

Diamond-based growth in Botswana.

Botswana has one of the fastest growing economies in the world. The source of this growth has been the country's rich mineral endowments, enriching the government enough to discourage further rent-seeking and enabling Botswana to pursue sensible policies. This case-study shows how the adaptation of sound economics policies and the good management of windfall gains have allowed Botswana to continuously manage growth and to become one of the great success stories of developing countries.

1. Introduction.

Botswana is a landlocked country in southern Africa, bordering South Africa in the South and Namibia and Zimbabwe in the west and east. The country is scarcely populated with 1.7 million inhabitants (3 persons per square km), and water scarcity is a major limiting factor in the greater part of the country.

When Botswana became independent from Britain in 1966, the country was among the twenty-five poorest countries in the world. Since then, GDP growth has been impressive, averaging an annual GDP growth of over 10 percent between 1975 and 1999. GDP was estimated at 7,388 million US\$ in 2003. The mining sector is the most important part of Botswana's economy, contributing around 34% of GDP over the last ten years. Mining is dominated by the diamond industry and, to a lesser extent, by copper-nickel. Diamond mining is dominated by the Debswana Company which is jointly owned by the government (more than 50 percent) and by DeBeers.

Primary activity combined with the processing of primary products accounts for 38% of GDP and raw and processed primary products account for nearly 80 per cent of total exports in Botswana. While meat products are an important source of GDP, vehicle production has recently become a large export earner after diamonds (Table 1).

Table 1. Primary exports, 2003.

Primary exports.	Million US\$ (fob)	% of total exports
Total	14,184	100.0
Diamonds	11,707	82.5
Vehicles	443	3.1
Copper-nickel	695	4.9
Textiles	227	1.6
Meat-products	260	1.8

Table 2. Gross Domestic Product Botswana.

	1998/99	1999/2000	2000/01	2001/02	2002/03
Total (Pula million)	21,524	24,973	28,637	31,922	36,339
Total (US\$ million*)	3,913	4,541	5,235	5,246	6,443
Real change (%)	4.1	6.6	8.6	2.1	6.3
Per head (Pula)	13,413	15,165	16,993	18,521	20,538
Per head (US\$)	2,439	2,757	3,107	3,044	3,641
Real change (%)	1.6	4.0	5.9	-0.3	4.2

* Using average exchange rates from EIU (2005).

2. Intervention

Minerals constitute a major part of total exports, with the contribution of diamonds and copper-nickel to total exports varying between 75 percent and nearly 90 percent as of 1980. Botswana has managed to avoid most of the economic problems associated with export booms (e.g. extreme rent-seeking, an overspending government and Dutch Disease¹ effects) by adopting appropriate macroeconomic policies. The temptation to increase expenditure during boom periods was successfully avoided. Instead, the government adopted cautious spending policies, running budget surpluses earmarked for stability spending in leaner periods. This policy avoided having to drastically cut expenditures during bad years and reduced inflationary pressures.

The Botswana government established a Revenue Stabilisation Fund and a Public Debt Service Fund in 1972, when the first mine was being constructed. Through these funds, the government saved a large fraction of revenues, and sustained high recurrent surpluses. Between 1976 and 1998, foreign exchange reserves increased

¹ Dutch Disease is often experienced as the result of an export boom in one commodity. The export growth in one product will lead to an appreciation of the local currency, which reduces the export profitability of other economic sectors.

from US\$75 million to US\$5.9 billion, equivalent to 125% of the country's GDP. Inefficient public expenditures were largely avoided, at least until the late 1980s, and over time the Botswana economy became rather less vulnerable to economic setbacks. When in 1981/82 and in 1994, a downfall in diamond export earnings occurred, public expenditure levels could be maintained by using these government surpluses.

Around two-fifths of the mineral rents were sterilised in offshore investments. By the mid-1990s the interest earned by these rents had reached 12% of GDP and made a significant annual contribution to government revenue.

The accumulation of international reserves avoided real appreciation of the local currency. This allowed tradable goods other than minerals to maintain competitiveness on world markets, and hence encouraged economic diversification into small and medium manufacturing enterprises (aided by tax concessions), cattle industry and vehicle assembly.

