

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



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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

						Change (% age points)	
	Income Classification		1996	2012	2014	1996-2012	1996-2014
1	Middle Income (upper)	Botswana	80.90%	91.60%	91.92%	10.70%	11.02%
2	Low Income	Congo, Dem. Rep.	72.40%	81.50%	78.26%	9.10%	5.86%
3	High Income	French Polynesia	71.00%	64.00%	72.90%	-7.00%	1.90%
4	Middle Income (lower)	Zambia	76.10%	69.20%	69.05%	-6.90%	-7.05%
5	Middle Income (upper)	Mongolia	57.50%	74.60%	64.23%	17.10%	6.73%
6	Middle Income (lower)	Mauritania	35.90%	62.90%	58.82%	27.00%	22.92%
7	<b>High Income</b>	Chile	47.70%	61.60%	56.92%	13.90%	9.22%
8	Middle Income (upper)	Peru	48.30%	60.10%	53.71%	11.80%	5.41%
9	Low Income	Guinea	76.30%	60.10%	53.15%	-16.20%	-23.15%
10	Middle Income (lower)	Guyana	37.40%	58.50%	51.52%	21.10%	14.12%
11	Low Income	Burkina Faso	8.20%	46.30%	49.65%	38.10%	41.45%
12	Middle Income (lower)	Tajikistan	30.20%	58.50%	48.51%	28.30%	18.31%
13	Middle Income (upper)	Jamaica	49.70%	39.10%	48.14%	-10.60%	-1.56%
14	Middle Income (lower)	Armenia	24.60%	44.50%	47.30%	19.90%	22.70%
15	Low Income	Mali	8.40%	42.30%	47.12%	33.90%	38.72%

