Natural Resource Management for Transformation: The Case of the Mining Sector in Botswana

Keith Jefferis

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Outline

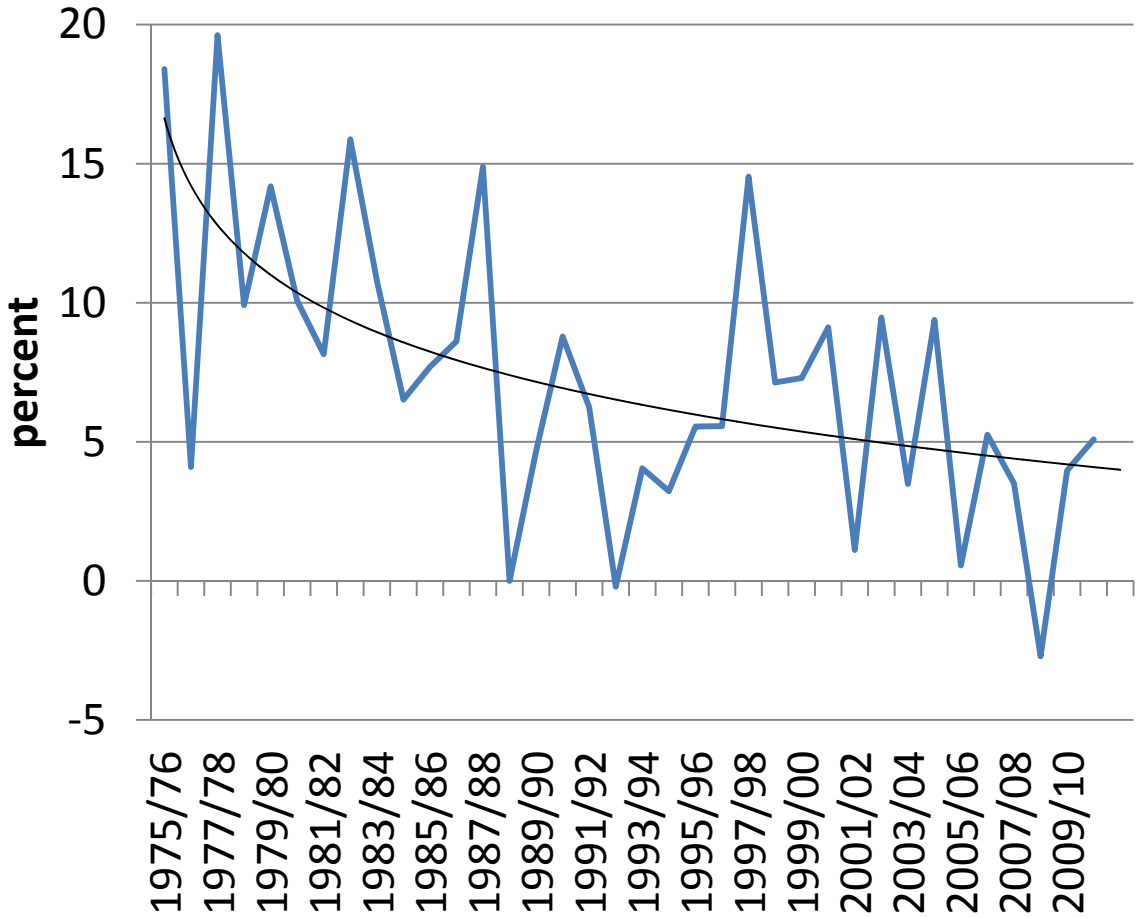
- Brief background – Botswana economy
- Structure & importance of mining
- Mining sector governance & taxation
- Development policies & public spending
- Poverty and social indicators
- Dutch Disease?
- Issues & conclusions

THE BOTSWANA ECONOMY

Botswana's economic record

- A well-known "success story"
  - Rapid economic growth
  - Transformation from low-income to upper-middle-income economy over 30 years
  - Highest GDP per capita in mainland SSA

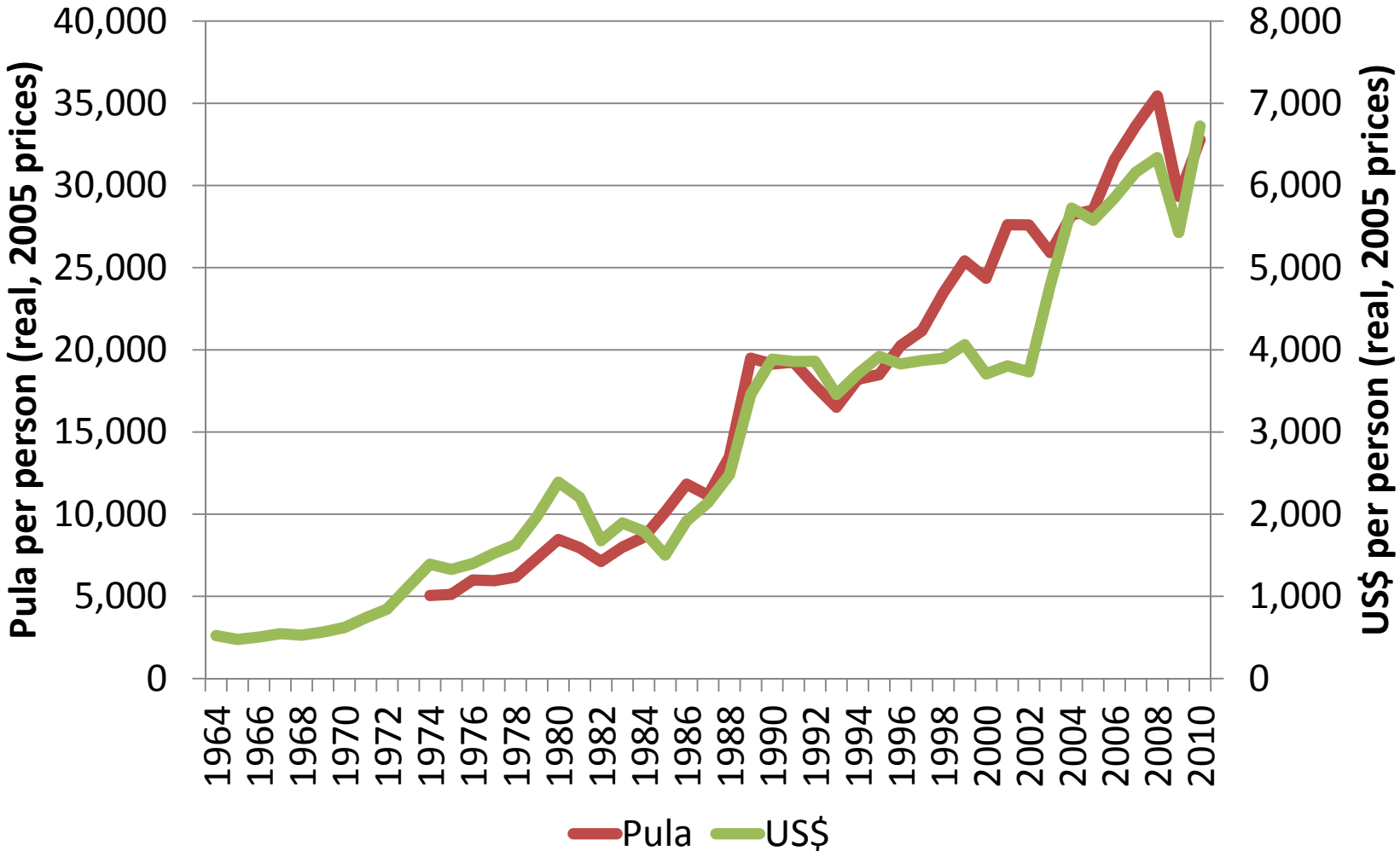
GDP growth rates



Source: Central Statistics Office (CSO)

