

## Small Countries with Volatile Revenue: Botswana and Bhutan

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Bhutan and Botswana share a number of similarities. The two countries, land locked small states, have grown rapidly over the past few decades, boosted by sustained, large-scale inflows of foreign exchange. Botswana's annual real growth rate averaged 9 percent over the past 40 years, driven by diamond exploration, whereas Bhutan has taken full advantage of generous foreign aid inflows to achieve an average growth rate of 8 percent per year for the past 30 years. However, after decades of rapid growth, the production base of both countries remains very narrow and the economy continues to directly or indirectly dependent on government demand. Job creation, particularly for the youths, is an important policy issue.

Despite these similarities, Bhutan and Botswana exhibit an interesting contrast with regard to the management of volatile foreign exchange inflows, and its macroeconomic consequences. Notwithstanding the serious impact of the recent global crisis, today Botswana's external position remains solid, guarded by sizable international reserves and low external debt. In contrast, Bhutan has accumulated large external debt and its international reserves are under significant pressure.

This paper discusses Bhutan and Botswana's experiences with managing volatile foreign exchange inflows. It assesses the nature and domestic economic consequences of volatile flows, and analyzes the policy measures that have been used to respond to revenue volatility.

The structure of the paper is as follows. Section 2 analyzes Botswana's experience of managing large, volatile diamond export earnings. Section 3 reviews more recent experience of Bhutan. Section 4 draws policy lessons from the experience of two countries. Finally Section 5 concludes the paper.

### 2. Botswana and Diamonds

With a population of just over two million spread across a landmass comparable in area to that of Texas, Botswana is one of the most sparsely populated countries in the world. As 70 percent of its land surface is covered by the Kalahari Desert, water is precious in Botswana, and their currency, the "pula", literally means rain in their language. When it gained independence from the United Kingdom in 1966, it was rural, tribal and agriculture based, and was one of the poorest countries in Africa. Botswana has since transformed itself, becoming one of the fastest growing economies in the world. Over the past four decades, Botswana grew on average by 9 percent per year, which allowed per capita income to rise impressively, from US\$300 in 1966 to US\$4,400 in 2011 (both in constant 2000 US dollar). However, progress in human development outcomes has lagged. Botswana ranks as the fifth most unequal country in the world, and suffers from a very high adult AIDS prevalence rate. Education and health outcomes are below those of countries in the same income group.

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The main driver of Botswana's remarkable growth has been the abundance of mineral resources, in particular, diamonds, which were first discovered in 1967. Since the mid-1970s, Botswana's economy has been heavily dependent on diamonds as a source of growth, exports and fiscal revenue. Today, the diamond sector contributes to 75 percent of the country's export earnings, 35-40 percent of government revenue and a third of national output. Since 1982, when two large diamond mines came into full production, Botswana's balance of payments position has been in large surplus, which has allowed the country to accumulate sizable international reserves. At their peak, Botswana's gross international reserves stood at US\$9.8 billion in 2007, equivalent to 26 months of imports of goods and services.

Botswana has avoided the pitfalls experienced by many other resource dependent countries, known as the "resource curse". The country has also avoided large borrowing against future mineral income. Despite abundant diamond reserves, it has averted domestic political instability or conflict for the control of diamonds. Rent-seeking behavior and corruption have been kept to a minimum, as reflected in Botswana's excellent governance indicators. Indeed, Botswana is one of the few countries that have successfully used mineral rents to transform itself from one of the poorest countries in the world to an upper middle income country.

This section reviews Botswana's experience with managing large, volatile diamond revenues.

### ***Background***

Diamond mines in Botswana have been developed and operated by Debswana Diamond Company Limited, a 50-50 joint partnership of De Beers and the Government of Botswana.<sup>2</sup> At incorporation, Debswana was fully capitalized by De Beers, and the shares were issued free to the Government of Botswana (Bank of Botswana, 1978).

Sorting, valuing, marketing and sales of rough diamonds produced in Botswana are governed by a sales agreement between the Government and De Beers, which is renewed every 10 years. Since the beginning of diamond mining in the early 1970s, diamonds produced in Botswana have been exported to Diamond Trading Company (DTC) in London—the sales and distribution arm of the De Beers Group—which sorts, values and sells approximately two-thirds of the world's rough diamonds by value.<sup>3</sup>

Botswana's diamond mining is a highly capital intensive industry, requiring a large up-front investment for the construction of mines and surrounding infrastructure, and involving a variety of heavy moving machinery, such as rotary drills, large shovels, dozers, wheeled loaders and haul trucks. After the opening of the mines, additional large investments are required periodically for surface and depth expansion in order to extend the life of the pits.<sup>4</sup> Various stages of investment have been financed by Debswana's retained earnings, and have required no direct financial contribution by the government.<sup>5</sup>

Notwithstanding the large capital requirement, diamond mining in Botswana is extremely profitable. Botswana's diamond mines are large, produce gem-quality diamonds, and require lowest cost for production. No other country in the world has as large diamond mines that produce as high-quality

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<sup>2</sup> The company was originally incorporated in 1969 as De Beers Botswana Mining Company with original shareholding of 85 percent by De Beers and 15 percent by the Government of Botswana. In 1992, the company name was changed to Debswana Diamond Company (Pty) Ltd.

