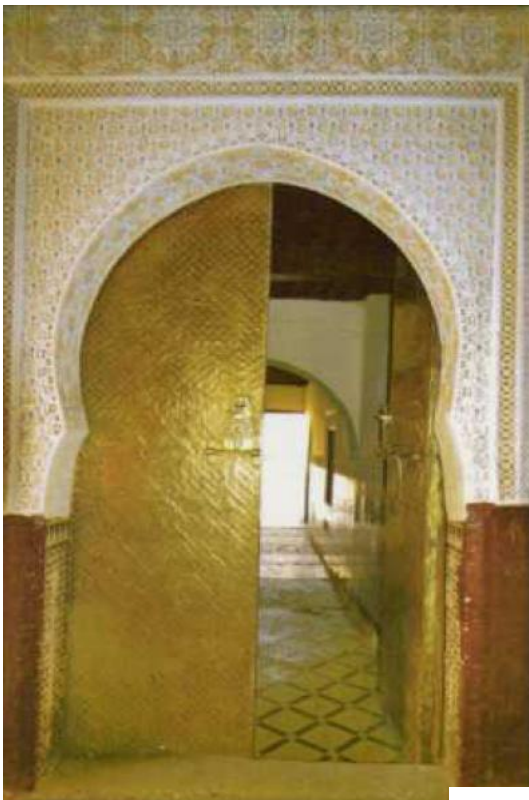


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## ***Le Maghreb face aux nouveaux enjeux mondiaux***

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**Beyond the Arab awakening,  
Policies and Investments  
for Poverty and Food Security**



**Perrihan Al-Riffai  
Clemens Breisinger  
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Bingxin Yu**

*Juillet 2013*

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# Abstract

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This report aims to inform and stimulate the debate on key policy priorities for poverty reduction and food security in light of the Arab Awakening. Its findings are based on an innovative combination of datasets and rigorous economic analysis. Results suggest that poverty and income inequality in the Arab world are likely higher than official numbers have long suggested. Given that poverty indicators seem to be misleading for many countries in the region, the report introduces a new welfare measure reflecting food insecurity risks at both national and household levels to classify Arab countries into five risk groups. Regression analyses further show that, unlike in the rest of the world, manufacturing- and service sector-led growth, rather than agriculture-led growth, is most pro-poor in Arab countries. In addition, high levels of public spending in the Arab world do not do as much to stimulate growth as in other world regions, particularly in the case of education.

Three key policy recommendations emerge from this report: (1) improve data and capacity as the basis for evidence-based decision-making, (2) foster growth that enhances food security at national and household levels, and (3) significantly enhance the efficiency and retool the allocation of public spending. More generally, the report argues that the region urgently needs national dialogues about societies' joint vision and economic development strategies. Successful design and implementation of these strategies will require visionary leadership, sound laws and institutions, politicians who are accountable and listen to the voices of the people, and civil society that is patient and accepts the tenets of democracy. The Arab world is awake—it is time to move forward.

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## **Acronyms and Abbreviations**

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<b>AHDR</b>	Arab Human Development Report
<b>Arab-TI</b>	Arab League Countries plus Turkey and Iran
<b>FS</b>	Food secure
<b>FSC</b>	Food-security challenged
<b>GDP</b>	Gross domestic product
<b>GMM</b>	Generalized methods-of-moments estimator
<b>LMIC</b>	Low- to middle-income country
<b>MDG</b>	Millennium Development Goal
<b>MENA</b>	Middle East and North Africa
<b>NENA</b>	Near East and North Africa
<b>SPEED</b>	Statistics of Public Expenditure for Economic Development
<b>UAE</b>	United Arab Emirates
<b>WDI</b>	World Development Indicators

# Introduction

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The Arab Awakening may provide new impetus for change in Arab countries as it presents great opportunities for many governments in learning modes (Nabli 2011). But with the opportunities come significant challenges for governments and civil society. Arab countries in transition will likely see a sharp slowdown in economic growth and a related rise in unemployment in the short run. In addition, political fluidity, coupled with rising food and fuel prices<sup>1</sup> has led to widespread increases in fuel and food subsidies, public sector wages, and other government welfare spending (EIU 2011; IMF 2011b). As a result, oil-importing countries in particular face growing budget gaps and inflation is expected to rise above its 2010 levels, where foreign exchange reserves and tourism, foreign direct investments and remittances are also expected to suffer throughout the region.

Several authors and institutions have acknowledged that for said countries to prosper in the 21st century they need economic diversification, market liberalization, a pro-poor growth focus, a stronger role for the private sector, an increased focus on improving income disparities, a shift from subsidies to targeted income transfers, and better governance (World Bank 2004; UNDP 2009; IMF 2011b). Food security presents a serious challenge for the region because of high dependency on food imports, diminished capacity for generating foreign exchange to finance food imports, rising food demand driven by continued high population growth, and limited potential for agricultural growth due to severe water constraints and water resource management issues (World Bank, FAO, and IFAD 2009; IFAD 2011; Breisinger et al. 2010; Ecker et al. 2010). Mastering these short-term challenges will be critical for successful transition processes. Medium and long term prosperity in

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<sup>1</sup> The region imports 30 percent of the world's wheat. World wheat prices rose 40 percent during the six-month period from fall 2010 to early 2011, and 75 percent from March 2010 to March 2011 (IMF 2011b; World Bank 2011a).

each country will require wider participation in decisionmaking and a transparent system of checks and balances to reach agreement on a broader economic roadmap and on designing development strategies.

Expanding on these previous findings and in light of the Arab Awakening, this paper aims to initiate and inform the debate on key challenges and policy options for poverty reduction and food security across the Arab region and in Turkey and Iran (Arab-TI region). The analysis underlying this research is built on a unique and innovative combination of datasets for comparative statistics and cross-country regressions, which are the main analytical tools<sup>2</sup>. In addition, the report draws on secondary literature to support and expand the original findings from the analyses, especially with the respect to the policy recommendations. It must be noted upfront that the regional nature of this report and some of the analytical tools used unavoidably lead to generalizations. However, the report strives to go beyond the regional level to point out important differences among countries. It organizes many data tables using a new Arab country typology and incorporates specific country-level results whenever possible.

The report has three sections. “Rethinking Development Progress” investigates perceived discrepancies between the data and people’s actual living conditions. It does so by using alternative data sources to analyze development outcomes and then presenting a new typology of Arab-TI countries<sup>3</sup>, which groups countries according to their food insecurity risk. “Analyzing the Impact of Economic Growth and Public Spending” assesses how much growth has translated into poverty reduction and how investments have translated into growth and social outcomes. “Summary and Policy Recommendations”

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<sup>2</sup> See Breisinger et. al (2012) for a more detailed explanation of the methodology used.

<sup>3</sup> This report focuses on 24 countries which include; the 22 countries of Arab League of States (Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates [UAE], West Bank and Gaza, and Yemen) plus Iran and Turkey. South Sudan is considered part of Sudan because it had not gained independence when data was collected. For the group of Arab countries plus Turkey and Iran this report uses the abbreviation “Arab-TI.” Wherever the report focuses on Arab countries excluding Turkey and Iran, it refers to the “Arab” region.

highlights the major findings and identifies three strategic priority areas for urgent policy action beyond the Arab Awakening.



