(6) Uneven development. This indicator attempts to measure economic disparities between ethnic and religious groups. It is from the Fund for Peace's *Failed States Index* and measures "group-based impoverishment as measured by poverty levels, infant mortality rates, educational levels; and the rise of communal nationalism based on real or perceived group inequalities." The fund uses conflict assessment system tool software which indexes and scans hundreds of thousands of open-source articles and reports; internal and external experts review the scores generated from the software to improve accuracy. Possible score: 1 to 10. 2009 data.

(7) Environmental sustainability. This indicator is an index of five components which attempt to measure ecosystem vitality and natural resource management: (1) biodiversity and habitat; (2) sustainable energy; (3) air quality; (4) water resources; and (5) productive natural resources. Source: Yale Center for Environmental Law & Policy and Columbia University Center for International Earth Science Information Network, *The Environmental Performance Index*. Possible score: 25 to 100. 2010 data.

(8) Domestic credit. This indicator measures domestic credit as percent of GDP; World Bank, *World Development Indicators*. 2008 data.

4. Investing in People Index

(1) Under five mortality rate. Deaths of children under the age of five per 1,000 live births; World Bank, *World Development Indicators*. 2008 data.

(2) Life expectancy. Number of years of life expectancy; World Bank, *World Development Indicators*. 2008 data.

(3) Public health expenditures. Government expenditures in health as percentage of GDP; World Bank, *World Development Indicators*. 2007 data.

(4) Environmental health. An index of five indicators: urban particulates; indoor air pollution; drinking water; adequate sanitation; and disability adjusted life years (DALYs). Source: Yale Center for Environmental Law & Policy and Columbia University Center for International Earth Science Information Network. *The Environmental Performance Index*. Possible score: 25 to 100. 2010 data.

(5) Combined gross education enrollment rates. Percentage includes primary, secondary, and tertiary rates. Source: UNDP, *Human Development Report*. 2008 data.

(6) Literacy rate. Percentage of the population that is literate; World Bank, *World Development Indicators*. 2008 data.

(7) Public education expenditures. Government expenditures in education as percentage of GDP; World Bank, *World Development Indicators*. 2007 data.

(8) Per capita GDP. In purchasing power parity; World Bank, *World Development Indicators*. 2008 data.

(9) Gender equality. An index with three dimensions: reproductive health (maternal mortality rate and adolescent fertility rate); empowerment (share of parliamentary seats held by each sex); and labor market (attainment at secondary and higher education by each sex, and labor market participation rate by each sex). Source: UNDP, *Human Development Report*. Possible score: 0 to 1. 2008 data.

5. Peace and Security Index

The six components of this index are drawn from the Director of Foreign Assistance's conceptual framework of peace and security. Further elaboration is provided in J. Swedberg and R. Sprout, *Peace and Security in Eastern Europe & Eurasia*, USAID/E&E Working Paper Series, No. 10 (October 2009).

(1) Counter-terrorism is an index of four indicators and measures the incidents and severity of terrorism as well as the capacity of governments to avert or control terrorism and/or the likelihood of political instability stemming from terrorism. Sources include the U.S. Department of State, *Country Reports on Terrorism*, and the National Counter-Terrorism Center, *Worldwide Incidents Tracking System*. 2009-2010 data.

(2) Combating weapons of mass destruction consists of three indicators and measures the extent to which governments are able to control and regulate the export of chemical, biological, and nuclear weapons. Sources include U.S. Department of Commerce, *Export Administration Regulations*, and the U.S. Department of State, *Border Security Assessment*. Primarily 2009-2010 data.

(3) Stabilization operations and security sector reform consists of five components and measures the capacity, scope, and intent of a government's security sector as well as estimates of the domestic security environment and status. Sources include the Center of International Development and Conflict Management, University of Maryland, *Peace and Conflict Instability Ledger*; USAID DCHA/CMM, *Instability Alert List*; SUNY at Binghamton, *Cingranelli-Richards Human Rights Dataset*; UNICEF, *TransMONEE database*; World Bank, *World Development Indicators*; and A.T. Kearney/Foreign Policy Magazine, *Globalization Index*. Primarily 2008-2009 data.

