Sustainable fiscal policy in mineral-dependent economies

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Outline

- **Measuring economic performance in resource-dependent economies**
- **Achieving sustainable growth and development in resource-dependent economies: the Hartwick Rule**
- **Implementing the Hartwick Rule: Fiscal sustainability**
- **Public investment management: making the Hartwick Rule effective for development**

The wealth of mineral- and oil-dependent economies in Sub-Saharan Africa in 2005

Type of Asset	Wealth per capita ($)	% of total wealth
Sub-soil assets	1,688	19
Timber resources	448	5
NTFR	469	5
Cropland	1,052	12
Pasture land	593	7
Protected areas	159	2
Natural capital	4,409	50
Produced capital	1,368	15
Intangible capital	3,099	35
Total wealth	8,877	

NTFR: non-timber forest resources

- **Natural wealth dominates**
- **Subsoil assets are larger in value than produced capital**
- **Intangible wealth (human and social capital) is small: 35% compared with 60-70% in a 'typical' developing country – this is indicative of a low return on total assets**

How we measure development will drive how we do development (World Bank 2011)

Adjusted Net National Income (aNNI)

aNNI =	**Gross National Income**
	- Depreciation
	- Resource depletion

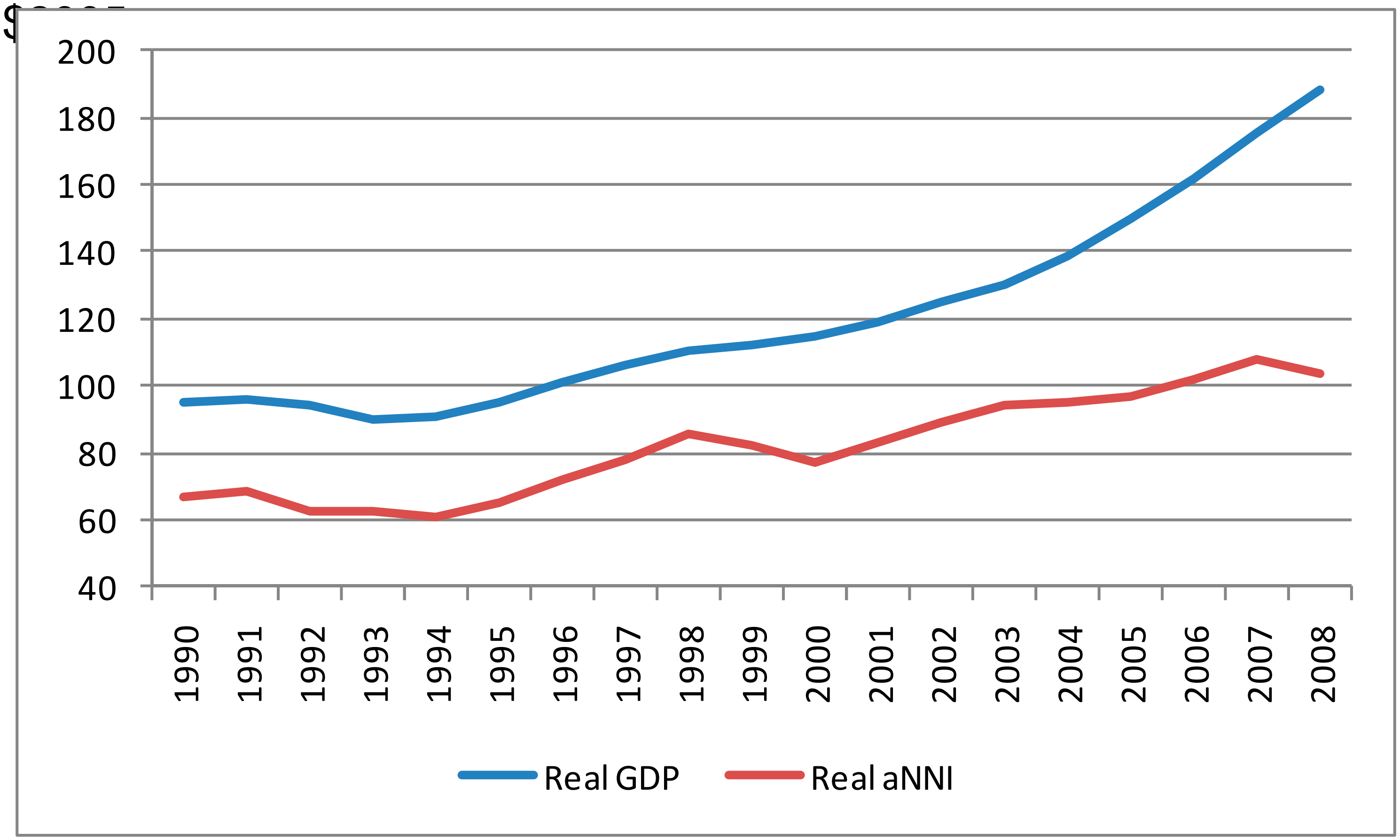
Adjusted Net Savings (ANS)

