



International Monetary Fund

Managing Nonrenewable Natural Resources

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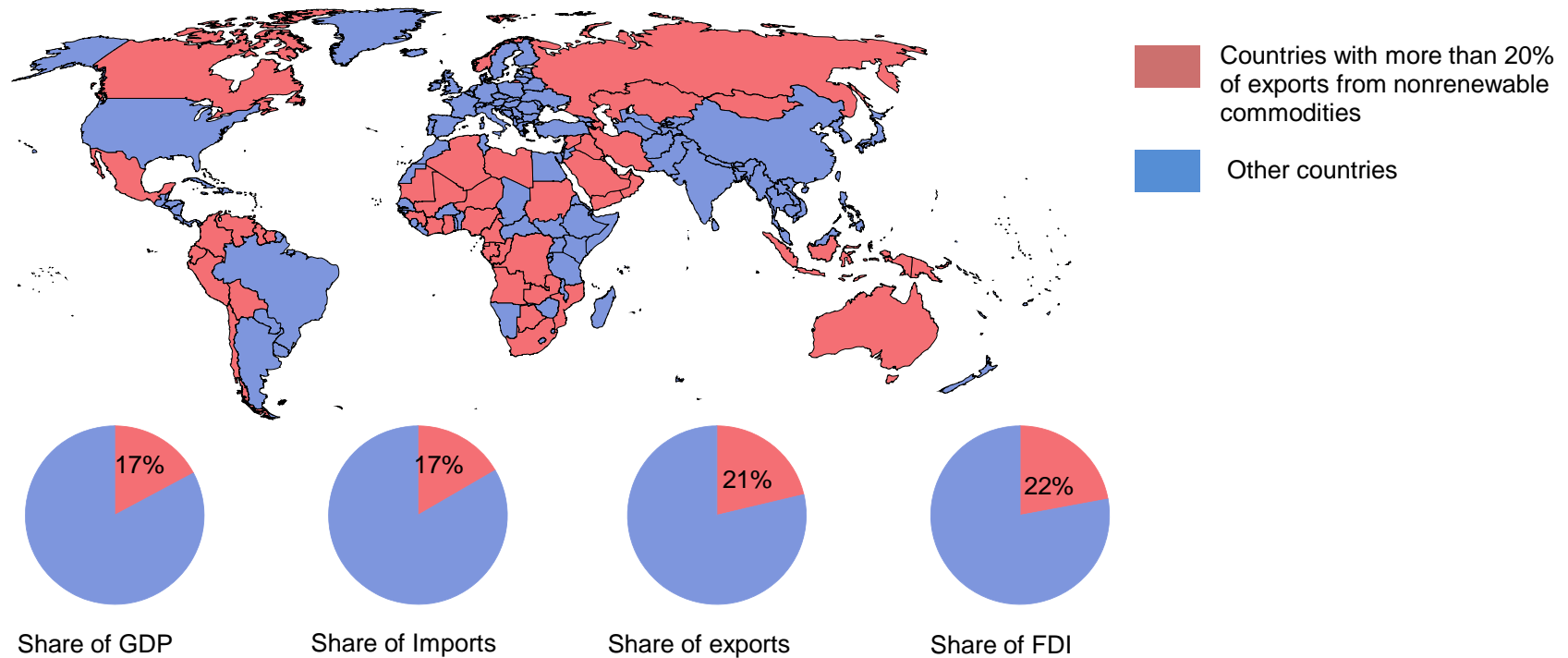
Third IMF Statistical Forum: Official Statistics to Support Evidence-Based Policy-Making
Frankfurt, November 19-20, 2015

Outline

- How to leverage resource wealth to promote growth
- A volatile and uncertain world
- A Fiscal framework for commodity exporters

Commodity exporters in the World

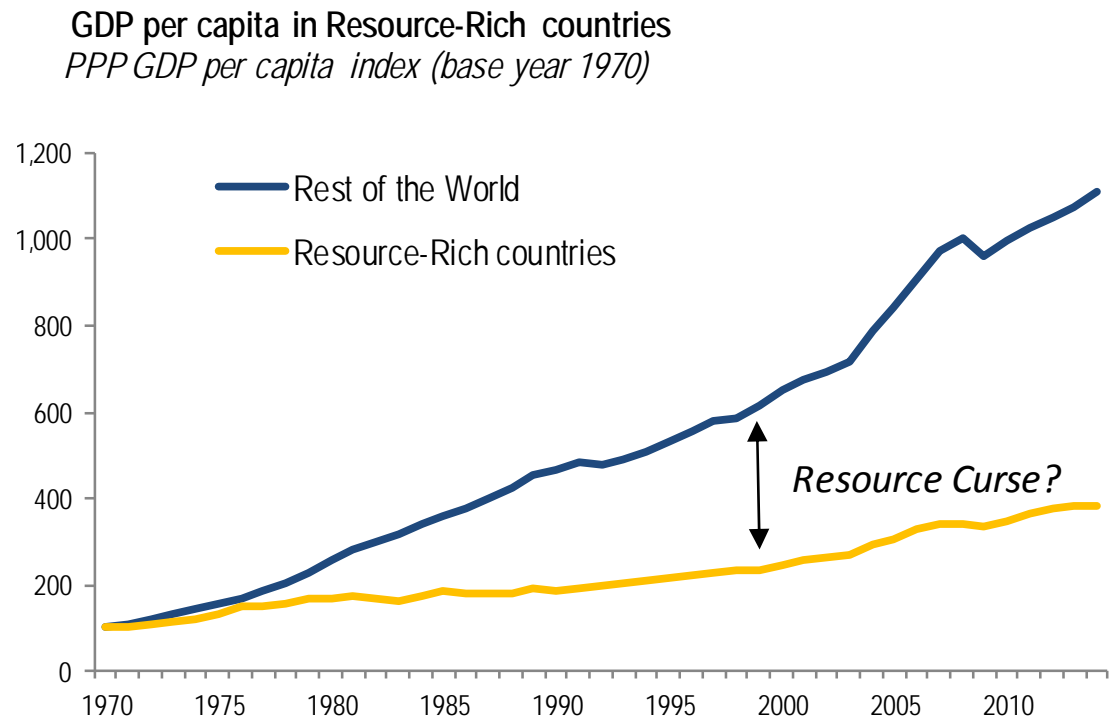
Nonrenewable Commodity Exporters, 2014



Sources: BP Statistical Review, Institutional Investor, National authorities, Sovereign Wealth Center, Sovereign Wealth Fund Institute, and the U.S. Geological Survey.

