The Botswana Development Model since 1966: Evaluation of Diversification Efforts. What worked? What didn't?[1]

Introduction

Ever since the start of Botswana's mineral-led economic growth in the early 1970s, policymakers have been aware of the potential weaknesses and constraints of such a development path, alongside the advantages that it could bring. Mineral economies are vulnerable to a lack of diversification, with slow or even negative growth of non-mining tradeables sectors such as agriculture and manufacturing, due to a lack of competitiveness. This can of course cause problems as mineral resources are depleted, as such economies may then have limited sources of growth and, in particular, balance of payments problems due to weak exports.

The Government of Botswana has implemented a range of policies to counter such weaknesses, at both macro- and micro-economic levels. This paper will briefly review such policies, and the actual developments with regard to diversification over the past four decades. It also considers these developments in the light of economic challenges with regard to achieving sustainable, equitable growth.

What is meant by diversification?

There is no single agreed interpretation of economic diversification. Often diversification is interpreted in terms of the structure of GDP or production: is GDP dominated by a single sector or sectors or widely spread across a range of sectors? Closely related to this is the composition of GDP growth – how much is this driven by a single sector?

This approach to diversification is useful, but needs careful interpretation. As a mineral economy matures and the contribution of mining to growth declines, an economy will inevitably become more diversified as the share of mining in GDP falls; similarly with the composition of GDP growth. Hence a focus on the composition of GDP, even if becoming less concentrated and more diversified, may not be a good indicator of more diversified growth, rather, simply an indicator of a mature, declining minerals sector.

Hence we need a broader interpretation of diversification. Amongst the key issues in the context of a mineral economy are:

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(i) whether economic growth can be sustained at reasonable levels in the post-mining era; i.e. an economy that is becoming more diversified but only growing slowly – or not all – cannot be considered a success;
(ii) are the key macroeconomic aggregates sustainable – in particular the fiscal balance and the balance of payments; given that mining activity often makes a major contribution to both government revenues and the balance of payments, it is essential that sources of fiscal revenue and foreign exchange earnings also become more diversified; and
(iii) given that the ultimate development objective is a sustained rise in real incomes and living standards for all of the population, diversification must also be judged in terms of whether household incomes in general are rising (and not just average GDP per capita) – which means consideration of employment and household incomes.

The analysis here therefore focuses on the following aggregates:

- Composition and level of GDP, and GDP growth;
- Fiscal revenues;
- Balance of payments, and in particular exports;
- Employment, living standards and poverty.

Prior to discussing economic outcomes with respect to these indicators, we first briefly discuss some of the policies that have been followed to encourage diversification.

Diversification Policies[2]

The era of mineral-led growth in Botswana can be traced back to early 1970s. Soon after independence in 1966, the Government embarked upon the "Shashe Project", based around the establishment of the Selebi-Phikwe copper-nickel mine and associated infrastructure, including a new town, water and power supplies etc. The total cost of the project was very large, equivalent to 150% of 1968/69 GDP (Harvey & Lewis, 1990). The Shashe Project was followed by the establishment of the first diamond mines at Orapa and Letlhakane in the early 1970s. At the time, the importance of diamonds was not widely understood, and the expectation was that it would be copper-nickel that would transform the Botswana economy. In the event, the Selebi-Phikwe mine turned out to be a financial disaster, while diamonds performed well beyond initial expectations.

The Government was aware of two important, related macroeconomic policy issues in the context of diamond led growth:

(i) the dangers of Dutch Disease (whereby rapid mining growth undermines the competitiveness of non-mining tradeable activities), and shifts incentives towards non-tradeables;
(ii) preparing the economy for the eventual end of the mineral era, given that diamonds and copper-nickel were non-renewable resources.

[2] *More detailed reviews of policy and institutions can be found in Harvey & Lewis (1990), Salkin et al (1997), and Leith (2005)*

The first policy was implemented in part aimed to support the second, as avoiding the Dutch Disease would help to preserve a wider range of economic activities, in particular tradeable activities (exports and import substitutes), which would help to support balance of payments sustainability.

On the **macroeconomic** front, the following policies were pursued:

(i) **Exchange Rate Policy**: managing the exchange rate so that diamond-related export inflows would not lead to nominal exchange rate appreciation;

(ii) **Monetary Policy**: keeping interest rates low from the mid-1970s through to the late 1980s, to encourage investment.

Associated with the policy of managing the exchange rate was that of running a surplus on the balance of payments and accumulating foreign exchange reserves. In other words, domestic absorption was deliberately kept below domestic income. This was achieved in part by restricting the growth of government spending below the growth of government revenues, and accumulating budget surpluses. Large foreign exchange reserves were accumulated and a sovereign wealth fund established.

An important element of fiscal policy was the principle that revenues derived from the exploitation of minerals should be invested, i.e. given that mineral revenues are derived from the sale of an asset, they should be used to accumulate other assets and not used to finance recurrent spending. This investment could be in the form of physical assets (roads, water supplies etc.), human capital (education, training, healthcare) or financial assets (government savings balances or financial investments). The idea was that mineral revenues would be used to drive diversification and growth through investment in public goods and raising productivity. As a result, government spending, particularly investment spending through the development budget, became a major driver of economic activity.

A number of **labour market policies** were also pursued:

(i) minimum wage policy, which originally tied the formal sector minimum wage to agricultural earnings, so as to discourage rural-urban migration;

(ii) wage compression, especially in public sector, to prevent undue income differentials from emerging in the context of severe shortages of skilled labour;

(iii) a relatively liberal immigration policy, so that firms (and government) had access to scarce skills.