ANS =	**Gross National Savings**
	+ Education expenditure
	- Depreciation
	- Resource depletion
	- Pollution damage

Why focus on net savings? Because development is about building wealth – only this will increase future well-being

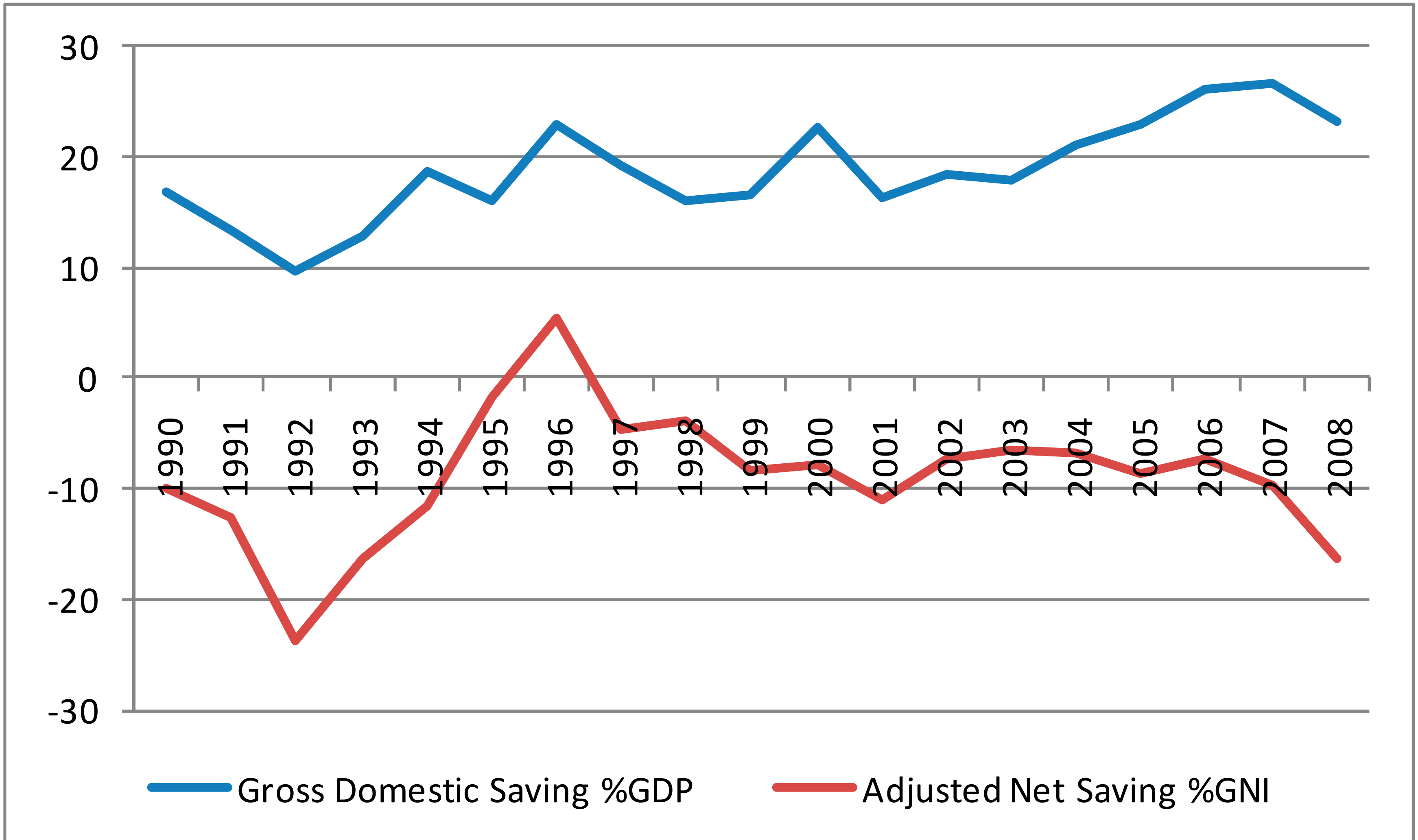
Measuring economic performance in resource-dependent African countries