# Rethinking Development Progress

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## *Performance according to Millennium Development Goals*

Official poverty rates in most Arab-TI countries are lower than in many Asian and Latin American countries. Applying the \$1.25-a-day poverty line, which is used to measure progress toward the first Millennium Development Goal (MDG), extreme poverty affects less than 5 percent of the population in all Arab-TI countries except Comoros, Djibouti, Mauritania, and Yemen (World Bank 2011a). Even when applying the \$2-a-day poverty line, estimates suggest less than 20 percent of the total population in Arab-TI countries lives in poverty (World Bank 2011a). Furthermore, the Gini coefficient (between 0.32 and 0.41), suggests that wealth is distributed fairly equally in all Arab-TI countries (World Bank 2011a). These numbers appear questionable in light of the complaints raised by these countries' populations during the Arab Awakening.

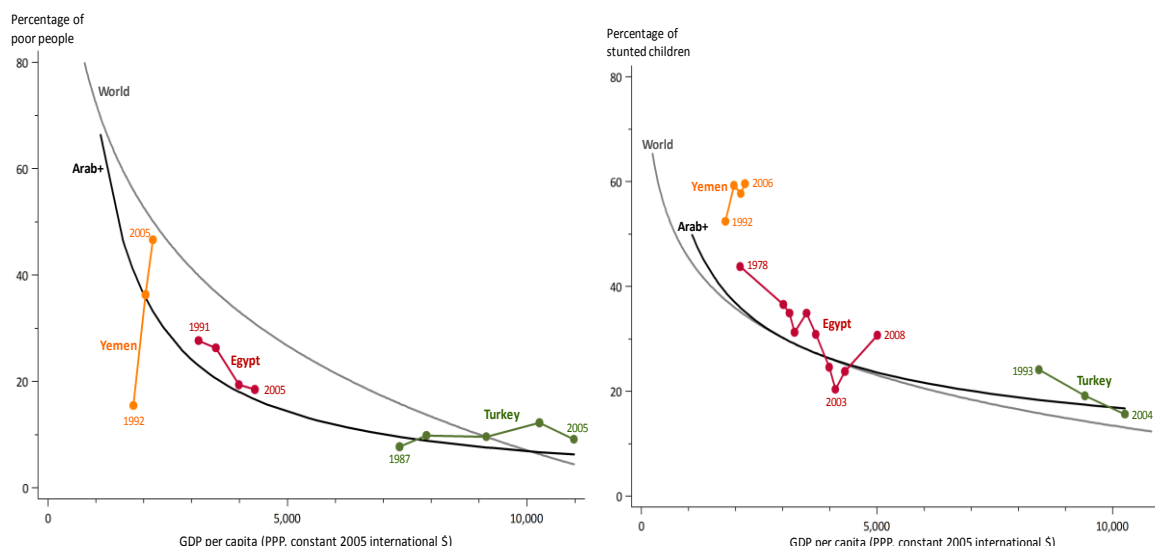
A more nuanced picture of the Arab-TI region's development progress relative to the rest of the world emerges when comparing income-based indicators with selected indicators measuring progress toward MDGs 2–8. There are significant differences among Arab-TI countries in all non-income MDG indicators. While most countries report youth literacy rates of 96–100 percent, Algeria, Libya, and Comoros have youth literacy rates of only 92 percent, 76 percent, and 46 percent, respectively (World Bank 2011a). The average mortality rate of children younger than five in the Arab-TI region is about 40 child deaths per 1,000 children alive. On average, three out of four births are attended by skilled health workers in Arab-TI countries, but only about one out of three in Somalia and Yemen. Even in Egypt and Morocco, only 79 and 63 percent of children are born with assistance from professionals (World Bank 2011a). More than 80 percent of the people living in Arab-TI countries have access to improved water sources, similar to people in LMICs on average, and Egypt, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia, and UAE have access rates above 95 percent, whereas, less than one-third of the population in Somalia, less than half in Mauritania, and less than two-thirds in Libya, Sudan, and Yemen have access to improved water sources.

## *Revisiting Common Well-Being Measures*

The official numbers measuring development progress described in the previous section show an Arab-TI region that is reasonably well-off based on income but still lagging in some social indicators. The picture becomes even fuzzier when one considers that the official numbers may be inaccurate. Income-based measurements to assess progress in improving poor people's living conditions may be particularly optimistic. To check on this often-voiced concern, we first explore GDP per capita growth's relationships to both poverty and child stunting across Arab-TI countries and countries worldwide (and

over time). We then compare and assess the general poverty–growth and nutrition–growth paths along which an average Arab-TI country and an average country in the world move, given available data (Figures 1a and 1b)<sup>4</sup>.

**Figure 1a and 1b—Relationships between GDP per capita growth and the incidence of poverty and prevalence of child undernutrition in the world, the Arab-TI region, and selected countries**



Source: Based on WHO (2011), World Bank (2011a), UNSTAT database (2011), and on Ecker et al. (2010).

According to official numbers, economic growth in Arab-TI countries has generally translated into income poverty reduction rates higher than the worldwide average, but similar reduction rates in child undernutrition. Comparing the Arab-TI and the global poverty–growth paths suggests that, at GDP per capita levels below \$10,000, Arab-TI countries generally have more success in bringing down poverty as their national income grows (Figure 1a).

The relationship between the prevalence of child undernutrition and GDP per capita in the Arab-TI region is similar to the global relationship until about the \$5,000 level, at which GDP continues to climb steadily while child undernutrition levels off (Figure 1b). In individual countries the relationship between child undernutrition and GDP per capita is even more negative (for example, Egypt's prevalence of child undernutrition 2003 onwards). Taking the child undernutrition levels as reference, this difference suggests that income poverty measures may not fully capture the realities of the well-being of the deprived population. It also raises concerns about the suitability of the typical income-based poverty indicator for measuring living standards.

Though improved data and more research are needed, at least two hypotheses can be offered here to explain the discrepancies between poverty- reduction measures in the Arab-TI region and the global average. First, official poverty estimates may be inaccurate. Second, poverty is typically measured by income alone; in contrast, child undernutrition, an alternative measure of poverty, encompasses many

<sup>4</sup> See Breisinger et. al (2012) for a detailed explanation of the methodology.

factors besides income, like health and education, also critical determinants of everybody's well-being and vulnerability. These non-income factors may be relatively less developed in Arab-TI countries and therefore are reflected in child undernutrition but not in poverty numbers based on income.