Government was also concerned that there would be a shortage of productive employment opportunities, given limited employment creation in mining and low productivity in traditional agriculture. Following an initial assessment by Michael Lipton (Lipton, 1978), government established a subsidies policy working group to make recommendations on a subsidy scheme that would help to promote the establishment of sustainable jobs. The resulting Financial Assistance Policy (FAP), established in 1982, provided a range of employment-related grants for new or expanding firms in manufacturing, non-cattle agriculture, and small-scale mining – i.e. the focus was on tradeables (Peat, 1997).

There were also a range of subsidies for arable agriculture, including the Arable Lands Development Programme (in the late 1970s) and the Advanced Rainfed Arable Programme (ARAP) (1982). Cattle-rearing was supported by the Tribal Grazing Lands Programme (TGLP), established in 1975. A further important early decision allowed EU "aid" provided through the Lome Convention – in the form of elevated beef prices – to be appropriated by cattle farmers and – later – BMC inefficiencies, rather than by the nation as a whole.

Industrial development policies were developed in 1984 and 1998. The 1984 IDP already recognised the need to diversify the economy – interestingly, the challenge was seen as diversifying away from dependence on diamonds *and beef*. However, the policy was rather inward looking, and included the objective of promoting rural economic / industrial activity and small scale enterprises, and took the view that domestic markets and import substitution would provide a sufficiently large market for developing industrial activity (Jefferis, 1996). Therefore, little emphasis was placed on export development or on scale, international competitiveness or efficiency.

The 1998 IDP took a much more outward looking approach, focusing on large-scale export-oriented firms, recognising that the domestic market would be insufficient to drive diversification, and that improved productivity would be central to competitiveness.

Although export competitiveness was the basic theme of the 1998 IDP, it is not clear that this policy framework was followed through to implementation, and the evolution of various sub-policies lost the export focus. The FAP was wound up around 2001; having been through regular reviews that had concluded that it was broadly effective in achieving its original objective, the Fourth Review of FAP (BIDPA, 1999) concluded that as grant expenditures had grown, the scheme had become increasingly vulnerable to waste and corruption, and was not offering cost-effective job creation. FAP was replaced by the Citizen Entrepreneurial Development Agency (CEDA), which reverted to an inward looking approach (assisting citizen owned firms only), and had no focus on tradeables. Unlike FAP, CEDA has not been subject to any transparent (i.e. published) evaluations of its impact and effectiveness[3].

Other industrial development policies included the Selebi-Phikwe Regional Development Project (SPRDP) established in the late 1980s (see Cowan, 1997 for more details).

The centrepiece of industrial development policy now seems to be the Economic Empowerment Drive (EED). This again reverts to an import substitution mode, providing incentives for local firms to replace imports in government procurement.

The various agricultural policies (ARAP and ALDEP) were also wound up, having achieved little. One of the replacements is the National Policy on Arable Agriculture and Dairy Development (NAMPAADD), which aims to support the development of competitive, commercial agriculture. Another is the Integrated Support Programme

[3] *However, the Bank of Botswana (2011) suggests that CEDA may have led to a crowding out of private sector financial institutions in the market for credit to SMMEs, as well as leading to a lack of innovation. The Bank also notes that CEDA's loan performance is far worse than that of commercial banks, and indeed of other DFIs.*

for Arable Agriculture Development (ISPAAD), which essentially provides subsidies to small-scale arable farmers without any reference to competitiveness or productivity.

Immigration policy has also become more inward looking, by making it more difficult for firms to recruit foreigners with specialised skills, and providing disincentives to inward foreign direct investment.

Macroeconomic policy also experienced some changes. The underlying objective of exchange rate policy – maintaining a stable real effective exchange rate – was unchanged, although the methods of exchange rate management were refined. Monetary policy, however, experienced major changes around 1990, when interest rates were raised sharply so that they were positive in real terms, a situation that prevailed through to the advent of the global financial crisis in 2008.

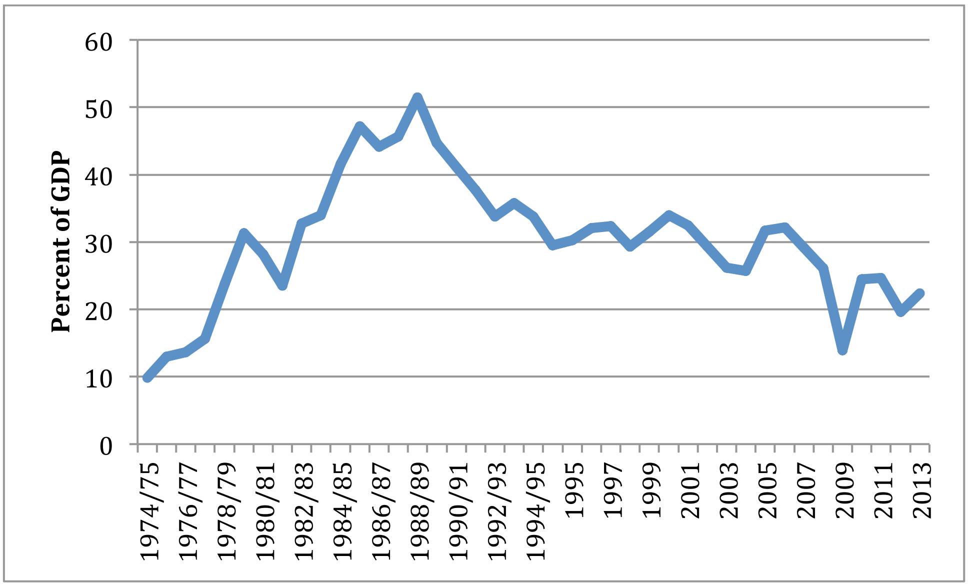
There was also institutional evolution; as noted above, CEDA was established in the early 2000s. The Botswana Development Corporation (BDC), which was established in 1970 to promote industrial and economic development by filling the gaps that the private sector (then very small) could not fill. Over the years, however, BDC lost its way as its mandate was not updated, and it evolved into a significant property developer, competing with (and squeezing out) the private sector rather than complementing it. The old Trade and Investment Promotion Agency (TIPA) was folded into the Botswana Export Development and Investment Authority (BEDIA). The International Financial Services Centre (IFSC) was established. BEDIA and IFSC were in due course merged into the Botswana Investment and Trade Centre (BITC). The Botswana National Productivity Centre (BNPC) was established, and yet there are serious concerns about low or declining productivity (Leith, 2005; World Bank, 2007; Government of Botswana, 2009).