Natural resources wealth and economic growth

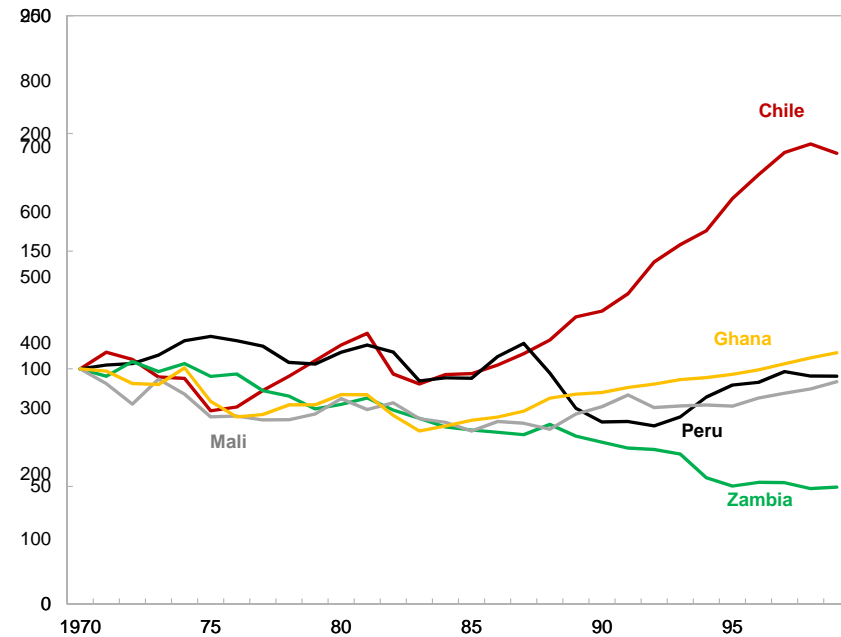
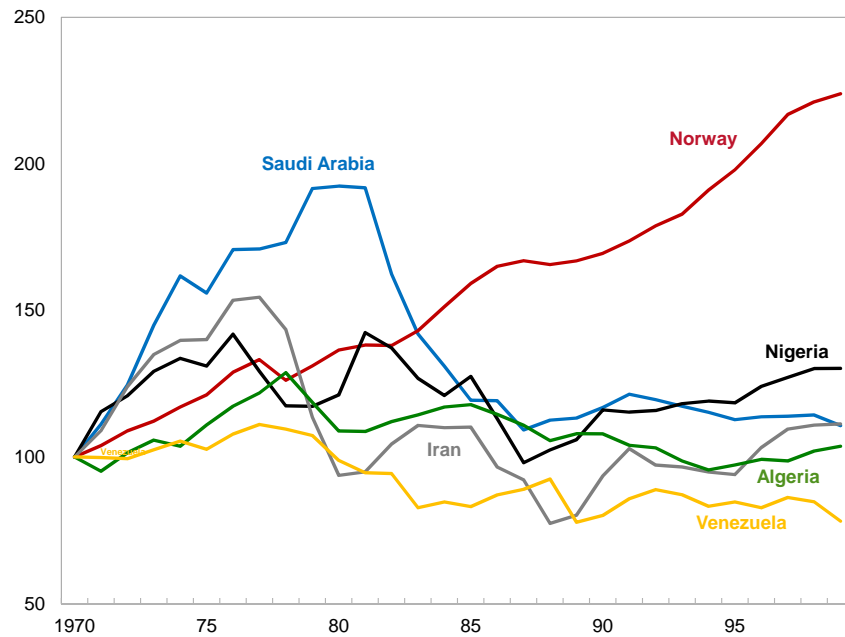
- Opportunity to leverage resource wealth towards promoting growth and economic development
- But, economic performance has been weaker among resource-rich economies



Sources: IMF staff estimates

Booms and busts can be very costly to countries

With few exceptions, most commodity exporters faced a long period of low growth after commodity prices fall in the 1980s
(Real GDP per capita, 1970 = 100)

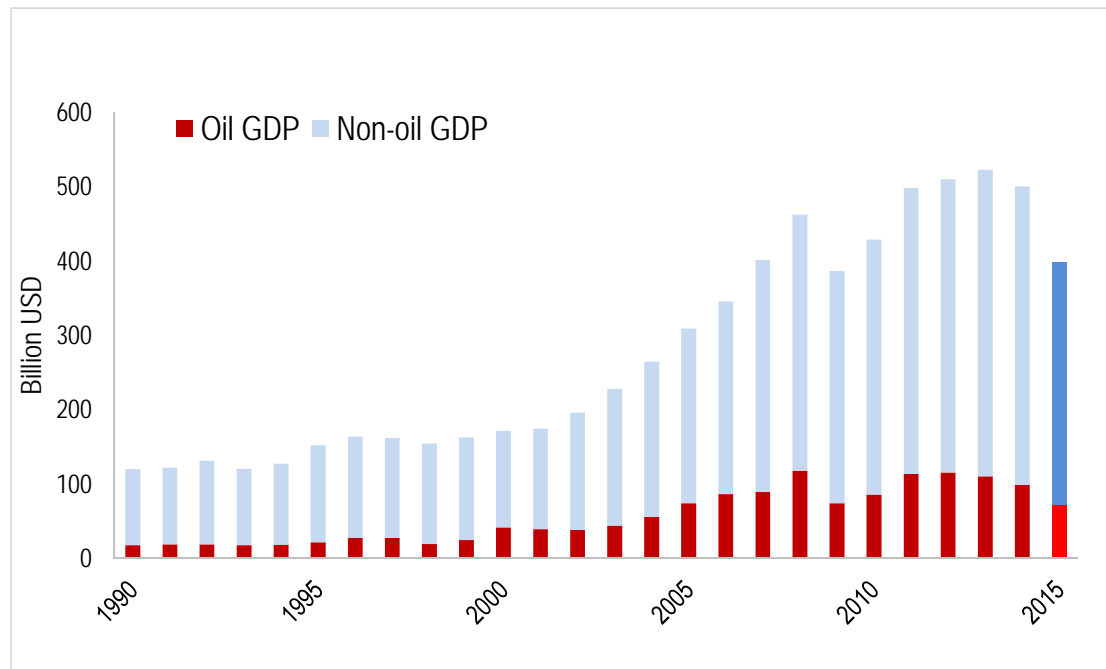


Source: IMF staff estimates

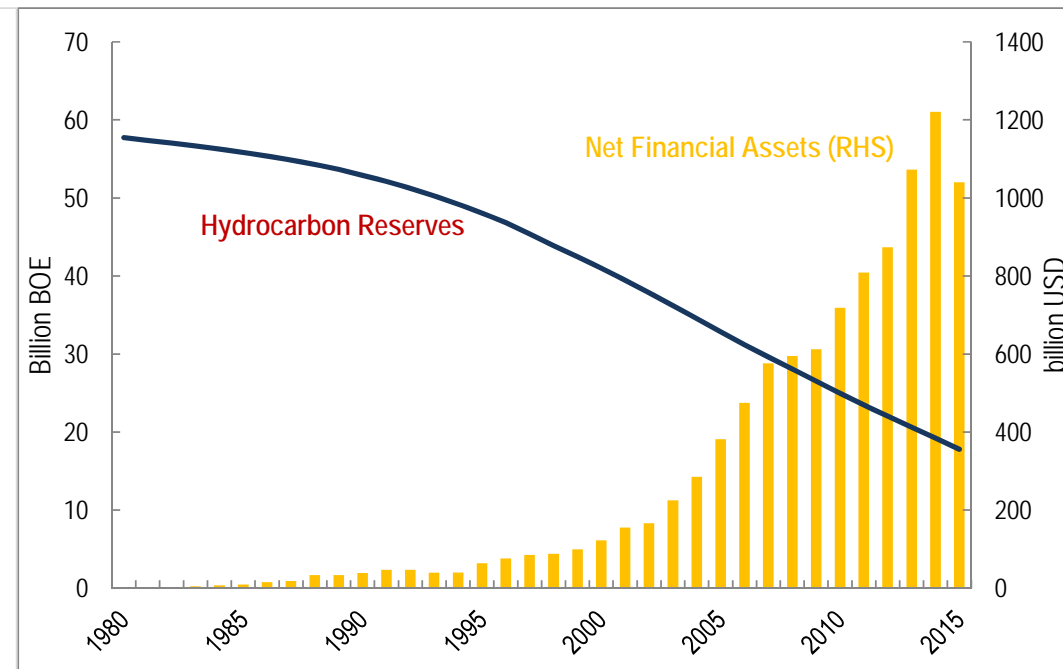
**Today's decisions
have long-term
consequences**

GDP or Wealth?