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

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

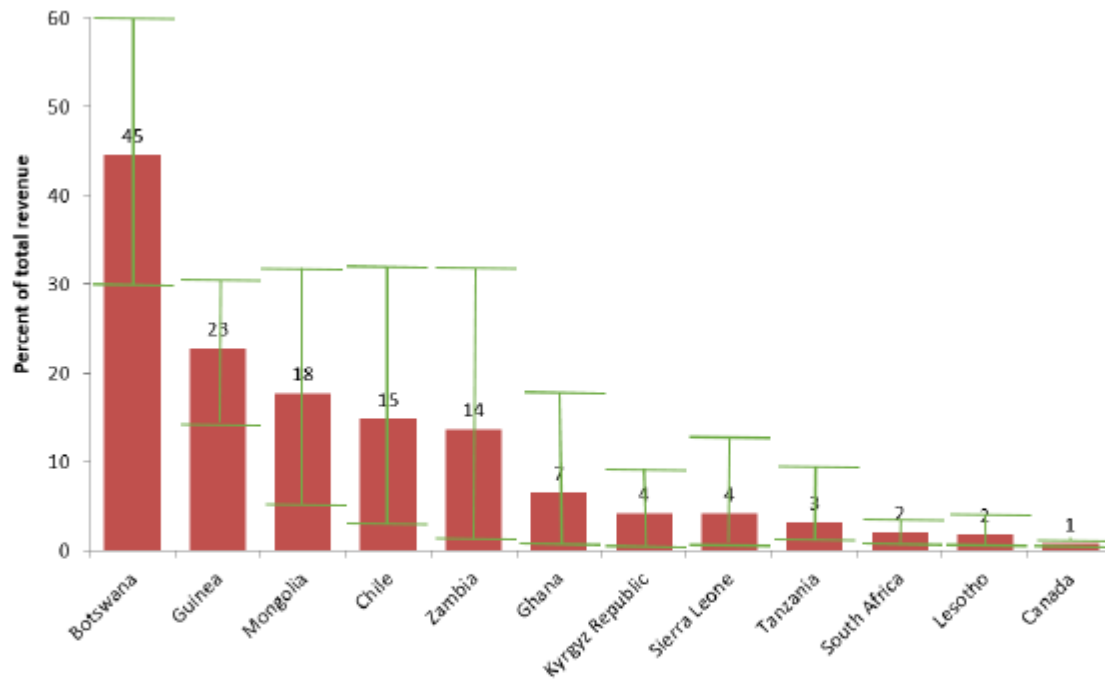
## ..... Combined

- **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

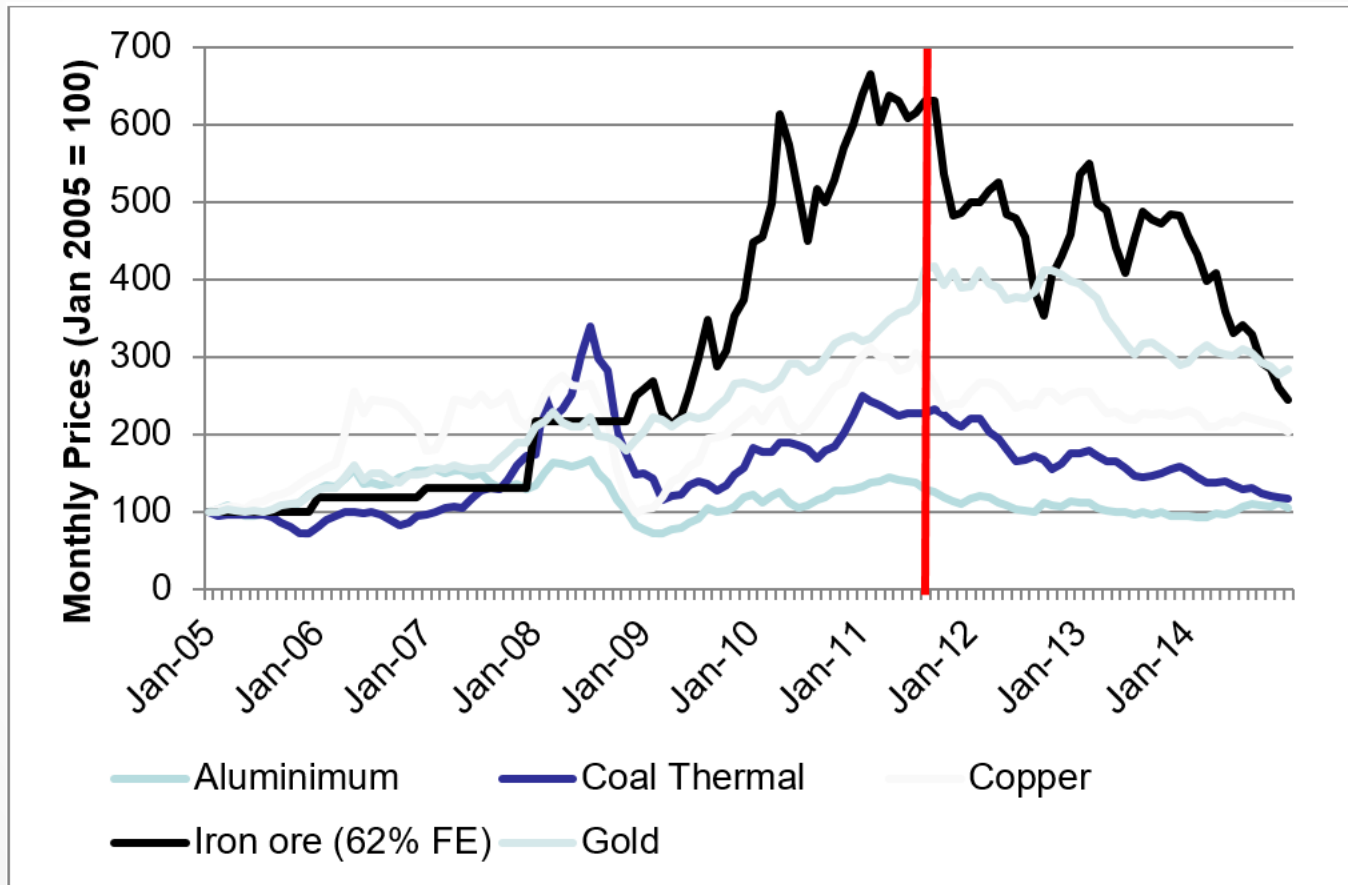
( averages, max and min 2000-2013)



Source: IMF (2016)

