

# Tanzania's Resource Challenge

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# Introduction

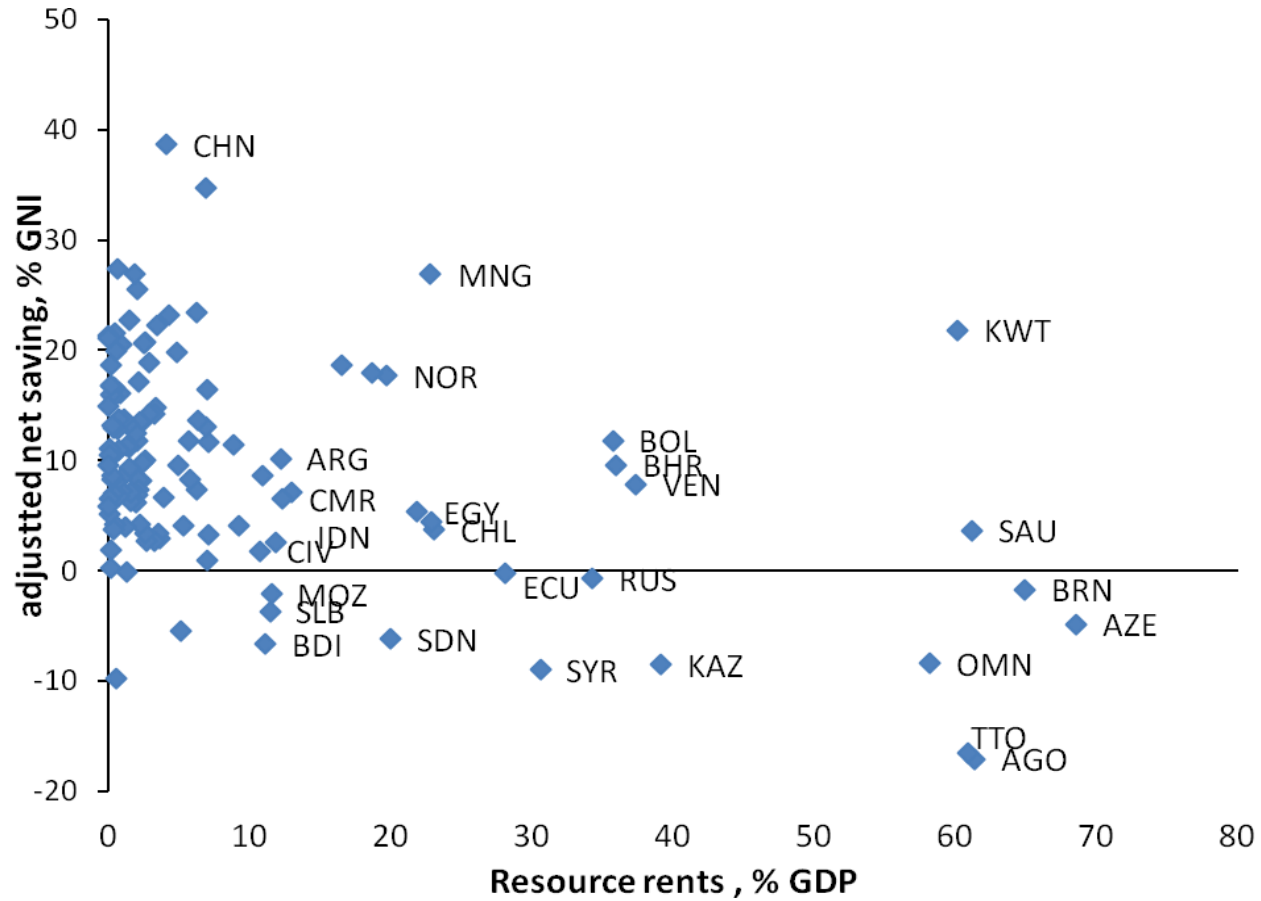
- Objective: Transform subsoil assets into surface assets that yield sustainable flow of income and employment
- A 'weakest link' problem
  - Attract exploration and development
  - Design and implement fiscal regime to capture revenue
  - Transfer revenue to Finance Ministry
  - Save / invest a high proportion of revenue
  - Avoid boom and bust
  - Spend and invest efficiently
  - Avoid Dutch disease & promote private sector growth
- Often in a political environment with intense competition for the revenues