The oil sector has accounted for about 20 percent of Norway's GDP since 1990



Norway accumulated large financial assets as hydrocarbon reserves were extracted



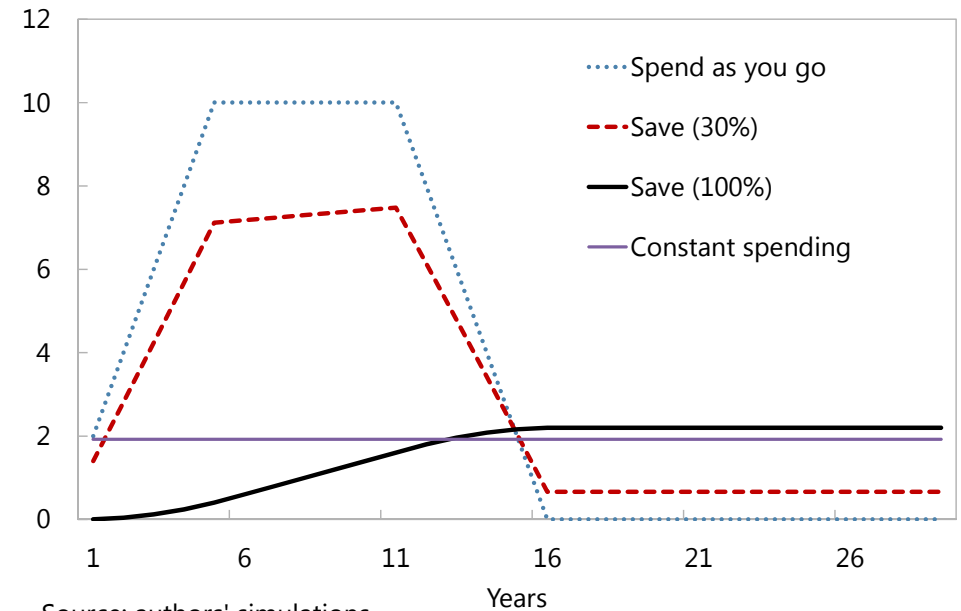
Sources: BP statistical review of world energy; World Economic Outlook (IMF), IMF staff calculations

How to use the wealth?

- If consumed (spend-as-you-go), the country will get poorer as reserves are depleted;
- If saved, returns from those savings can finance budget beyond depletion
- Savings can also promote more stable fiscal path

Benefits from Natural Resource Wealth

(Consumption out of natural wealth under different scenarios)



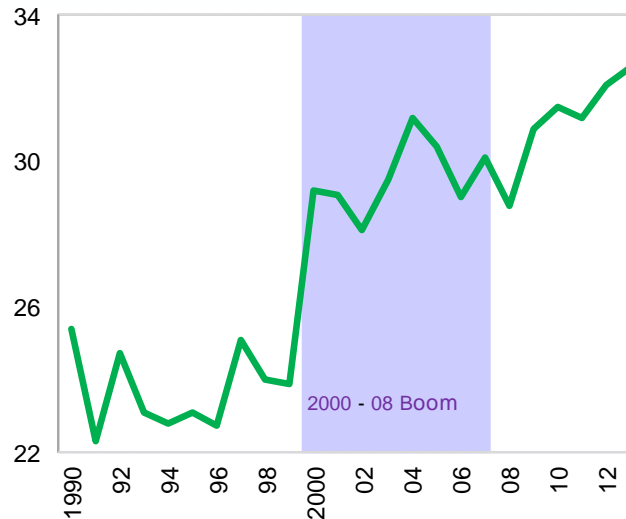
Source: authors' simulations

Sources: IMF staff estimates

Where to save is key

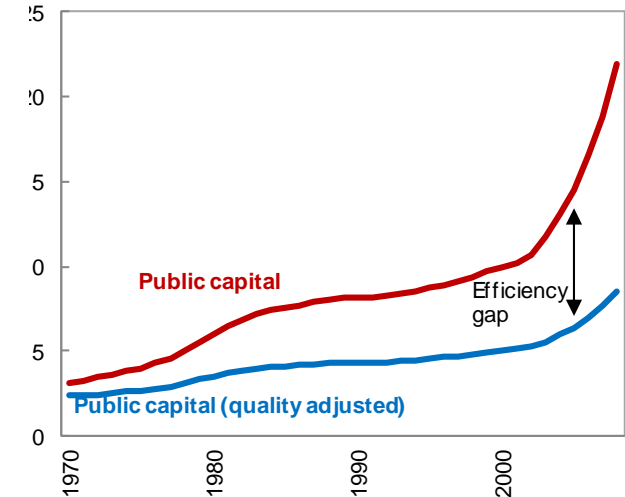
- Long-term financial savings (future generations; avoid Dutch disease)
- Precautionary motives
- Invest in domestic economy. Physical infrastructure and education to promote growth.
- The right balance will depend on country circumstances

Public Investment in Low-income Commodity Exporters
(Percent of total spending)



Sources: IMF staff estimates.

The Quality of Public Investment in Low-Income Resource-Rich Economies is Low
(Percent of GDP)

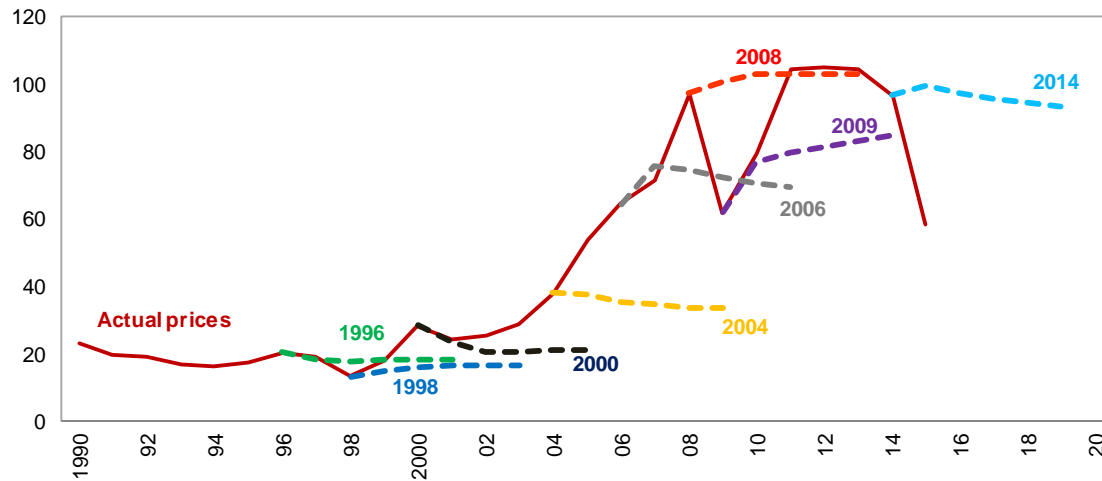


Source: Gupta and others (2014) and authors' calculations

A Volatile and Uncertain World

Highly volatile and unpredictable commodity prices

A Poor Record of Forecasting Oil Prices
(Crude oil, U.S. dollars per barrel)

