Constructing a New Syria?
The Growing Impact of the Civil War

Anthony H. Cordesman

Last Updated: September 21, 2015

Photo: ALBERTO PIZZOLI/AFP/Getty Images
The Demographic Pressures, Ethnic Divisions, Population Density, Area of Control, and Energy Factors Shaping Syria’s Future
Demographic Pressures on Syria

Syria Total Population (in millions)

The Pre-War Ethnic Sectarian Nightmare in Syria

Rough Estimate of Current Areas of Control - I

Source: Pamela Engel
This detailed Syria map shows what territory ISIS is truly fighting for, Business Insider, June 30, 2015,:
http://www.businessinsider.com/map-of-syria-shows-what-isis-is-truly-fighting-for-2015-6#ixzz3kOBnu5GO
The Rising Impact of the Air Campaign
Air Campaign: Sorties Flown by Location, as of September 15, 2015

Air Campaign: Sorties Flown in Iraq and Syria, as of September 17, 2015

Air strikes in Iraq and Syria

- Iraq: 4,122
- Syria: 2,362

Figures are up to 17 September 2015

Source: US Central Command

OPERATION INHERENT RESOLVE

Close Air Support/Escort/Interdiction

<table>
<thead>
<tr>
<th>Sorties</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>211</td>
<td>760</td>
<td>1,641</td>
<td>1,407</td>
<td>1,867</td>
<td>5,886</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2015</td>
<td>2,308</td>
<td>1,756</td>
<td>1,600</td>
<td>1,685</td>
<td>2,010</td>
<td>1,586</td>
<td>2,829</td>
<td>2,718</td>
<td>16,592</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sorties with at least one weapon release

| 2014 | 1,411 |
| 2015 | 4,716 |

Number of Weapons Released

<table>
<thead>
<tr>
<th>Intel, Surveillance and Recon Sorties</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airlift and Airdrop Sorties</td>
<td>1,992</td>
<td>6,540</td>
</tr>
<tr>
<td>Airlift Cargo (Short Tons)*</td>
<td>14,555</td>
<td>50,700</td>
</tr>
<tr>
<td>Airlift Passengers*</td>
<td>9,900</td>
<td>29,500</td>
</tr>
<tr>
<td>Supplies Airdropped (Pounds)</td>
<td>1,417,900</td>
<td>0</td>
</tr>
<tr>
<td>Tanker Sorties</td>
<td>4,828</td>
<td>10,379</td>
</tr>
<tr>
<td>Fuel Offloaded (Millions of Pounds)</td>
<td>282</td>
<td>638</td>
</tr>
<tr>
<td>Aircraft Refuelings</td>
<td>28,956</td>
<td>62,737</td>
</tr>
</tbody>
</table>

* Iraq only

Source: POC: AFCENT (CAOC) Public Affairs afcent.pa@afcent.af.mil
September 2015: Population Density and Uncertain and Changing Zones of Control
DoD: Iraq and Syria: ISIL's Reduced Operating Areas as of March 2015

Note: Our judgment as to which group has dominant influence over a particular city is based on a body of unclassified sources that we deem reliable.

Islamic State of Iraq and the Levant’s (ISIL) frontlines in much of northern and central Iraq have been pushed back since August.

ISIL can no longer operate freely in roughly 20-25 percent of populated areas of Iraqi territory where they once could.

These areas translate into approximately 11,000-13,500 square kilometers (4,100-5,200 square miles). However, because of the dynamic nature of the conflict in Iraq and Syria, this estimate could be higher or lower depending on daily fluctuations in the battle lines.

With the exception of its withdrawal from ‘Ayn al ‘Arab and Tall Hamis, ISIL’s area of influence in Syria remains largely unchanged.
The Islamic State of Iraq and the Levant’s (ISIL) frontlines in much of northern and central Iraq have been pushed back since August 2014.

ISIL can no longer operate freely in roughly 25 to 30 percent of populated areas of Iraqi territory where it once could.

These areas translate into approximately 13,000 to 17,000 square kilometers (or 5,000 to 6,500 square miles).

However, because of the dynamic nature of the conflict in Iraq and Syria, this estimate could increase or decrease depending on daily fluctuations in the battle lines.

ISIL’s area of influence in Syria remains largely unchanged, with its gains in As Suwayda’, Damascus Countryside, and Homs Provinces offset by losses in Halab and Al Hasakah Province.
**Islamic State setbacks**

Dissent, defections and reversals on the battlefield are steadily eroding the Islamic State's aura of invincibility in Syria and Iraq, suggesting that the group is starting to fray from within as its many enemies step up their offensives on multiple fronts.

A gun battle erupted last week between Syrian fighters and foreigners in Abu Kamal after the Syrians refused an order by a Kuwaiti commander to travel to Iraq to reinforce the front lines in Tikrit.

In Ramadi, fighting erupted between a group of mostly Chechens and local Iraqi supporters of the Islamic State who felt they were being abandoned when the foreigners decided to head back to Syria.