- Very high GDP growth rates from 1970s through to 1990 as diamond production and exports grew rapidly
- But long-term downward trend and recent performance less impressive

Real GDP per capita



Source: author's calculations based on IMF IFS

International Rankings

- Good scores on World Bank Doing Business ranking and WEF's Global Competitiveness Report
- Lowest level of corruption in Africa (TI Corruption Perceptions Index)
- Investment Grade Credit Rating

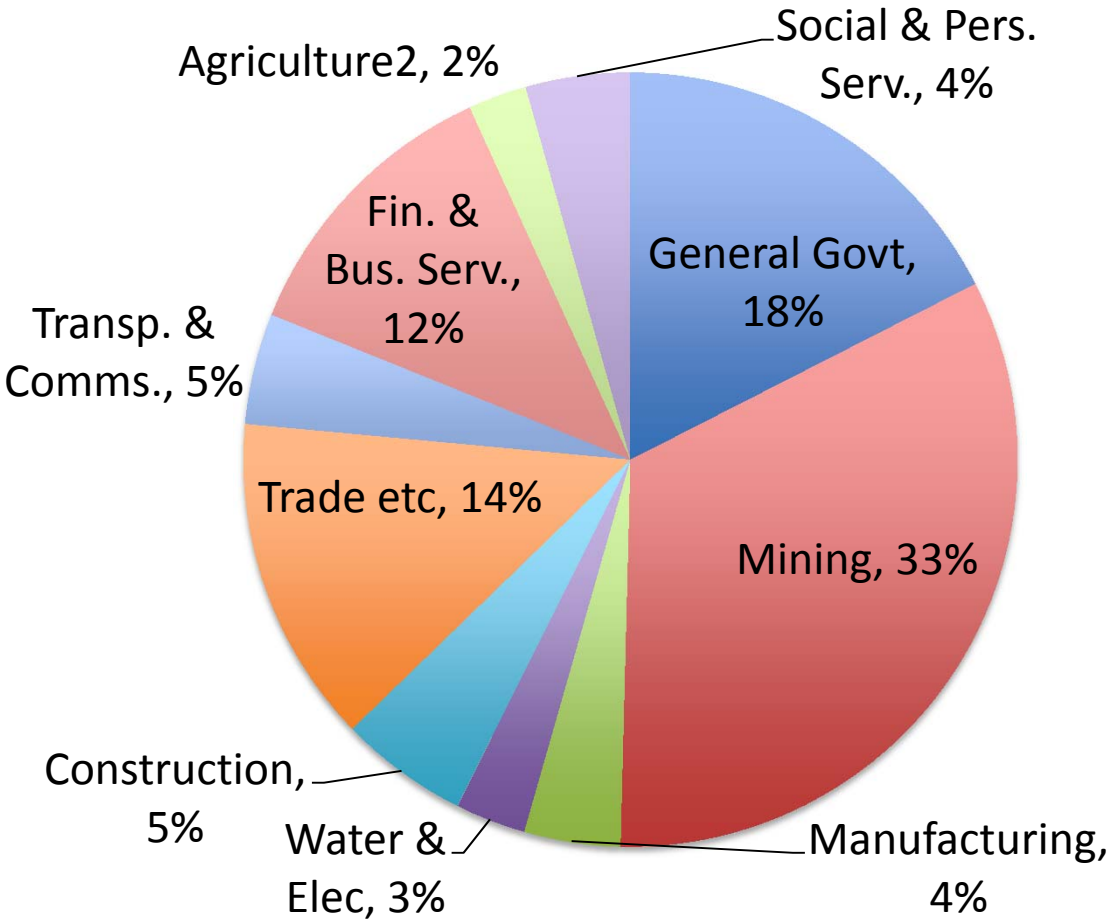
STRUCTURE & IMPORTANCE OF MINING

An economy driven by mining

Macroeconomic Indicator	Value (average 2005-2010)
% of GDP	36%
% of export revenues	85%
% of government revnues	40%

- Mining is the largest contributor to GDP, exports & govt revenues
- Botswana has generally – in the view of many – avoided the “resource curse”

Composition of GDP, 2010



Composition of Mineral Output/Exports

	US$ mn	% of total
Diamonds	3,205.9	80.9%
Nickel	485.6	12.2%
Copper	125.9	3.2%
Gold	67.8	1.7%
Soda Ash	44.4	1.1%
Salt	16.7	0.4%
Cobalt	9.7	0.2%
Coal	7.8	0.2%
Total	**3,963.7**	

Source: Bank of Botswana; authors' calculations

Composition of Mining Sector

Mineral	Units	Annual Production [1]	Global production [2]	Share of global production	Global ranking [3]
Diamonds	mcts	28.1	133.1	21.1%	1
Copper	‘000t	23.4	16,200	0.1%	…
Nickel	‘000t	27.6	1,550	1.8%	13
Cobalt	t	324.4	88,000	0.4%	…
Soda Ash (natural)	‘000t	248.0	11,700	2.1%	4
Coal	‘000t	872.2	7,000,000	0.0%	…
Gold	t	2.5	2,500	0.1%	…

Sources: US Energy Information Administration; US Geological Survey; Kimberly Process; Bank of Botswana; own calculations
Note: [1] annual average, 2006-2010; [2] 2010; [3] diamond ranking by value of production, others by volume; … not available