Achievements

GDP

On a range of measures GDP has become more diversified over the past 25 years. The peak time for lack of diversification was in 1988/89, when mining accounted for 51.5% of GDP. Since then the share of mining has progressively fallen, to 22.4% in 2013.

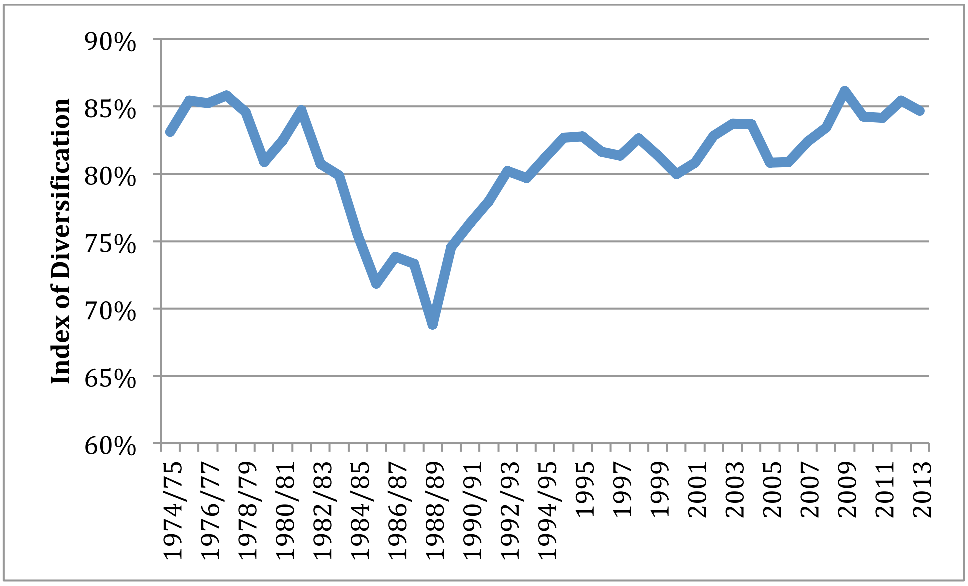
Figure 1: Mining as share of GDP



Source: Statistics Botswana

A more broadly-based index of diversification[4] (1-HHI) has also risen, and by 2013 was around the same level as in the mid-1970s when the mining boom began.

Figure 2: Index of Diversification



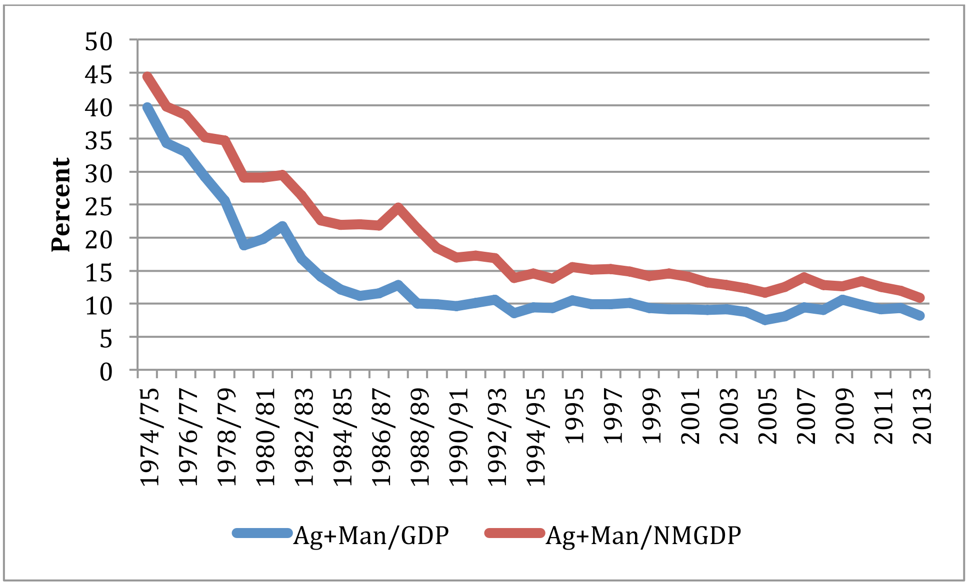
Source: calculations based on data from Statistics Botswana

Although the economy has become more diversified since the late 1980s, and the share of mining has fallen, the non-mining sector is quite different now to what it was 40 years ago. In 1974/5, the agriculture and manufacturing sectors accounted for 45%