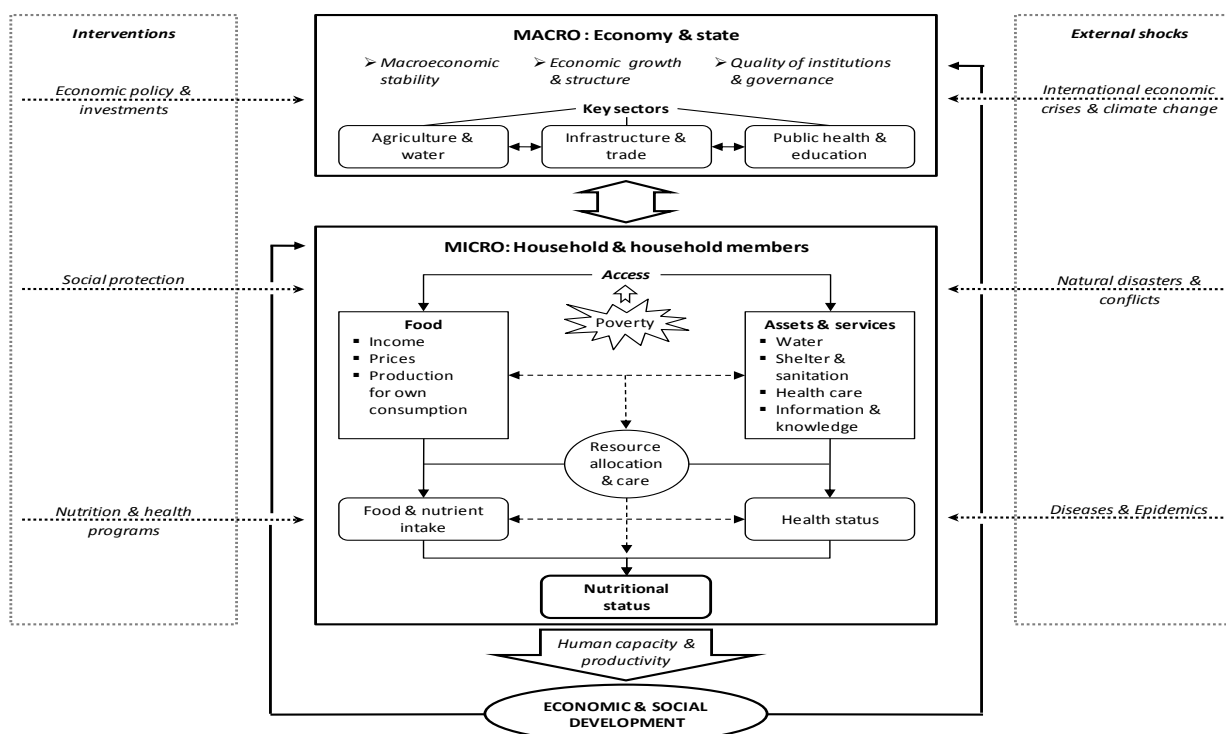
Measures of income inequality in the Arab-TI region, especially Gini coefficients, are also highly uncertain. Another indication of a numbers mismatch is that people's satisfaction with living standards has fallen in most Arab countries in recent years, especially in Bahrain, Egypt, Libya, and other countries with high levels of civil disobedience (Breisinger, Collion, et al. 2011).

As pointed out in the 2002 AHDR, the definition of poverty in the Arab world should be expanded to include dimensions other than income poverty. Since this report goes beyond the traditional income-poverty dimension, looking instead to child undernutrition to determine the level of human development progress, the analyses in the following sections will use child undernutrition as the main outcome variable. The next subsection presents a rationale for focusing on child undernutrition to capture the nexus of poverty and food security at the household level. It also proposes a new typology for classifying countries according to their food insecurity risk, incorporating critical macroeconomic determinants of food security in addition to the household-level dimension.

## A New Typology of Arab-TI Countries

The poverty-food security nexus is one of the key development challenges facing Arab countries.

**Figure 2—Conceptual framework linking food security and poverty to economic and social development**



Source: Ecker and Breisinger (2012).

Poverty and food security are particularly closely linked in Arab countries due to high vulnerability to food-related “external shocks” that have direct and indirect impacts on people’s well-being and nutritional status (Figure 2). As a result, food security has, both, a macro and a micro dimension.

At the macroeconomic level, there is broad and growing consensus that food security goes beyond the simple notion of food self-sufficiency (Diaz-Bonilla, Thomas, and Robinson 2002; Wilson and Bruins 2005; Yu, You, and Fan 2009; ESCWA 2011). Particularly in the Arab world, with its high food-import dependency and limited agricultural potential, a country’s trade and budget balances play major roles in food security (Loefgren and Richards 2003; World Bank 2008; Breisinger et al. 2010). To assess countries’ food security at the macro level, this report extends the analysis beyond that of a previous indicator of macro-level food security, that measures a country’s ability to purchase food on international markets using its export revenues (Diaz-Bonilla, Thomas, and Robinson 2002; Yu, You, and Fan 2009) to include remittances in the calculation to more adequately capture the region-specific characteristics of the importance of workers’ remittances in household income.

A key indicator for micro-level food security and more broadly for poverty is the prevalence of child stunting. In addition to the availability and quality of nutrition indicators (measured by anthropometrics) as discussed previously, young children’s nutritional status tends to be most responsive to changes in living conditions and to be particularly vulnerable to food shortages and diseases, due to their high physiological nutrient requirements for growth. Among the three common child anthropometric measures, height-for-age scores (stunting), when compared with a healthy reference population, best reflect the cumulative effects of chronic food deficits and illness and are therefore good overall, long-term nutrition indicators. In the Arab-TI region, every fifth child younger than five is stunted, while the prevalence in countries like Comoros, Somalia, Sudan, and Yemen is considerably higher (Figure 3).

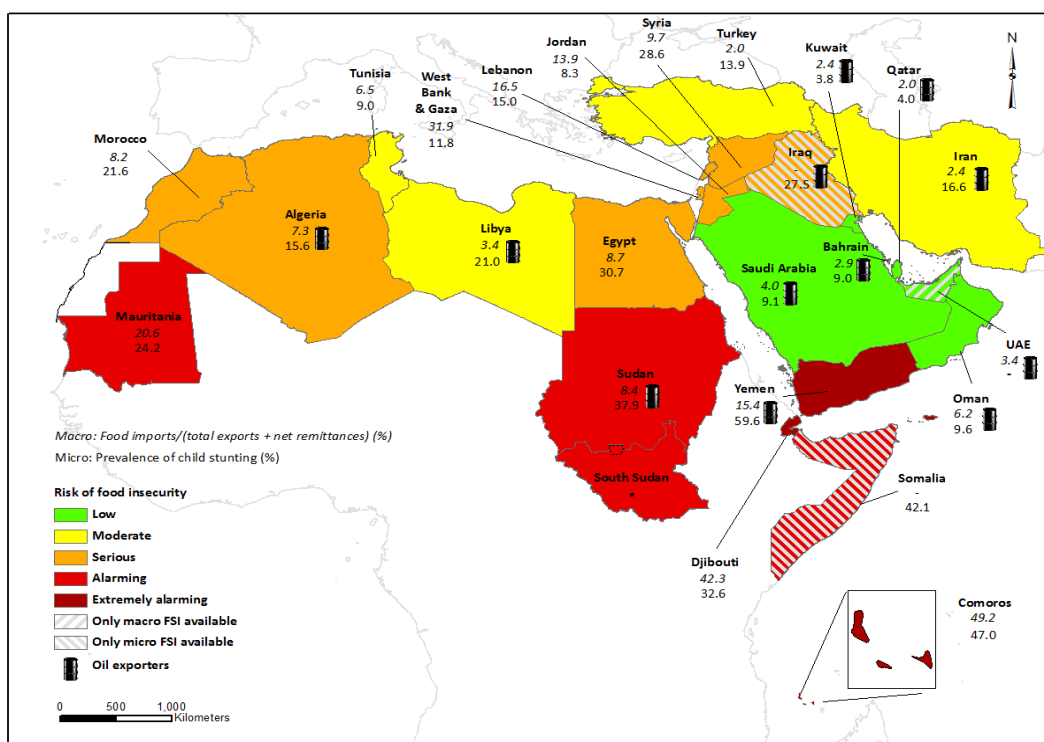
The map in Figure 3 shows the Arab-TI countries classified in five categories according to their risk of overall food insecurity. In addition to the countries’ food-insecurity risk status, the map also shows their status as oil importers or exporters (indicated with oil barrels)<sup>5 6</sup>. Since

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<sup>5</sup> The five food security categories are aggregated into two groups: food-secure (FS) countries (at low risk of food insecurity), and food-security- challenged (FSC) countries (with all other

all FS countries in the Arab-TI region are also oil exporters, the Arab-TI countries are grouped into three categories, that is, oil-exporting FSC countries, oil-importing FSC countries, and (oil-exporting) FS countries<sup>7</sup>. Acknowledging that this classification may be too simplistic in some cases, the discussion of results will highlight critical differences between individual countries within the aggregate groups. In addition, the policy recommendations for food security are likely to be different depending on whether a country has a strong macro- or household- level food security challenge.