MINING SECTOR GOVERNANCE & TAXATION

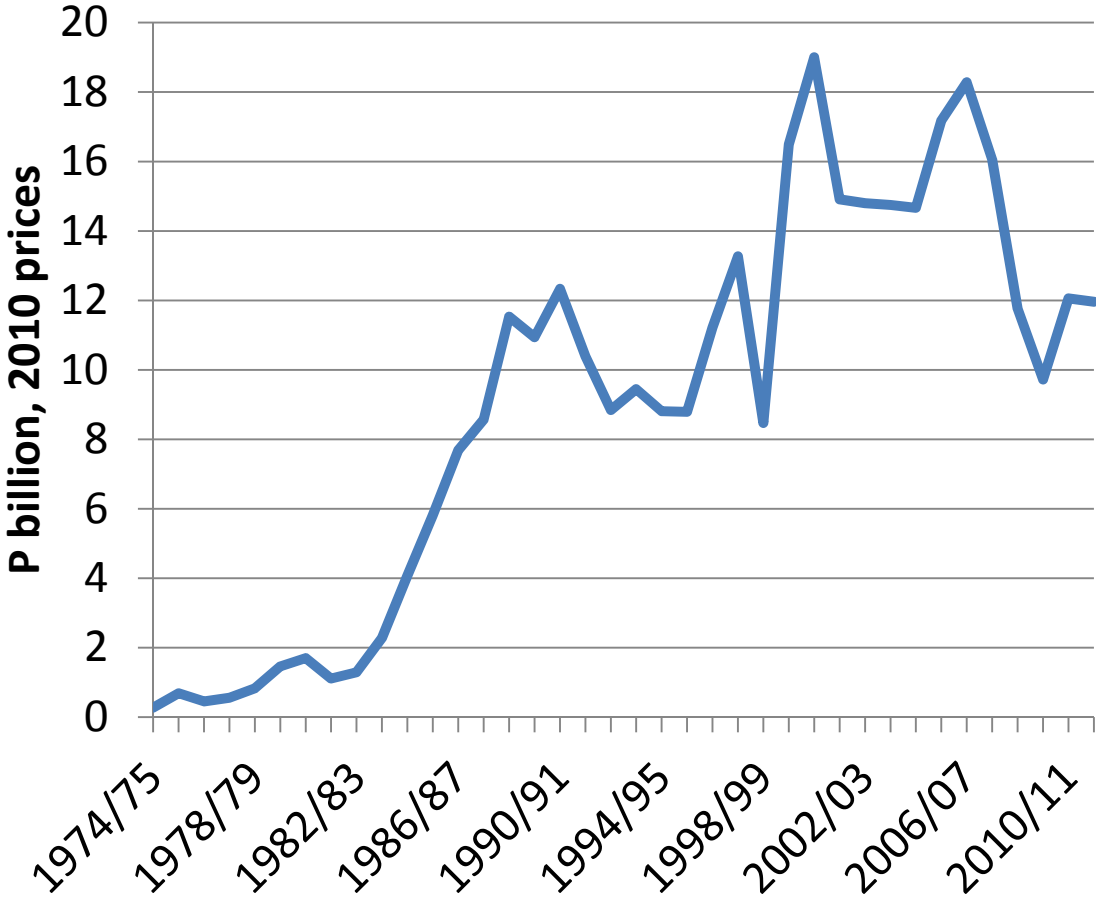
Mining Fiscal Regime: 3 sources of revenue

- Royalty on gross value of production (3%-10%, depending on mineral)
- Taxation of profits according to a variable rate formula
  - Tax rate rises with profitability
  - No tax holidays (except for 100% capital allowances)
  - Taxation non-negotiable except for diamonds
- Share of dividends:
  - GRB has the right to acquire up to 15% of shareholding when mining licence is granted
  - At cost
  - One off option
- All relevant aspects laid out in Mines & Minerals Act and Income Tax Act

Debswana

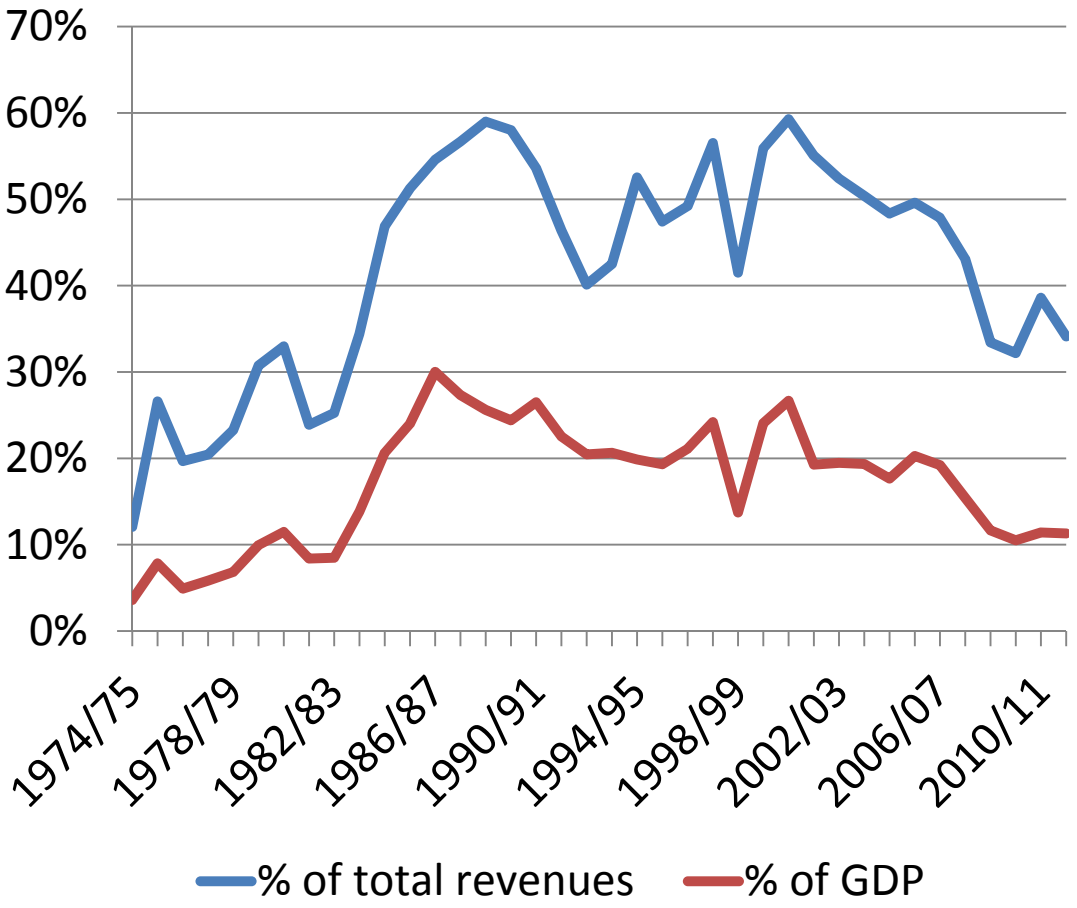
- Diamonds are the key mineral resource & hence management of this commodity and its revenues is crucial
- Major mines run by Debswana – JV between GRB and De Beers
- GRB took an initial 15% shareholding, subsequently increased to 50% (hence now 50-50 JV – equal board representation)
- Governed by a range of agreements (mining licences, marketing agreements & shareholders agreements)
- Overall distribution of revenues – now 81% GRB 19% De Beers
- Diamond mining in Botswana is extremely profitable – largest and lowest cost mines in the world

GRB mineral revenues (real)