Billion



Growth rates 2000 to 2008: GDP 6.4%, aNNI 3.8%

Saving for growth and development: the Finance minister is getting the wrong picture

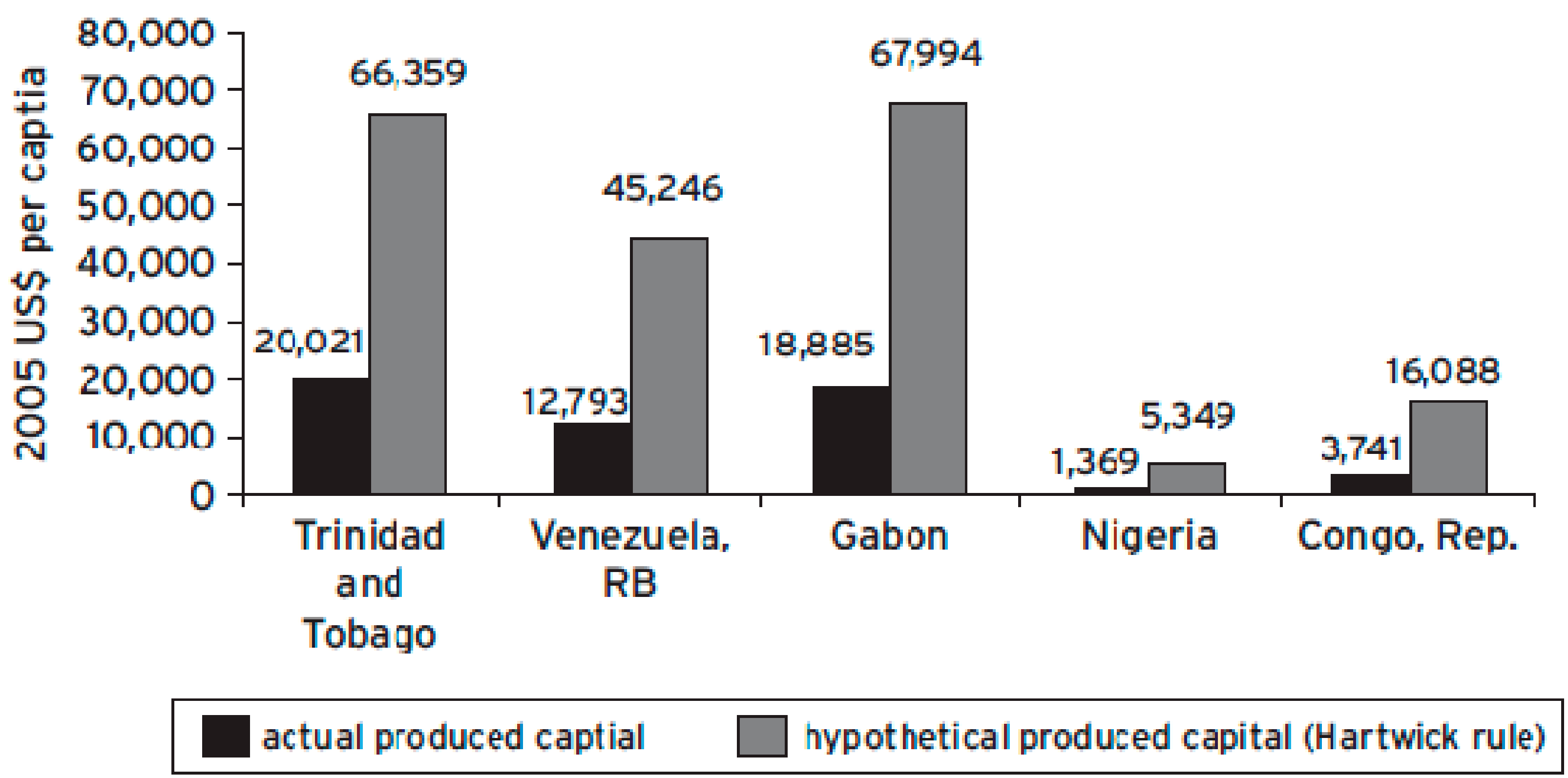


There are no sustainable diamond mines, but there are sustainable diamond-mining countries (World Bank 2006)

- **Hartwick (1977) showed that a simple policy rule – invest all resource rents in other assets – will yield sustainable development with exhaustible resources**
- **This is the famous Hartwick Rule, which Solow (1986) called "a rule of thumb for sustainable development"**

Have countries been following the Hartwick Rule?

Produced Capital Per Capita, Actual and Hypothetical, in Five Resource-Rich Countries, 2005



Implementing the Hartwick Rule is one way to achieve sustainable growth and development

Applying the Hartwick Rule requires sound fiscal policy and public investment management

Building wealth through fiscal policy

- **Effective revenue instruments**
- **Fiscal rules to limit discretion**
- **Effective public investment management**

Fiscal sustainability (1)

Revenue instruments (royalties, rent taxes, taxes on corporate profits)

- **Are non-distorting to the extent that they capture pure rents**
- **Otherwise, need to consider incentive effects for firms to explore for and extract minerals**
- **Effectiveness of rent capture is vital – this is how citizens benefit from being owners of the resource**
  - **Low capture rates imply that profits are flowing to foreign shareholders, above and beyond ordinary returns on capital**

Fiscal sustainability (2)

- **Mineral resource assets should be valued in the government balance sheet accounts (per Government Finance Statistics 2001)**

This has consequences for fiscal space:

- **Because mineral resources are exhaustible, depletion of the resource will decrease fiscal space over time**