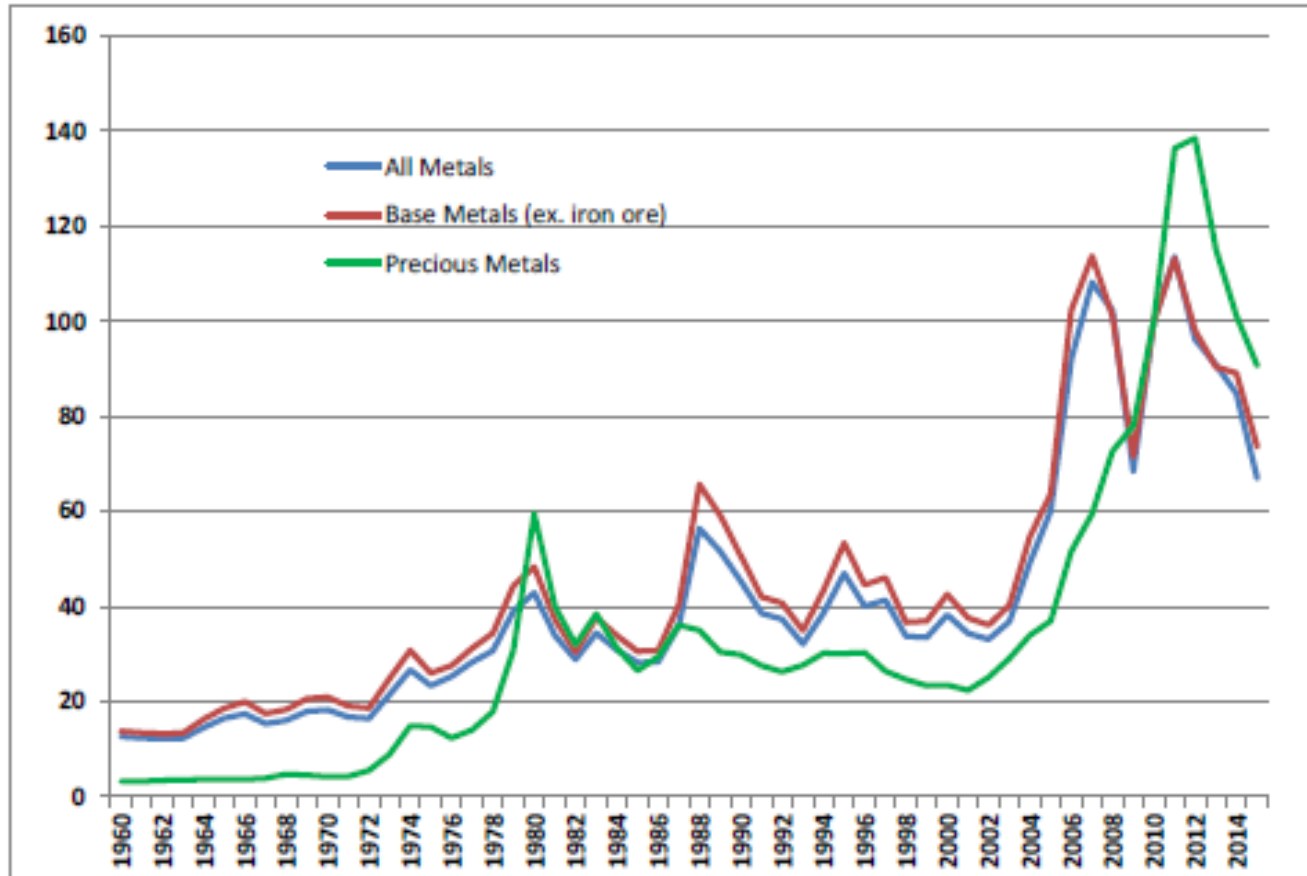
# Fact TWO – Price Volatility

## Price Changes - Metals



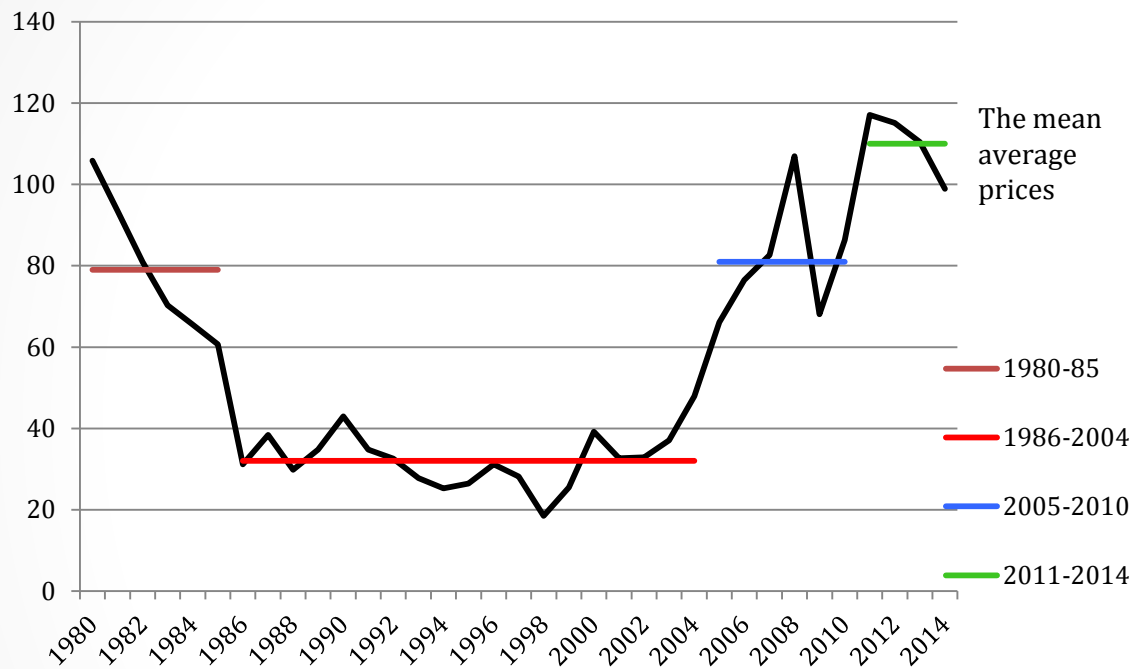


# Metals Prices, 1960 to 2015)



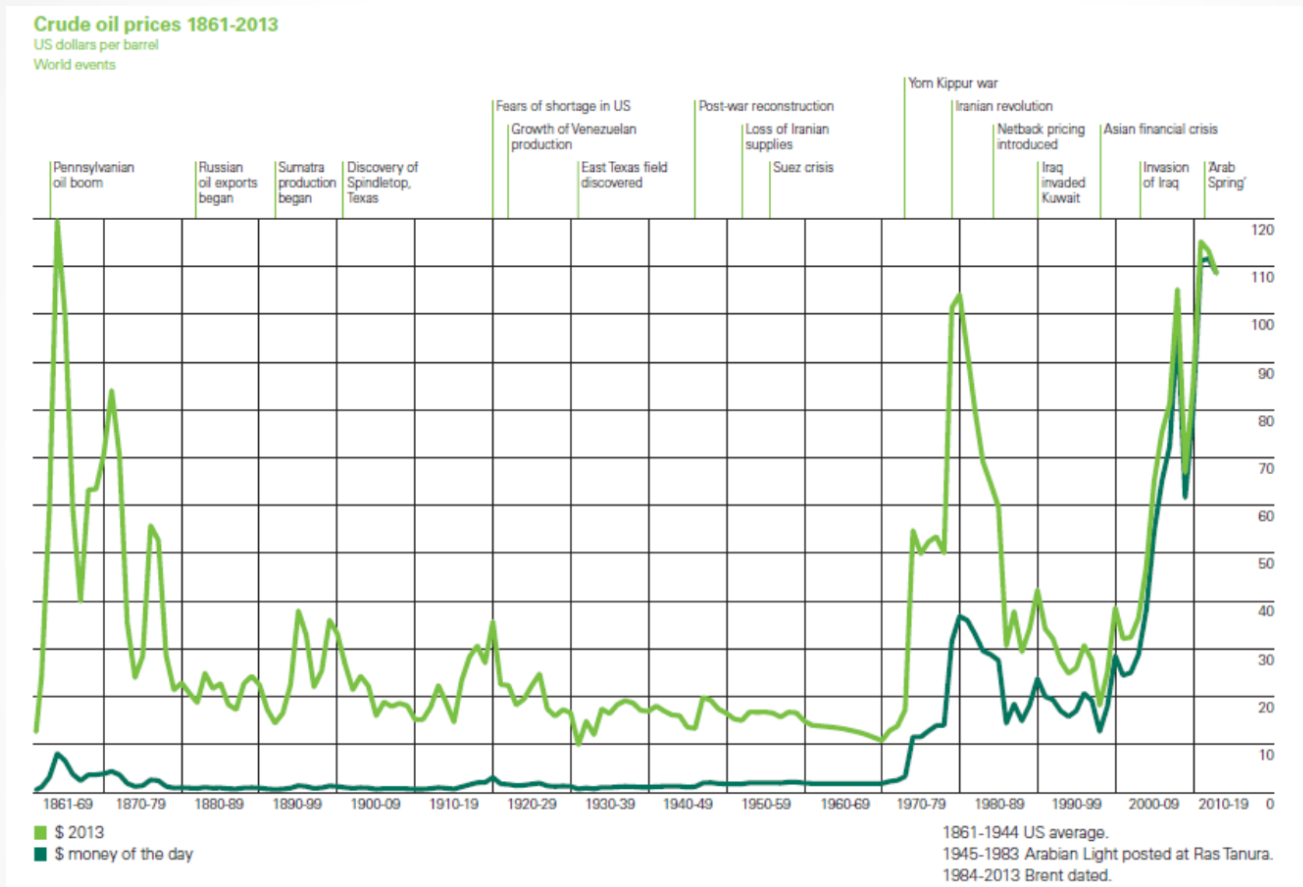
Source: World Bank Commodity Price Data (the Pink Sheet) July 2016

