The effects of sanctions and their lifting in the Middle East: The example of Iran

Mohammad Reza Farzanegan
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https://www.uni-marburg.de/cnms/wirtschaft
Center for Near and Middle Eastern Studies (CNMS), Marburg

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Overall picture of economic growth under different regimes in Iran
Ahmadinejad = Sanction?
30 years of sanctions against Iran
The main international sanctions against Tehran

1979
Activists seize hostages at the US embassy in Tehran

1995
Total economic embargo

1996
Sanctions against foreign businesses investing in oil or gas

2002
The existence of secret nuclear sites in Iran is revealed

2006
Nuclear/ballistic missile programme
Financial assets, named individuals

2008
Assets for joint civilian-military use
Ban on US banks taking intermediary role

2010
Heavy weapons
- Tanks
- Missiles
- Fighter aircraft

2011
Oil sector technology transfer, banking
Assets and specific individuals

2012
Oil embargo
Iranian central bank assets are frozen
Bank-to-bank transactions

2013
Automobile sector, Iranian currency

2014
Suspension of sanctions on financial transfers, gold, petrochemicals

Jan 16, 2016
UN clears way for end to sanctions

July 14, 2015
Iran agrees not to acquire nuclear weapons in return for an end to sanctions

The main consequences of sanctions
- 100 billion dollars of Iranian assets frozen around the world
- 50% drop in oil exports (millions of barrels/day)
- 2.5 - 2011
- 1.2 - 2015
- 50% drop in car production (millions of units)
- 1.6 - 2011
- 0.8 - 2013
- Iran’s fleet of aircraft is ageing: it needs 400-500 new aircraft over the next 10 years
Recent Sanctions on Iran

Why?
Iran's centrifuges, ‘000

- Sanctions
- Oil sanctions

Joint plan of action signed
Deal reached

Natanz enrichment plant discovered
Fordow enrichment facility discovered

2002 04 06 08 10 12 14 15

UN UN UN EU US

0 8 12 16 20

6,104

2002 04 06 08 10 12 14 15

UN UN UN EU US

0 8 12 16 20

6,104
### Capability

<table>
<thead>
<tr>
<th>Before deal</th>
<th>After*</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-generation centrifuges installed</td>
<td>19,138</td>
</tr>
<tr>
<td>Advanced centrifuges installed</td>
<td>1,034</td>
</tr>
<tr>
<td>Breakout time</td>
<td>1-2 months</td>
</tr>
<tr>
<td>R&amp;D of new centrifuge technology</td>
<td>unconstrained</td>
</tr>
<tr>
<td>Uranium stockpile:</td>
<td></td>
</tr>
<tr>
<td>Low-enriched†</td>
<td>19,211 lbs</td>
</tr>
<tr>
<td>Medium-enriched‡</td>
<td>430 lbs$</td>
</tr>
</tbody>
</table>

*Next ten years †Up to 3.67% ‡20% $Nov 2011 peak
Recent Sanctions on Iran

Goals?
The Goals of Economic Sanctions: In Theory

- The goals of economic sanctions fall into five categories:

1. Punishment (deterrence),
2. Compliance (coercion),
3. Destabilization (subversion),
4. Signaling, and
5. Symbolism (demonstrative effect)
Recent Sanctions on Iran
Mechanisms for change?
Sanctions – Mechanisms for Change

• Main mechanisms are assumed:

1. Economic Hardship $\rightarrow$ rebellion/revolt or social implosion $\rightarrow$ regime change

2. Regime caves in to pressure $\rightarrow$ change of behavior
Recent Sanctions on Iran

A world-wide popular tool for change, especially after 1990s!
• **1914-1990**: 115 sanctions *(average of 1.6 a year)* of which **two** were *multilateral UN sanctions* (against the then Rhodesia 1966 and South Africa 1977)

• **1990-1999 (10 years)**: 66 sanctions.
  • Of these **two-thirds** are *US sanctions*

• During the **Clinton administration (1993-2001)** alone 35 **US sanctions** affecting **2.3 billion people** worldwide (ca. 40% of the total population)

• **UN sanctions to date**: ca. **20**
  • Sudan (Darfur), Ethiopia/ Eritrea, Iraq, Iran, Al-Qaida, etc.

Source: H. Hakimian (2013)
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Source: H. Hakimian (2013)
Recent Sanctions on Iran

What is the success rate?
• The first 2 years of a sanction episode are crucial for the success of economic sanctions.