**Figure 3. The risk of food insecurity in Arab-TI countries**



Source: World Bank (2011a) and Authors' own calculations.

food-security risk levels). The distinction between oil exporters and oil importers is maintained throughout the rest of this report (see Table A.1).

<sup>6</sup> Figures A1 and A2 in Appendix 1 show the macro- and micro-level indicators, respectively, mapped separately.

<sup>7</sup> See Breisinger et. al (2012) for a detailed explanation of the methodology used.

# Analyzing the Impact of Economic Growth and Public Spending

---

Findings from the previous section suggest that Arab-TI countries exhibit high levels of income inequality and food-insecurity risk. To change these unacceptable situations, one must understand their causes. Economic growth and the structure of public spending can contribute significantly to both income inequality and food-insecurity risk. Therefore, this section explores their contributions by first reviewing Arab countries' growth and nutritional outcomes. This is followed by a quantitative assessment of how Arab-TI countries compare with global averages when translating growth into nutritional outcomes and which sectors (agriculture, manufacturing, nonmanufacturing industry, services) have or have not contributed to people's well-being.

## ***Economic Growth, Structural Change, and the Effects on Child Nutrition***

Economic growth in Arab-TI countries has been modest, with slow or even negative growth in manufacturing and agriculture. Real GDP per capita growth averaged 1.7 percent in FSC countries and 0.8 percent in FS countries in the 1990s and 2000s where growth was mainly driven by the service sector. Even with modest growth and economic transformation in many Arab-TI countries over recent years, child undernutrition rates remain high—at 22 percent on average in FSC countries and only less than 10 percent in FS countries. Across the region, child stunting is more prevalent in rural than in urban areas, which is consistent with the global pattern (Smith et al. 2005).

## **Overall Growth Does Not Lead to Poverty Reduction**

In general, there are four key components that link poverty and nutrition to sectoral growth: the direct growth component from the sector itself; the indirect growth component arising from spillover effects of growth in one sector on another (or multiplier effect); the participation component, reflecting the responsiveness of overall poverty to the GDP growth's sector of origin; and the relative size of the sector in the economy (Christiaensen, Demery, and Kuhl 2011). The cross- country regressions presented below take all these components into account<sup>8</sup>. To identify differences in the relationships between overall economic growth or sector growth and child nutrition in the Arab-TI region compared with the rest of the world, cross-country regressions are estimated for the two regional samples separately (Table 1).

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<sup>8</sup> See Breisinger et. al (2012) for detailed explanation of methodology used.

**Table 1. Estimated coefficients (elasticities) of the nutrition-growth models: Arab-TI region vs. rest of the world**

	Sector VA share (% of GDP)	Arab-TI region			Sector VA share (% of GDP)	ROW		
		Overall growth	Ag. & non-ag. Growth	Sector Growth		Overall growth	Ag. & non-ag. Growth	Sector Growth
		1	2	3		4	5	6
Growth (per capita)								
GDP	100	-0.07			100	0.12***		
AgVA	15.3		0.70**	1.06***	19.8		0.46***	0.34***
Non-AgVA	84.7		-0.07		80.2		0.08***	
MaVA	13.3			0.39*	20.5			0.54***
InVA	25.5			0.03	13.4			0.11†
SeVA	45.8			-0.27**	46.4			0
Stunting level, lagged (t-1)		-0.16†	-0.12	-0.09		0.25***	0.27***	0.28***
F-Value		2.2	2.8	3.4		2.2	2.3	2.5
R-squared		0.5	0.59	0.66		0.47	0.48	0.51
R-squared adjusted		0.27	0.38	0.47		0.25	0.27	0.3
Observations		66	66	66		340	336	336
Countries		20	20	20		97	96	96

Source: WDI database (2011a), UNSTAT database (2011).

Note: \*\*\* p = .01, \*\* p = .05, \* p = .10. † Coefficients are almost statistically significant (i.e. p = .15)

The dependent variable is the prevalence rate of stunted children (in percent). AgVA = agriculture value-added; Non-AgVA = nonagriculture value-added; MaVA = manufacturing value-added; InVA = other industry value-added; SeVA =services value-added.

Results from the model show that unlike in the rest of the world, overall growth does not translate into poverty reduction in the Arab-TI region. One percent in overall growth in the rest of the world leads to a reduction in the prevalence of child stunting by 0.12 percentage points, but the relationship in the Arab-TI region is statistically insignificant<sup>9</sup>. This finding raises important questions about how to make growth more pro-poor in the future. To start finding answers to these questions, the next step explores how growth at subsector levels—for example, in agriculture, manufacturing, nonmanufacturing industry, and service sectors—affects nutrition. Results can aid in understanding which sector may be most promising for poverty reduction, but also potentially point to sectors that need to be made more effective in poverty reduction and food-security enhancement. Table 1 shows that manufacturing-led growth and service sector-led growth reduce child undernutrition in the Arab-TI region, suggesting that growth led by these two sectors can be an important driver of poverty reduction and increased food security.

Consistent with previous studies' findings on growth's impacts on poverty (Christiaensen, Demery, and Kuhl 2011; Diao et al. 2007; World Bank 2007), the effects of agricultural growth on child nutrition are positive and large on the global scale (Table 1, model 6). However, agricultural growth does not

<sup>9</sup> The significance levels of the estimated coefficients in the models for the Arab-TI region could be influenced by the relatively low number of observations available.



have the same positive effect on nutrition in the Arab-TI region. Agricultural growth has a statistically significant negative effect on child nutrition in the Arab-TI region, suggesting that agriculture has not been a driver of poverty reduction and food-security enhancement in the Arab-TI region thus revealing scope for improvement in the sector's poverty and food-security impact (in Table 1, model 3). Yet it should be noted that these elasticities measure relationships at the regional level and should not be overinterpreted with respect to individual countries<sup>10</sup>.

There are several structural reasons why agriculture in the Arab region as a whole may not translate into poverty reduction and improvements of people's well-being more generally. First, agriculture only constitutes about 15 percent of GDP in the Arab-TI countries on average and even less in Arab countries—significantly less than in other world regions. Second, agricultural growth per capita has been slow or negative in many Arab-TI countries in both FSC and FS countries. One important cause is the severe water constraints in most Arab countries, which are bound to hamper agricultural development even more in the future. Third, most foods, and particularly staple foods, are imported, thereby limiting the potential consumer benefit of decreased food prices that would typically accompany agricultural productivity growth. In other words, the linkage and multiplier effects of growth within the domestic economy are weak. Fourth, rising global food prices have a detrimental effect on nutrition that may explain the negative causality between agricultural growth and child undernutrition. For example, any increase in global food prices is likely to accelerate agricultural growth and increase malnutrition, an effect that is likely to be stronger in the Arab-TI region compared to the rest of the world. Finally, while about half the people in the region still live in rural areas, most rural dwellers in Arab-TI countries derive the majority of their income from nonagricultural sources.