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



Source: *BP Statistical Review of World Energy 2015.*

# But – Longer Term Who Knows !



Source: BP Statistical Review of World Energy, 2014

# Can Macro/Price Risks be Managed?

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

Effects have included:

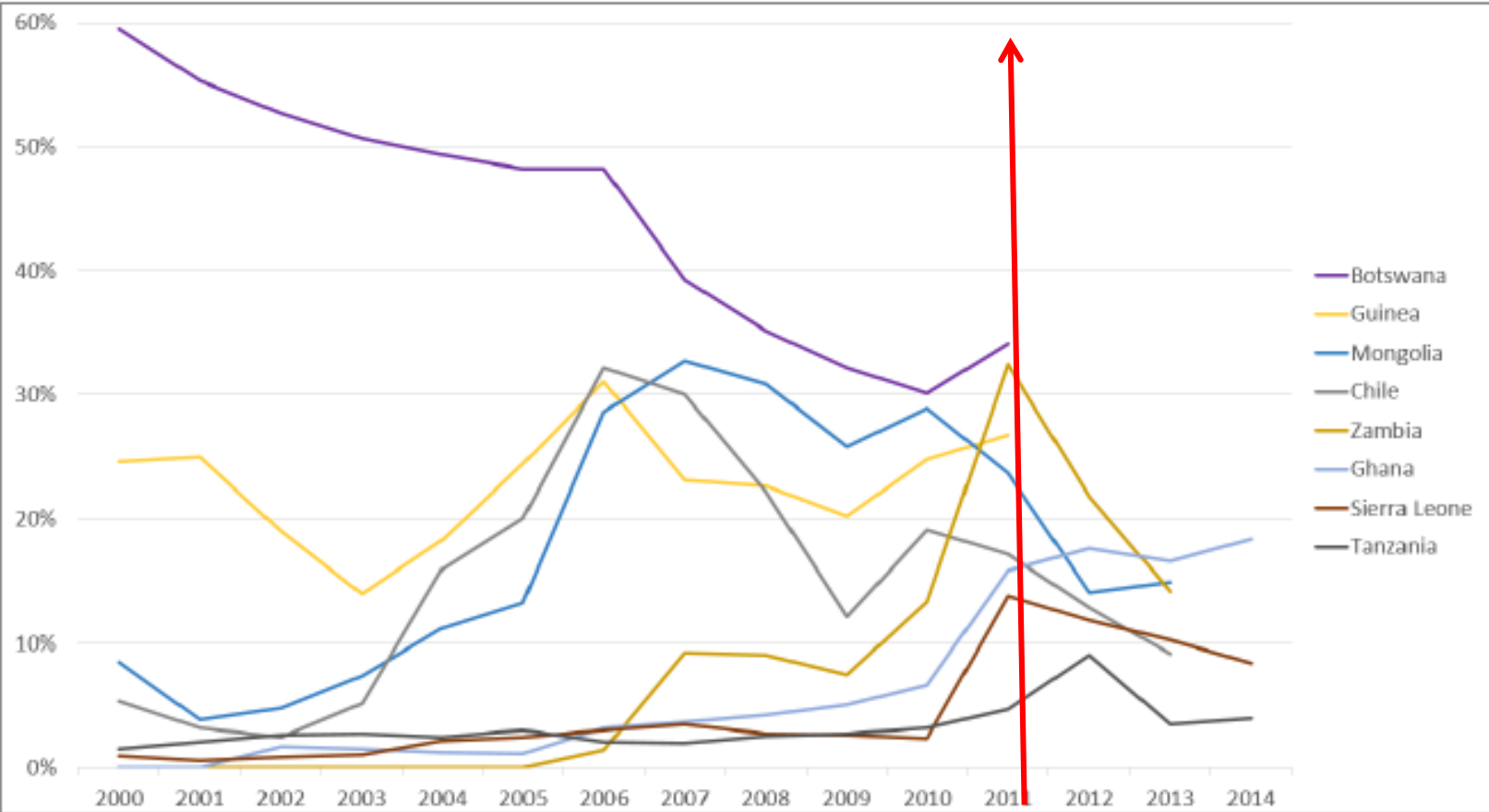
- Loss of FISCAL Revenues
- Need for large Fiscal Adjustments
- Exchange Rate Depreciation and Higher Inflation
- Slower Growth