Mineral revenues have been very important, rising steadily from 1970s to early 2000s, although have since fallen considerably

GRB mineral revenues (% of total revenues & GDP)



- Mineral revenues very large relative to total govt revenues and GDP, although also well below peaks
- Decline worsened by global crisis, but main cause is structural

Use of “leverage”

- Being #1 producer in the world provides leverage that has been used to:
  - Improve revenue (profit) shares
  - Give GRB substantial influence over how resource is developed
- More recent developments related to beneficiation:
  - Establishment of cutting & polishing industry (based on access to rough)
  - Relocation of De Beers’ selling activities from London to Gaborone
  - Independent (outside of De Beers) sales channel, to build diamond trading hub

DEVELOPMENT POLICIES & PUBLIC SPENDING PRINCIPLES

Development Policies, Mineral Revenues & Public Spending

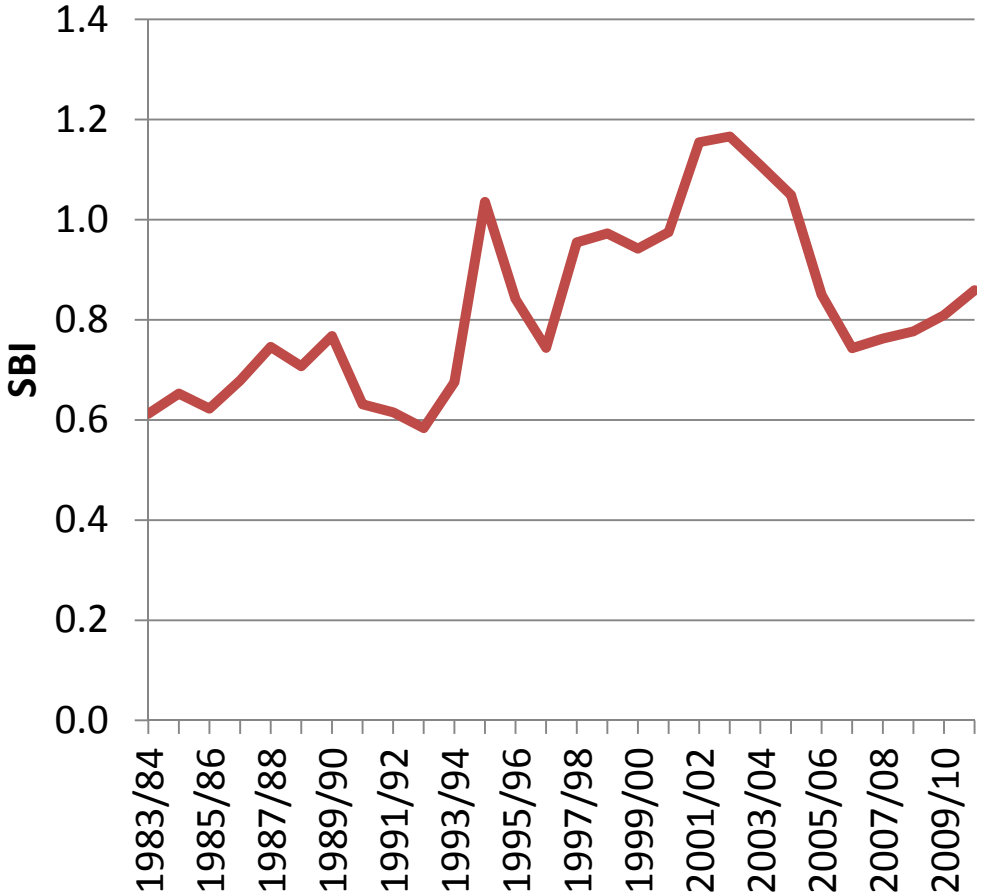
- Key principles:
  - Mineral production not nationalised (instead, use JVs)
  - Taxation of minerals should appropriate rents while leaving investor with commercial return
  - Invest mineral revenues (from sale of an asset) in accumulation of other assets – economic, human, social, financial
- From FY 1983/4 to FY 2010/11, total mineral revenues were BWP319bn at 2010 prices (approx US$50bn)
  - Equivalent to 19% of real GDP
  - Equivalent to 50% of VA in mining sector
  - Estimated at 75% of mineral rents

Key Policy & Institutional Structures

Minerals Policy Committee	National Development Plans	MFDP	Bank of Botswana
• High level policy direction • High level membership	• Broad economic policy direction • Public finance priorities	• Annual budgets • Macroeconomic policy (esp. XR)	• Macroeconomic policy (monetary, XR) • Management of FX reserves

“Sustainable Budget Index”

- SBI
  - ratio of non-investment spending to recurrent revenues
  - SBI < 1, mineral revenue is either being saved or spent on public investment (“sustainable”)
  - all education & health spending classed as investment



Source: author’s calculations, based on data from MFDP

Public Finance Policies

- SBI targets achieved, but not a perfect solution:
  - Doesn't ensure that public investment is productive
  - Doesn't help with determining allocation across different categories of investment
  - Can lead to very large government sector
  - Has no statutory basis and has fallen into disuse
- Other fiscal restraints in place:
  - "fiscal rule" – spending not more than 40% of GDP on average
  - Statutory limits on public debt
  - Finance & Audit Act (limits off-budget spending)
  - Auditor-General and Parliamentary Public Accounts Committee (but both weak)

Public Finance - weaknesses

- Multiplicity of fiscal rules
- Not necessarily coherent or enforced
- Difficult to maintain discipline with “soft” budget constraint
- Weak management of public sector projects
- No explicit financial allocations to sovereign wealth fund, or rules on drawdown of public sector financial assets