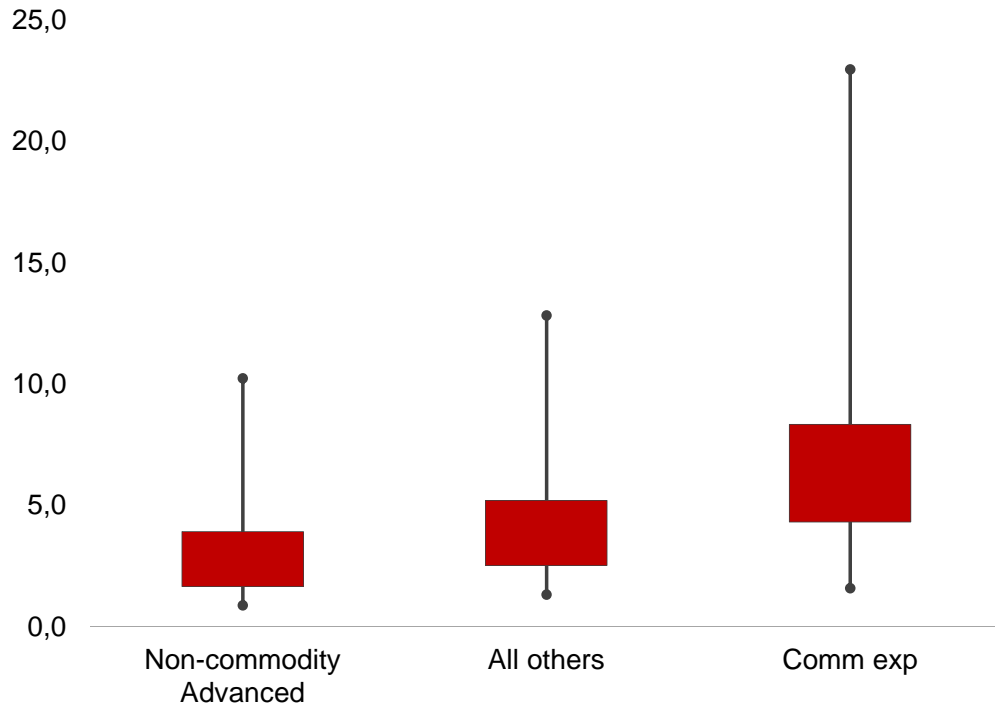


Sources: IMF staff estimates and market projections. 2015 represents an estimate based on actual data for part of the year and future contracts.

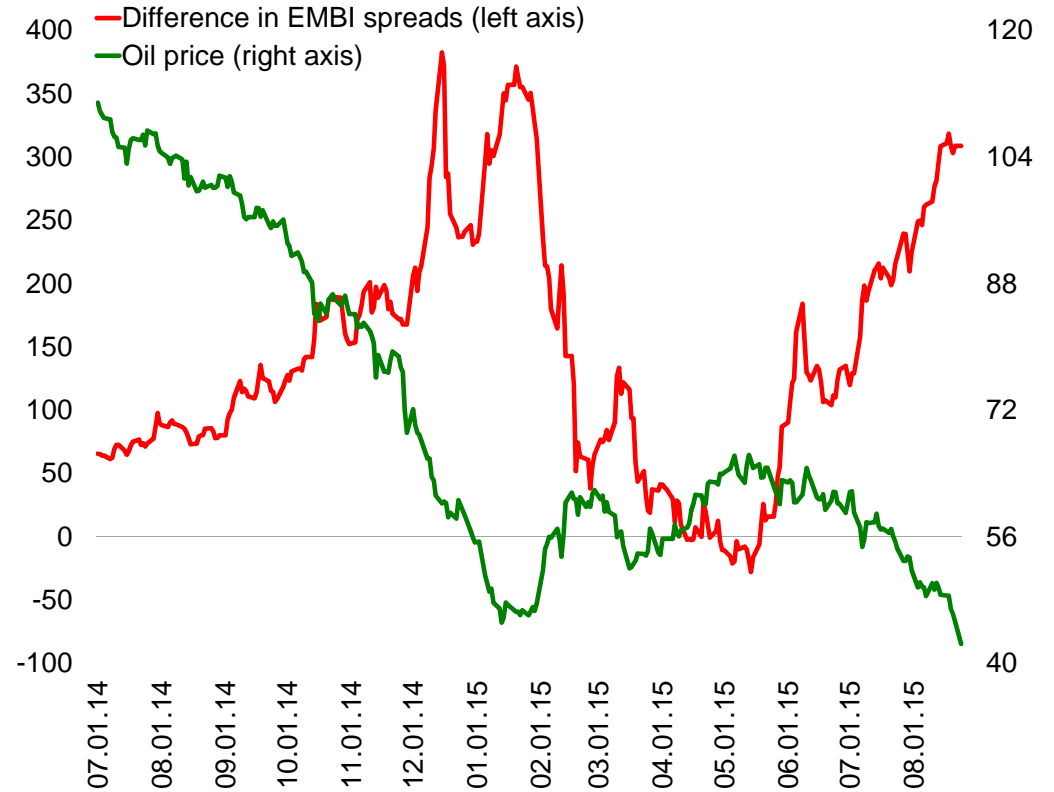
Note: The solid line represents actual crude oil average prices for the year. 2015 represents an estimate based on actual data for part of the year and future contracts. The dashed lines are based on market projections for prices

... result in higher uncertainty and risks for commodity exporters

Standard deviation of revenue to GDP, 1980-2014
(min, 25-75 percentile band, and max)