[4] *The index of diversification is based on the Hirschmann-Herfindahl Index (HHI), which is commonly used to measure the concentration of production in industry. The index used here is 1-HHI applied to the sectoral composition of GDP (value added).*

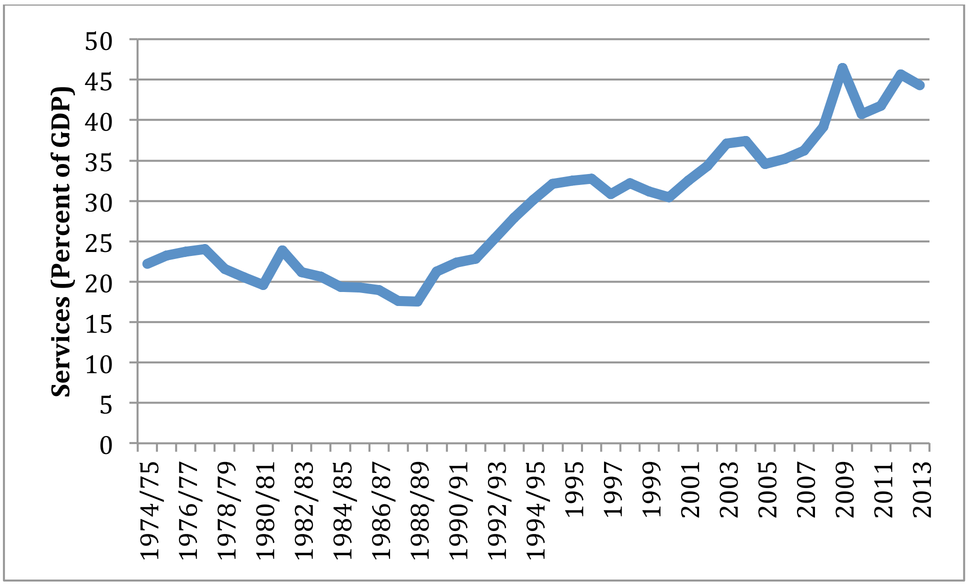
of non-mining value added, but by 2013 this had fallen to 10%. The counterpart to this was that the share of services has risen sharply.

Figure 3: Share of Agriculture and Manufacturing in GDP and Non-mining VA



Source: calculations based on data from Statistics Botswana

Figure 4: Share of Services in GDP

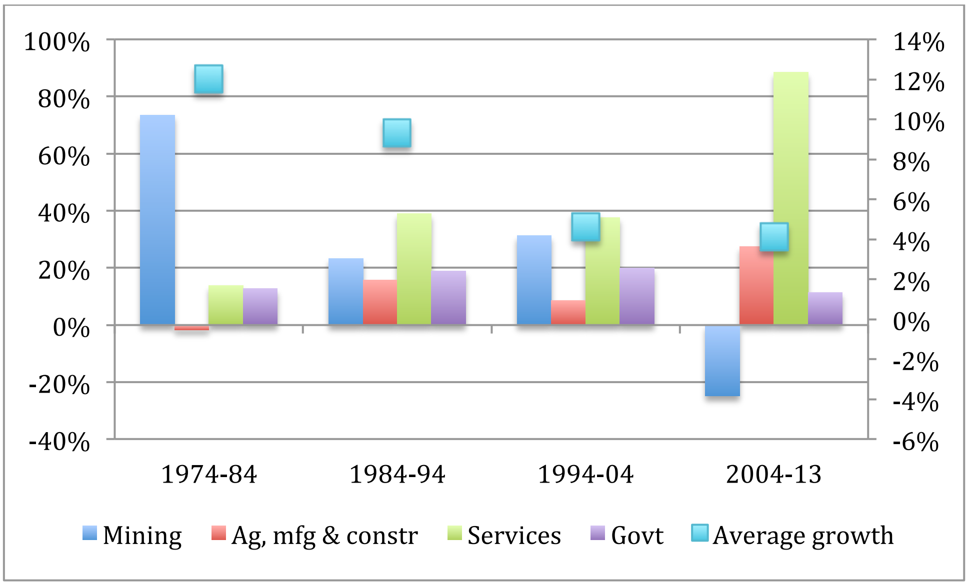


Source: calculations based on data from Statistics Botswana

Growth

What about sources of growth? Botswana has also been successful in reducing its dependence on mining as the driver of growth – which corresponds to the reduction in its share of GDP. In the most recent decade (2004-13) mining contributed negatively to growth, while the main driver of growth has been services. So the sources of growth have perhaps become more diversified (certainly less dependent on mining); however, this has been associated with a gradual decline in average growth rates, and – as we shall see shortly – a lack of export diversification, given that many services are non-tradeables.