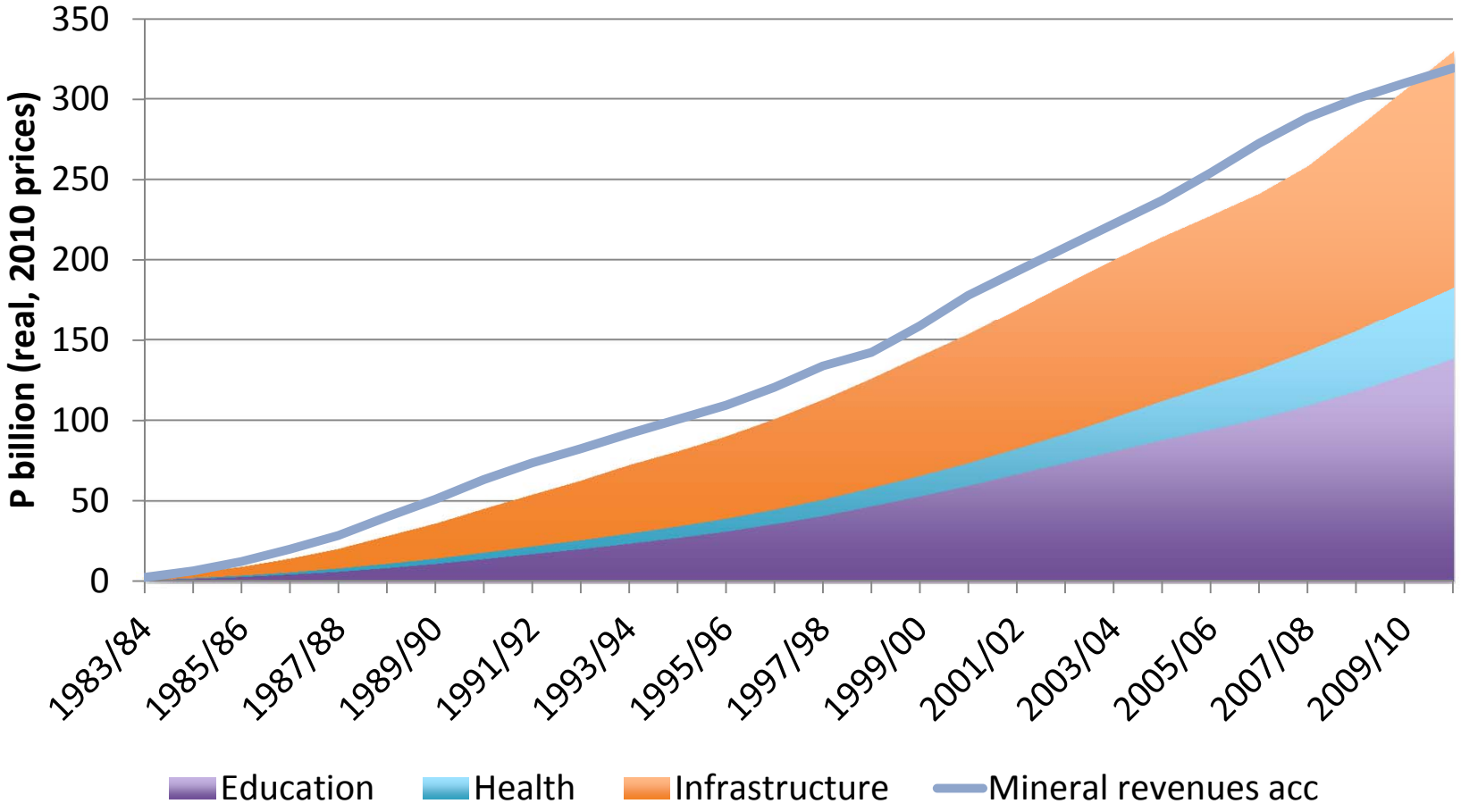
World Bank assessment (PER 2010)

Botswana has in the past been seen as a best practice leader in terms of its programming of public investment, but discipline appears to have been lost gradually over time. The historic abundance of resources appears to have weakened the attention paid to cost-benefit analysis of projects. This is apparent in the emergence over the years of project delays and increasing costs. Problems that should be identified at the screening and appraisal stages of projects are not. Deterioration in project performance has ensued. With poor ex ante scrutiny of economic benefits, ex post returns from public investment have fallen, even if this has not been accurately measured. Poor planning, including poor financial management and procurement planning, is evidenced by constant delays in project implementation. Close to 50% of all projects suffer implementation delays on one form or another (p.xiii).

Trends in public sector asset accumulation
Total Revenues and Spending, 1983/4 – 2010/11
(Real, 2010 prices)

Category	P billion
Recurrent revenues, excluding grants and sale of property	334.0
Recurrent spending, excluding health & education	281.1
Mineral revenues	319.4
Education spending	138.3
Health spending	44.5
Other development (investment) spending	147.1
Total investment (physical and human capital)	329.9

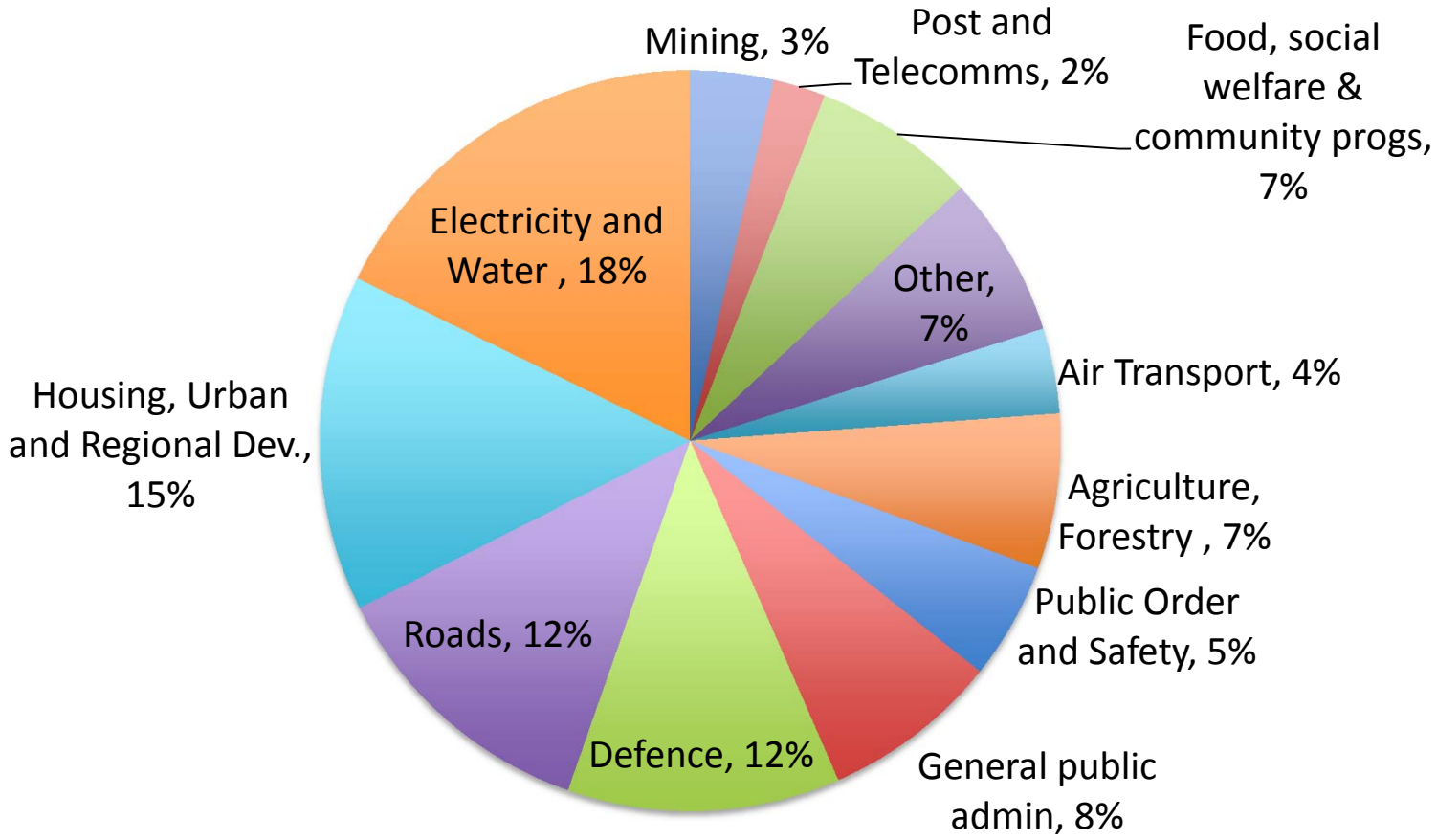
Accumulated mineral revenues and public investment