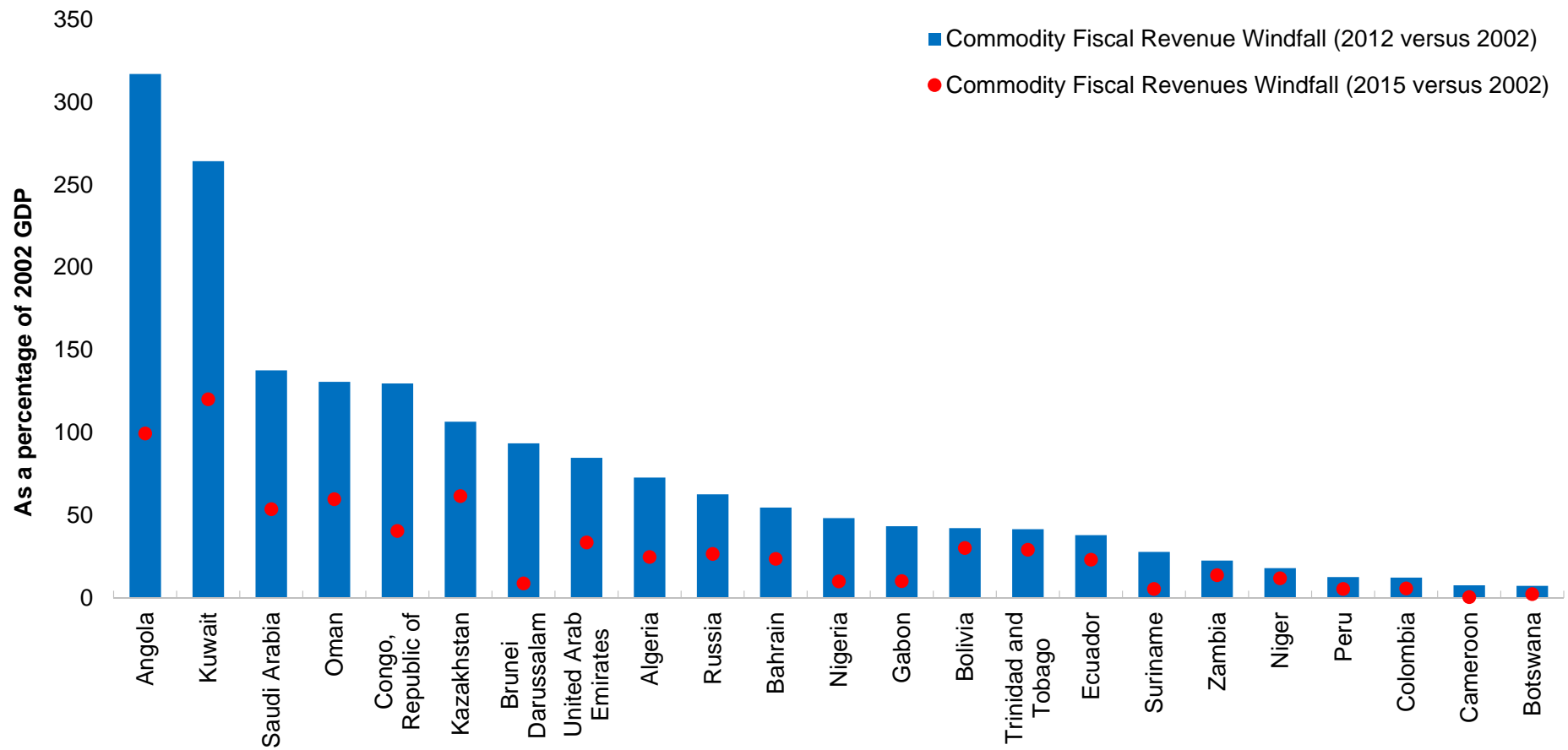


Oil Prices and Difference in EMBI spreads between commodity exporters and non-commodity exporters (basis points)



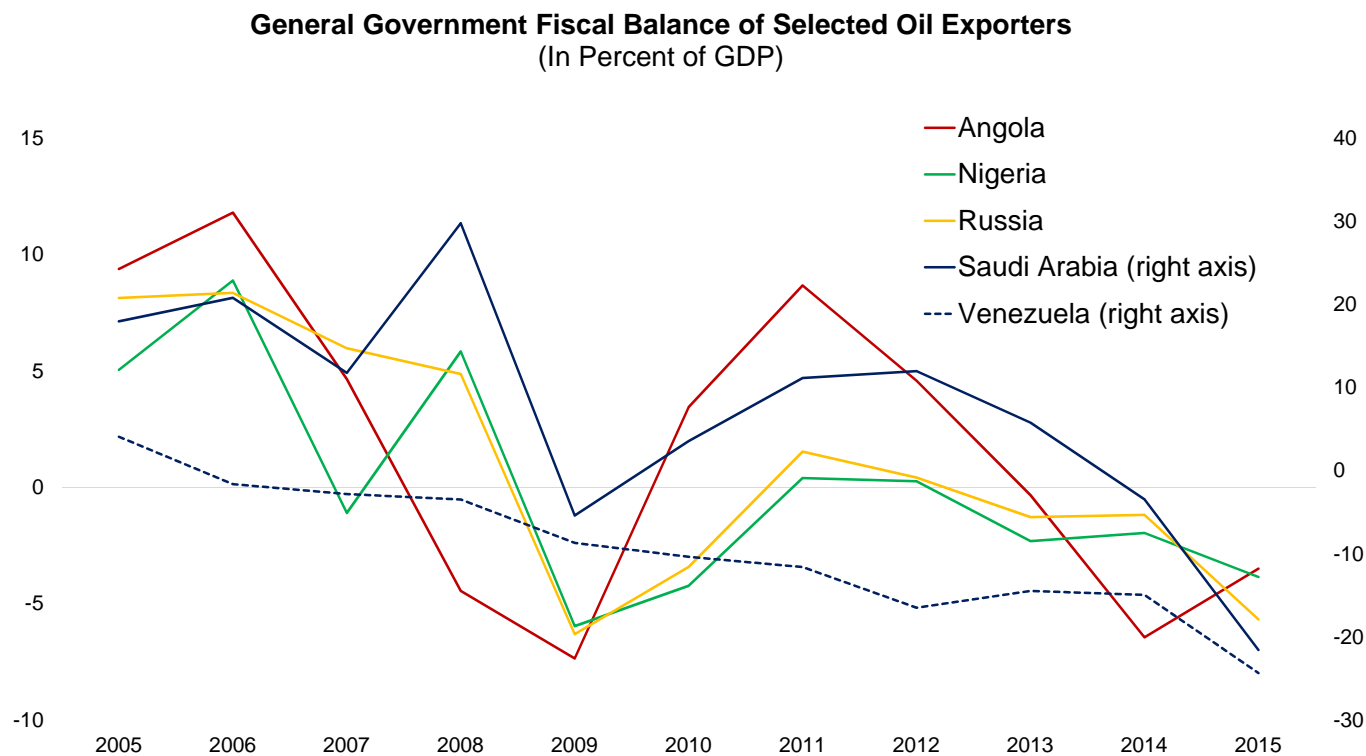
Sources: Bloomberg and IMF staff estimates

The large commodity revenue windfall experienced by resource-rich countries since 2002 is being rapidly unwound



