Managing resource revenues

Tony Venables

Oxford Centre for the Analysis of Resource Rich Economies (Oxcarre)

University of Oxford

Introduction

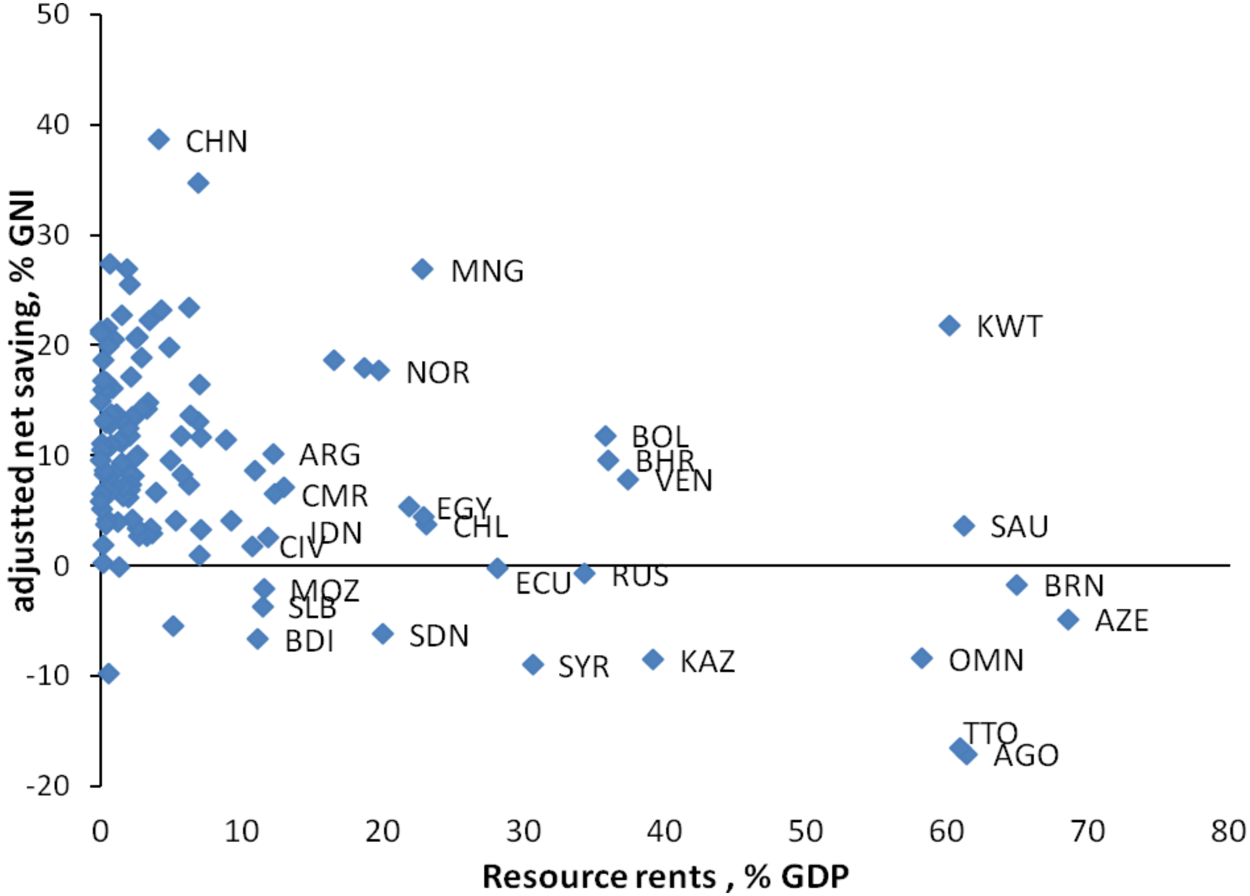
- Objective: Transform subsoil assets into surface assets that yield sustainable flow of income and employment