Allocation of mineral revenues

- Mineral revenues have been almost entirely devoted to investment in physical and human capital assets
- Have not been used to finance recurrent spending (which has been entirely financed by recurrent revenues
- Public investment spending has been divided between physical assets (45%), education (42%) and health spending (13%)
- Very little accumulated as financial assets, over period as a whole

Allocation of development budget, 1983/4 – 2010/11

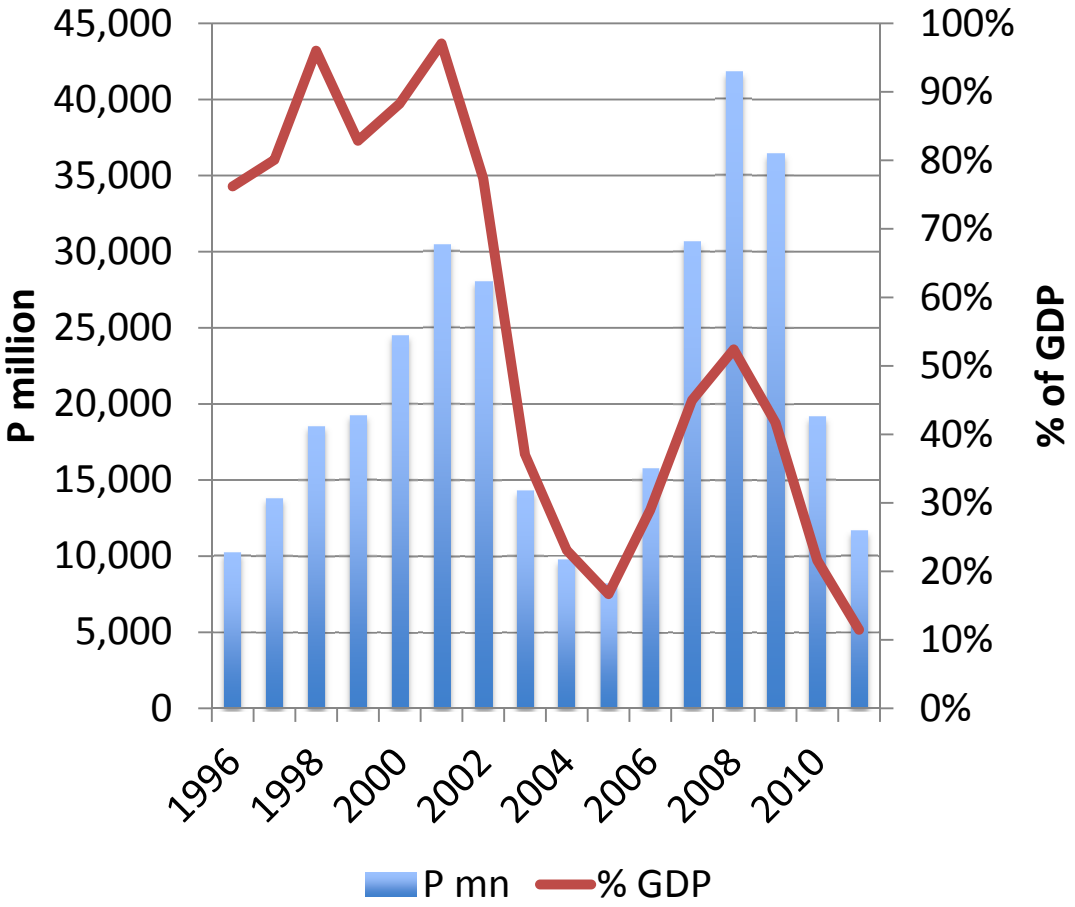


NB excludes education and health spending under recurrent budget

Investment in Financial Assets

- No explicit provision for financial saving from mineral revenues
  - BoP and fiscal surpluses accumulated – as GRB and national savings – but residuals not formal allocations
  - FX reserves and GRB deposits at central bank have been large at times, but have been depleted to some extent – reflecting the lack of rules payments in and drawdowns from these funds
  - Lack of clarity over whether funds are accumulated for budget stabilisation, to provide income, or as a "fund for future generations"

Government Net Financial Assets



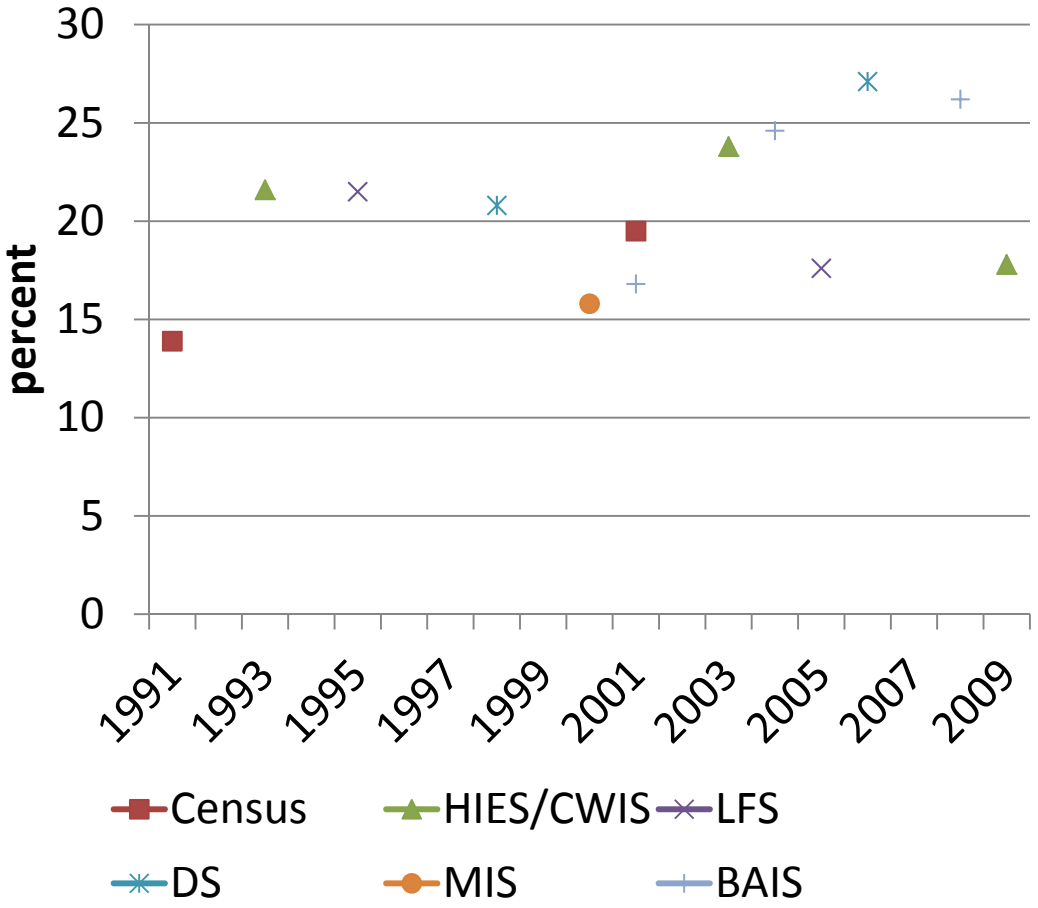
- Govt NFA (financial assets less debt) has been high at times, but depleted by:
  - funding of govt pension scheme
  - Borrowing and drawdowns to finance budget deficits around GFC
- No ring-fencing of accumulated from mineral revenues