Sources: IMF staff estimates

...And the overall balance of resource rich countries deteriorated sharply



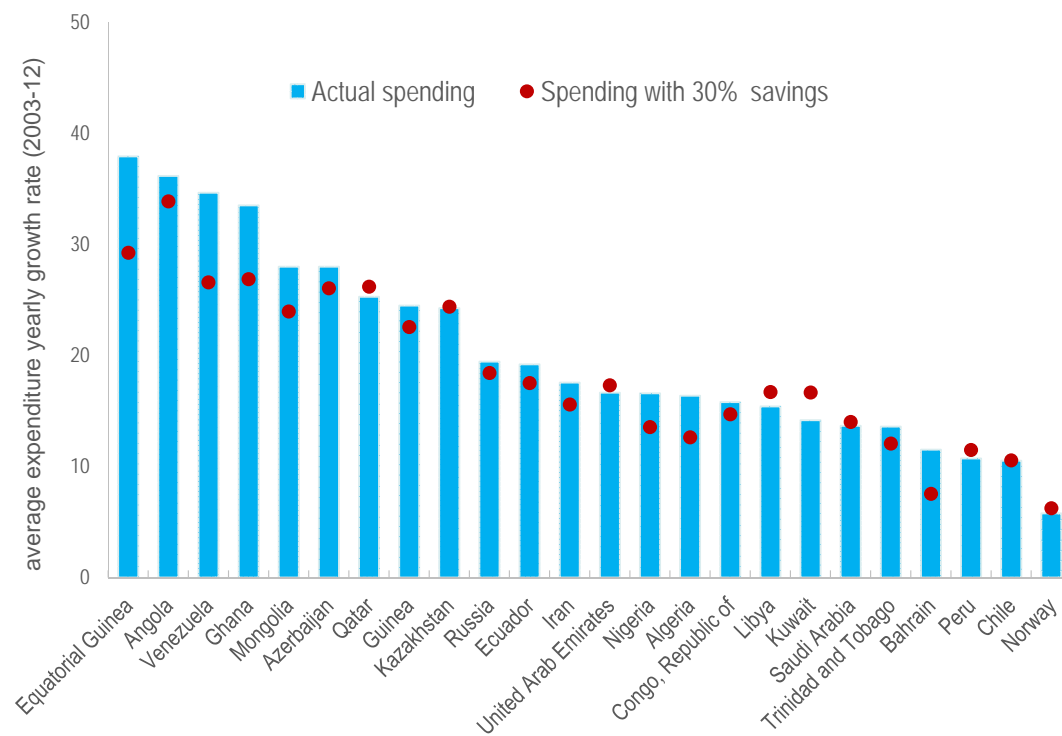
Sources: IMF staff estimates

This argues for building up precautionary savings during commodity windfalls

- Past approaches tended to focus on limited buffers to manage volatility
 - Conservative budget prices
 - Reduce gross liabilities during windfalls
 - Value-at risk approach; buffers to be depleted in few years
- Need larger and long-lasting buffers (due to persistence of shocks)
 - Financial returns from stabilization savings to protect from most shocks to budget
 - Adds a countercyclical component to fiscal policy

Windfalls allow to accumulate savings, while sustaining public expenditures...

Countries could have boosted expenditures and accumulate significant buffers during the 2000s commodity revenue windfall

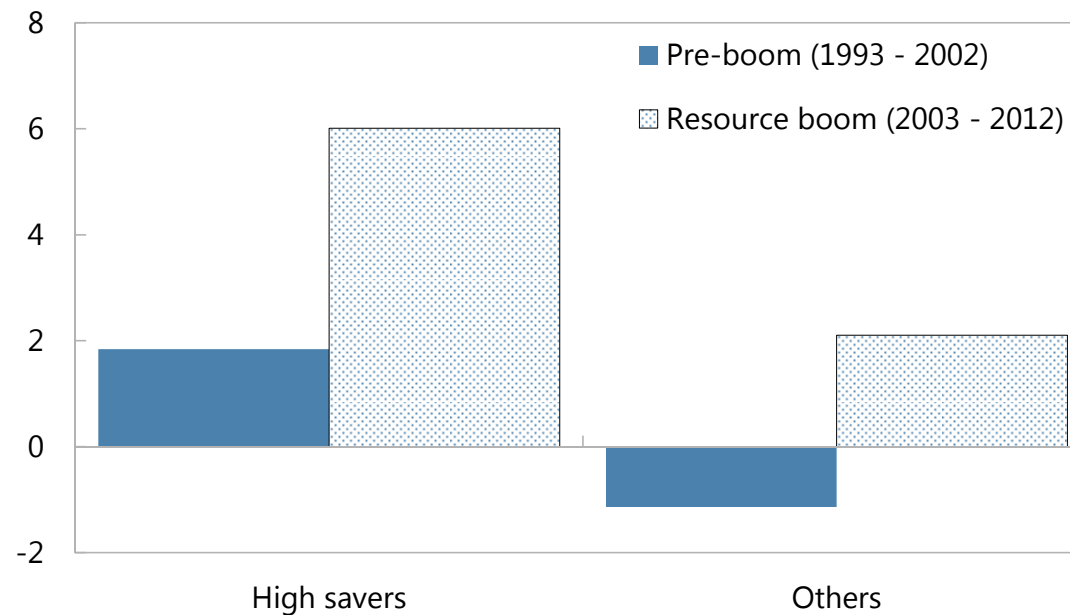


Sources: IMF staff estimates

...and preserve economic growth

Countries that saved a large share of the resource windfall had stronger economic growth over the last decades

(Real GDP per capita, average yearly growth rate)



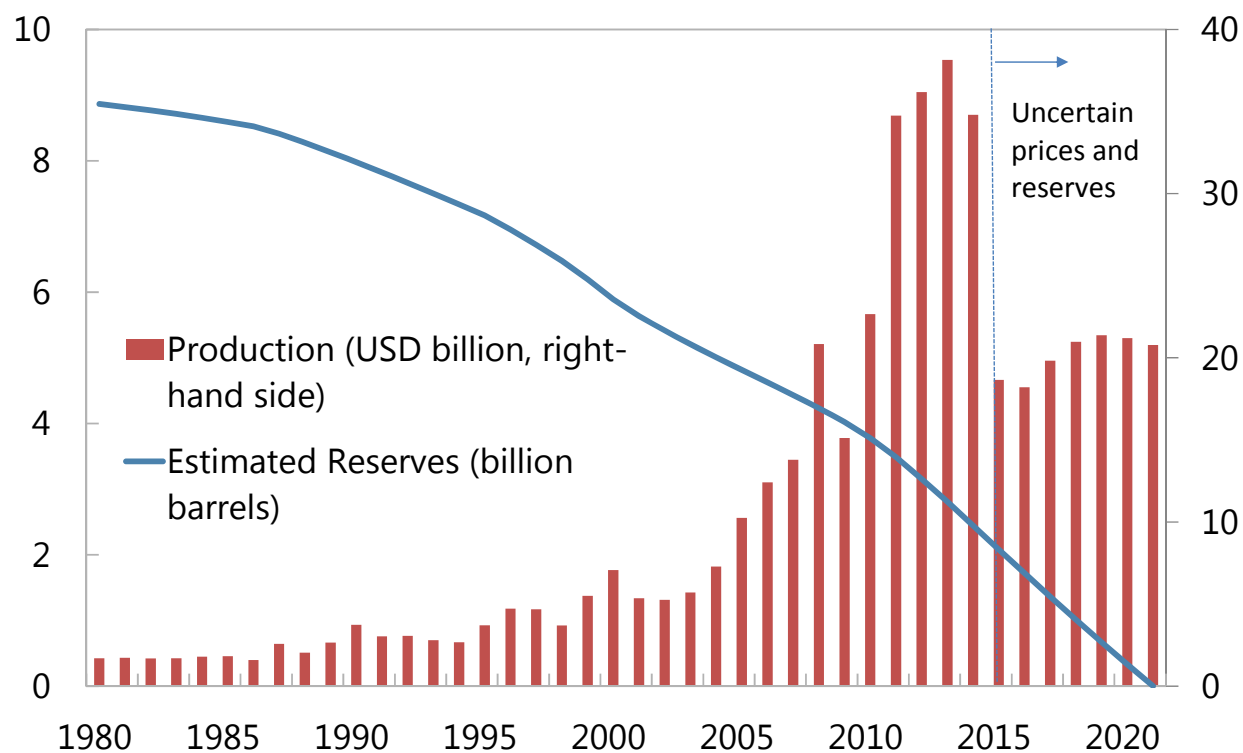
Source: World Economic Outlook and authors' estimates