## ***Allocation and Growth Effects of Public Spending<sup>11</sup>***

Public spending is one of the key tools for governments to support private sector-led growth and achieve social outcomes. Government spending as a share of GDP is the highest in the Arab-TI region among all world regions and keeps expanding rapidly, however, it is important to note that the size of public spending does not necessarily translate into spending effectiveness and efficiency.

Public spending on agriculture, education, health, infrastructure, and social protection are most critical for achieving poverty reduction and food security. The average of agricultural expenditures in all LMICs accounts for 7.2 percent of agricultural value-added, compared with 7.0 percent in all Arab-TI countries and 6.9 percent in Arab LMICs. The agricultural expenditure intensity is relatively low in several FSC countries, including Yemen (3.9 percent), Lebanon (1.2 percent), and Morocco (4.4 percent), indicating potential underspending. Per capita spending on agriculture in Arab countries has shrunk by 3.8 percent annually partly due to agriculture's declining share in the economy.

LMIC Arab-TI and Arab countries spend more on education than most other world regions on average (12.5 and 2.1 percent, respectively) with the exception of Latin America and the Caribbean

<sup>10</sup> Agricultural growth was associated with reductions in child undernutrition in some countries in the past, including Egypt, Iran, Morocco, Sudan, and Tunisia.

<sup>11</sup> Figures for spending as a percent of GDP are derived from IFPRI (2011).



(LAC) countries (3.6 percent of GDP). But public education expenditures per capita grew more slowly (2.5 and 0.9, respectively) than in the rest of the world. Interestingly, FSC countries dedicate a slightly greater share of GDP to education than FS countries on average (2.9 percent compared with 2.0 percent), and oil-importing FSC countries spent a slightly higher share on education than oil exporters (3.0 percent compared with 2.8 percent).

Arab-TI countries spend about 2.5 percent of GDP on health, which is less than in LAC (2.7 percent) but more than in other regions. However, on a regional level, per capita public spending on health increased at a lower rate only in LMICs in Asia and the Pacific (5.7 percent compared with 9.5 percent in Arab-TI LMICs). FSC countries devote a greater share of GDP to health than FS countries, and oil-importing FSC countries devote more than oil-exporting FSC countries.

Spending on infrastructure, which refers here to transportation and communication, in the Arab-TI region and particularly in Arab LMICs is high according to global standards; however, the Arab-TI region is the only region where spending per capita has fallen by close to 1 percent over the 2000-2007 period. This decline is particularly pronounced in oil-importing FSC countries (2.6 percent per year), whereas spending has sharply increased by 12.4 percent in (oil- exporting) FS countries.

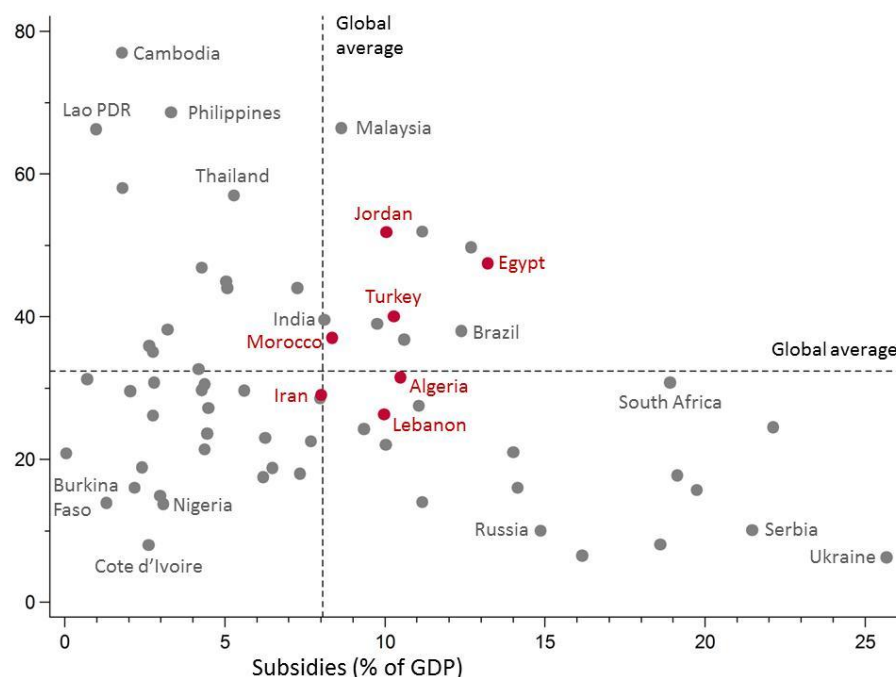
Arab-TI countries and Arab LMICs in particular have by far the highest level of spending on social protection (4.7 and 5.3 percent, respectively): more than double that of Eastern Europe and Central Asia and more than four times that of Sub-Saharan Africa. Social protection spending is higher in FS countries than in FSC countries. In Arab LMICs, the social budget grew at an annual rate of 18.8 percent per capita per year from 2000 to 2007, outpacing any other public spending account in the region, as well as public expenditure growth in any other region<sup>12</sup>. However, consistent with the existing literature, comparing subsidies to people's satisfaction levels reveals no clear trend linking the level of subsidies in a country to the people's perception of how the poor are treated, suggesting that subsidy levels are largely unrelated to the poor's well-being (Figure 4).

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<sup>12</sup> Fuel and, in some countries, food subsidies are often higher than more targeted social spending.

**Figure 4. People's satisfaction about tackling poverty compared to governments' expenses on subsidies**

% of people satisfied about the efforts to deal with the poor



Source: Based on Gallup World Poll (2011), World Bank (2011a).

Using a more rigorous methodology, the question becomes: what is the relationship between public spending and economic performance and to what extent does public spending support economic development in the Arab-TI region<sup>13</sup>

Similar to the nutrition–growth relationships, the relationships between public spending and growth outcomes in the Arab-TI region differ considerably from the rest of the world (Table 2). In both the rest of the world and in the Arab-TI region, increasing public spending has a positive effect on economic growth. However, this positive effect is much smaller in the Arab-TI region, raising important questions about the efficiency of public spending. To further explore this finding, total government expenditure is disaggregated first into social-sector expenditures (education, health, and social protection combined) and productive-sector expenditures (agriculture and infrastructure combined) and then into the individual sectors. Results show that in the rest of the world, social-sector spending is a driver of growth. However, these positive effects are more limited for the Arab-TI region, especially when focusing on the short-run effects (indicated by the reported coefficients).

Findings from the model suggest that spending one additional international dollar in the Arab-TI region yields only about half the growth of a dollar spent in the rest of the world, indicating a large potential for improving the allocation and efficiency of social-sector spending in the Arab-TI region (Table 2). Further exploring social spending by sector reveals that the growth effect of health spending

<sup>13</sup> See Breisinger et. al (2012) for methodology used.

is positive in both the rest of the world and the Arab-TI region, and about the same in magnitude. But while education spending in the rest of the world is a major determinant of growth, education spending in the Arab-TI region as a whole has a negative effect on growth, raising serious concerns about the quality of education systems and the effectiveness of public service delivery more broadly.