# Introduction

Many examples of failures

- Attract exploration and development:
  - much of Africa (until recently):
- Design and implement fiscal regime to capture revenue:
  - Zambia 1.5% royalty rate:
- Transfer revenue to Finance Ministry
  - Nigeria \$400bn stolen 1960-99 (UN):
- Save / invest a high proportion of revenue
  - Nigeria:
- Avoid boom and bust
  - Cameroon: Income pc 1970 \$500; 1985 \$1000; 1995 \$600; 2000 \$750:
  - Kazakhstan:
- Spend and invest efficiently
  - Iran: Fuel & food subsidies exceeded 20% of GDP
- Dutch disease
  - Holland, Nigeria

# Real savings rates



Adjusted net savings, excluding particulate emission damage (% of GNI)

# Introduction

- And some successes:
  - Botswana: avoided boom and bust, undertaken high quality investment.
  - Chile: macro-economic stability, diversification.
  - Malaysia: macro-economic stability, high savings rates, successful diversification: pc income increased x21 between 1957 and 2006
- Common features:
  - Information: transparency and a realistic narrative
  - Committed government: ambition for the domestic economy
  - Preparedness: long period of accumulating assets
- Learning from the past:
  - EITI
  - Natural Resource Charter



# Tanzania

Gas is different:

- long gestation period
- expensive to trade internationally

Draw out implications – but first, how big is it?

Over the period 2023-2050

- Gas exports \$3bn pa;
  - Current exports \$5bn, of which gold \$2bn.
  - Current imports \$8bn, of which oil \$3bn
- Government revenue from gas \$2bn
  - Current \$9bn, of which ODA \$1bn
  - Revenue \$40 per person per year

Small?



# Tanzania

Small? – but gas supplies two things that are scarce in Tanzania:

Rent → Government revenue

Energy → users in the domestic economy

→ Additional value beyond pure windfall

## 1) Government revenue:

- Accrues on all sales, export and domestic
- May have high social value if government is fiscally constrained
- Depends on how well government spends revenue


## 2) Domestic energy use:

- Shortage of capacity means that much power generation is high cost
- Many potential activities that would use energy do not take place



# Tanzania

## 1) Resource revenue management

- Save a lot (high and rising share):
  - Need to manage expectations of public
  - Demands of spending ministries
- Invest the saved revenue in the domestic economy
  - Not an off-shore 'future generations fund'.
  - Stabilization fund if volatile
- Priority is an efficient investment programme
  - Education
  - Infrastructure
  - Urban development
  - Energy

Complementary  
with private  
investment
- Ramp up slowly and prepare
  - Absorptive capacity: 'Investing in investing':
  - Foreign assets/ borrowing to put you on efficient investment path





# Tanzania

## 2) Domestic energy costs and comparative advantage:

- Suppose replace  $\frac{1}{2}$  of oil imports by gas:
  - Estimated that oil electricity generation costs 4 times gas generation
  - Substitution gives efficiency gain equal to approx. 3% of GDP
- Further expansions of gas may be of high value
  - Household
  - Transport
  - Industrial – new comparative advantage in products that use energy.
- Providing price charged in the domestic economy is approximately the export price minus the cost of exporting (liquifying etc), then these gains are ON TOP OF government revenues.
- [Willingness to pay greater than opportunity cost]
- [Change in comparative advantage due to high transport costs]



# Tanzania

**Points (1) and (2) suggest gains potentially large, BUT:**

- Arguments based on efficient use of gas; domestic price at least equal to the net export price (= opportunity cost)
- Require large capital expenditures in the domestic economy.
  - Timing and funding issues
- Are boosted by quantity response in the domestic economy
  - Need to have the public investments that remove bottlenecks and promote private sector growth
- Limits to the quantity that should be used domestically
  - Need to keep price above opportunity cost
  - Need to offer investors sufficient export quantities to justify development.
  - Primarily onshore/ shallow gas?



## Tanzania: Conclusions

- Usual standards of good practise – necessary because of ‘weakest link’ problem.
- Scale of gas discoveries large enough to allow for domestic use and substantial exports
- Combination of improved domestic energy supply & government funds for investment increase the value of the resource
- *Possible* effects are large.