**Population density**

(Per square kilometer)

<table>
<thead>
<tr>
<th>Islamic State control</th>
<th>Government or other rebels</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>1,000</td>
<td>10,000</td>
</tr>
</tbody>
</table>

Sources: Institute for the Study of War, CIA World Factbook, LandScan

http://www.washingtonpost.com/world/middle_east/the-islamic-state-is-fraying-from-within/2015/03/08/0003a2e0-c276-11e4-a188-8e4971d37a8d_story.html
Zones of Control in Syria

ISW Estimate

September 2, 2015

Source: Institute for the Study of War, https://mail.google.com/mail/u/0/#search/ISW/14fd9c79b69ce51
Operations vs. Population Density in September 2015

Source: Institute for the Study of War, https://mail.google.com/mail/u/0/#search/ISW/14fdf9c79b69ce51; and Stratfor, Google Maps
Zones of Control in Syria

UCA Estimate

September 2, 2015

Source: Institute for United Conflict Analysis
s://pietervanostaeyen.files.wordpress.com/2015/09/2000px-syria15.png
The Growing Uncertainties over the Kurds, Turkey, Security Zones and Operations in the North
BBC Map of The Fighting in North Syria

The Turkey-Syria border: who controls which crossings

- Open
- Restricted
- Closed

Who controls the crossing:
- Government of Syria
- Islamic Front
- Free Syrian Army Affiliated Groups
- Al-Nusra Front
- PYD: Democratic Union Party (Kurds)
- Islamic State

Source: OCHA
Military Situation on the Turkish Border: ISW Estimate
September 14, 2015

Source: Institute for the Study of War.
Russian Wild Cards

• Expand port facilities in naval base at Latikia and expand airfield south of city into air base; reports of Su-27 fighter deployments. 3-4 aircraft already deploy as of 19 September.

• Train and assist mission present

• Images of Russian R-166-0.5 (ultra) high-frequency signals (HF/VHF) vehicle with jam-resistant voice and data communications driving through Syria

• 15+ new artillery weapons

• 6+ T-90 main battle tanks, 35+ new BTR-82A/B wheeled AFVs, and Russian Humvee equivalent

• Prefabricated housing for up to 2,000.

• New SA-22 land-based air defense systems.

• New York Times reports American military specialists analyzing satellite photographs and other information found Russia had half a dozen T-90 tanks, 15 howitzers, 35 armored personnel carriers, 200 marines and housing for as many as 1,500 personnel at the airfield near the Assad family’s ancestral home.
The Failed Governance, Political System, and Economic Base a Post-Conflict Syria Must Build On
Syria Country Profile: (CIA World Factbook, July 2015)

• **Population:** 17,951,639 (July 2014 est.)
• **Youth Bulge:** 53.3%: 0-14 years: 33.1% (male 3,046,922/female 2,898,060); 15-24 years: 20.2% (male 1,833,802/female 1,789,854)
• **Entering Labor Force Annually:**
• **Ethnic Divisions:** Arab 90.3%, Kurds, Armenians, and other 9.7%
• **Sectarian Divisions:** Muslim 87% (official; includes Sunni 74% and Alawi, Ismaili, and Shia 13%), Christian (includes Orthodox, Uniate, and Nestorian) 10% (includes Orthodox, Uniate, and Nestorian), Druze 3%, Jewish (few remaining in Damascus and Aleppo)
• **Urbanization:** 57.3% (1.37% per year)
• **GDP vs. Labor Force: GDP:** $107.6 (PPP 2011) $64.7B (2011 Official Exchange Rate)
• **Per Capita Income:** $5,100 (2011 in $2011) (165th in the world)
• **Budget:**
• **Taxes & Other Revenues:**
• **Exports vs. Imports:**
• **Direct Unemployment:** 33% (2014)
• **Poverty Level:** 11.9% (2009)
• **Transparency International Global Corruption Ranking:** 159th worst of 175 countries
World Bank Rankings of Failed Governance in Syria

159th most corrupt country out of 175 rated by Transparency International

The inner, thicker blue line shows the selected country's percentile rank on each of the six aggregate governance indicators. The outer, thinner red lines show the indicate margins of error.

World Bank Global Ranking of Ease of Doing Business in Syria in 2015: 175\textsuperscript{th} worst of 185 Countries