**Table 2. Estimated coefficients (short-run elasticities) of the growth-public spending models: Arab-TI region vs. rest of the world**

	Total		Main sector aggregates		Main sectors	
	<i>Arab-TI</i>	<i>ROW</i>	<i>Arab-TI</i>	<i>ROW</i>	<i>Arab-TI</i>	<i>ROW</i>
Growth (per capita), lagged (t-1)	0.964 ***	0.876 ***	0.993 ***	0.906 ***	0.948 ***	0.964 ***
<i>Public spending (per capita)</i>						
Total expenditures	0.027 *	0.085 *				
Social sectors			0.029 **	0.054 **		
Health					0.020 ***	0.016 **
Education					-0.019 ***	0.017 ***
Social protection					0.008 **	-0.004
Productive sectors			-0.003	0.011		
Agriculture					-0.004	0.009
Infrastructure					0.002	-0.012 **
Other expenditures			-0.006	0.002	0.021 **	0.020 ***
Constant	0.150 **	0.543 **	-0.039	0.543 ***	0.313 ***	0.147
Arellano-Bond test for AR(1), <i>p</i> -value	0.031	0.008	0.029	0.007	0.028	0.003
Arellano-Bond test for AR(2), <i>p</i> -value	0.24	0.104	0.268	0.033	0.265	0.023
Observations	316	1,146	316	1,146	316	1,146
Instruments	82	82	138	138	222	138
Countries	14	55	14	55	14	55

Source: World Bank 2011a and UNSTAT 2011.

Note: See Breisinger et al (2012) for a more detailed methodology explanation. Arab-TI = Arab League countries plus Turkey

## Summary and Policy Recommendations

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This paper has used innovative data and tools to identify three key focus areas for policymakers and civil society in Arab countries directly and indirectly affected by the Arab Awakening. Findings suggest that poverty and income inequality levels are higher than official numbers suggest and that existing welfare indicators such as income poverty seem to be misleading for many Arab countries. Furthermore, given the importance of food security for the region, this report introduces the risk of food insecurity as a new measure of well-being, combining (1) food imports as a share of total exports plus net remittances and (2) the prevalence of child under-nutrition (measured by child stunting)<sup>14</sup>. Growth throughout the region has been especially modest in agriculture and manufacturing and whilst limited agricultural growth can be partly explained by natural resource constraints, manufacturing growth has also been lagging behind other world regions.

Results of this research also show that economic growth does not trickle down to the poor in Arab countries as much as it does in the rest of the world. In other world regions, 1 percent GDP per capita growth reduces the prevalence of child undernutrition by 0.12 percentage points on average; however, statistical evidence did not reveal the same relationship between GDP growth and child undernutrition reduction in Arab-TI countries. Furthermore, the strong and positive relationship between agricultural growth and reductions in child undernutrition found in other world regions does not apply to the Arab-TI region. However, it is important to note that there are differences among countries that the cross-country econometric analysis could not fully capture. Government spending is an important tool for supporting private sector-led growth and improving food security and despite their relatively high levels of public spending,

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<sup>14</sup> See Table A.1 for typology classifications.

overall public spending in Arab-TI countries contributes less to economic growth compared with the rest of the world. There is clearly a large scope for improving the efficiency and effectiveness of public spending.

Several key policy recommendations emerge from this analysis, including the urgent need to (1) improve data and capacity for evidence-based decisionmaking, (2) foster growth that enhances food security, and (3) revisit the allocation and efficiency of public spending. Policymakers' space for action is further limited by the fact that the Arab Awakening unfolded (and continues to unfold) in the midst of a global crisis.

The following policy priority areas and related recommendations take these specific political and economic realities into consideration. Therefore, they mainly focus on measures that do not place additional financial burdens on the countries and are largely budget-neutral.

## **1. Improve data and capacity for evidence-based decision making.**

It is critical that policymakers and voters base their decisions on realistic baselines, because decisions based on flawed data can lead to significant financial losses and damage to economies and people thus, countries should develop and improve availability, accessibility, and quality of data. Data often exist but are withheld by governments and related agencies. Key indicators for assessing progress toward the MDGs and other development goals do not exist for many countries and if they do, they should be published in a coordinated and consistent way in national, regional, and global online databases.

In addition to the lack of access, the quality of data matters for policy analysis. In the short run, alternative data can compensate for the lack of reliable data, however, in the medium to long term, countries have to improve the capacity of staff in statistical offices, ministries, and related agencies to collect, analyze, and evaluate relevant data. Focusing on national and subnational regional offices in staff training can greatly improve the quality of data during collection and processing. There is also large scope for regional cooperation given the multitude of cross-country data (trade, migration, water flows, and others) and potential for knowledge exchange and transfer. Furthermore, providing government budget data organized by detailed categories, function, and subnational

levels could greatly enhance public spending analysis and allocation and, more generally, give support to subnational development strategies.

## **2. Foster growth that enhances food security.**

Fostering economic growth is key to enhancing food security, yet different types of growth are likely to be more conducive to enhancing food security at the macro or household levels or both. For improving food security at the macro level, export-led growth improves the balance of payment position and generates foreign exchange revenues for food imports which is important for those countries with high macro-level vulnerability. Enhancing food security at the household level requires inclusive growth, which generates jobs and incomes for the poor. Growth, combined with appropriate tax systems, also generates government revenues that can be directed to public spending on food security.

Supporting growth that strengthens macro-level food security necessitates finding the “right” path to export-led growth that depends on countries’ initial conditions, such as geographic location and natural endowments, among others. Mediterranean countries can benefit from their proximity to Europe, an export market for “traditional” goods and services such as fresh or processed fruits and vegetables and tourism. In addition, there is a growing market for renewable energy, countries can also use their vast potential for solar and wind energy production to meet this growing demand. Access to the sea also makes many Arab countries attractive for setting up special zone industrial clusters and highlights the importance of expecting long planning horizons, including special economic zones in national and urbanization strategies, and creating legislation and infrastructure conducive to these plans (Brautigam and Xiaoyang 2011).

Fostering growth that improves household-level food security must become a key priority, especially in countries with high levels of poverty. Results from this report show that growth led by the manufacturing and service sectors is most pro-poor, but many countries have seen poor manufacturing growth, and the manufacturing sector’s poverty-reducing effects in Arab-TI countries are weaker than in the rest of the world. Thus, Arab-TI countries need country-level analysis to find the binding constraints on accelerating growth and to identify country-specific reasons why growth does not

reach the poor to the same extent it does in other world regions. In addition, and to make growth inclusive, governments need to expand targeted social safety net programs in countries where they are already in place and establish such programs in countries lacking established safety net programs. Safety nets should be effectively combined with gender-sensitive interventions that increase the productive capacity and improve the health and nutrition of vulnerable households and individuals (Fan, Torero, and Headey 2011).

Fostering export-led, inclusive growth and targeting transfers to poor households requires substantial improvements in institutions and legal frameworks for firms and individuals. The “governance gap” that exists throughout the region has to be closed through improvements in public administration and public accountability overall. It is crucial to build healthy governing institutions in the Arab world so that they are able to provide, make available, and improve opportunities for individuals and private firms to contribute to human and economic development.

Agricultural growth may play a role in enhancing macro-level food security either through growth in agricultural exports or food production for the domestic market. It may also provide incomes to the rural poor. However, the finding that agricultural growth is not pro-poor in the Arab-TI region calls for revisiting the sector’s roles, which have traditionally included job creation for the poor, provision of a safety net in times of crisis, development of lagging regions, and provision of environmental services.