(4) Counter-narcotics consists of four indicators and measures both the demand and supply of the four major types of narcotics: opiates, cocaine, cannabis, and amphetamines. Sources: UNODC, *World Drug Report*, and U.S. Department of State, *International Narcotics Control Strategy Report*. 2006-2010 data.

(5) Combating transnational crime consists of five indicators and measures the extent of trafficking in persons, piracy of intellectual property rights, narcotics, and money laundering as well as the capacity of governments to address these concerns. Sources include the U.S. Department of State, *Trafficking in Persons Report*; U.S. Trade Representative, *Special 301 Report, Intellectual Property*; the U.S. Department of State, *International Narcotics Control Strategy Report*; and the Fund for Peace/Foreign Policy Magazine, *Failed States Index*. 2009-2010 data.

(6) Conflict mitigation consists of three indicators and measures the potential or vulnerability of governments toward conflict and state failure by taking stock of instability, conflict history of the country, and the potential for conflict among neighborhood countries. Sources include the Center for Global Policy, George Mason University and the Political Instability Task Force; USAID DCHA/CMM, *Fragility Alert List*; and Center of International Development and Conflict Management, University of Maryland, *Peace and Conflict 2010*. 2009-2010 data.

Converting the Primary Data into a “1” to “5” Scale

For each indicator, a “5” represents the best performance worldwide; that is, a level of progress which corresponds to the lower bound results of the top 5% of country performances worldwide. A “1” represents the worst performance worldwide; that is, a level of progress which corresponds to the upper bound results of the bottom 5% of country performances worldwide.

The “1” to “5” “spread” is determined by the minimum-maximum normalization technique (see OECD’s *Handbook on Constructing Composite Indicators: Methodology and User Guide*, 2008, pages 27-30). For indicators that are positively correlated with development (i.e., an increase in value indicates development):

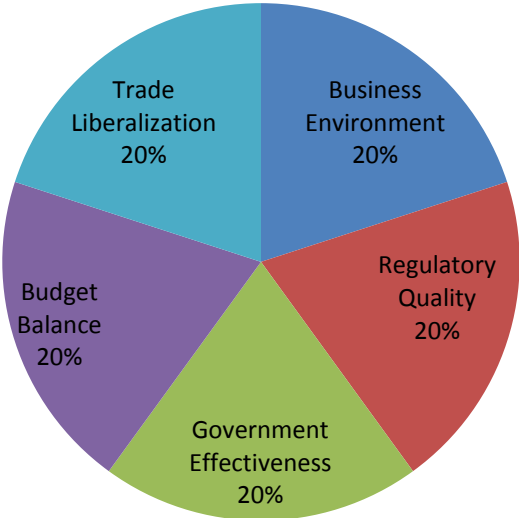
$$\frac{(x - Min)}{(Max - Min)} * 4 + 1$$

For indicators that are negatively correlated with development (i.e., a decrease in value indicates development):

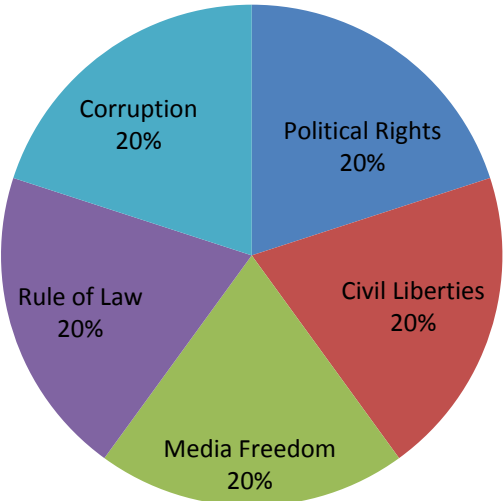
$$5 - 4 * \frac{(x - Min)}{(Max - Min)}$$