But this outcome is by no means inevitable

- There are important counter examples

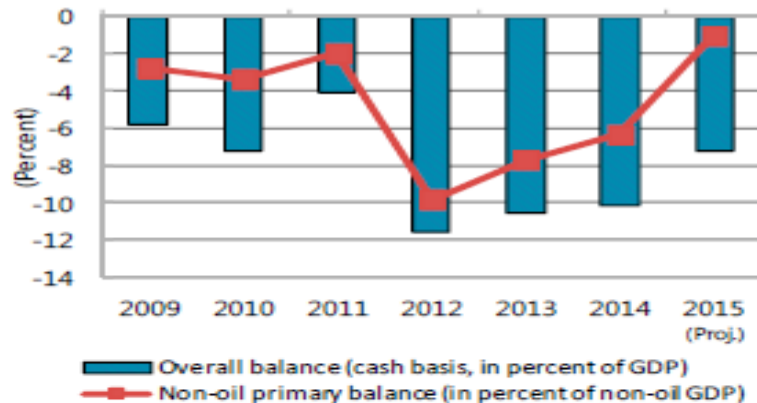
Consider the two contrasting cases of **Ghana** and **Chile**

# Govt. Revenues from Mining - % of total (2000-2014)

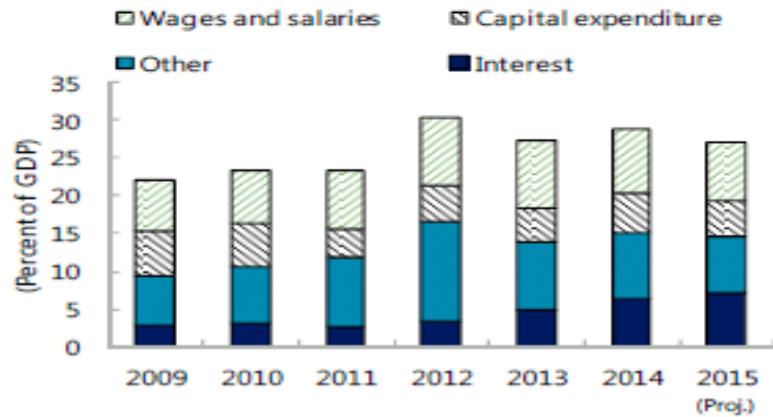


Source: IMF (2016)

# Risk Management: Ghana – and new Oil

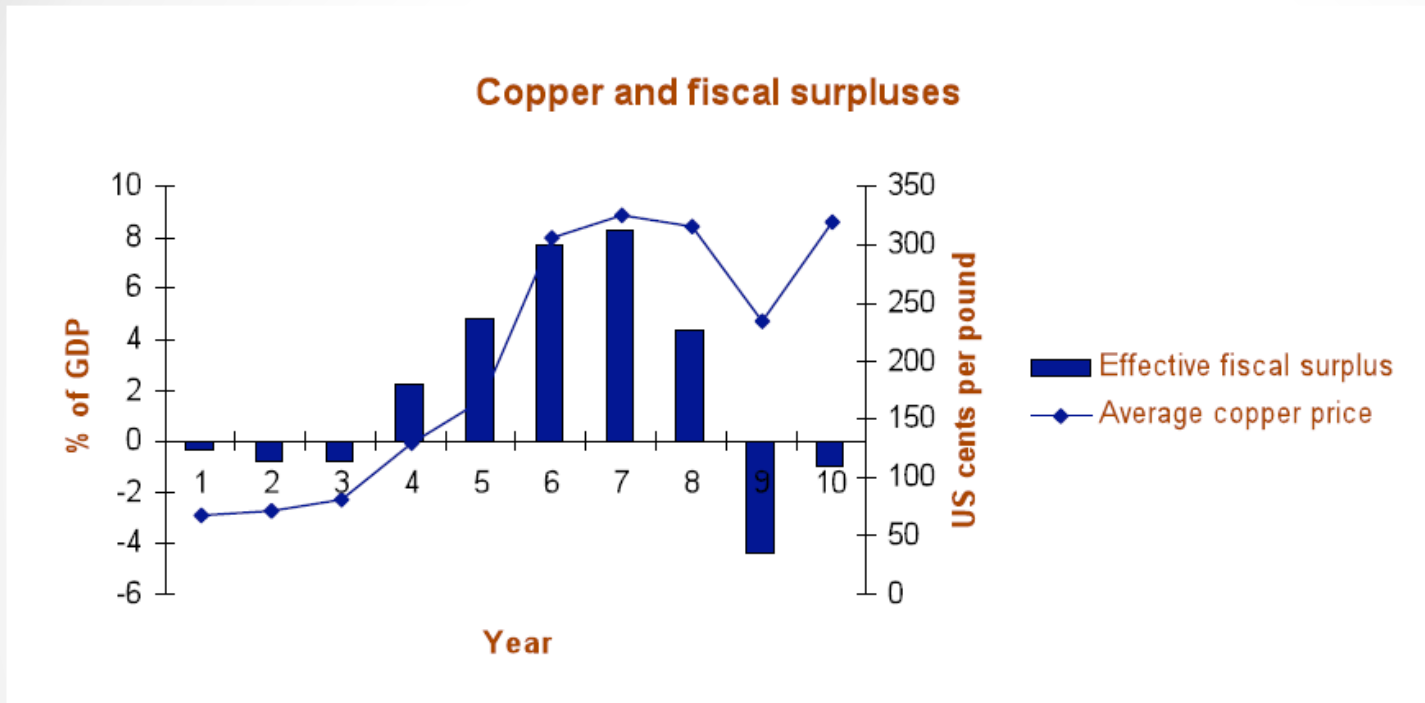


... and containing spending despite increasing interest payments, ...