The public allocation of the mineral revenues was done wisely. Instead of launching itself into prestigious, costly public projects, the government avoided undertaking any new development projects if there was no provision to cover the long term recurrent costs. Botswana has consistently produced National Development Plans that directed public investment towards improving the country's economic infrastructure, education and health provision.

Given that the employment potential of the mining sector is limited due to the capital intensive nature of its operation, the creation of jobs in other sectors of the economy was a major concern for the government. It therefore adopted incentives to create jobs in the manufacturing and services sectors. These policies were only partially successful and lifted total public expenditure considerably in the 1990s. However, the increase in expenditure did not lead to an 'expenditure trap' as in many other countries. Government interventions in public projects were cut when mineral revenues declined.

Botswana has used price subsidies to transfer the boom to the private sector. The main subsidies in Botswana were to large-scale farmers via subsidies on beef and to civil servants via subsidies on housing. Neither of these were substantial components of government expenditure. There has been a substantial investment in rural infrastructure, providing rural jobs and enabling the distribution of the Drought Relief Programme when a drought crisis hit the country. Also, government investments placed emphasis on education, health care and other basic needs. It has avoided heavy subsidisation of inefficient urban projects and it has avoided the extreme urban bias found in other countries.

Botswana exhibits a high level of transparency in public revenue and low levels of corruption. The country ranked 24 on the International Corruption Perception Index 2002, higher than some western European countries and highest of all African countries.

3. Benefits for growth.

Mineral development was the major contributor to the growth in Botswana's economy. The mining sector reached its peak in 1989, when it accounted for more than 50 percent of GDP.

- Mineral exports are a major source of government revenue. The government has been rather successful in recovering resource rents from minerals, the government appropriation of rent averages 76% since 1980. The mineral share of government revenue grew from almost nothing at independence to about 60 percent in 1989. It has since been oscillating around 50 percent of total tax revenues.
- Botswana's mining industry provides employment for approximately 13 000 people, of which 80% are employed by the two biggest mining companies, Debswana and BCL.
- Total wealth in constant prices has increased considerably over the past two decades, by about 500%, from Pula 12 billion to 72 billion (from approximately US\$2.2 billion to US\$13.1 billion). Botswana's real, per capita wealth increased by about 250% (see also table 2 for data on the last 5 years). The growth of the Government's net foreign financial assets is especially striking, increasing from less than 1% of national wealth in 1980 to 18% by 1997.
- The remarkable growth of output (12,3 percent per year) lead to growth in private consumption. Public consumption per capita grew at an average annual rate of 9 percent per year from 1964 to 1985. Similarly, recurrent expenditure per capita grew at 8 percent per year from 1968 to 1987, while development expenditure per capita grew at 9 percent per year over the same period. Largely on account of diamonds, private consumption per capita grew at 5,2 percent.

4. Benefits for poverty reduction.

Many voters to the ruling Botswana Democratic Party live in rural areas. This has made the government sensitive to the needs of the rural voters. Botswana developed an explicit policy of reinvestment of all resource rent. The government channelled a major part of the mineral rents towards development programs. By 1994/95, the total development budget was Pula 591 million. Government investments placed emphasis on building (social) infrastructure, stimulating education, health care and other basic needs. The national economic wealth has therefore aided to improve access to rural areas and hence standards of living of Botswana. The Drought relief programmes in particular, have benefited the poor.

There have been significant reductions in poverty reported in preliminary results from the latest Household Income and Expenditure Survey conducted in 2002/03. Although mining revenues have thus found their way to the poorer population of Botswana, clear data on the relation between mining benefits and poverty are not available and there are still some major challenges related to the Botswana mining sector.

Notwithstanding its economic successes, poverty perseveres in the larger part of Botswana. Average per capita income equals 3,430 US\$/day, but half the population still lives below the international poverty line of 2\$/day and more than 23% of the population lives on less than 1\$/day (1993). Poverty is strongly related to tribal descent and the majority of the wealthy are members of the ruling tribes.