Figure 5: Drivers of growth

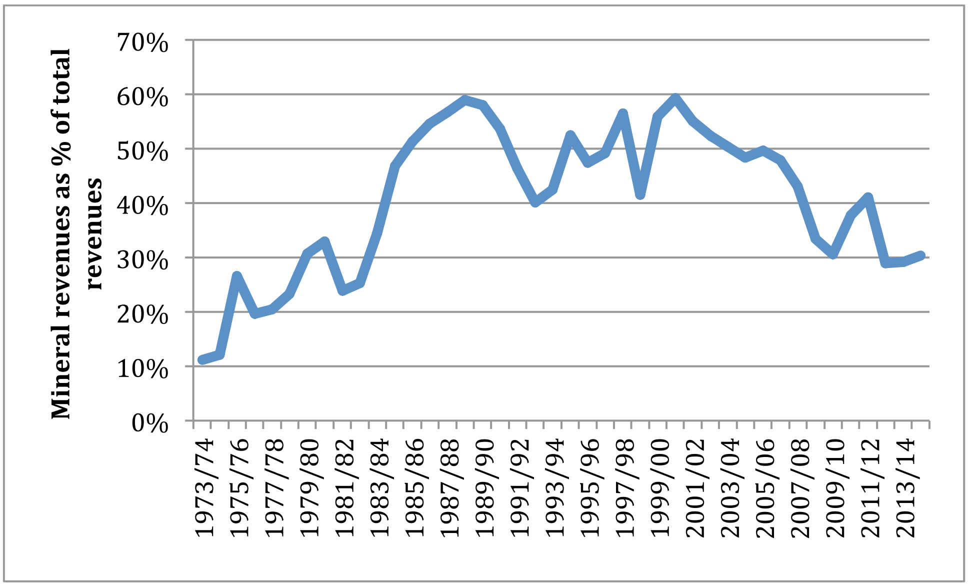


Source: calculations based on data from Statistics Botswana

Government Revenues

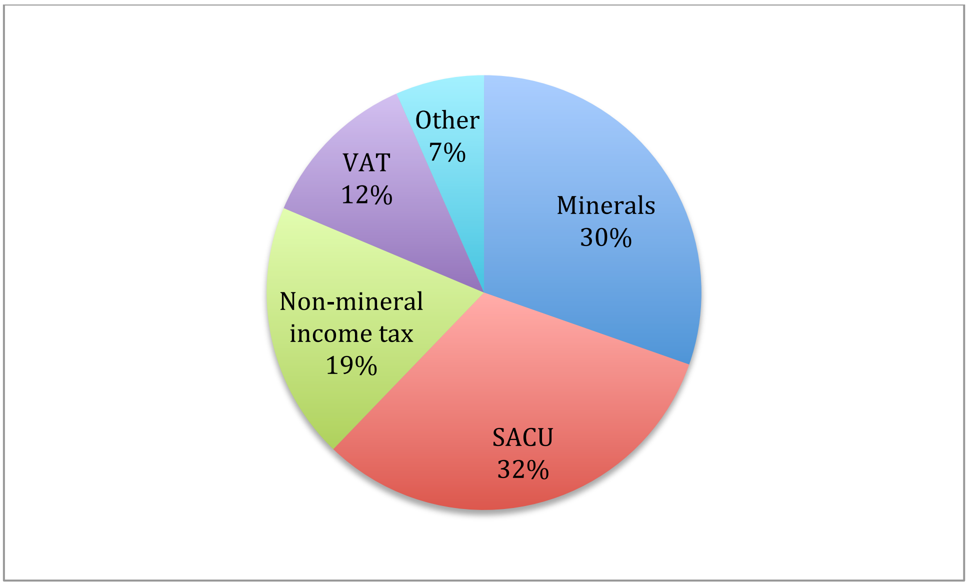
The Botswana government has also become much less dependent on mineral revenues over the past three decades. Back in mid-1980s, fiscal mineral revenues accounted for 60% of total revenues and 30% of GDP. These figures have now at least halved, and non-mineral revenues make the majority (around 70%) of government revenues. So government is much less dependent upon mineral revenues than it was historically. However, this has been associated with generally lower revenues, a squeeze on spending and a move from budget surpluses to budget deficits.

Figure 6: Mineral revenues (% of total revenues)



Source: Ministry of Finance and Development Planning

Figure 7: Composition of Government Revenues, 2014/14



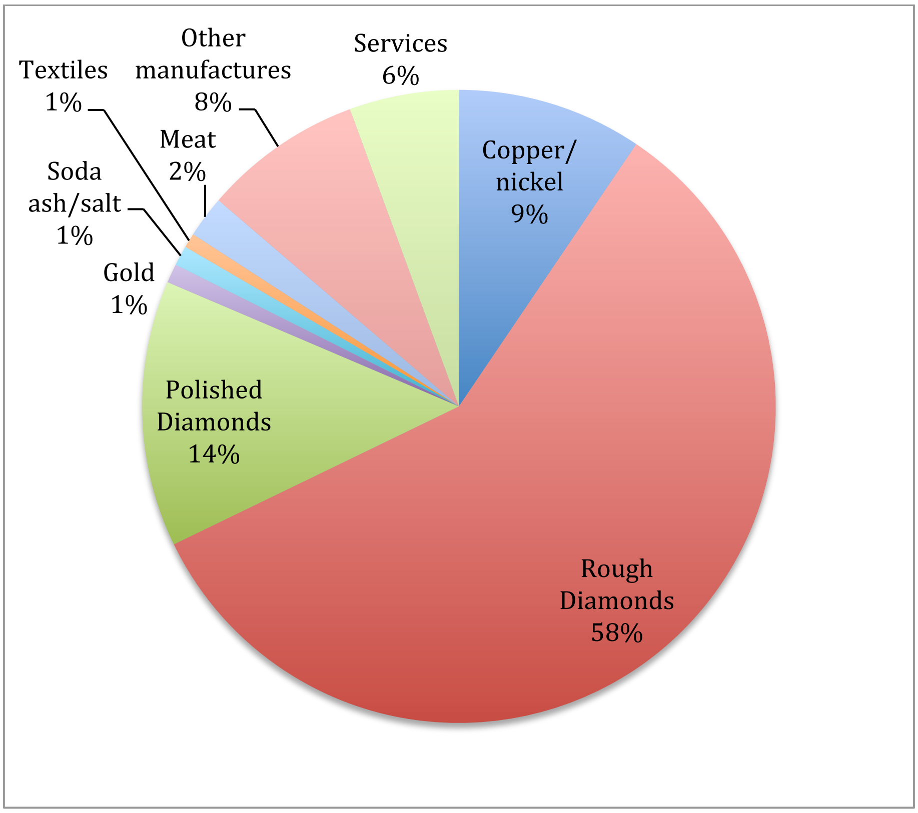
Source: Ministry of Finance and Development Planning