• According to the Hufbauer et al. (2008) dataset, 55% of the successes (that is changes of behavior or political regime type) occur during the first two years.

<table>
<thead>
<tr>
<th>Duration</th>
<th>Failures (%) (A)</th>
<th>Successes (%) (B)</th>
<th>Ratio (B/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 year</td>
<td>17</td>
<td>41</td>
<td>2.4</td>
</tr>
<tr>
<td>1–2 years</td>
<td>6</td>
<td>14</td>
<td>2.3</td>
</tr>
<tr>
<td>2–3 years</td>
<td>15</td>
<td>9</td>
<td>0.6</td>
</tr>
<tr>
<td>&gt; 4 years</td>
<td>62</td>
<td>37</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Totals may not add up due to rounding. Calculations based on Hufbauer et al. (2008).
Iran leader Ahmadinejad laughs off tough UN sanctions: 'They are annoying flies, like a used tissue'

BY JAMES GORDON MEEK / DAILY NEWS WASHINGTON BUREAU / Published: Wednesday, June 9, 2010, 11:53 AM

The Telegraph

Iran dismisses new UN sanctions as 'a used hanky'

Mahmoud Ahmadinejad, the Iranian president, has dismissed new UN sanctions over the country's nuclear program as "a used hanky that should be thrown in the dustbin".
Some Visible Costs of Sanctions for Iran
1. Fall of Oil Production

- On average, the total supply of Iranian oil fell by 686 thousand barrels per day in 2012 compared to the 2011 average.
Oil production, daily, 1000b

Fall of about 1 million b/d

2005: 4,092  2012: 3,740  2015: 3,152

Source: OPEC (2016)
Oil revenues loss due to fall of production below level of 2005 (Billion $)

Source: production from OPEC (2016), oil prices from UNCTAD (2016)
2. Crisis in Foreign Exchange Market & Rent-Seeking (2012)

- Significant decline in government oil revenues due to sanctions and problems transferring the petrodollars into the domestic economy destabilized the foreign exchange market.

- In September 2012, the Iranian government announced the adoption of a three-tiered multiple exchange rate regime.

- The state also introduced ten general categories of products, grouped according to their importance in the Iranian economy.
Black Market Premium (BMP) in 2012 reached 130%.

Black Market Premium (BMP) for US $

BMP = \frac{(\text{non official rate} - \text{official rate})}{\text{official rate}} \times 100

= \frac{(26,059 - 12,260/12,260)}{12,260} \times 100 = 130\%
Sanctions → Oil Rent → Foreign Exchange Reserves

Shadow Economy → Rent-Seeking / Mis-invoicing of Trade → Black Market Premium
Crisis in *Foreign Exchange Market & Rent-Seeking*

If BMP > imports tariffs

Over-invoicing of imports

If BMP < imports tariffs

Under-invoicing of imports
Import mis-invoicing of Iran in Billion US$

Average of BMP (2002-2010): 0.5%

Average of BMP (1989-1999): 614%

Source: IMF, DOT (2013) and own calculations
BMP for US$ in Iran (%)

- 1991: 2000%
- 2001: 352%
- 2012: 113%

CBI (2016) & own calculations
3. Increasing inflation & falling production

- Oil embargos (2012)
- Negative oil revenues shocks
- Significant government budget deficits
- Covering deficits by borrowing from Central Bank
- Increasing liquidity in the market
- Fall of supply due to sanctions
- Demand > Supply!
- Higher inflation (from 20% in 2011 to 40% in 2013)
Inflation, consumer prices (annual %)

<table>
<thead>
<tr>
<th>Year</th>
<th>Inflation</th>
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<tbody>
<tr>
<td>2005</td>
<td>13</td>
</tr>
<tr>
<td>2006</td>
<td>12</td>
</tr>
<tr>
<td>2007</td>
<td>17</td>
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<td>2008</td>
<td>26</td>
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<td>2009</td>
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<td>2012</td>
<td>27</td>
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<tr>
<td>2013</td>
<td>39</td>
</tr>
<tr>
<td>2014</td>
<td>17</td>
</tr>
<tr>
<td>2015</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: WDI (2016)
Inflation (annual %) in 2013 (Silver Medal), Global Ranking

- Venezuela, RB: 40.64%
- Iran, Islamic Rep.: 39.27%
- Sudan: 29.96%
• Negative oil shocks **depreciate** the local currency.