<table>
<thead>
<tr>
<th>REGION</th>
<th>Middle East &amp; North Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCOME CATEGORY</td>
<td>Lower middle income</td>
</tr>
<tr>
<td>POPULATION</td>
<td>22,845,550</td>
</tr>
<tr>
<td>GNI PER CAPITA (US$)</td>
<td>2,803</td>
</tr>
<tr>
<td>CITY COVERED</td>
<td>Damascus</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOPICS</th>
<th>DB 2015 Rank</th>
<th>DB 2014 Rank</th>
<th>Change in Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting a Business</td>
<td>152</td>
<td>141</td>
<td>+11</td>
</tr>
<tr>
<td>Dealing with Construction Permits</td>
<td>189</td>
<td>189</td>
<td>No change</td>
</tr>
<tr>
<td>Getting Electricity</td>
<td>76</td>
<td>64</td>
<td>+12</td>
</tr>
<tr>
<td>Registering Property</td>
<td>140</td>
<td>140</td>
<td>No change</td>
</tr>
<tr>
<td>Getting Credit</td>
<td>165</td>
<td>163</td>
<td>+2</td>
</tr>
<tr>
<td>Protecting Minority Investors</td>
<td>78</td>
<td>77</td>
<td>+1</td>
</tr>
<tr>
<td>Paying Taxes</td>
<td>117</td>
<td>113</td>
<td>+4</td>
</tr>
<tr>
<td>Trading Across Borders</td>
<td>146</td>
<td>143</td>
<td>+3</td>
</tr>
<tr>
<td>Enforcing Contracts</td>
<td>175</td>
<td>175</td>
<td>No change</td>
</tr>
<tr>
<td>Resolving Insolvency</td>
<td>146</td>
<td>145</td>
<td>+1</td>
</tr>
</tbody>
</table>

### UNDP Ranking of Human Development Indicators in Syria in 2015: 118th worst of 187 Countries

#### Human Development Index

<table>
<thead>
<tr>
<th>Human Development Index</th>
<th>Index</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life expectancy at birth</td>
<td>74.55</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>Income/Command Over Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross national income (GNI) per capita (2011 PPP $)</td>
<td>5,771.23</td>
<td></td>
</tr>
<tr>
<td>Inequality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inequality-adjusted HDI (HDI)</td>
<td>0.518</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender inequality index</td>
<td>0.556</td>
<td></td>
</tr>
<tr>
<td>Poverty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population in multidimensional poverty (%)</td>
<td>6.36</td>
<td></td>
</tr>
<tr>
<td>Employment and Vulnerability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment to population ratio</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Human Security</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homeless population (% of population)</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>Trade and Financial Flows</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Trade (% of GDP)</td>
<td>71.08</td>
<td></td>
</tr>
<tr>
<td>Mobility and Communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net migration rate (per 1000 population)</td>
<td>-13.7</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon dioxide emissions per capita (tonnes)</td>
<td>2.87</td>
<td></td>
</tr>
<tr>
<td>Demography</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population total (millions)</td>
<td>21.9</td>
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</tbody>
</table>
IMF Summary Data on Syria in 2015

<table>
<thead>
<tr>
<th>Subject Descriptor</th>
<th>Units</th>
<th>Scale</th>
<th>Country/Series-specific Notes</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td>Gross domestic product, constant prices</td>
<td>Percent change</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>Gross domestic product, current prices</td>
<td>U.S. dollars</td>
<td>Billions</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Gross domestic product per capita, current prices</td>
<td>U.S. dollars</td>
<td>Units</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Gross domestic product based on purchasing-power-parity (PPP) per capita GDP</td>
<td>Current international dollar</td>
<td>Units</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>Inflation, average consumer prices</td>
<td>Percent change</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Volume of imports of goods and services</td>
<td>Percent change</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Volume of exports of goods and services</td>
<td>Percent change</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>Percent of total labor force</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>Population</td>
<td>Persons</td>
<td>Millions</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>General government revenue</td>
<td>Percent of GDP</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>General government total expenditure</td>
<td>Percent of GDP</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>General government net debt</td>
<td>Percent of GDP</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>General government gross debt</td>
<td>Percent of GDP</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<td>Current account balance</td>
<td>U.S. dollars</td>
<td>Billions</td>
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<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Current account balance</td>
<td>Percent of GDP</td>
<td></td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Energy Vulnerability in Syria

http://www.eia.gov/beta/international/analysis.cfm?iso=SYR
No Reliable Current Casualty Data

240,000-300,000 dead; 500,000-900,000 injured and wounded as of September 2015?
Comparative Casualty per Month Estimate: 2011-2013

The opposition Syrian Observatory for Human Rights reported that at least 82,000 people have been killed after two years of civil war in Syria. The number of casualties documented by opposition activist groups vary.

**CASUALTIES BY MONTH**

From select activist groups

- Violations Documentation Centre
- Syrian Shuhada
- Syrian Network for Human Rights

(Jan. - May 2013 data are Reuters calculations based on available casualty reports)

Source: Reuters,
https://www.google.com/search?q=trend+graphs+for+Syrian +casualties&tbm=isch&imgil=YGlffJlki6As0M%253A%253Baat
mvbd6LOjVI%M%253Bhttp%252
3A%252S52F%252S52F6storiesf
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_WnWQeP81oQ%3D

- First shipments of arms from Qatar, according to The New York Times
- 'Significantly more and better weapons' start to be sent in by Gulf states and US, according to The Washington Post.
- CIA begins to 'limit supplies of weapons ... reaching rebel forces', according to The Times.
- Gulf states and U.S. begin to 'sharply increase their military aid to Syria's opposition fighters', according to The New York Times.