Exports

There has been much less success is in diversifying exports, which remain totally dominated by diamonds. Even without taking account of the flows of diamond re-exports related to diamond aggregation, diamonds have become more dominant between 2008 and 2013, despite the impact of the global financial crisis. This is largely due to the rapid growth of polished diamond exports – which marks a form of diversification, albeit a limited one. Other commodities have at various times in the past accounted for a significant share of exports, but have diminished sharply in importance – notably copper-nickel (21% of total exports in 2007), motor vehicles

(14% of total exports in 1996), textiles (7% in 2007) and meat. Export data relates mainly to goods exports; data on services exports are very poor, but to the extent that they are available, they indicate that services exports only make up around 6% of total exports – despite the much-vaunted success of Botswana's tourism industry.

Figure 8: Composition of Exports, 2013



Source: Statistics Botswana

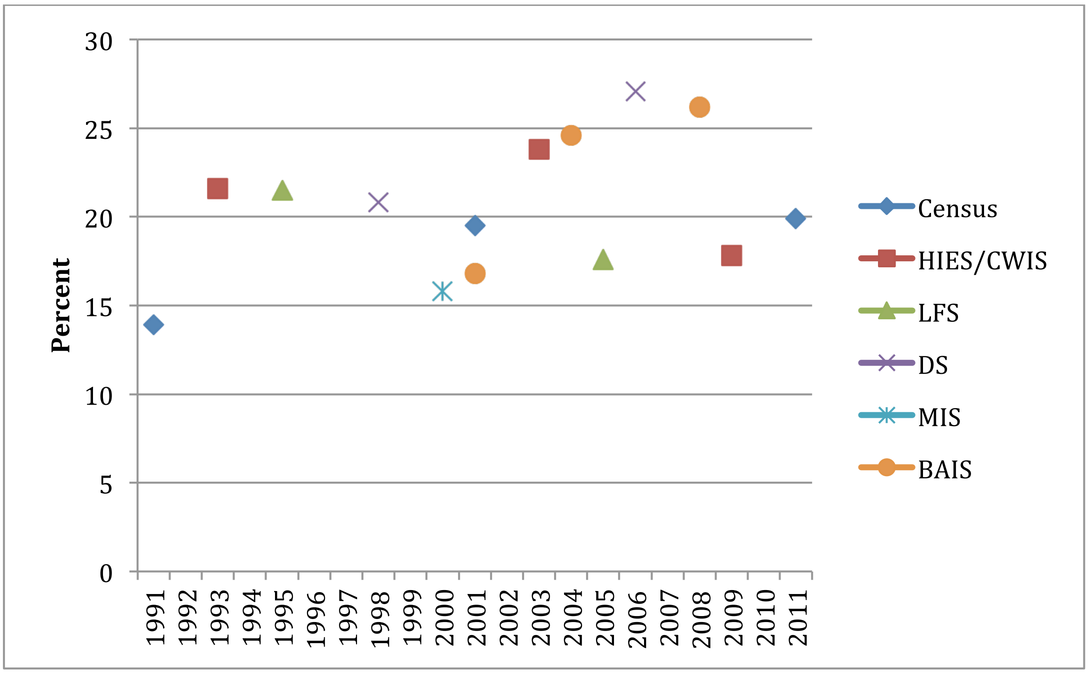
Indeed this illustrates one of the key weaknesses of Botswana's recent economic history: although growth has declined, it remains reasonable by international standards. But GDP growth is being increasingly sustained by the production of services, which are predominantly non-tradeables, and hence does not contribute significantly to export diversification. Weaknesses are being stored up, as eventually diamonds will run out – perhaps gradually, but they will still run out – which will lead to a major balance of payments crisis if not addressed.

Employment, Unemployment, Inequality and Poverty

One of the objectives of diversification has been to stimulate employment creation, and therefore to spread incomes throughout the population. It has long been acknowledged that mining is very capital intensive, and creates few jobs directly. One of the key components of Botswana's development model has been to use the revenues from diamonds to create employment indirectly, through public sector employment, which is one reason why government is by far the largest employer in Botswana, accounting for almost 40% of formal sector jobs. However, sustainable diversification requires the non-mining private sector to take over from mining/government as the main source of jobs.

This has not generally been achieved. Unemployment, although imperfectly and irregularly measured, was at 20% of the labour force in 2011. Formal sector employment only grew on average by 2.4% a year over the period 1994-2012, much lower than the average real GDP growth rate of 4.3% a year over the some period, even though there has been a move away from mining-led growth. Employment growth needs to be faster than labour force growth for the unemployment rate to fall, but this has not been achieved.