Components and Weights MCP Global

Economic Reforms



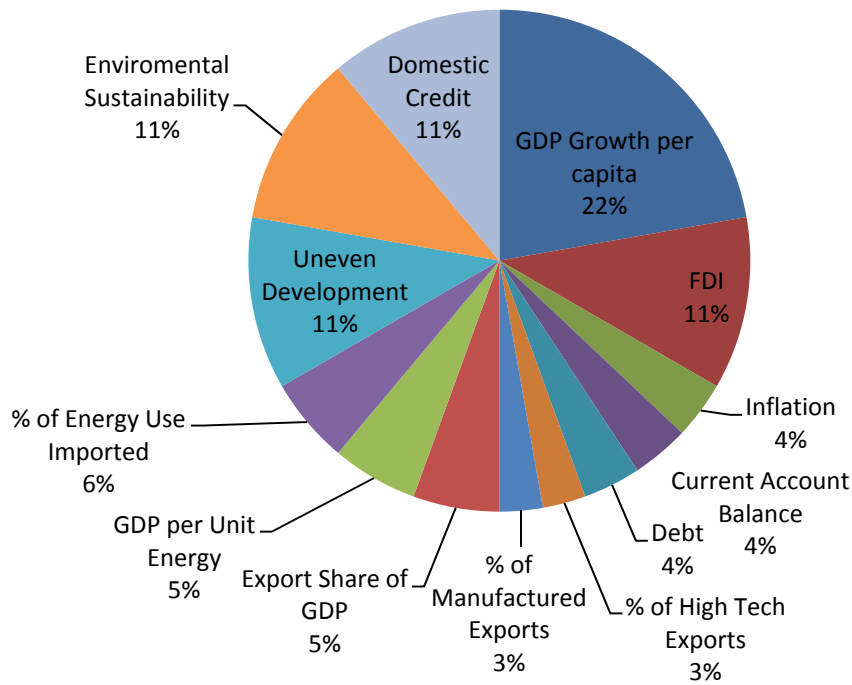
Governing Justly and Democratically



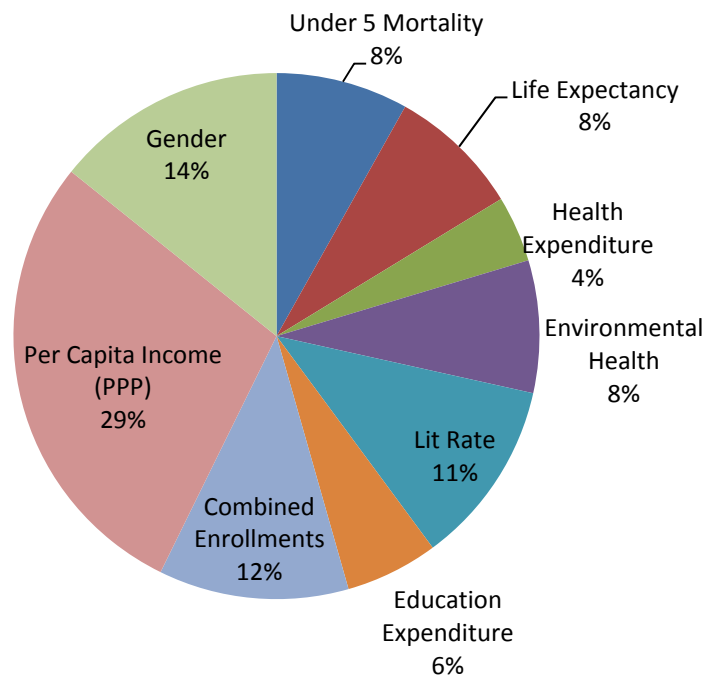
Components and Weights

MCP Global

Macroeconomic Performance



Investing in People



Components and Weights MCP Global

Peace and Security