- Successes and failures
  - case studies illustrate a wide variety of causes

- Two repeated mistakes
  - Boom and bust
    - Inefficient spending
    - Long ‘stops’ following the bust
  - Save too little
    - Failure to develop surface assets (public or private)
    - Nigeria: real savings -30% GDP

- Broad-brush overview of policy to avoid these problems
  - Will talk in terms of aggregates – but micro details crucial
  - Based on series of papers with Rick van der Ploeg (Oxcarre website)

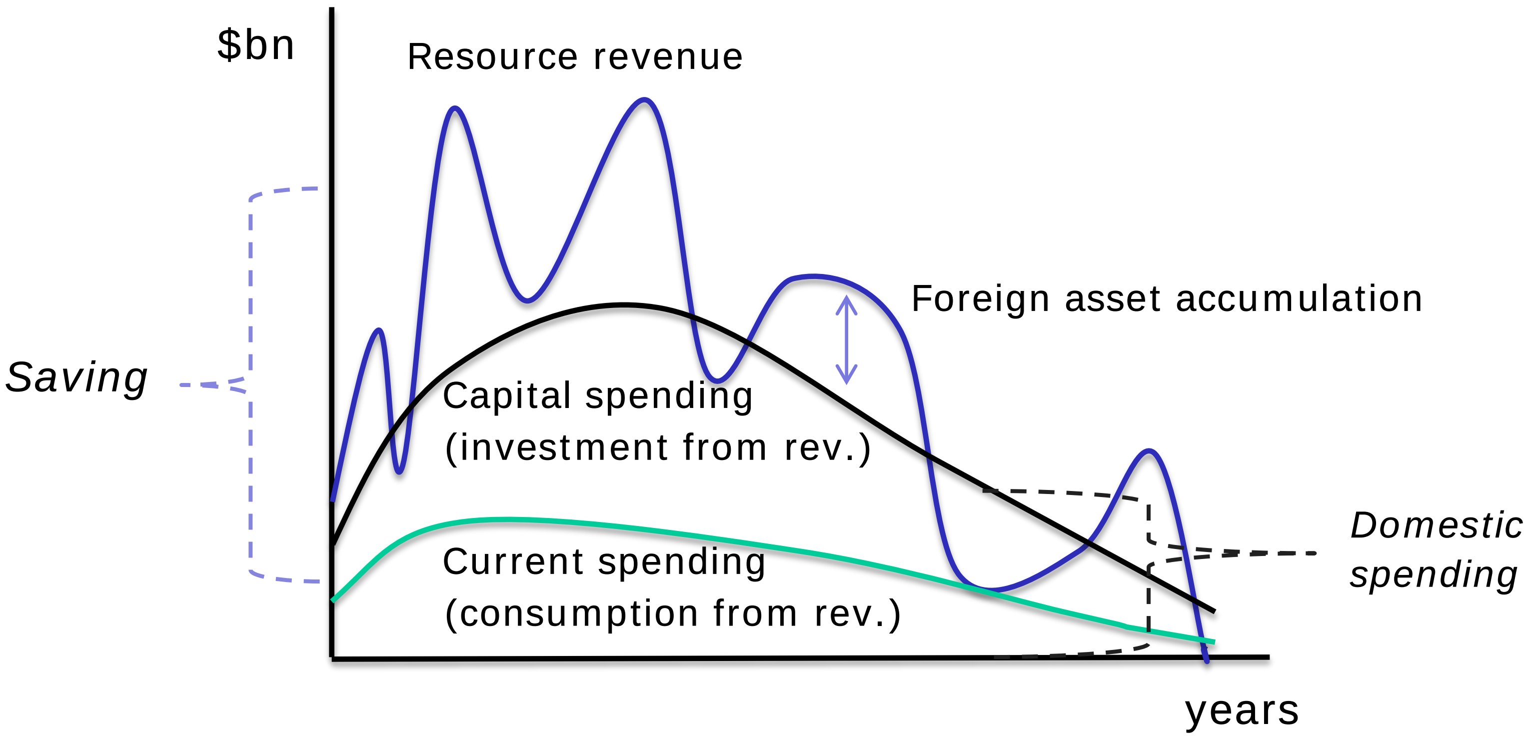
Real savings rates



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

Options for resource revenue:

