Risks and Crises – Issues for the Extractives Industries in Developing Economies

Alan R. Roe
University of Warwick and UN WIDER

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Introduction (and some priors of the WIDER project)

- Increasing dependence on extractive industries (mining plus oil & gas) in developing economies - a statistical fact
- Results in new challenges for development policy – how best to capture the longer term benefits?
- But also creates new risks including
  - Macro-economic risks associated with volatile commodity prices and management of increased government revenues
  - additional Societal risks – failure to generate sustainable economic gains, with inclusive benefits for the affected communities and the broader society (e.g. replace an exhaustible natural resource by equivalent of higher amount of human and physical capital)

- Discussion around extractives has traditionally focused on specific ills (e.g. Dutch disease and tax avoidance) with insufficient attention to the broad, complex and practical challenges of managing the sector.
- Risk management from a national perspective has been neglected
I. Macroeconomic Risk

Two Facts that contribute to the Risks
Fact One – Increasing Dependency

Top 15 countries in terms of dependence on MINERAL Exports in 2014

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1 Middle Income (upper)</td>
<td>Botswana</td>
<td>80.90</td>
<td>91.60</td>
<td>91.92</td>
<td>10.70</td>
<td>11.02</td>
<td></td>
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<tr>
<td>2 Low Income</td>
<td>Congo, Dem. Rep.</td>
<td>72.40</td>
<td>81.50</td>
<td>78.26</td>
<td>7.10</td>
<td>9.10</td>
<td>5.86</td>
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<tr>
<td>3 High Income</td>
<td>French Polynesia</td>
<td>71.00</td>
<td>64.00</td>
<td>72.90</td>
<td>-7.00</td>
<td>-7.00</td>
<td>-1.90</td>
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<tr>
<td>4 Middle Income (lower)</td>
<td>Zambia</td>
<td>76.10</td>
<td>69.20</td>
<td>69.05</td>
<td>-6.90</td>
<td>-7.05</td>
<td>-1.90</td>
</tr>
<tr>
<td>5 Middle Income (upper)</td>
<td>Mongolia</td>
<td>57.50</td>
<td>74.60</td>
<td>64.23</td>
<td>17.10</td>
<td>6.73</td>
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<tr>
<td>6 Middle Income (lower)</td>
<td>Mauritania</td>
<td>35.90</td>
<td>62.90</td>
<td>58.82</td>
<td>27.00</td>
<td>22.92</td>
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<tr>
<td>7 High Income</td>
<td>Chile</td>
<td>47.70</td>
<td>61.60</td>
<td>56.92</td>
<td>13.90</td>
<td>9.22</td>
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<tr>
<td>8 Middle Income (upper)</td>
<td>Peru</td>
<td>48.30</td>
<td>60.10</td>
<td>53.71</td>
<td>11.80</td>
<td>5.41</td>
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<tr>
<td>9 Low Income</td>
<td>Guinea</td>
<td>76.30</td>
<td>60.10</td>
<td>53.15</td>
<td>16.20</td>
<td>-23.15</td>
<td></td>
</tr>
<tr>
<td>10 Middle Income (lower)</td>
<td>Guyana</td>
<td>37.40</td>
<td>58.50</td>
<td>51.52</td>
<td>21.10</td>
<td>14.12</td>
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<tr>
<td>11 Low Income</td>
<td>Burkina Faso</td>
<td>8.20</td>
<td>46.30</td>
<td>49.65</td>
<td>38.10</td>
<td>41.45</td>
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<tr>
<td>12 Middle Income (lower)</td>
<td>Tajikistan</td>
<td>30.20</td>
<td>58.50</td>
<td>48.51</td>
<td>28.30</td>
<td>18.31</td>
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<tr>
<td>13 Middle Income (upper)</td>
<td>Jamaica</td>
<td>49.70</td>
<td>39.10</td>
<td>48.14</td>
<td>-10.60</td>
<td>-1.56</td>
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</tr>
<tr>
<td>14 Middle Income (lower)</td>
<td>Armenia</td>
<td>24.60</td>
<td>44.50</td>
<td>47.30</td>
<td>19.90</td>
<td>22.70</td>
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<tr>
<td>15 Low Income</td>
<td>Mali</td>
<td>8.40</td>
<td>42.30</td>
<td>47.12</td>
<td>33.90</td>
<td>38.72</td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. 14 of the 15 countries are low and middle income – so too are most of the next 25 countries in the rankings
2. 11 of the 15 saw increased levels of dependence between 1996 and 2014
# Top-20 Oil & Gas Export Dependent Economies