Figure 9: Unemployment Rates



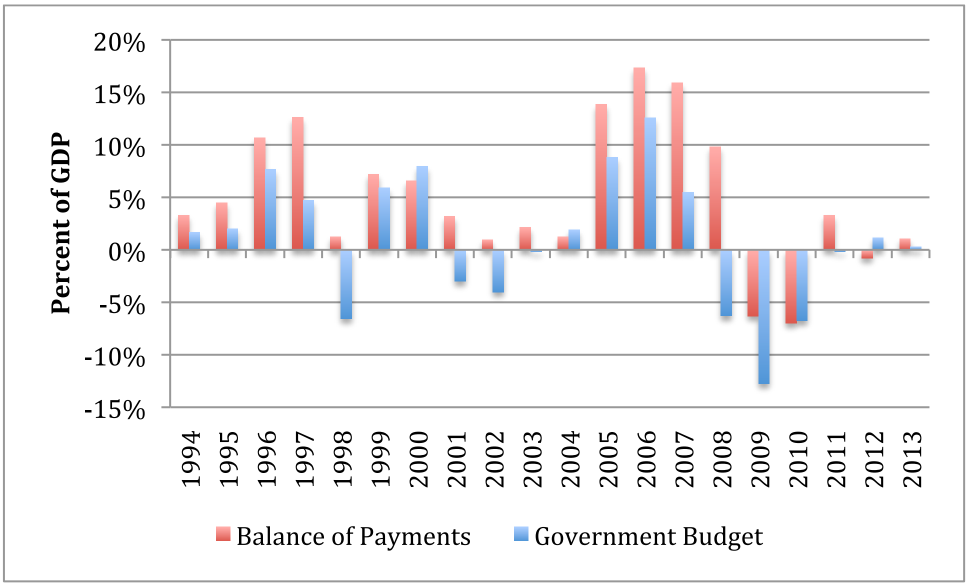
Source: Statistics Botswana

Although poverty has been steadily reduced, it remains high by the standards of upper-middle income countries, as do income and consumption inequality (IMF, 2014).

Asset Accumulation and Public Investment

Finally, how successful has the policy of running twin surpluses and accumulating financial and economic assets been? Certainly surpluses were accumulated over a long period of time, but since the global financial crisis both have been either in deficit or broadly in balance.

Figure 10: Balance of Payments and Fiscal Balances



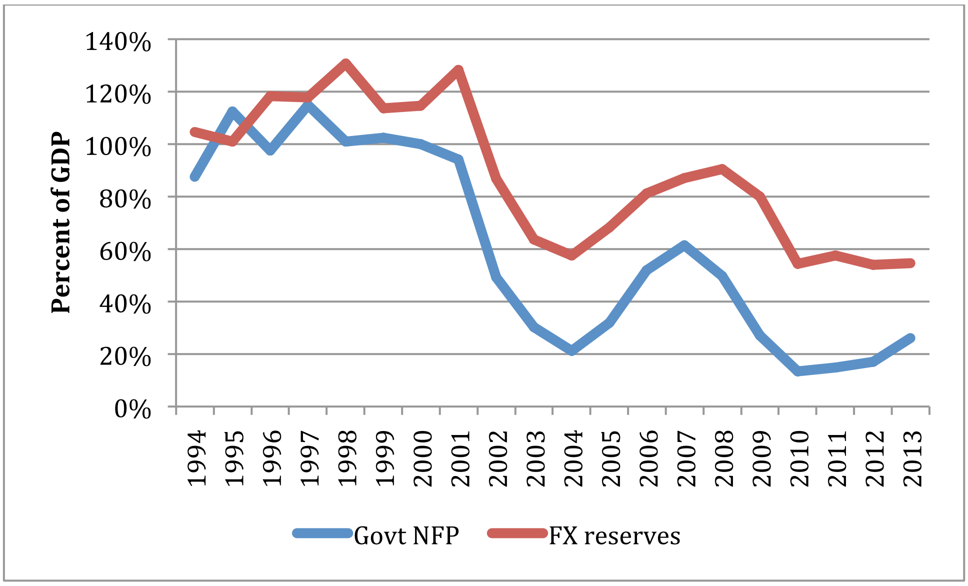
Source: Bank of Botswana and the Ministry of Finance and Development Planning

The objective of using mineral revenues to finance investment have largely been achieved. Around 90 percent of mineral revenues were used to invest in physical / economic assets or human capital, with relatively little used to accumulate financial assets. However, there are major questions regarding the quality of public sector investment, especially in recent years. There are widespread perceptions that investment in education and training has been expensive but ineffective, and there are also widespread examples of very poor quality public investment decisions and management in capital projects[5]. So while mineral revenues may have been invested, it is less clear as to whether this will contribute to future growth.

Finally, the financial balances that were accumulated over the years have largely been depleted. While these proved useful for stabilisation purposes during and after the global financial crisis, they are insufficient to generate significant future incomes.

[5] *The poor quality of investment decisions has two aspects. First, projects are selected that would have minimal economic return, even if implemented on time and within budget, such as tarmac roads in remote and sparsely populated areas. Second, projects that might conceivably have had a positive return if properly implemented have gone way over budget and been completed late, or not at all. In many cases, the cost overrun would cause a positive return to change into a negative return.*

Figure 11: Foreign exchange reserves and government net financial position (% GDP)



Source: calculations based on data from Bank of Botswana and Ministry of Finance and Development Planning

Future Challenges and Conclusions

So what can we draw from this brief review of diversification policies and achievements over the past 40 years?