• Imports of raw materials and equipment become more expensive.
High inflation & unemployment: lower saving rates
Also lower oil income
Importance of FDI

FDI % of GDP in Iran

UNCTAD (2016)
Psychological Costs of Sanctions for Iranians

The **Gallup 2016 Global Emotions Report** presents the results from **Gallup's latest measurements of people's positive and negative daily experiences**, based on nearly **147,000 interviews** in **2015** with adults in **140 countries**.
Global State of Emotions

Negative Experience Index Questions:

• Did you experience the following feelings during a lot of the day yesterday?

1. How about **physical pain**?
2. How about **worry**?
3. How about **sadness**?
4. How about **stress**?
5. How about **anger**?
Iraq and Iran have the highest Negative Experience Index scores in the world for the third year in a row.

Iraq has been No. 1 on this index four times — in 2011, 2013, 2014 and 2015 — and has been among the top five in all other years since 2008.

Iran was No. 1 in 2012 and has made at least the top 15 countries in the years Gallup has conducted surveys there.

Almost all countries at the top of the list in 2014 are at the top of the list again in 2015.
Lifting Sanction:
Potentials & Challenges
Lifting Sanction: Potentials

Iran as an investment opportunity

Karas (2010) has calculated the changes in the size of the middle class (from $10 to $100 per day) in Iran over the years which can be seen in the following graph.
Lifting Sanction: Potentials

Iran as an investment opportunity

![Graph showing upper and middle class as a percentage of population in various countries in 2011. Iran has a lower percentage compared to other countries like Turkey, Brazil, Thailand, Mexico, South Africa, Egypt, China, Indonesia, India, and Nigeria. Sources: Pew Research; UNCTAD; World Bank.](image)
Lifting Sanction: Potentials

Demographic Rent

Gross enrolment ratio, tertiary, both sexes (%)
Lifting Sanction: Potentials

Demographic Rent

Population ages 15-64 (% of total)

<table>
<thead>
<tr>
<th>Year</th>
<th>IRAN</th>
<th>MENA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
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<tr>
<td>2015</td>
<td>71</td>
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IRAN
MENA
Lifting Sanction: Potentials

Demographic Rent

Urban population (% of total)

<table>
<thead>
<tr>
<th>Year</th>
<th>Iran</th>
<th>MENA</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2014</td>
<td>73</td>
<td>63</td>
</tr>
<tr>
<td>2015</td>
<td>73</td>
<td>63</td>
</tr>
</tbody>
</table>
Lifting Sanction: Challenges

Positive oil revenues shocks

- Appreciation of exchange rate,
- Higher non-tradable to tradable prices, higher costs of non-oil exports,
- Higher spending of state,
- Re-allocation of resources from manufacturing & agriculture to services,….

- **Typical symptoms of Dutch disease**

Possible distortions in government spending (Military vs. Education & Health categories)
Lifting Sanction: Challenges

Quality of governance

- **Resource and demographic rents** needs **good governance** for positive contribution in development.

- To attract FDI, Iran needs to **reduce corruption and improve rule of law and regulatory quality**.

- **These are challenging issues in Iran** (and many other developing countries).
Lifting Sanction: Challenges

World Bank Index of Control of Corruption (-2.5, 2.5)

Iran  Turkey
Lifting Sanction: Challenges

Rule of Law

-0.90 -0.93 -0.87 -0.94 -0.94 -0.89 -0.94 -0.98 -1.03 -0.95


Iran, Islamic Rep. Turkey
Lifting Sanction: Challenges

Political Stability and Absence of Violence/Terrorism

<table>
<thead>
<tr>
<th>Year</th>
<th>Iran, Islamic Rep.</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1.08</td>
<td>-1.08</td>
</tr>
<tr>
<td>2007</td>
<td>-0.99</td>
<td>-1.99</td>
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<tr>
<td>2008</td>
<td>-0.98</td>
<td>-1.98</td>
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<tr>
<td>2009</td>
<td>-1.55</td>
<td>-1.55</td>
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<tr>
<td>2010</td>
<td>-1.42</td>
<td>-1.42</td>
</tr>
<tr>
<td>2011</td>
<td>-1.33</td>
<td>-1.33</td>
</tr>
<tr>
<td>2012</td>
<td>-1.26</td>
<td>-1.26</td>
</tr>
<tr>
<td>2013</td>
<td>-0.91</td>
<td>-0.91</td>
</tr>
<tr>
<td>2014</td>
<td>-0.91</td>
<td>-0.91</td>
</tr>
<tr>
<td>2015</td>
<td>-0.91</td>
<td>-0.91</td>
</tr>
</tbody>
</table>