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Dependence Level</th>
<th>Dependency</th>
<th>Dependence Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Iraq</td>
<td>Upper MY</td>
<td></td>
<td>98.8%</td>
</tr>
<tr>
<td>2</td>
<td>Algeria</td>
<td>Upper MY</td>
<td></td>
<td>98.4%</td>
</tr>
<tr>
<td>3</td>
<td>Angola</td>
<td>Upper MY</td>
<td></td>
<td>98.3%</td>
</tr>
<tr>
<td>4</td>
<td>Libya</td>
<td>Upper MY</td>
<td></td>
<td>97.3%</td>
</tr>
<tr>
<td>5</td>
<td>Timor-Leste</td>
<td>Low MY</td>
<td></td>
<td>97.1%</td>
</tr>
<tr>
<td>6</td>
<td>Brunei Darussalam</td>
<td>High Y</td>
<td></td>
<td>96.2%</td>
</tr>
<tr>
<td>7</td>
<td>Equatorial Guinea</td>
<td>High Y</td>
<td></td>
<td>95.0%</td>
</tr>
<tr>
<td>8</td>
<td>Chad</td>
<td>Low</td>
<td></td>
<td>93.7%</td>
</tr>
<tr>
<td>9</td>
<td>Nigeria</td>
<td>Low MY</td>
<td></td>
<td>93.5%</td>
</tr>
<tr>
<td>10</td>
<td>Azerbaijan</td>
<td>Upper MY</td>
<td></td>
<td>93.4%</td>
</tr>
<tr>
<td>11</td>
<td>Qatar</td>
<td>High Y</td>
<td></td>
<td>91.4%</td>
</tr>
<tr>
<td>12</td>
<td>Kuwait</td>
<td>High Y</td>
<td></td>
<td>90.9%</td>
</tr>
<tr>
<td>13</td>
<td>Congo</td>
<td>Low</td>
<td></td>
<td>88.2%</td>
</tr>
<tr>
<td>14</td>
<td>Yemen</td>
<td>Low MY</td>
<td></td>
<td>85.9%</td>
</tr>
<tr>
<td>15</td>
<td>Saudi Arabia</td>
<td>High Y</td>
<td></td>
<td>85.2%</td>
</tr>
<tr>
<td>16</td>
<td>Aruba</td>
<td>High Y</td>
<td></td>
<td>81.9%</td>
</tr>
<tr>
<td>17</td>
<td>Venezuela</td>
<td>High Y</td>
<td></td>
<td>81.2%</td>
</tr>
<tr>
<td>18</td>
<td>Gabon</td>
<td>Upper MY</td>
<td></td>
<td>78.7%</td>
</tr>
<tr>
<td>19</td>
<td>Gibraltar</td>
<td>High Y</td>
<td></td>
<td>73.7%</td>
</tr>
<tr>
<td>20</td>
<td>Oman</td>
<td>High Y</td>
<td></td>
<td>71.2%</td>
</tr>
</tbody>
</table>
Combined

- 72 low and middle income countries now have export dependency on minerals and/or oil & gas at or above 30% of total exports
- 18 of these are LOW income countries
- 25 are LOW MIDDLE income countries
- The simple average INCREASE in dependency measured like this (1996 – 2014) was 17 percentage points

Source: Roe and Dodd (2016)
Revenue Dependency is also High (averages, max and min 2000-2013)

Source: IMF (2016)
Fact TWO – Price Volatility

Price Changes - Metals

![Graph showing monthly prices for various metals from January 2005 to January 2014. The x-axis represents the months from Jan-05 to Jan-14, and the y-axis represents the monthly prices (Jan 2005 = 100). The graph includes lines for Aluminium, Coal Thermal, Copper, Iron ore (62% FE), and Gold.]
Metals Prices, 1960 to 2015

Price Volatility – Crude Oil Prices - (1980 to 2014)

But – Longer Term Who Knows!

Can Macro/Price Risks be Managed?

Commodity price falls can cause crises. Recent examples are Venezuela, Nigeria, Ghana

Effects have included:
- Loss of FISCAL Revenues
- Need for large Fiscal Adjustments
- Exchange Rate Depreciation and Higher Inflation
- Slower Growth

But this outcome is by no means inevitable

- There are important counter examples

Consider the two contrasting cases of Ghana and Chile
Govt. Revenues from Mining - % of total (2000-2014)

Source: IMF (2016)
Risk Management: Ghana – and new Oil

- Ghana had a significant boost to GDP growth from 2012 when new oil came on stream.
- Additionally HIPC debt relief in 2004/05 had reduced foreign debt and government interest payments from over 100% of GDP to less than 30% by 2008.
- But the new oil era quickly saw fiscal deficits rise to almost 12% of GDP even before the major oil price shock of 2012-2015.
- The large new borrowing made easier by new oil led to interest payments in the budget rising to over 5% of GDP – public debt was back to the pre-HIPC levels.
Following the large drop in the copper price during the global crisis in 2008/09 Chile was in a position to inject a large fiscal stimulus (2.8% of GDP v. 0.6% in Brazil, 1.5% in Mexico and less than 1% in much of Europe) *without* threatening its debt stability and global bond ratings.
• A build up of significant surpluses in Chile’s Stabilisation Funds through early 2009 and then the ability to draw this down when the copper price fell after that.
• Was this an over cautious fiscal approach given Chile’s many remaining social problems? Possibly yes – but it certainly avoided what might otherwise have been a critical situation.
What to do long-term?
The Potential is Huge

Developing Economies have large unexploited resources

**Example:** Guinea has one quarter of the world’s total reserves of bauxite – most high grade and unexploited. But it produces only at the level of China and India which have only one tenth Guinea’s reserves.
BUT developing economies also have a mixed record in using extractives to drive growth (1995 - 2011)

Source: McKinsey Global Institute, 2013
What’s needed for the Longer Term?

The key to *relative* success is building institutions/capacity across a wide range of functions of effective governance across the life cycle shown below:

- Effective macro management is merely one among many dimensions.
- NRGI in particular has articulated what these other areas are:
  - Strategy
  - Legal Structures/Contracts/Licensing
  - Geological Information
  - Setting Taxes
  - Collecting Taxes/Public Expenditure Management
  - Regulating Environment
  - Community Development etc.
Four Scenarios?

- **Rogue Company**
  - Adversial & limited relationship
  - Relationship based on survival

- **Effective/Inclusive Government**
  - Positive feedbacks & collaborations
  - Tense /opportunistic relationship

- **Ineffective/Divisive Government - Warlords**

- **Enlightened Company**
  - Sound and inclusive domestic policies enhanced by international initiatives such as Natural Resources Charter, IFC Sustainability Principles, ICMM Principles, ideas from the African Mining Vision, Global Economic Forum etc.

Hodge (2016) **46 Initiatives in total – most since 2000**
NRGI Governance Index 2013

Source: NRGI
Thank you

See also UNU WIDER E4D

Any comments please to:
alan.roe@opml.co.uk