Deaths per week during the Syrian civil war

Source: https://www.google.com/search?q=trend+graphs+for+Syrian+casualties&tbm=isch&imgil=YGlffJlki6As0M%253A%253Baacmvbd6LOjVIM%253Bhttp%25252F%25252F6storiesfromthe7continents.blogspot.com%25252F2013_06_01_archive.html&source=iu&pf=m&fir=YGlffJlki6As0M%253A%253Bcaacmvbd6LOjVI%253B%253Bhttp%25252F%25252F6storiesfromthe7continents.blogspot.com%25252F2013_06_01_archive.html&ved=0CDAQyjdqFQoTCMej89jlgCFUtgodOTAL5g&ei=XQL8VYeBNcvmuQS54KzQBA&usg=__twkWLaImgNnRKRmq-WnWQeP81oQ%3D#imgrc=YGlffJlki6As0M%3A&usg=__twkWLaImgNnRKRmq-WnWQeP81oQ%3D
Total Deaths: 3/2011-10/2013

Total deaths over the course of the Syrian civil war

Source:
https://www.google.com/search?q=trend+graphs+for+Syrian+casualties&tbm=isch&imgil=YGlffJlki6As0M%253A%253BaatcmvbdlOj7VjIM%253Bhttp%253A%25252F%25252F6storiesfromthe7continents.blogspot.com%25252F2013_06_01_archive.html&source=iu&pf=m&fir=YGlffJlki6As0M%253A%253BaatcmvbdlOj7VjIM%252C_&biw=1491&bih=976&ved=0CDAQyjdqFQoTCMej89jGlMgCFUtqojodOTAls&ei=XQL8VYeBNcvmuQSS4KzQBA&usg=__twkWLaimgNnRRmq_WnWQeP81oQ%3D#imgrc=wvhoVx0wDYG7HM%3A&usg=__twkWLaimgNnRRmq_WnWQeP81oQ%3D
Overall Economic and Social Impact of War to Date and Possible Future Impact
The humanitarian impact of the conflict continues to worsen.

The estimated death toll has exceeded 220,000 people (UN); 840,000 were injured and many more held in custody (SCPR).

As of March 2015, around half the Syrian population has been forced to leave their homes, with 7.6 million internally displaced, 3.8 million refugees (UNOCHA), and more than 1.5 million non-refugee migrants (SCPR). More than 12.2 million in Syria are in need of humanitarian aid, including 5.6 million children (UNOCHA).

The conflict has pushed millions of people into poverty, with four in five Syrians estimated to be living in poverty in 2014 (SCPR). The overall poverty rate was projected to be 82.5% in 2014, a significant increase compared to the estimated 64.8% rate in 2013 (SCPR). SCPR estimated that 64.7% of Syrians were living in extreme poverty in 2014, unable to meet basic food and non-food needs. While the accuracy of these estimates is difficult to gauge in a conflict situation, they remain highly indicative of the degree of deprivation facing the embattled Syrian population.

Key social outcomes have also deteriorated as a result of the conflict. Lack of access to health care and scarcity of medicine have led to a catastrophic health situation. Poor food availability and quality and successive cuts in subsidies on bread has exacerbated nutritional deprivation. SCPR estimates that by Q3-2014, 25% of all schools in the country (around 5,200 schools) were not operational, including 90% that were partially or completely destroyed and the remainder that were serving as shelters for IDPs. The share of schools that have ceased operations is projected to have risen to 28 percent by Q4-2014 (SCPR). Unemployment is estimated to have increased from 15% to 58% between 2011 and Q4-2014. Among the unemployed, about 3 million lost their jobs during the conflict, which adversely affected their 12.2 million dependents (SCPR).

The economy has witnessed a dramatic contraction since the beginning of the conflict. According to figures from the CBS, annual GDP growth before the crisis between 2004 and 2009 averaged 5.7%. Since 2012, the estimates diverged with EIU offering a more optimistic perspective than SCPR's and ESCWA's. SCPR and ESCWA converge in their projection that economic contraction has significantly slowed in 2014, with GDP falling to 38% (SCPR) or 48% of 2010 GDP (ESCWA). EIU, on the other hand, projects that the economy has bottomed out, with growth averaging a modest 0.5% in 2014, driven by the economy's adjustment to the military stalemate in addition to the considerable migration of businesses to more stable coastal areas.
The conflict has caused a drop in government revenues and a spike in spending, sending the fiscal balance into severe deficit. ESCWA estimates a 2013 budget deficit of -26.3% of GDP. EIU estimates a deficit of -12.9% in 2013 and projects deficits of -10.7% of GDP in 2014. SCPR estimates a deficit close to 20% during 2013 and 2014 and almost doubles its estimates to 35.7% and 40.5% after adding off-budget subsidies.

SCPR projects foreign debt increased tenfold from 7% of GDP in 2010 to 71% at end-2014, whereas domestic debt increased from 16 to 76% of GDP. This implies a total debt of 147% of GDP by end-2014. Meanwhile EIU estimates external debt in 2014 at a much lower 40% of GDP.