3 options: Current spending, capital spending, foreign assets



Two key features of 'optimal' revenue management:

- Avoid boom-bust by smooth path of domestic spending – decoupled from resource revenue
- Saving and domestic investment a high proportion of revenue

I: Consumption / saving

Trade-off between:

- Consumption:
  - Ultimate benefit is higher income/ consumption of citizens
  - High levels of poverty → need for current consumption.

- High savings rate:
  - Inter-generational equity & exhaustability of the resource
    - Save higher share of revenue the shorter the duration
  - If saving can translate into sustained economic growth, then benefits many times larger than resource revenues.

I: Consumption / saving

Resolving the trade-off:

- Permanent income hypothesis: consumption increment constant and equal to annuity value of windfall.
- Bird-in-hand': save all and only consume interest on savings
- Developing economy: If on growth path with capital accumulation and rising consumption, then front load consumption increment from resource.
    - Intuition: consumption more valuable today.
    - Math: $dc/dt.(1/c) = \sigma\,[r(K) - r^*]$

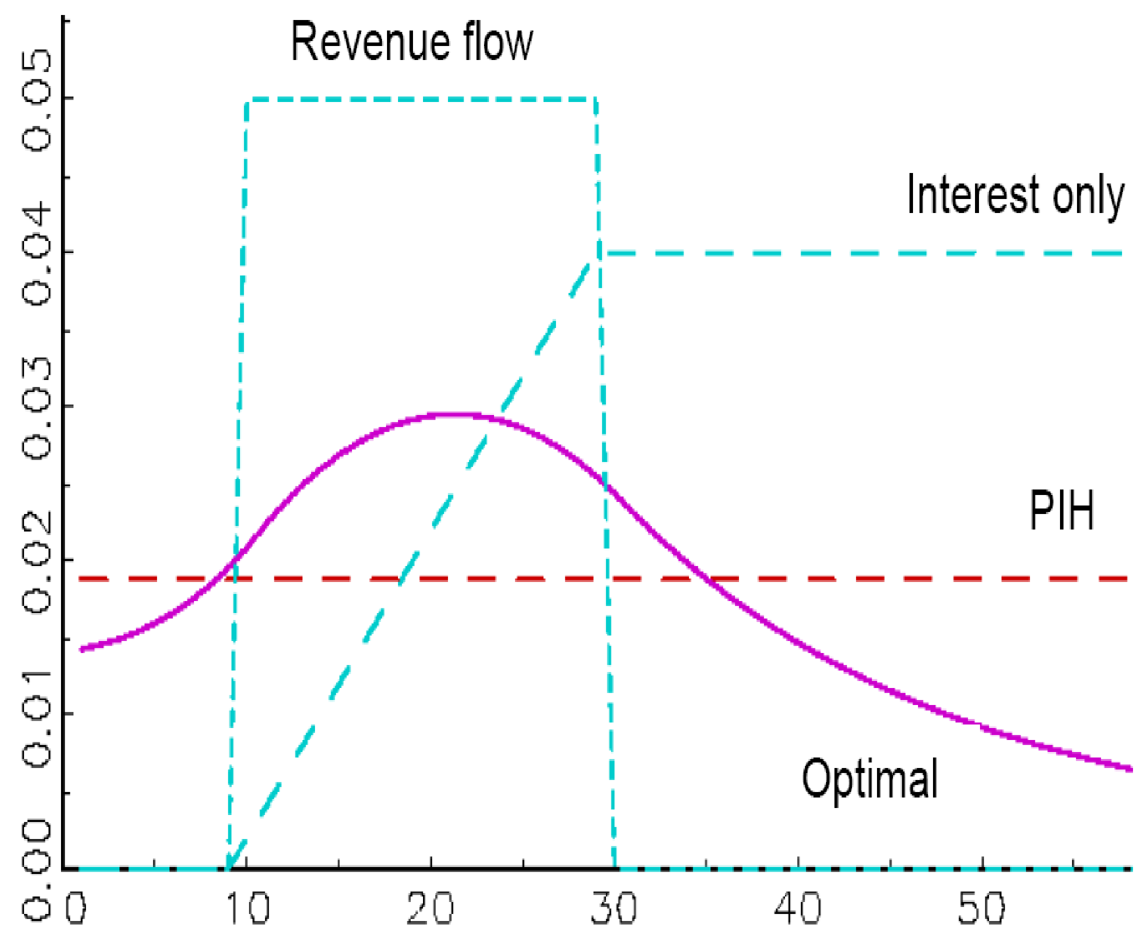
Incremental consumption paths

Permanent Income Hypothesis:
Borrow then use Sovereign Wealth Fund to finance a permanent increase in consumption.
*Optimal if r = r**

Bird-in-hand.
PIH ignoring resource wealth until extracted

'Optimal' – capital scarce economy.

Figure 1a: Profiles of incremental consumption



I: Consumption / saving

Controlling consumption:

- Transferring revenue to households:
  - Citizen dividends
  - Tax cuts
  - Conditional cash transfers
  - Fuel subsidies

- Expectations – and Ricardian consumers?
  - Kazakhstan

- Controlling public consumption
  - Political economy
  - Spending ministries should be lobbying for funds
  - Fiscal rules

II: Domestic investment

Savings can go to domestic investment or foreign assets:

- **Domestic investment**:
  - Developing economies are capital scarce, infrastructure scarce: use resource revenues to fill this gap
  - Discovery itself likely to raise return to domestic investment – booming sector/ new infrastructure demands
  - Private investment is key to growth:

    Public investment may encourage private investment:
    - Infrastructure
    - Lending/ interest rates