When designing country-specific growth strategies, emerging challenges should be closely integrated. Continued high population growth is likely to put additional pressure on water and other natural resources, however, may also provide opportunities for development through higher density, specialization, and shorter distances. Rural development must continue to play an important role to absorb a rapidly growing rural population. Furthermore, natural resource scarcity and projected strong impacts of climate change may also exacerbate conflicts in the region, which already exhibits the highest number and intensity of conflicts in the world (Center for Systemic Peace 2011). Evidence shows that countries in political transition are often at the highest risk of conflict (Collier and Hoeffler 1998). There are new opportunities that emerge from the fall of authoritarian regimes, including unique momentum for political and economic reforms. However, more research is needed to support policy-makers in their quest to lead a peaceful and successful transition process.

### **3. Revisit the efficiency and allocation of public spending.**

Arab countries urgently need to assess the efficiency and allocation of public spending. In general, most

oil-exporting countries with fiscal space will find it easier to compensate for inefficiencies by increasing spending, while oil-importing countries with fiscal deficits are likely to have to rely mainly on reallocation of spending and improving spending efficiency. However, both should have a genuine interest in achieving higher returns on their spending. A wide array of country-specific factors affects public expenditure efficiency, such as the level of economic development, size of the public sector, public-sector competence, governance, political stability, security of property rights, and others. As in the case of growth strategies, investment plans have to account for country-specific conditions, and importantly, they should be linked closely to growth strategies at subsector and subnational levels to ensure maximum consistency and development impact. As a key element of increasing efficiency, public services need to be overhauled in order to better serve the people and achieve the desired outcomes.

Results of this report show that social-sector spending, and most critically education spending, is much less effective in the Arab-TI region compared to the rest of the world. This finding is consistent with the often-heard notion that the education systems in most Arab countries have produced schools and universities that lack good technology, appropriate curricula, or motivated teachers and that pump out a large volume of graduates with high career aspirations who do not have skills matched to the labor markets. Given that education is the foundation for achieving inclusive growth, policymakers will have to prioritize education to address existing skill gaps, better respond to labor market signals, and stimulate knowledge-based capabilities, matching opportunities in the global as well as regional and local economy (UNDP 2009). For example, a growth strategy that builds on manufacturing-led growth for improving food security as suggested by the findings of this report will require building a strong, competitive, and relevant vocational education system. From a demand perspective, vocational training must be made worthwhile and competitive. Governments should employ national media to dispel the current negative perception of a vocational education and career to portray both systems as complementary in their national development goals. For general



education, the curriculum across all education levels should be modified to be competitive, not just nationally but also internationally and public-sector employment should be consolidated, and teacher and instructor salaries and training must also become competitive.

These priority areas may provide a starting point for governments, be they established, in transition,

or newly elected, to improve the lives of the people. Urgently needed are national dialogues about the joint vision of society, not only in terms of political systems, but also economic development pathways. Governments and citizens should be considering key questions: What should the economy look like in 20 years? What relationship should the country have with the global economy and neighboring countries? How much inequality and redistribution are acceptable and necessary? Development strategies based on a joint vision should have answers to more specific questions: Which short- and medium-term goals should be achieved? And what are realistic ways to achieve them? Successful design and implementation of these strategies will require visionary leadership, sound laws and institutions, politicians who are accountable and listen to the voices of the people, and a civil society that is patient and accepts the tenants of democracy. The Arab World has awakened. It is time to take the next steps.

## References

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Brautigam, D., and T. Xiaoyang. 2011. "African Shenzhen: China's Special Economic Zones in Africa." *Journal of Modern African Studies* 49 (1): 27–54.

Breisinger, C., M. H. Collion, X. Diao, and P. Rondot. 2011. "Impacts of the Triple Global Crisis on Growth and Poverty in Yemen." *Development Policy Review* 29 (2): 155–184.

Breisinger, C., O. Ecker, P. Al-Riffai, and B. Yu. 2012. *Beyond the Arab Awakening: Policies and Investments for Poverty Reduction and Food Security*. IFPRI Food Policy Report 25. Washington, DC: International Food Policy Research Institute.

Center for Systemic Peace. 2011. *Polity IV—Major Episodes of Political Violence (MEPV) dataset*. Accessed August 2011.

Christiaensen L., L. Demery, and J. Kuhl. 2011. "The (Evolving) Role of Agriculture in Poverty Reduction--An Empirical Perspective." *Journal of Development Economics* 96 (2): 239–254.

Collier, P., and A. Hoeffler. 1998. "On the Economic Causes of Conflict." *Oxford Economic Papers* 50: 563–573.

Diao, X., P. Hazell, D. Resnick, and J. Thurlow. 2007. *The Role of Agriculture in Development: Implications for Sub-Saharan Africa*. IFPRI Research Report No. 153. Washington, DC: International Food Policy Research Institute.

Diaz-Bonilla, E., M. Thomas, and S. Robinson. 2002. *Trade Liberalization, WTO, and Food Security*. Trade and Macroeconomics Division Discussion Paper No. 82. Washington, DC: International Food Policy Research Institute.

Ecker, O., and C. Breisinger. 2012. *The Food Security System: A New Conceptual Framework*. IFPRI Discussion Paper 01166. Washington, DC: International Food Policy Research Institute.

Ecker, O., C. Breisinger, C. McCool, X. Diao, J. Funes, L. You, and B. Yu. 2010. *Assessing Food Security in Yemen: An Innovative Integrated, Cross-Sector, and Multilevel Approach*. IFPRI Discussion

Paper 982. Washington, DC: International Food Policy Research Institute.

EIU (Economist Intelligence Unit). 2011. Country Reports: Algeria, Bahrain, Comoros, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Malta, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, UAE, Yemen. January, February, March, April.

ESCWA (Economic and Social Commission for Western Asia). 2011. Trends and Impacts in Conflict Settings: Conflict and MDGs. Issue No. 2. New York: United Nations.

Fan, S., M. Torero, and D. Headey. 2011. Urgent Actions Needed to Prevent Recurring Food Crises. IFPRI Policy Brief 16. Washington, DC: International Food Policy Research Institute.

Gallup World Poll. 2011. World View Data. Accessed February 12.

IFAD (International Fund for Agricultural Development). 2011. Enabling Poor Rural People to Improve Their Food Security and Nutrition, Raise Their Incomes and Strengthen Their Resilience: Strategic Framework Covers the Period 2011–2015. Rome.

IFPRI (International Food Policy Research Institute). 2011. Statistics of Public Expenditure for Economic Development (SPEED). Online database. Accessed December 22. [www.ifpri.org/blog/speed-public-expenditure-data-now-online](http://www.ifpri.org/blog/speed-public-expenditure-data-now-online).

IMF. 2011b. Regional Economic Outlook: Middle East and Central Asia. Washington, DC.

Lofgren, H., and A. Richards. 2003. Food Security, Poverty, and Economic Policy in the Middle East and North Africa. Discussion Paper 111. Washington, DC: International Food Policy Research Institute.

Nabli, M. 2011. "After the Arab Spring: What's Next for the Economies of the Middle East and North Africa." Speech given at The Brookings Institution, Washington, DC, September 23.

Smith, L.C., M.T. Ruel, and A. Ndiaye. 2005. "Why Is Child Malnutrition Lower in Urban Than in Rural Areas? Evidence from 36 Developing Countries." *World Development* 33(8): 1285–1305.