The conflict has resulted in a trend of large current account deficits and a depreciating exchange rate. Depressed export revenue due to the impact of conflict (declining output and sanctions), and declining international reserves have caused a significant depreciation of the Syrian pound from 47 pounds per USD (March 2011) to an estimated 176 pounds per USD (end-2014) (EIU).

Prior to the crisis, Syria’s economic reform efforts had helped strengthen growth, although external and domestic shocks, and particularly the impact of the global financial crisis and prolonged droughts, had adversely affected the country’s macroeconomic performance.

Despite accelerating economic growth over the last decade, this pre-conflict growth had not been inclusive. It had not led to significant job creation or to poverty reduction. Rural society became increasingly marginalized and suffered from severe shocks related to both economic transition and drought. This was especially severe in the east, consequently spurring internal migration to larger regional cities and the Damascus suburbs.

Syria’s GDP had remained dependent on the oil and agriculture sectors, themselves subject to fluctuating oil prices and rainfall. Main sources of foreign earnings were oil exports, exports of services, and foreign transfers of income and remittances; however these sources are now seriously curtailed by the crisis.

Once the situation stabilizes, Syria will have to grapple with immediate economic challenges. It will also need to support the return of internally displaced people and refugees in neighboring countries, rebuild the country’s infrastructure, enhance the provision of public services including health and education, and rebuild the social fabric of the country.
In a recently released World Bank working paper we attempt to address this issue and quantify both the direct and indirect economic effects of this war on the countries in the greater Levant area—Turkey, Syria, Lebanon, Jordan, Iraq, and Egypt. The direct effect comes from the decline in the size and skills of Syria’s labor force due to loss of life and refugee outflows, infrastructure destruction, the trade embargo on Syria, cost-of-doing-business increases, and a decline in productivity.

The indirect effect captures the opportunity cost of foregone trade integration initiatives aimed at improving trade logistics and liberalizing trade in services in the region. The indirect effect is important to consider because the war disrupted the intra-Levant trade, which grew seven-fold between the early and late parts of the 2000s. It put an end to plans for deepening intra-regional trade ties further following the signing of the “Levant Quartet” agreement in 2010. The benefits of deep trade integration reforms were expected to be sizable, reflecting significant economic complementarities, as shown in a recent World Bank study (2014).

We find that, so far, as a result of the war the six economies of the greater Levant taken together have lost close to US$35 billion in output, measured in 2007 prices. In other words, the cumulative economic size of these economies, measured by their Gross Domestic Product, could have been US$35 billion larger had the war not occurred. These aggregate costs of war are equal to the size of Syria’s GDP in 2007!

However, these losses have been unevenly distributed. Those countries most affected by the war, Syria and Iraq, have borne the brunt of the direct economic costs of it, as well as of losing out on what could have been much more formal economic integration: Syria and Iraq have seen per capita income in constant terms declining by 23 percent and 28 percent relative to the levels that could have been achieved if war hadn’t broken out.

The costs directly attributed to war, though, are substantial at a 14 percent and 16 percent reduction in per capita GDP for Syria and Iraq, respectively. The trade embargo on Syria has been a major factor behind the direct costs, followed by the decline in the size and skills of its labor force due to the loss of life and exodus of refugees, the destruction of infrastructure and the increase in the cost of doing business in conflict zones.
Other countries in the Levant region have incurred average per capita income losses but not GDP declines due to the direct effects of war. Influxes of refugees into Lebanon, Jordan, and Turkey have boosted consumption, investment and labor supply, and therefore the size of these refugee-receiving economies. But, in all cases, aggregate incomes have increased less than the size of the population, so the war has hurt the standards of living there, with per capita average incomes declining by 11 percent in Lebanon and 1.5 percent in Turkey, Egypt, and Jordan relative to levels that could have achieved had the war been avoided. The opportunity costs of foregone trade integration are larger than the direct costs for Egypt, Jordan, and Turkey.

In Syria, almost every economic sector has been affected negatively, but property-ownership has been particularly badly hit as demand for land has declined steeply, reflecting the drop in demand because of the huge numbers of refugees leaving the country. By contrast, in Lebanon and Turkey, land and business owners have benefitted but workers have lost because the arrival of Syrian refugees has increased local demand for goods and services, raising prices, and augmented the labor supply. With quality of services deteriorating and wages falling due to intense competition for jobs, all in all many people have suffered.

The direct effects of war in the region are, sadly, therefore an understatement of the real economic costs of civil war and the spread of ISIS. Because the war has disrupted the growth of strong intra-regional trade and plans for deep trade integration, one must include the foregone benefits of further trade integration in order to provide an accurate assessment of the economic costs of war.

Even so, this still does not factor in the fiscal costs of delivering basic services to refugees in the countries that have received them, nor does it take into consideration the cost of putting-up infrastructure to support them. These costs could be substantial for Lebanon, Jordan, and Turkey, the three countries that have taken the most refugees. The future costs arising from the large numbers of deaths and of replenishing depleted physical and human capital are also likely to be sizable, especially in Syria. From an economic point of view, the magnitude of these shocks have been calculated only up until mid-2014; the eventual size of the economic—including, most importantly, the human—impact will obviously change depending on the course war takes in the Levant.