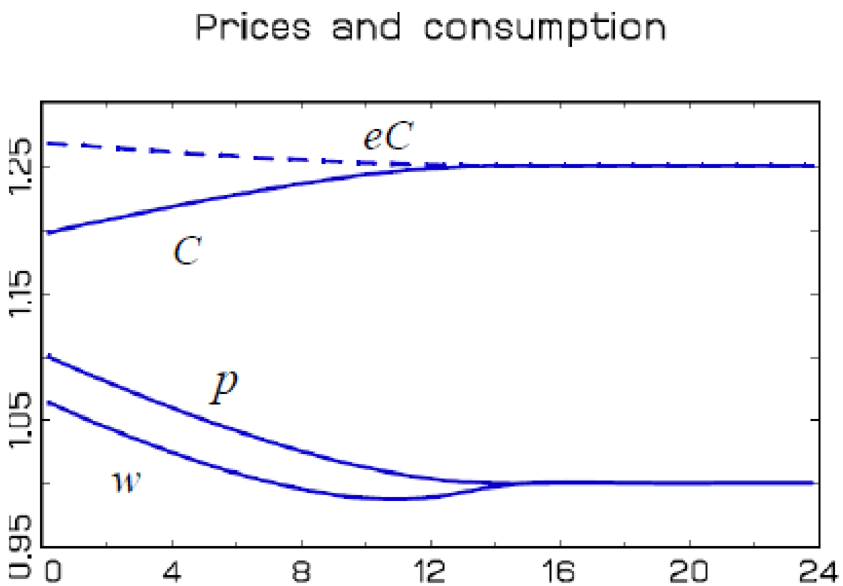
II: Domestic investment

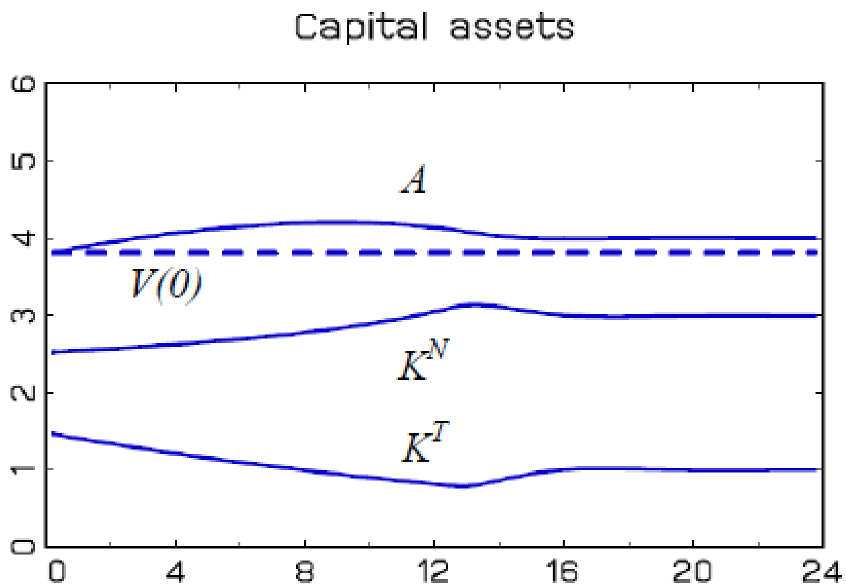
- **Can the economy absorb extra spending (current & capital)?**
  - Micro detail:
    - Supply of projects.
    - Process for appraisal, selection & implementation
  - Macro-adjustment and the Dutch disease.
    - Resources will cause structural change in the economy:
      - Larger non-traded sector
      - Requires investment – but supply curve steep in short run?
      - EG: *Absorbing a windfall of foreign exchange: Dutch disease dynamics*
      - Investment requires equipment (tradable) and structures (non-traded – 'homegrown')
      - Takes time to build the 'homegrown' capital.

II: Domestic investment

- **Implications**
  - Short run Dutch disease – wages and price of non-tradables increase
  - Optimal to build up real spending less fast
  - Build up then run down foreign assets – ‘parking fund’
  - Magnitude of effects depends on tradability of capital goods.

  - Can anticipate these absorption problems – ‘ invest in investing’.





III: Foreign asset accumulation (debt reduction)

How much accumulation of foreign assets?

Set domestic spending (current and capital) to what the economy can absorb efficiently, avoiding boom and bust

Foreign assets play role of decoupling domestic spending from revenue flow.

- 3 roles:

i) Stabilization:

  - Price volatility one of the major factors driving poor performance.
  - Handle price fluctuations by:
    - Hedging:
    - Stabilization fund.

III: Foreign asset accumulation (debt reduction)

ii) 'Parking':

- Absorption problems → do not build up domestic spending too fast.
- 'Park' revenues off-shore until efficient spending possible
- Also builds up stock of foreign assets needed for stabilization.

iii) Future generations fund:

- Not a priority for developing countries:
- Need high saving rate, but best implemented via investment in the domestic economy.
- Makes sense for capital abundant country:
  - Norway, Gulf States.

Concluding comments

- Resource revenues are a means to an end
  - Want to end up ***not*** dependent on resources

- Downside risks
  - Resources destabilize economy
  - Resources lead to unsustainable spending commitments
  - Resources damage other sectors
  - Resources corrupt institutions

- Revenue management needs to strike a balance
  - Legitimate demands for current consumption.

    - but have to leave space for saving.
  - Scale-up saving and investment.

    - but in good projects and through effective processes
  - Avoid boom and bust.

    - management of foreign assets to stabilize domestic spending