POVERTY & SOCIAL INDICATORS

Impact on Poverty & Social Indicators – Illustrative MDGs

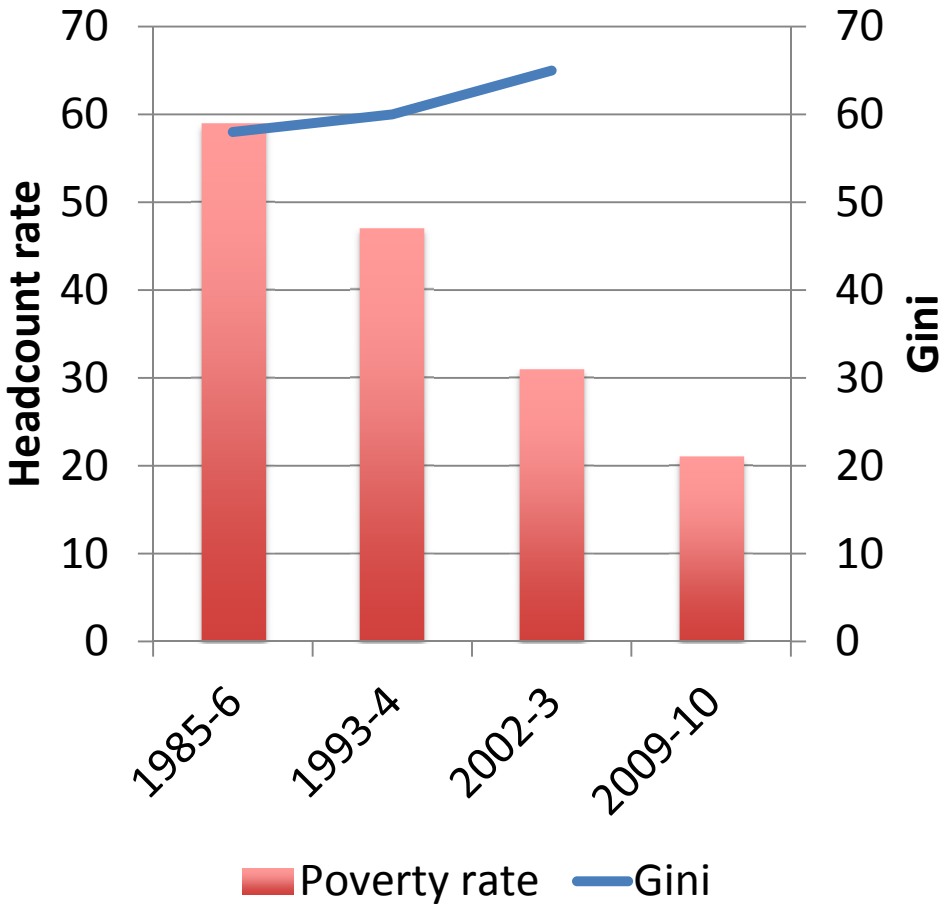
Goal/indicator	2007
1. Prevalence of underweight children < 5	4.7%
2. Net primary enrolment rate 6-12	87%
2. Literacy rate 15-24 year olds	94% (2003)
3. Ratio of boys to girls in primary education	96%
3. Share of women in formal non-agricultural employment	43%
4. Infant mortality (per 1000 live births)	57
5. % of births attended by skilled health personnel	95
5. Maternal mortality rate (per 100,000 live births)	183
6. HIV prevalence (% adults)	28%
7. Access to safe drinking water	96%

Unemployment



- Unemployment data erratic and derived from a range of different surveys
- Some results suggest increase in 2000s to over 25%, although most recent suggests <20%
- Concentrated amongst young adults

Poverty and Inequality



- Has been a long-term decline in headcount poverty rates – down to 21% in 2009/10
- Inequality figures for the most recent survey (2009/10)not yet released, but earlier data suggest increased inequality