- 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

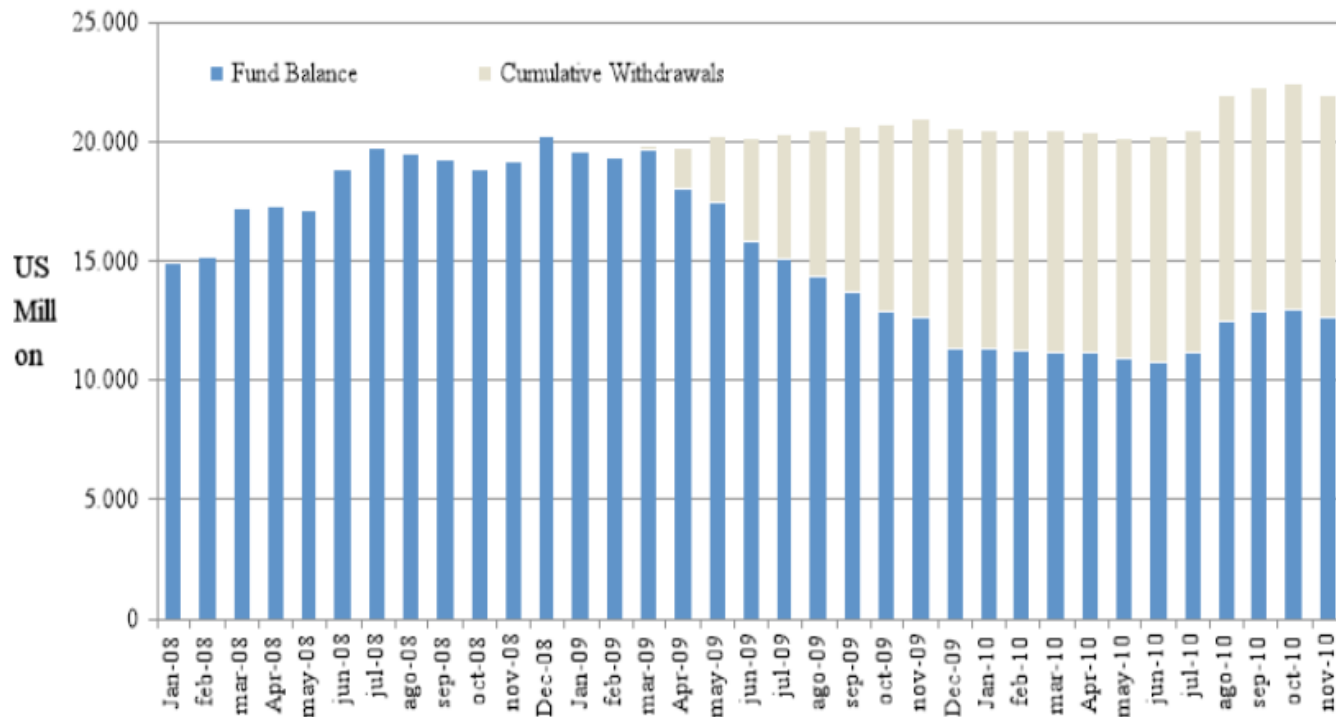
# Chile and the Volatile Copper Price - 2000-2010



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

# ..... the Reason

- 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.

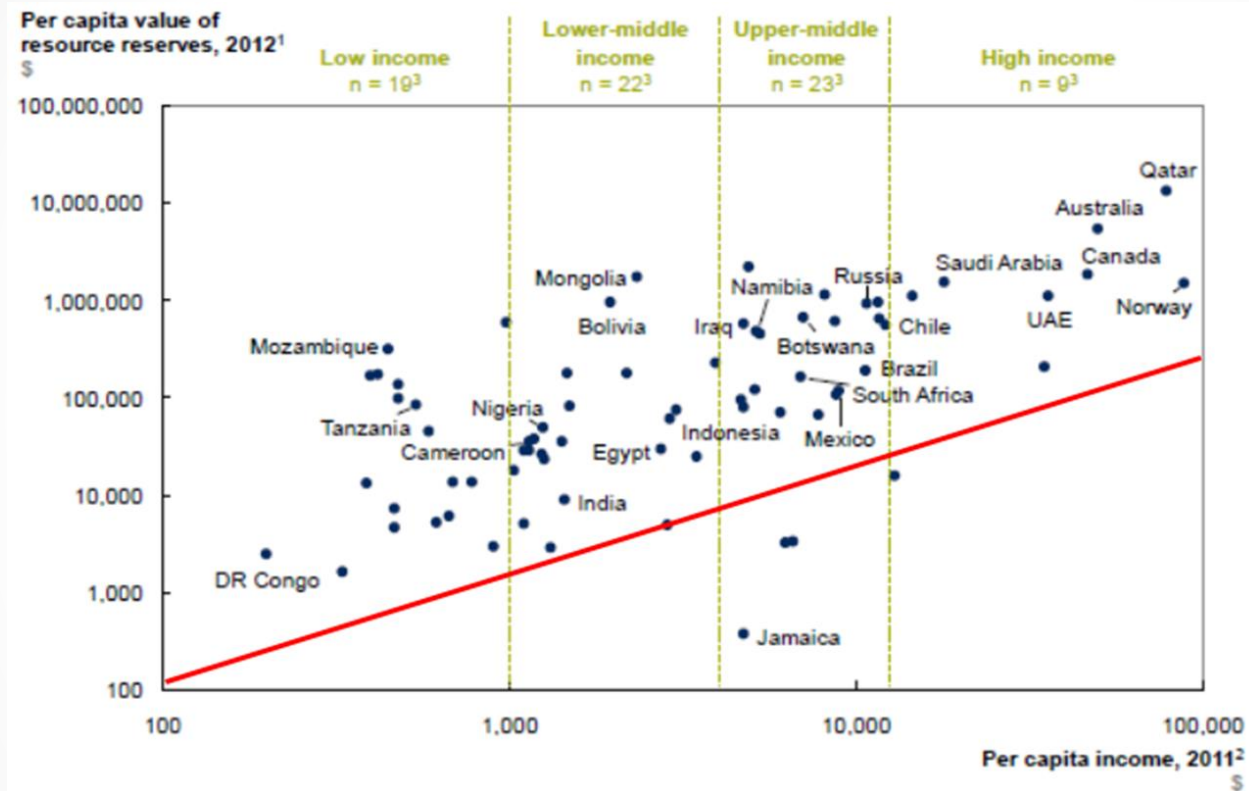




What to do long-term?