A Fiscal Framework

Resource-rich countries need to decide how to best use natural wealth under high uncertainty

Colombia's Oil Wealth

(Production is estimated using WEO average price for crude oil)



Sources: BP statistical review of world energy; Staff estimates and simulations

A comprehensive Fiscal Framework to manage volatility and uncertainty

1. Resilience of Budget Revenues

- Tax policies that diversify the revenue base and avoid an overdependence of government spending on the resource sector.

2. Efficiency of Spending

- Strengthen public investment management and expenditure policies
- Energy subsidy reform

3. Fiscal anchors and volatility

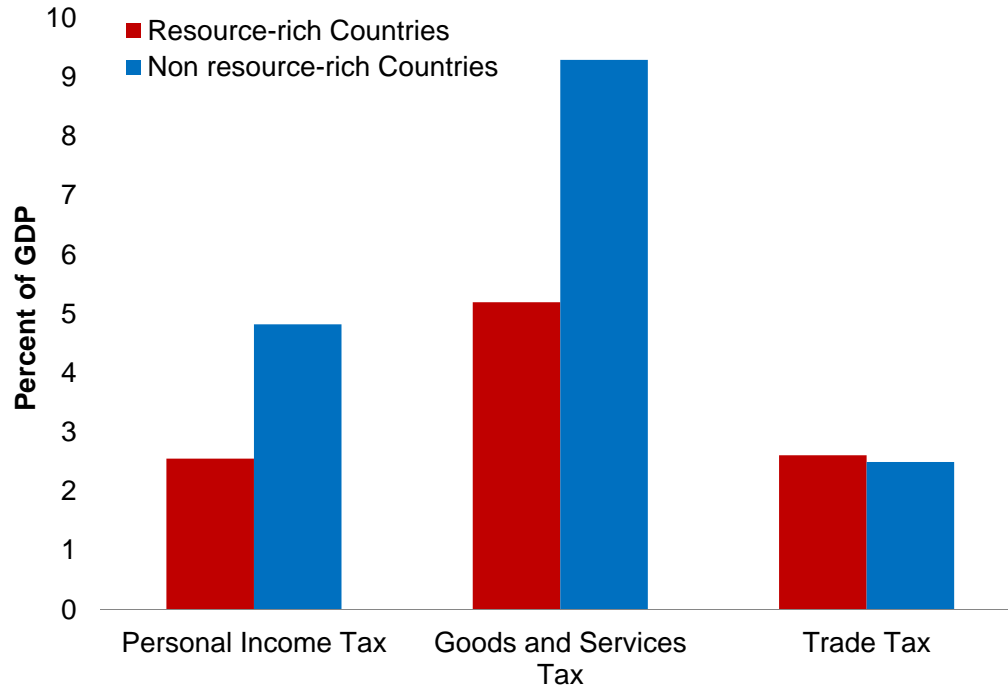
- Long-term planning; take account wealth will be depleted
- Stabilization buffers to de-linking expenditures from volatile resource revenues

4. Strengthen Institutions

- Medium-term fiscal framework; management of fiscal risks; transparency and governance in the use of resource wealth

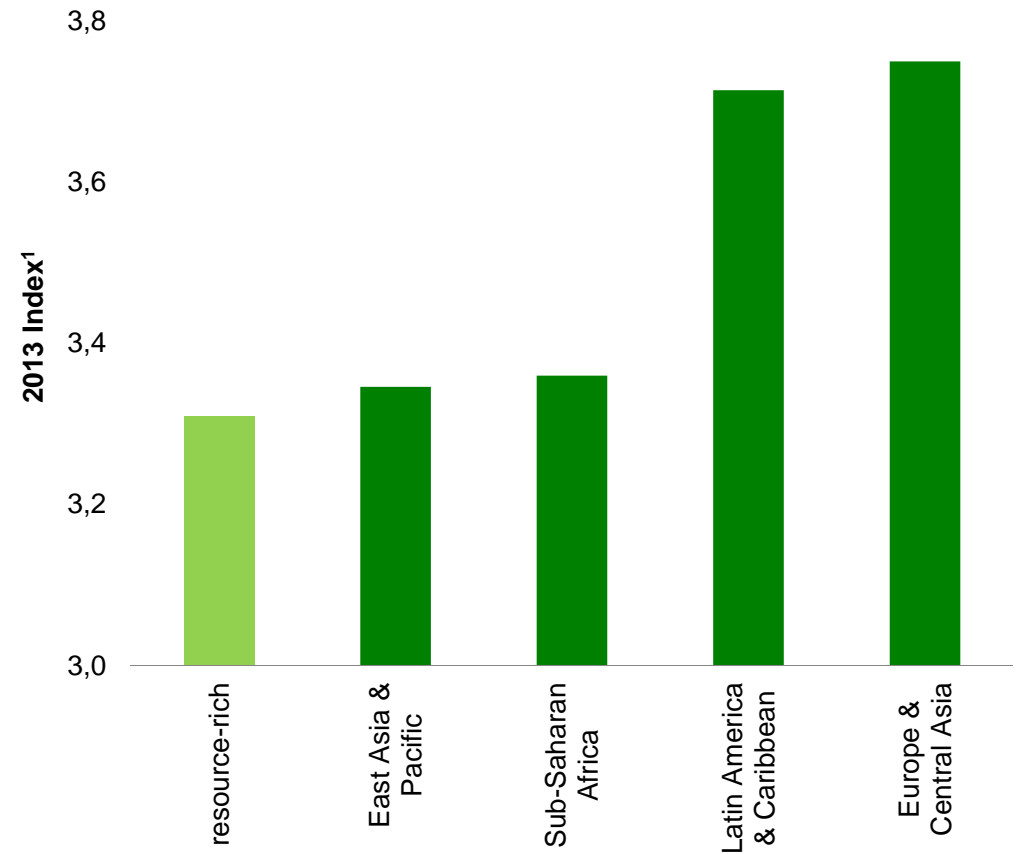
1. Improve the resilience of budget revenues

Revenue Ratios from Personal Income Tax and Goods and Service Tax are Lower in Resource-rich Countries (2010- 2014)