Education Collapse in 2012-2013

The Staggering Economic Costs of the Syrian Civil War, Erik Meyersson, Assistant professor, SITE, Stockholm School of Economics, July 1, 2015

Lately, I've seen a lot of statistics about the economic consequences of the Syrian Civil War, much of it disturbing evidence as to the scale of the suffering. For example, one report by the Syrian Center for Policy Research (SCPR) published in March 2015 claimed that Syria had lost more $119bn in Gross Domestic Product (GDP) since the outbreak up until 2014, and that “total losses” amounted to $220bn when comparing to a scenario without the conflict. For a country whose GDP in 2007 was valued at $40bn, this represents an enormous dollar loss in Syria’s output.

Another report, published by UNWRA, made the claim that

“[e]ven if the conflict ceased now and GDP grew at an average rate of five per cent each year, it is estimated that it would take the Syrian economy 30 years to return to the economic level of 2010”.

These are all striking ways of describing the economic costs of the Syrian conflict. At the same time, neither the UNWRA report nor the SCPR is very specific about how it arrived at these quoted estimates and so I felt the urge to take a stab at this in my own way, while also expanding the alternative “non-crisis” scenarios a bit more.

As for GDP, there’s a disclaimer to be made about it only being just one measure – an imperfect one, at that – of economic output, and as for measuring living standards, its per capita variant is but one of many candidates, but as GDP remains the quintessential summary of an economy’s productive capacity, it is the focus of this blog post.

Regarding some of the headline statistics mentioned in the news, one of the reason why Syria’s GDP has fallen so much in dollars is because the Syrian Pound has depreciated substantially. Dollar losses thus mix falls in GDP with that of the exchange rate. Most of the GDP-related statistics presented in the above mentioned SCPR report instead focus on real GDP growth in Syrian Pounds. To construct GDP and an alternative non-crisis scenario, the authors use

“actual quantitative proxy indicators, seasonality analysis, econometric projections, and a financial programming model. The report used the counterfactual methodology to estimate the economic loss, where the “crisis scenario” is the estimation of the actual GDP, and the “continuing scenario” is the projection of GDP during the same period using past historical data to project what would have been likely had the crisis not occurred.”

Even thought the SCPR is a fascinating report in many ways, it is not very specific about the methodology (something that can be easily accommodated in future reports by a more detailed methodology section). At the same time, there are few other options for macroeconomic data available for Syria, as the World Development Indicators (WDI) series run only until 2007, and the IMF’s World Economic Outlook (WEO) database only until 2010. Two exceptions are the Conference Board’s Total Economy Database, and the World Bank’s Global Economic Prospects (GEP) annual publication series, which both publish real GDP growth rates for Syria.

With actual GDP of Syria, we can document current output during the crisis compared to how it did before the crisis, say in 2010. But as Syria’s economy was growing before it started, such a measure would understatement the loss, and a more accurate estimate of the real loss would take into account what Syria’s GDP would have been in a counterfactual, non-crisis, scenario. For the purpose of this blog posts I will use pre-crisis forecasts by SCPR and IMF as estimates for such scenarios.

As for longer-horizon forecasts, the IMF (at least in published work) appears to have given up trying to forecast Syria’s economy sometime in 2012 due to “the uncertain political situation”. But as the previous years forecasts are over a six-year horizon, the 2010 forecast, done before the crisis started, runs through 2014 and can thus be used as an alternative “counterfactual” scenario to that constructed by the SCPR. This does not necessarily mean that the difference between the observed and forecasted series represent the causal effect of the Syrian crisis (a composite of the Arab Spring, the civil war, and whatever the Western policy in the country is), but in absence of better identification strategies it offers meaningful alternatives of the Syrian economy as perceived before 2011.
I thus have two types of GDP series available; 1) estimates of actual GDP and 2) forecasts of GDP from before the conflict (IMF) or as-if the conflict hadn’t occurred from SCPR. Among the two, SCPR forecasts real GDP growth at 6.6 percent per year 2010-2014, with the IMF’s World Economic Outlook (WEO) in 2010 forecasting 5.6 percent growth per year for the same period. Both sources forecast Syrian GDP growth above the preceding decade, which was 4.8 percent. As a more conservative candidate I extrapolate past GDP as a third alternative for a non-conflict scenario. (I have no prejudice as to whether the IMF is better or worse than the SCPR one, but what is clear is that both expected Syrian GDP to perform better than it had in the recent past. This is in itself quite interesting, but outside the scope of this post)

For both the series on actual GDP estimates as well as the forecasts, these are undoubtedly fraught with various measurement problems that could fit in (and perhaps deserves) a blog post on its own. Starting off with the IMF’s 2009 Article IV consultation for Syria already complaining about the quality of data and reporting standards, add to that also the question of how reliable statistics for the country is to be collected in the midst of a civil war, when the government controls just half its territory. Moreover, the size of the informal or black market could increase in wartime, and if Syrian government statistics are forced to omit from recording output occurring in rebel-held areas, this could overestimate GDP losses – that is, if the relevant constituency for data collection remains the Syrian state borders as they were in 2010 (and even if we were more interested in just the area controlled by the Syrian government, it would still be unclear whether we’re measuring lower GDP losses as a result of losing territory as opposed to lower output for a given territory because of the crisis.) Neither the Conference Board or the SCPR estimates divulge whether they are estimates for the entire 2010-border state of Syria or exclusively for areas controlled by the government.