# 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

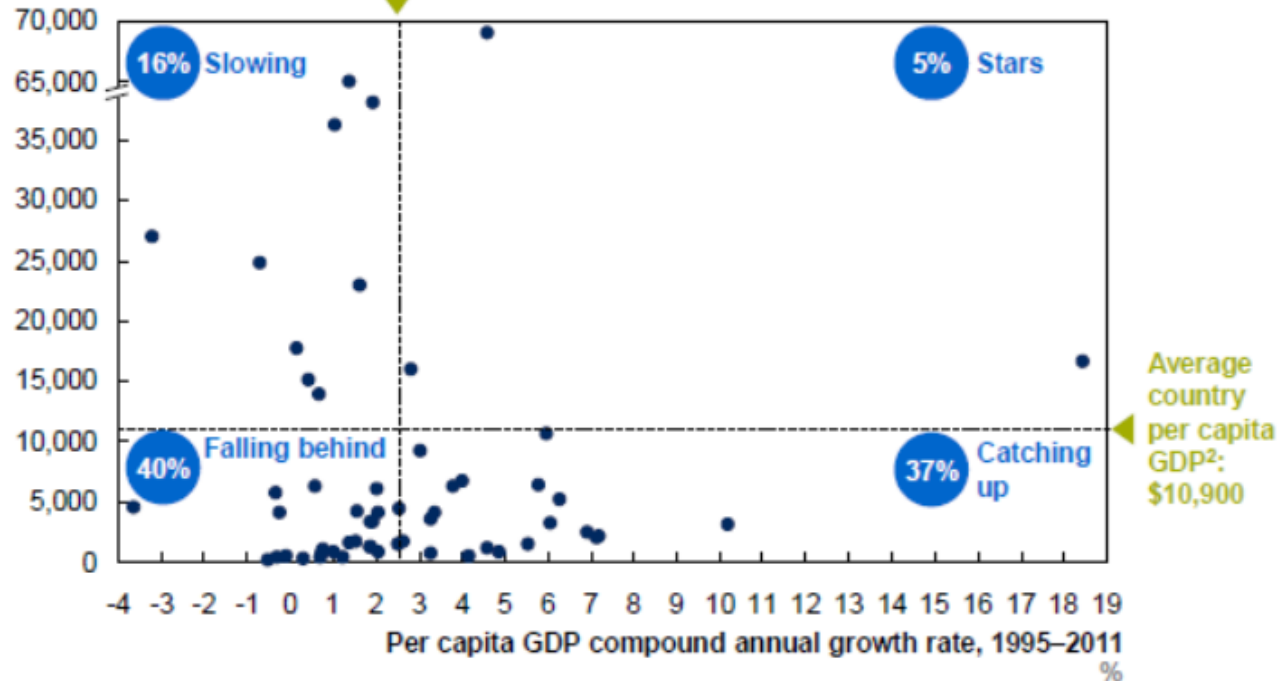
# BUT developing economies also have a mixed record in using extractives to drive growth (1995 - 2011)

Almost 80 percent of resource-driven countries have below-average levels of income; more than half of these are not catching up

● % of resource-driven countries<sup>1</sup>

Per capita GDP, 2011  
Real 2005 \$

Average country growth<sup>2</sup>: 2.5%



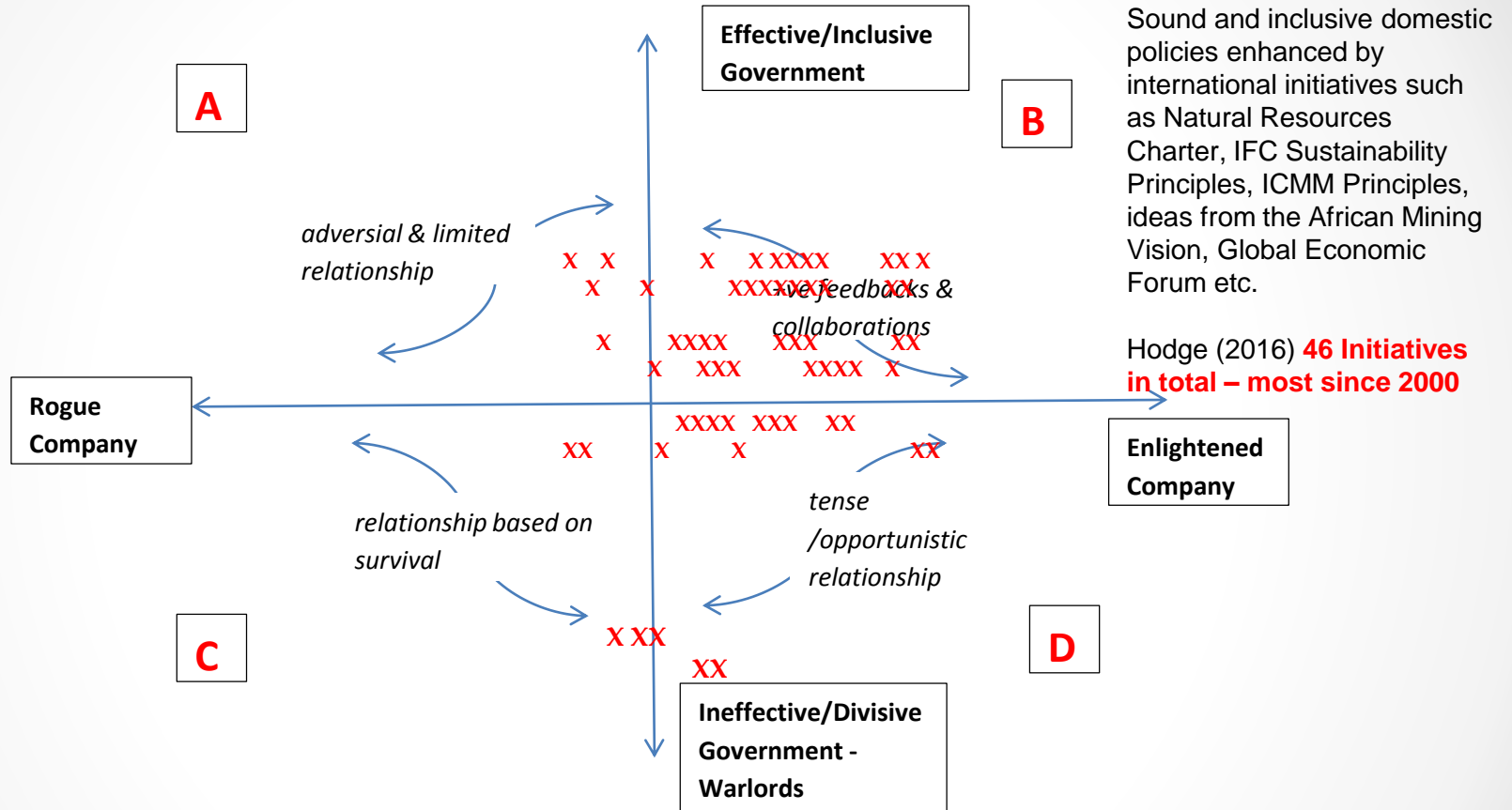
# What's needed for the Longer Term?