- **Governments need to take this into account in analyzing their fiscal stance**

Fiscal sustainability (3)

Fiscal rules:

- One means of implementing the Hartwick Rule, by ensuring that resource revenues are re-invested
- For example, Botswana's Sustainable Budget Index (SBI) – an SBI less than one implies that rents are being re-invested in other capital:

$$SBI = \frac{non - capital\ expenditure}{recurrent\ revenue}$$

- Issues – discretion, definition of capital expenditure

Public investment management (1)

- **The second part of implementing the Hartwick Rule: ensuring that resource rents are invested <u>effectively</u>**

Investment options:

- **Financial assets – also help to reduce Dutch Disease, buffer the fiscal effects of resource booms and busts, and compensate for limited absorptive capacity**
- **Resource funds – typically hold financial assets, require rules concerning use of proceeds (discretion is again an issue)**
- **Physical investments, e.g. infrastructure**
- **Human capital**

Public investment management (2)

Good practice for public investment:

- **Consistency with development strategy**
- **Formal project appraisal and independent review**
- **Integration with budget cycle**
- **Effective project implementation and adjustment**
- **Integration into government asset accounts**
- **Post-implementation assessment**

Conclusions

- **Building wealth (produced, natural, human and social capital) is essential for sustaining growth and development**
- **New macro indicators (Adjusted Net Saving, adjusted NNI) are required to monitor wealth creation**
- **Mineral assets are exhaustible, which has implications for fiscal space and fiscal sustainability**
- **The Hartwick Rule can guide wealth creation, but it depends upon:**
  - **Effective revenue instruments**
  - **Fiscal rules to limit discretion**
  - **Effective public investment management**