The degree to which Syria’s GDP losses could be overestimated would be greater depending on how much output is produced in rebel-held areas. It may be fair to assume that the Syrian government remains in control of the wealthier parts of the country (for example, the government controls a larger share of the population than the share of territory). Notwithstanding, the government’s loss of some oil fields to rebels could be a sign that there is some output unaccounted for, even though any oil output by rebels using Syrian oil fields is likely to receive lower prices (perhaps as sales would probably have to involve smuggling), suffer from lack of skilled workers and – especially if oil fields were severely contested – these could be places with significant destruction of the capital stock and under risk of infighting between rebel factions. But even if those parts of Syria not controlled by the government constitutes more of the economic periphery, or if those resources become significantly less productive, these potential limits in the quality of statistics collection need to be kept in mind.

These considerations aside, the below figure shows the relevant series: the historical IMF series of Syria’s GDP from 1990-2010; the estimates for Syria’s more recent actual GDP from SCPR (solid blue), the Conference Board (solid red line), and the World Bank (solid green line); and the forecasts for Syria’s GDP from SCPR (dashed blue line), the IMF (dashed red line), as well as the trend from the last ten years of the historical IMF series extrapolated to 2014 (dashed gray line). All series are in constant Syrian Pounds, or local currency units (LCU).

The blue solid line shows the SCPR estimate of GDP as the most pessimistic, with the 2014 value being 62 percent lower than the 2010 value, and 70 percent lower than the SCPR’s estimated counterfactual GDP in 2014 (without the crisis).

The Conference Board (solid red line) and World Bank (solid green) GDP series as well as the IMF’s forecasted GDP tend to be less extreme. The contraction in GDP according to the Conference Board is instead around 45 percent relative to 2010 GDP, and 58 percent lower than the IMF-forecasted GDP for 2014. The World Bank’s estimate is slightly lower.

Both the SCPR and the IMF forecast assume Syria would have been growing faster than the past decade, and if we instead use the extrapolated trend (combined with the most optimistic actual GDP value from the Conference Board), the GDP loss in 2014 would have been 53 percent lower than the extrapolated value for the same year.

In terms of the loss in cumulative GDP (the area in between the actual and forecasted series in the above graph), the estimated losses vary between 33-50 percent over the period 2011-2014.
Without passing judgment on the relative accuracy of any of the SCPR, World Bank, or Conference Board series of GDP, it’s clear that regardless of which series one uses, the losses are very large. The above graph actually gives yet another, more subtle, indication of how large: the most pessimistic estimate of Syria’s GDP in 2014 (from SCPR) is roughly equal that of the Syria’s GDP back in 1990 – i.e. 25 years ago. And so to put the economic cost of Syria’s conflict in a more historical context, the conflict has brought the country’s economic output back by a whole generation.

The IMF also produces forecasts for inflation and the current account balance as a percentage of GDP, and for the former CPI data is available post-2010 at the Syrian Central Bureau of Statistics (SCBS, although official statistics may underestimate the actual inflation), whereas for the latter data is available in the World Bank’s GEP reports. The two graphs below illustrate the economic crises also for these outcomes: the hyperinflation and the severe current account deficit.

.... In particular the spiraling current account deficit is likely due not just to the war itself but also the sanctions put in place by Western countries “ranging from a ban on imports of Syrian oil to prohibitions on financial transfers via credit cards and banks” and as a result “[i]mports of oil products were now costing Syria half a billion dollars a month” (via FT).

...(An aside for economists: below I am comparing Syria’s growth rate in constant local currency units (LCU) GDP with growth rates of other countries in constant PPP GDP. This would be problematic if the Syrian PPP changed substantially during period between 2011-2014. However, as the most recent ICP publication of PPP series was already in 2011 and there will not be another one for some time, and the standard way to construct PPPs is then to extrapolate future values using past values multiplied by the change in inflation of the host country divided by the change in the numeraire country’s (read: US) change in inflation (See for example Deaton’s PPP paper on this). For GDP growth in real LCU, what is lacking is the adjustment for the change in numeraire/US inflation, but as inflation has been so low in the US, any downward adjustment to a PPP GDP growth rate for Syria would be a mere few percentage points with little bearing on the below ranking of cases.)
Excerpt from Myerson Analysis: July 2015 - IV
Excerpt from Myerson Analysis: July 2015 - V

Syria's Inflation (CPI) 1990-2014

Percentage change


IMF (historical)  SCBS (Estimate)  IMF Forecast (F2010)
The Growing Refugee and IDP Crisis that Makes Returning to the Past Impossible
Growing Aid Deficits and Tensions

• More than 7 million internally displaced persons in Syria, most than half of which have limited or no access to aid.