5. Benefits to the environment.

Economic development in Botswana has generated multiple environmental problems (such as rangeland degradation; loss of trees for fuelwood; depletion of groundwater resources; reductions in wildlife populations; erosion of arable land etc.). The majority of Botswana's environmental policies are wild-life related. Since 1968, several National Parks Acts have passed and nearly 40 percent of the country is protected area. A National Conservation Strategy Co-ordinating Agency is responsible for the implementation of the conservation strategy.

In addition to wildlife legislation, Botswana is active in environmental initiatives at both national and international level. The country has a number of laws promoting the use of environment impact assessment (EIA). The regulations under the EIA legislation contain detailed requirements for environment control. While it is acknowledged that these laws do not adequately protect the environment in terms of environmental impacts, they are crucial in the protection of the country's fragile arid environment from development associated with rapid economic growth.

6. Policies and coalitions for change.

The Botswana government was able to successfully manage the diamond booms, adopting a cautious economic strategy. Macro-economic policies were based on low estimates of permanent income, allowing easy corrections when revenues declined.

The Botswana Democratic Party has played a role in the establishment of these cautious economic policies. The democratic system has made the government susceptible to the needs of the (mostly rural) voters. Reinvestments of mineral revenues were therefore directed at these rural areas of government support.

There are some general lessons to be learned from this example:

- (i) It is sensible to be cautious in forecasting the effects of booms on permanent income. The Botswana government adopted a risk averse strategy and re-invested the resource rents in a sensible way. Instead of increasing spending whenever revenue increased, the government based expenditure levels on conservative longer-term expectations of export earnings and government revenues.
- (ii) Cautious spending policies were complemented by savings of mineral revenues in different Funds (e.g. a special Development Fund or a diverse portfolio of investment options). Accumulated foreign reserves could be used during leaner periods.
- (iii) Early adjustments to revenue declines have avoided permanent inefficient public expenditure and possible financial crises.

7. Remaining challenges.

Through many years of sustained macro-growth, there remain serious problems, particularly with respect to the agricultural sector, the incidence of AIDS, the persistence of inequality and high urban unemployment. It remains to be seen if Botswana's institutions will be strong enough to address these issues and sustain growth.

The agricultural sector performed poorly compared to the industry, manufacturing and services sector. As a result of severe and prolonged periods of drought and the over-utilisation of rural resources, the agricultural productivity actually declined over the last decade. The evidence for increasing pressures on scarce rural

resources is visible through the depletion of water reserves, water pollution problems, overgrazing, rangeland degradation, and the depletion of wood around large settlements.

Another serious problem is the high adult incidence of AIDS, with perhaps 25%-30% of adults being HIV positive. Apparently, relatively sensible economic policies have not extended into sensible AIDS campaigns. The incidence of HIV is likely to lead to a demographic crisis in the near future.

A large proportion of the population did not benefit from the overall growth in the economy – particularly the rural poor and marginalised groups. Income distribution barely improved since independence and the benefits of the mineral development have mainly accrued to a fortunate minority. Although growth has been rapid, inequality is remarkably high and has been practically unchanged. Botswana continues to suffer from high income inequality, with a GINI index of 63 (1993), comparable to countries like Sierra Leone or Angola. Lacking alternative income opportunities, a significant part of the population is dependent on agricultural activities for sustenance. This has caused pressure on land resources to the extent that the unsustainable use of resource base is now a major concern.

Despite its dominant role in the economic production and government revenue, mining is not a major employer and employs only a limited percentage of the labour force (around 4 percent in 1989). Botswana still struggles with high unemployment of 16% (2002). So, although economic growth has benefited the country, growth has not been very pro-poor. Investments in more pro-poor developments, reducing income inequality and provision of jobs for the (rural) poor will be needed in the future to include the poor in Botswana's economic prosperity. The synthesis paper prepared for the OECD/DAC/Environet project 'Natural Resources for Pro-Poor Growth' provides recommendations to increase the contribution of environmental management to economic growth and poverty reduction.

8. References.

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