Source: Fiscal Monitor

Efficiency of Revenue Mobilization

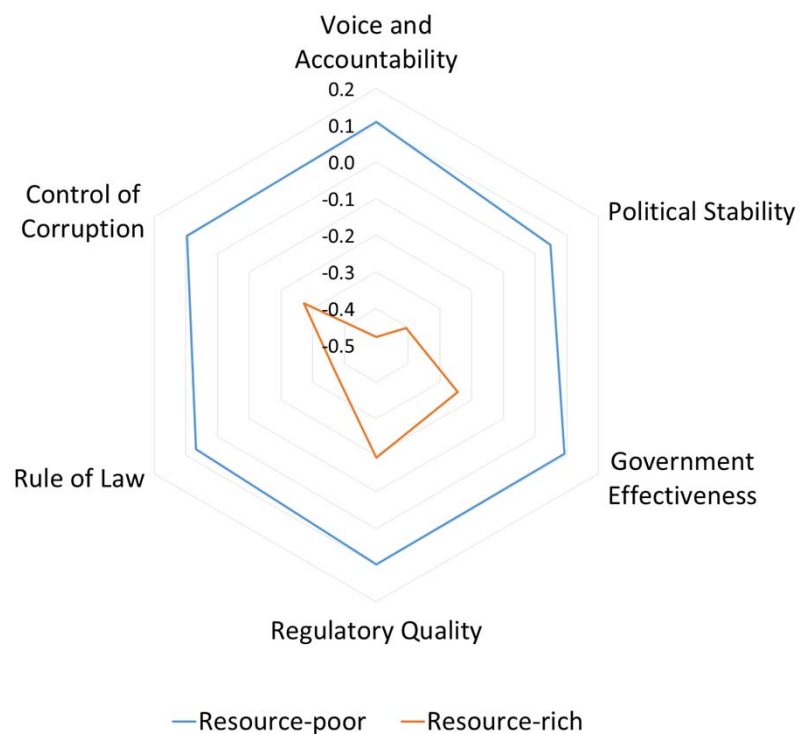


¹ CPIA efficiency of revenue mobilization rating (1=low to 6=high), World Bank

4. Strengthen institutions

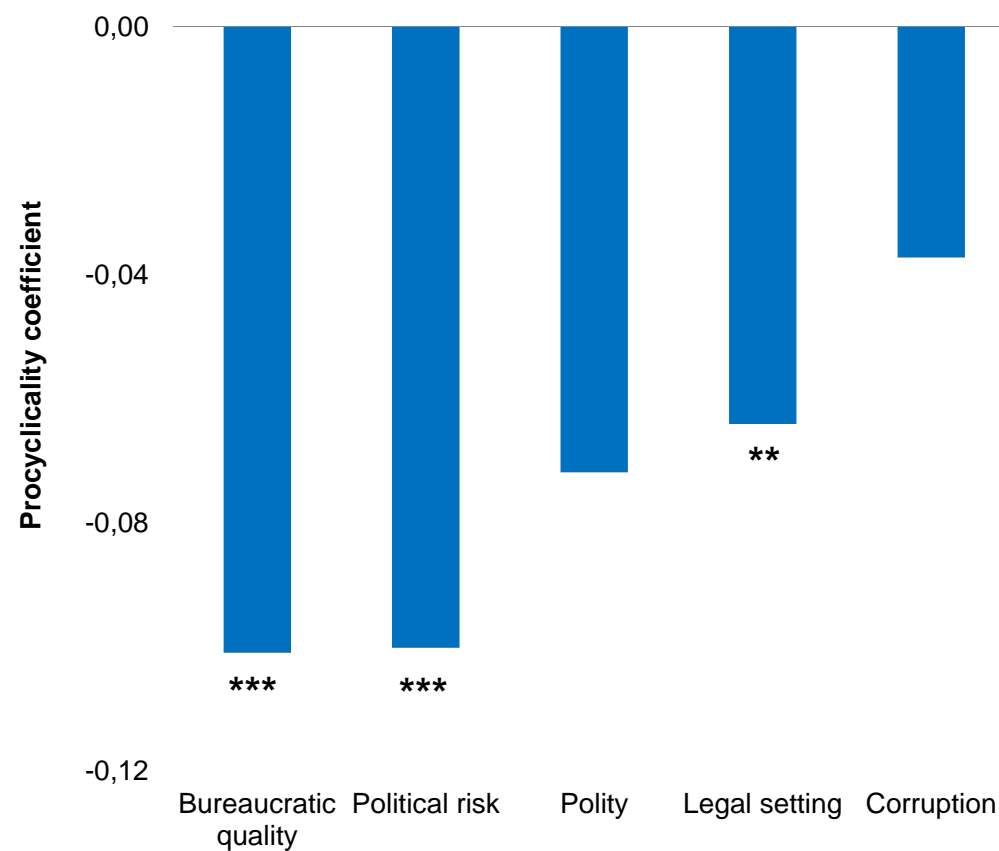
Institutional Quality in Resource-rich Countries

Resource rich countries tend to have lower institutional quality relative to other countries, 1996-2013



Sources: IMF staff calculations, and Worldwide Governance Indicators (World Bank) for 1996-2014

Better Institutions Reduce Procyclicality of Expenditures to Prices



Concluding remarks

- We are in the midst of one of the largest *booms and busts* faced by resource-rich countries over the last 100 years.
- It once again reminds us the importance of volatility and uncertainty to fiscal management. Ignoring it can have large economic costs.
- The magnitude of the challenges in many commodity exporting countries points to the need to give priority to adjustment. The size of fiscal buffers will determine the pace.
- But, countries also need to prepare for the next commodity cycle. This is the time to start strengthening fiscal frameworks to manage the large risks and promote sustainable growth.

IMF/FAD Technical Assistance

- FAD has provided substantial Technical Assistance (TA) to resource-rich countries.
 - About 15% of all TA in the past 5 years went to these countries (more than 40). The largest share went to Africa.
- TA covers several areas, including fiscal frameworks, public investment management, tax policy, and revenue administration.
 - The IMF has produced research and manuals to support these efforts. These include the Public Investment Management Assessment, developed jointly with the World Bank, and Pillar IV of the Fiscal Transparency Code (e.g. Peru).
 - FAD has also developed the *Fiscal Analysis of Resource Industries (FARI) model* to help countries build capacity in designing and analyzing fiscal regimes for extractive industries.

Thank you!

Background slides

New Zealand: Managing the Government's Balance Sheet

Objective

- The Crown balance sheet is managed effectively and efficiently with the overall performance and risk profile of assets and liabilities supporting the Government's medium-term objective.

Specific focus

- The core Crown debt portfolio is well managed
- The composition of the balance sheet aligns with government priorities
- Appropriate returns, risks, and long-term value are achieved from assets
- Risks are managed consistent with the government's risk appetite and tolerance

New Zealand: Managing the Government's Balance Sheet

Areas of Focus

- Develop an **investment strategy** for managing the Crown's capital
- Develop a structured, systematic mechanism to **collect better information** to support the prioritization and performance of investment
- Introduce **performance targets** to meet legislative requirements
- More **rigorous investment decision-making** to support the alignment between investment and the Government's long-term priorities
- Explore ways to **recycle capital** to meet changing demands
- **Develop and utilize metrics** to measure and monitor the performance of the assets relative to the Government's objectives
- Build a fuller understanding of aggregate Crown **financial risk**
- Focus on strengthening the Crown's **balance sheet buffers** to improve resilience