UNDP (United Nations Development Programme). 2002. Arab Human Development Report: Creating Opportunities for Future Generations. New York.

———. 2009. Arab Human Development Report. New York.

UNSTAT (United Nations Statistical Division database). National Accounts Main Aggregates Database.  
<http://unstats.un.org/unsd/snaama/Introduction.asp>.  
 Accessed October 2011.

WHO. 2011. Global Database on Child Growth and Malnutrition.  
<http://www.who.int/nutgrowthdb/en/>. Accessed October 2011.

Wilson, J. P., and H. J. Bruins. 2005. "Food Security in the Middle East since 1961." The Jacob Blaustein Institute for Desert Research, Ben-Gurion University. Accessed December 27, 2011. <http://ressources.ciheam.org/om/pdf/a65/05002195.pdf>.

———. 2004. Unlocking the Employment Potential in the Middle East and North Africa: Toward a New Social Contract. MENA Development Report. Washington, DC.

———. 2007. World Development Report 2008: Agriculture for Development. Washington, DC.

———. 2008. World Development Report 2009: Reshaping Economic Geography. Washington, DC.

———. 2011a. World Development Indicators. Washington, DC.

World Bank, FAO, and IFAD. 2009. Improving Food Security in Arab Countries. Washington, DC: World Bank.

Yu, B., L. You, and S. Fan. 2009. Towards a Typology of Food Security in Developing Countries. Discussion Paper 945. Washington, DC: International Food Policy Research Institute.

# Appendix 1: Food Insecurity Risk Typology

**Table A.1. Composition of the food insecurity risk indicator and country ranking**

	Macro food security (food imports/(total exports + net remittances)	Micro food security (Percent of stunted children)	Overall food security (Average of macro and micro indicator)	Food security status
<i>Oil exporter</i>				
Algeria	7.3	15.6 **	11.4	serious
Bahrain	2.9 *	9 **	5.9	low
Iran	2.4	16.6 **	9.5	moderate
Iraq		27.5 3		serious
Kuwait	2.4 *	3.8 4	3.1	low
Libya	3.4	21 5	12.2	moderate
Oman	6.2 *	9.6 **	7.9	low
Qatar	2 *	4 **	3	low
Saudi Arabia	4 *	9.1 **	6.5	low
Sudan	8.4	37.9 3	23.2	alarming
UAE	3.4 *			low
Yemen	15.4	59.6 3	37.5	ex. alarming
<i>Oil importer</i>				
Comoros	49.2	47 **	48.1	ex. alarming
Djibouti	42.3	32.6 3	37.4	ex. alarming
Egypt	8.7	30.7 6	19.7	serious
Jordan	13.9	8.3 4	11.1	serious
Lebanon	16.5	15 **	15.7	serious
Mauretania	20.6	24.2 6	22.4	alarming
Morocco	8.2	21.6 **	14.9	serious
Somalia		42.1 3		alarming
Syria	9.7	28.6 3	19.2	serious
Tunisia	6.5	9 3	7.7	moderate
Turkey	2	13.9 **	8	moderate
West Bank & Gaza	31.9	11.8 5	21.9	serious

Source: Based on World Bank 2011a and FAO 2011b.

\* High-income countries; \*\* predicted for 2008. Latest estimates: 1 = 2003, 2 = 2005, 3 = 2006, 4 = 2009, 5 = 2007, 6 = 2008

**Figure A1. Macro food insecurity map**

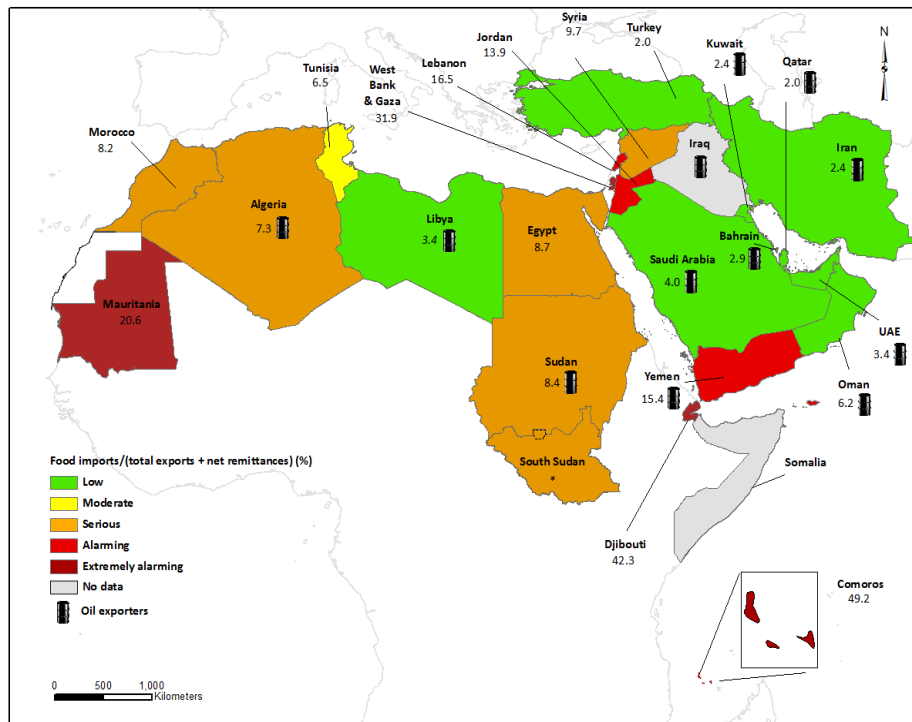
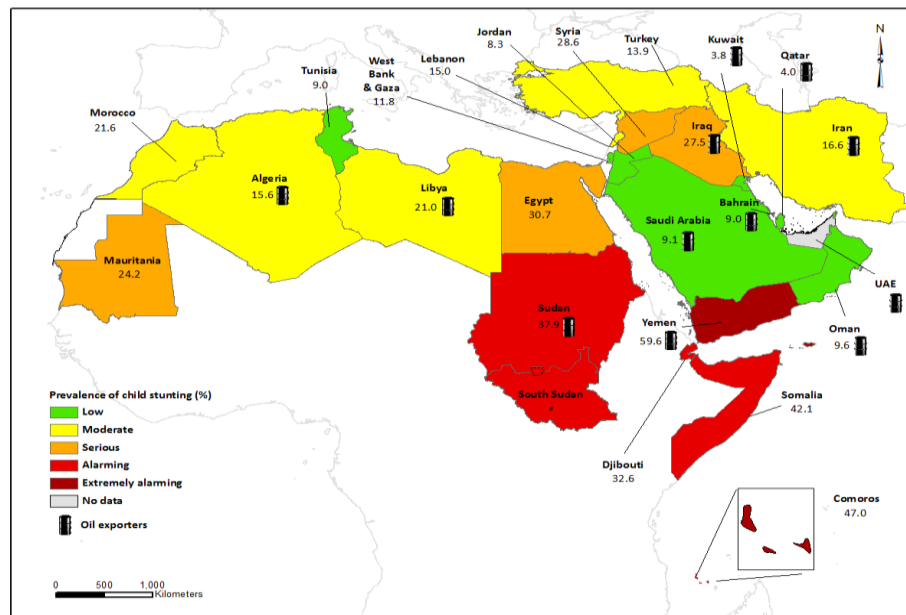


Figure A2. Micro food insecurity map



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