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

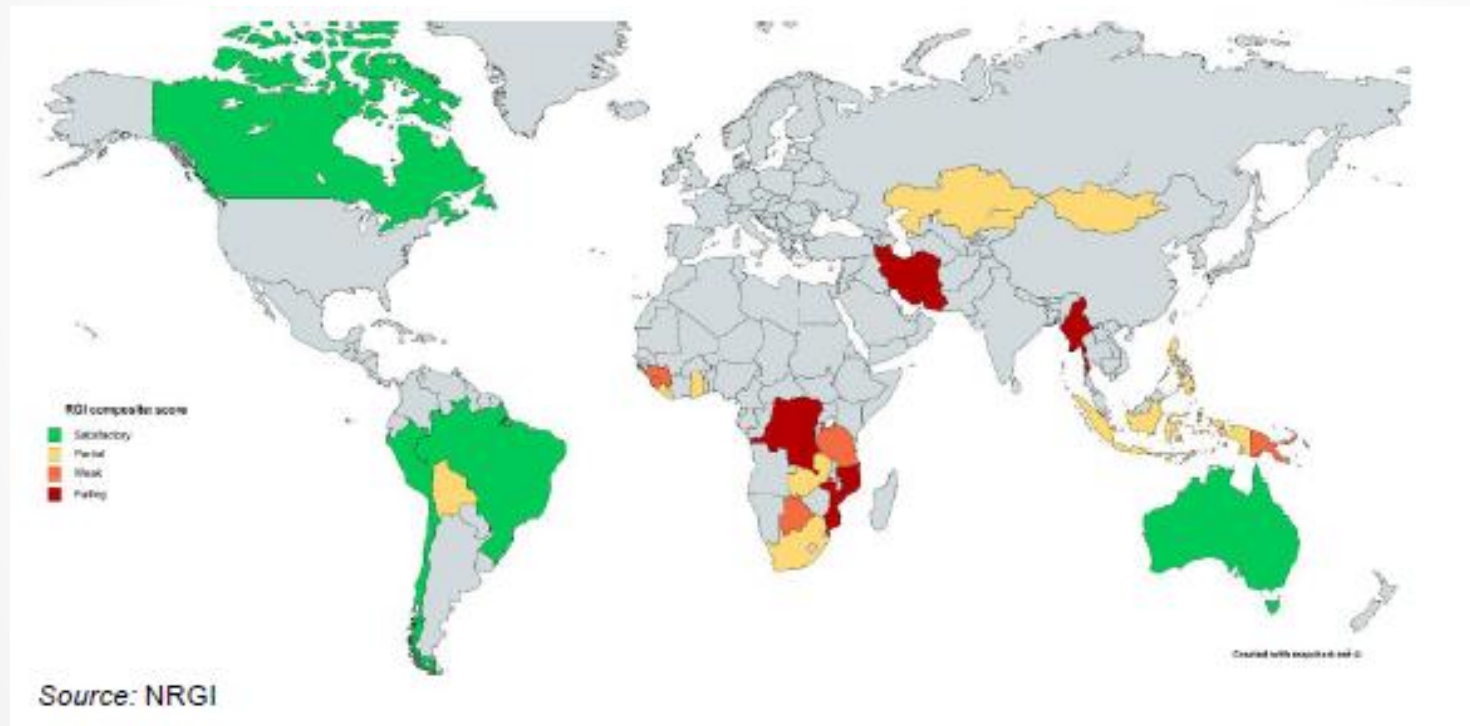
- Effective macro management is merely one among many dimensions
- NRGI in particular has articulated what these other areas are
  - Strategy
  - Legal Structures/Contracts/Licensing
  - Geological Information
  - Setting Taxes
  - Collecting Taxes/ Public Expenditure Management
  - Regulating Environment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



# Four Scenarios?



# NRGI Governance Index 2013



# Thank you

*See also UNU WIDER E4D*

Any comments please to:  
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