Social & economic outcomes

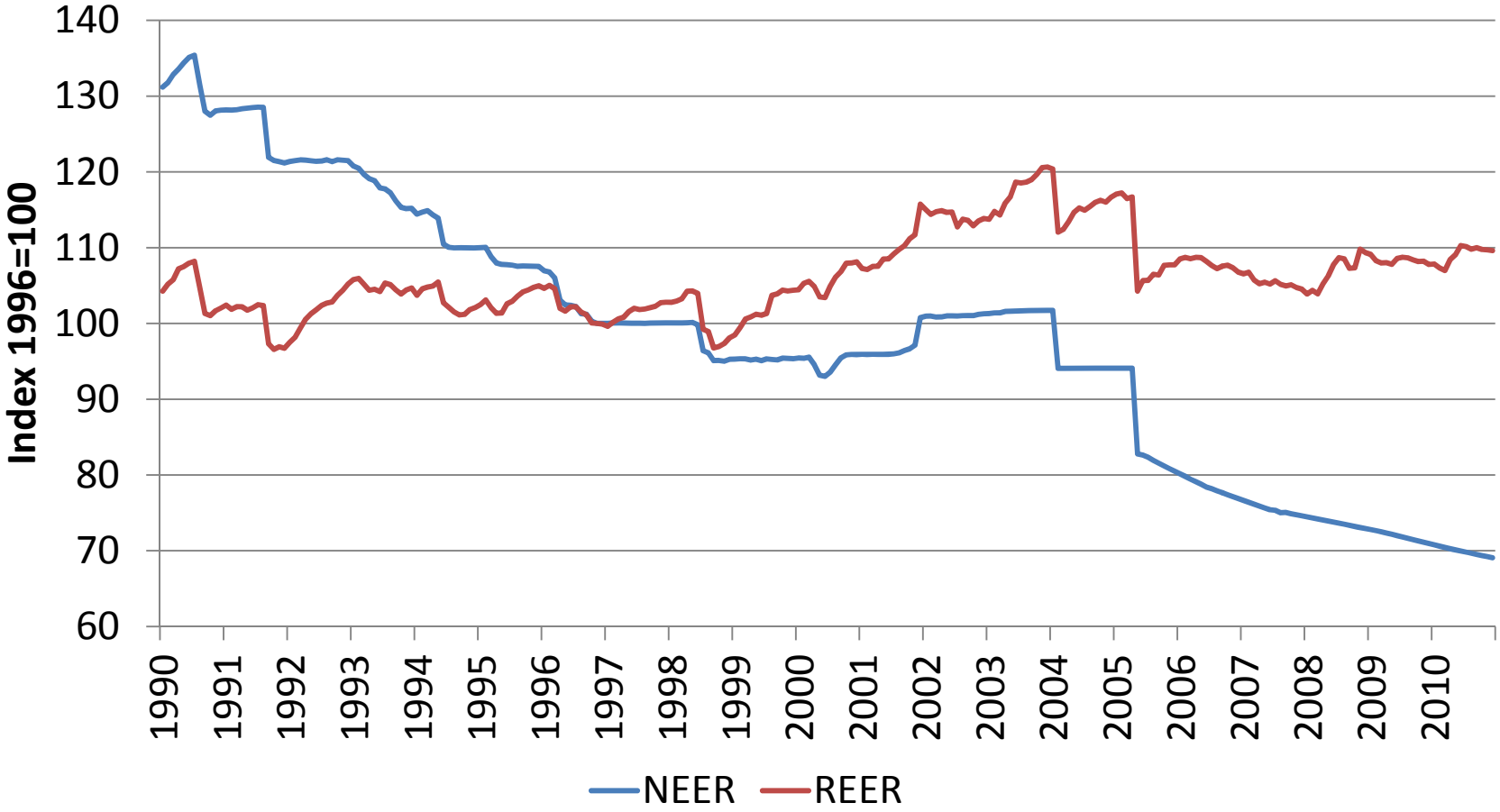
- Generally good performance on social indicators, although some weaknesses
  - High HIV prevalence and associated indicators
  - Concerns over quality & cost of education
  - High unemployment
  - Very unequal income distribution
- Poverty/income distribution problems reflect:
  - very capital intensive nature of mining production
  - reliance on government to use mineral revenues to create employment
  - weak agriculture/rural economy – despite high levels of public spending
  - Inefficient social safety nets

DUTCH DISEASE?

Has Dutch Disease been avoided?

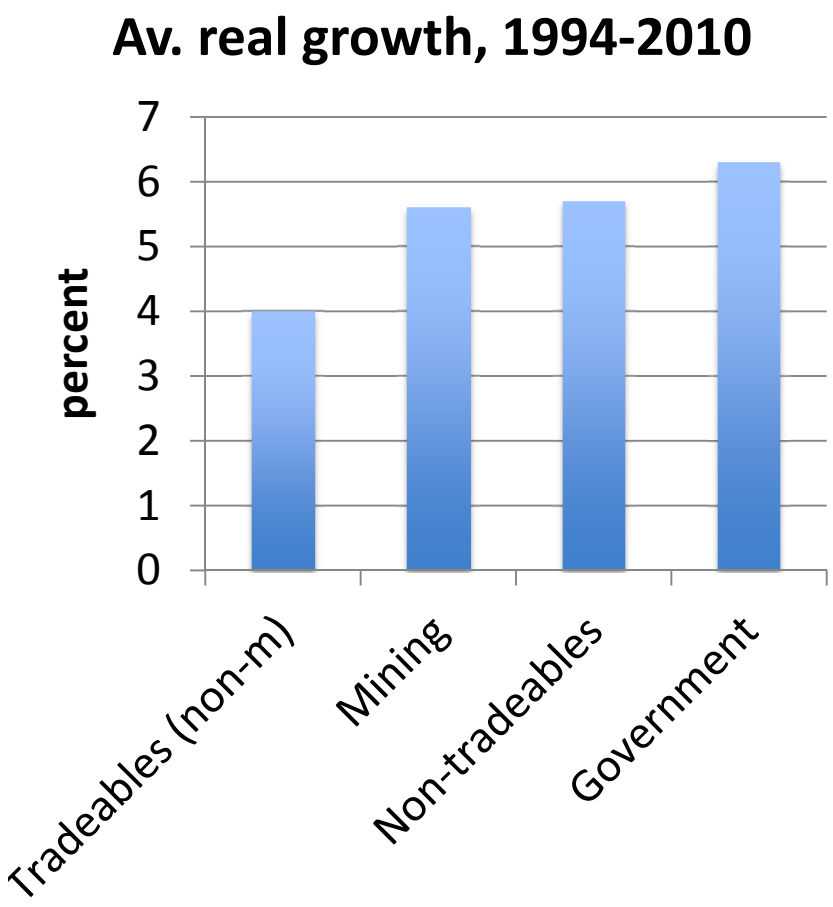
- Yes in terms of conventional exchange rate measurements (real exchange rate appreciation)
- Exchange rate has been managed, not floating
- Managed peg to a basket
- Moderately stable REER
- But steady depreciation of NEER, resulting in an inflation problem
- Result in BoP surpluses and accumulation of reserves
- Hence the need for sterilisation of monetary growth – expensive for central bank
- High interest rates that may have held back growth

Long-term exchange rate trends



Has Dutch Disease been avoided?

- Perhaps not, in terms of overall competitiveness
- Non-mining tradeables sector has lagged growth (agric., mfg., tourism)
- Too much reliance on non-tradeables & government
- Uncompetitive labour costs – driven by mining/government sectors
- High unemployment and insufficient job creation



ISSUES & CONCLUSIONS

Issues & Conclusions

- Major successes:
  - Appropriating mineral rents as government revenues
  - Utilising mineral revenues for investment
- Supported by good macroeconomic management, stable real effective exchange rate, “eclectic” monetary policy
- Very high savings and investment rates, led by the public sector
- But Dutch Disease still a problem

Issues & conclusions

- Major weaknesses:
  - Lack of clarity over objectives of accumulation of financial assets
  - Lack of rules governing payments into and drawdowns from SWF
  - Questionable quality of public spending decisions – resulting in low productivity & growth impact
  - (Unsustainably) large government
  - Lack of economic diversification, and concerns regarding future sources of growth, with diamonds due to run out within 15 years or so

Issues & conclusions

- Botswana's growth model has been successful especially when compared to other mineral economies, both maintaining per capita GDP growth rates and reasonably broad-based provision of social services & public goods
- Reflects high quality public administration and the good fortunes of a very large and highly profitable mineral resource
- Key challenge is changing the growth path – to one based more on competitiveness and diversified economic activity – requiring a change of policies and mindsets, and less complacency

QUESTIONS?

Keith Jefferis
Econsult Botswana (Pty) Ltd
keith@econsult.co.bw
www.econsult.co.bw