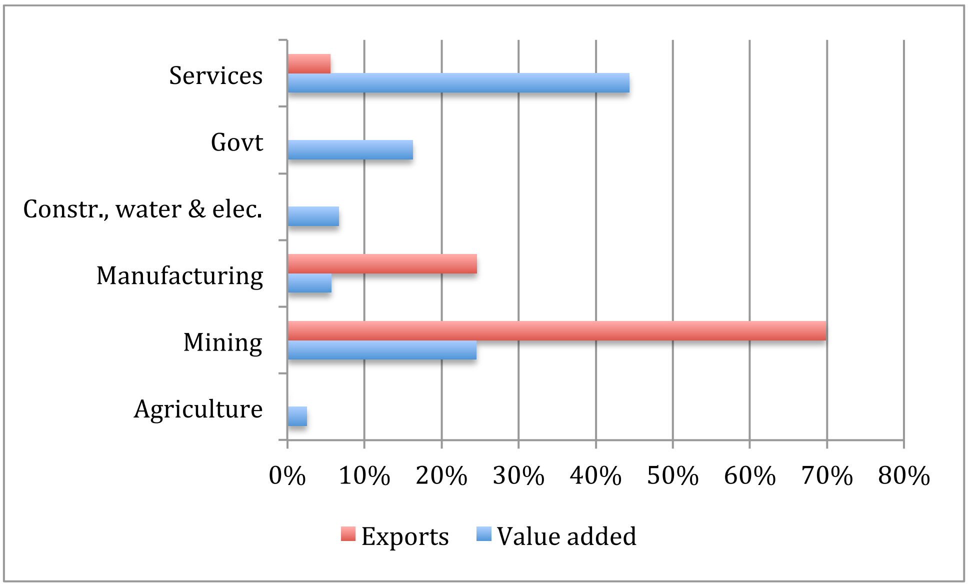
First, there have been some successes. The economy has become more diversified in terms of the composition of GDP and is much less dependent upon diamonds as a driver of economic growth. Government is also much less dependent upon mineral revenue than it has been historically. To that extent there is less economic and fiscal dependence on mining in 2014 than there was, say, 20 years ago.

Nevertheless, the economy has not really become diversified in a self-sustaining manner. Mining has been replaced as the main driver of growth by services, which are primarily focused on the domestic market. The economy has become inward looking rather than outward looking. In such a small economy, there is a limit to how far the domestic market can drive growth.

Furthermore, the diversification that has occurred has been associated with a general decline in economic growth rates; has not been associated with widespread employment creation; and inequality remains very high, indicating that prosperity has not been shared equitably.

The most telling problem is that the balance of payments still remains extremely dependent upon exports of diamonds. Exports have not become more diversified, and this is associated with the shift from mineral-driven growth to services-led growth. This can be seen in Figure 12, which shows that mining and manufacturing are relatively export-intensive sectors, while services are not. Hence the structural shift away from mining and manufacturing towards services has led to a structural decline in export intensity – exactly the opposite of what is needed.

Figure 12: Broad sectoral contributions to value added and exports



Source: based on data from Statistics Botswana and Bank of Botswana

Note: exports of polished diamonds are classified to manufacturing

While growth and the fiscal position may not be directly vulnerable to declining diamond production, the balance of payments certainly is, and this in turn would have knock on effects. Projections prepared for other projects show that unless the export-intensity of the non-mining private sector rises dramatically, there will be a serious balance of payments crisis during the second half of the 2020s. Declining export earnings will reduce the ability to pay for imports, leading to pressure on the exchange rate and downward pressure on real incomes. Eventually, economic growth will be reduced (and may become negative) because of declining incomes, constrained ability to import, and the need to undertake large-scale structural adjustment of the economy. This still remains the challenge: transforming Botswana from an economy driven by mineral rents to one driven by competitiveness and productivity. Mineral rents are essentially unearned income, and although Botswana justifiably has a reputation for good management of mineral revenues, the basis of the economy remains windfall income[6]. While some diversification has been achieved, there has been no transformation to a sustainable future growth pattern.

The challenge therefore is to achieve this structural transformation of the economy: from one dominated by (unearned) mineral rents, with non-mining activity focused on supplying the domestic market in general and government in particular, with little focus on costs and competitiveness, to one driven by exports of goods and services to the regional and global economies, which requires competitiveness, productivity and efficiency.

[6] *This is compounded by the nature of the second major fiscal revenue source, income from the SACU.*

References

Bank of Botswana (2011) *Annual Report*, Gaborone: Bank of Botswana

BIDPA (1999) *Fourth Review of the Financial Assistance Policy,* Gaborone: BIDPA

Cowan, D. (1997) "The Selebi-Phikwe Regional Development Programme: A Case Study of the Costs and Benefits of Foreign Direct Investment", in Salkin et al (1997).

Government of Botswana (2009) National Development Plan 10

Harvey, C. & S. Lewis (1990) *Policy Choice and Development Performance in Botswana*, London: MacMillan and Paris: OECD

IMF (2014) *Botswana 2014 Article IV Consultation Staff Report*, Country Report No. 14/204

Jefferis, K (1996) "Industrial Development: Policies, Achievements and Challenges", in *Botswana's New Industrial Development Policy, National Seminar Report*, September, BIDPA.

Leith, J.C. (2005) *Why Botswana Prospered*, McGill-Queens University Press

Lipton, M. (1978) *Employment and Labour Use in Botswana*, Gaborone: Government Printer

Peat, J. (1997) "Review of the Initial Objectives and Rationale of FAP", in Salkin et al (eds) 1997.

Salkin, J. et al (eds) *Aspects of the Botswana Economy*, Gaborone: Lentswe La Lesedi and Oxford: James Currey

World Bank (2007) *An Assessment of the Investment Climate in Botswana*, Report no. 43645