• Just under 4.1 million official registered Syrian refugees — 2.1 million in Egypt, Iraq, Jordan and Lebanon, 1.9 million in Turkey and 24,000 registered in North Africa. But only 12 percent of the 4.1 million are in actual refugee camps

• United Nations Syria Regional Refugee and Resilience Plan, received 37 percent of the $4.5 billion needed for 2015 as of August.

• António Guterres, high commissioner for refugees, said that agency’s budget this year would be 10 percent smaller than in 2014, and that it could not keep up with the drastic increase in need from the long Syrian conflict, which includes shelter, water, sanitation, food, medical assistance and education. United Nations refugee agency’s funding for Syria this year is only at 43 percent of budgeted requirements.

• World Food Program more than 63 percent underfunded for 2015, recently had to halve the monthly stipend to 211,000 Syrians in regional refugee camps. Recently halted aid to 230,000 Syrian refugees living in Jordan outside camps 100,000 people living in refugee camps could find their food support stopped entirely in November.

• The World Health Organization is only 27 percent funded.

• About 70 percent of registered Syrian refugees living in Lebanon are below the poverty line, creating tensions with local inhabitants for jobs and health services.

• About a quarter of Lebanon’s population is now Syrian.

Syria OHCA IDP & Refugee Trends

Data source: OCHA (as of May 2015).

http://www.unocha.org/syria, 28.8.15
Syria: On-Going Displacement: Jan-June 2015
Syria UNHCR Refugee Trends: 2012-2015

http://data.unhcr.org/syrianrefugees/regional.php, 28.8.15
Syria UNHCR Refugees: August 25, 2015

http://data.unhcr.org/syrianrefugees/regional.php, 28.8.15
Syria: UNICEF Gap - 55% Funded: June 2015:

People in Need

- 12.2 million inside Syria
  - including 5.6 million children
- 4 million refugees
  - including 2.1 million children

Syrian Children in Need

UNICEF Funding Requirements for SRP and 3RP in 2015

$903 million (US$)

- Gap: 492m
- Received: 411m

2015 UNICEF Results

Water

In Syria, UNICEF is providing water treatment supplies that treat enough water to serve over 16.55 million people on a regular basis. UNICEF also provides targeted support to water systems:

- Syria: 135% of target 3.5 million

In neighboring countries, 1,017,022 people have been provided with access to drinking and domestic water.

- Iraq: 79% Target 123,948
- Lebanon: 48% Target 592,614
- Jordan: 35% Target 1,840,000

Child Protection

There are over 820,000 children targeted for psychosocial support services in 2015, to date 447,138 children have benefited from these services.

- Syria: 56% Target 385,000
- Jordan: 57% Target 203,264
- Lebanon: 44% Target 140,000
- Turkey: 51% Target 50,000
- Iraq: 62% Target 39,044
- Egypt: 54% Target 11,000

Education

In Syria, UNICEF supported access to formal education for 13,017 students through school rehabilitation, pre-fabricated classrooms and school bursaries.

- Syria: 3% Target 365,500

In neighboring countries, 344,186 refugee children have been supported to enroll in formal education.

- Turkey: 55% Target 180,000
- Jordan: 100% Target 87,150
- Lebanon: 130% Target 130,000
- Iraq: 90% Target 24,782
- Egypt: 91% Target 14,500

Note: Education results remain pending the new school year from September.

Health

5,051,986 children vaccinated against polio as of June 2015.

There are over 20 million children targeted with polio vaccination in 2015, mainly through campaigns**.

Three campaigns have been conducted in Syria reaching 2,989,659 children under five with immunization and 2,062,327 children have been immunized between Lebanon, Jordan and Iraq. Nine campaigns have been conducted in the sub-region so far this year.

**Campaigns include NID and SNID.
Registered Syrian Refugees as of August 31, 2015

Registered refugees: 4,088,078

Source: UNHCR, Reliefweb (figures up to 31 August 2015)

Source:
Syria: Food Security (as of 30 June 2015)

http://www.unocha.org/syria, 28.8.15

Syria: Education (as of 30 June 2015)

http://www.unocha.org/syria, 28.8.15
Syria: Health (as of 30 June 2015)

Most commonly reported reason for lack of access to health care facilities:
- No lack of access reported
- Health care services are too expensive
- Security concerns to enter in health facility
- Security concerns to remain in health facility
- No data available

Syria: Water (as of 30 June 2015)

Aleppo Humanitarian Overview (as of 30 June 2015)

Damascus Humanitarian Overview (as of 30 June 2015)

Ar Raqqa Humanitarian Overview (as of 30 June 2015)