<sup>3</sup> Since 2009 a small proportion of diamonds produced in Botswana is supplied domestically to facilitate the growth of local diamond cutting and polishing industries.

<sup>4</sup> For example, the most recent surface extension that started in 2010, called "Cut 8 Project", is estimated to cost P 24 billion (about US\$3 billion), equivalent to 23 percent of GDP in 2011/12.

<sup>5</sup> In other words, the government has indirectly contributed to Debswana's investment, since investment through retained earnings translates to reduced dividend payouts to the government from Debswana.

diamonds. Botswana’s Jwaneng Mine is the richest diamond mine in the world due to substantially higher dollar per carat obtained for its gems, whereas Orapa Mine is the is the biggest open cast mine in the world.

Diamonds are a unique commodity. The most distinctive feature of diamonds is the relative price stability, due largely to the dominant market position of De Beers, which is historically known for controlling supply and demand to exert influence on diamond prices (Figure 1). Since the turn of the century, however, De Beers’ market position has eroded, with the emergence of diamond producers that chose not to join the cartel. Several lawsuits that were filed against De Beers in the US for its antitrust violations are also said to have changed De Beers’ market practice somewhat.

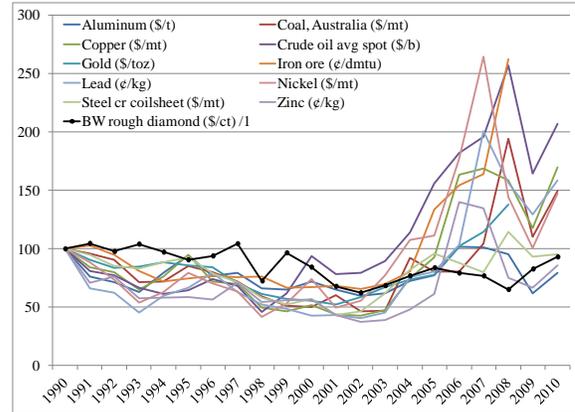
Although diamond production in Botswana is expected to continue at high levels for a while, revenues accruing to the government are projected to start falling sharply in 2020, as a rapid depletion of ore from Jwaneng Mine is projected to start and mining is likely to move from low-cost surface mining to high-cost underground mining, increasing extraction costs and reducing profits. Production may continue until the anticipated depletion of reserves around 2030, but profitability and economic feasibility of underground mining are uncertain.

**Macroeconomic Policy in Early Years**

Revenue from diamond sales accrues to the government coffers through income tax, royalties, and, as a joint owner of Debswana, a share of the company’s profit as dividends.<sup>6</sup> This unique revenue arrangement has allowed the Government of Botswana to make significant revenue from diamond mining—said to be about 80 cents of every dollar of profits generated by Debswana.

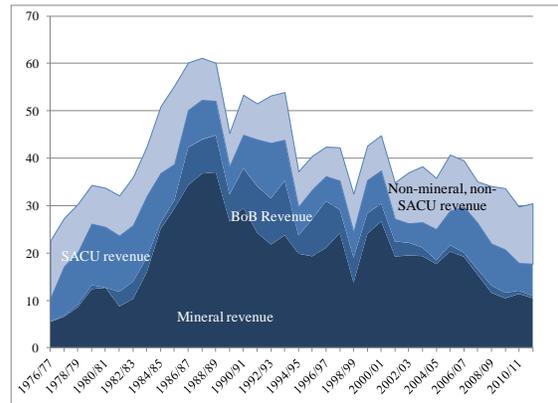
Government revenue from diamonds is volatile notwithstanding the relative price stability.<sup>7</sup> Although it has been on a downward trend for some time, diamond revenue remains the largest contributor to total government revenue (Figure 2). The second largest revenue source for the government is customs union receipts, which are also erratic and unpredictable, and expected to decline owing to the change in the SACU revenue sharing

Figure 1. Commodity Prices (in 1980 US dollar)



Sources: Data Stream and author’s calculation.  
1/ Calculated using Botswana’s diamond exports (value) and the volume of diamond production during the calendar year.

Figure 2. Botswana: Government Revenue Excluding Grants (in percent of GDP)



Source: Ministry of Finance.

<sup>6</sup> Throughout this paper, diamond revenue and mining revenue are used interchangeably since over 95 percent of mining revenue comprises revenue from the diamond sector.

<sup>7</sup> Government revenue from diamonds is one and half times as volatile as diamond exports. Part of the higher volatility of government diamond revenue can be explained by the periodic large investment spending by Debswana, which is tax deductible and reduces the dividend payment to the government through a lower net profit (see Footnote 5).

formula and further trade liberalization. Diamonds and SACU revenues together account for 60-70 percent of total government revenue.

Reliance on large, volatile and externally driven revenue sources has made Botswana's revenue structure extremely vulnerable to external conditions. Although domestic revenue collection has grown over time, following the introduction of VAT and improvements in tax administration, its contribution to overall revenue is still low, accounting for only about 35-40 percent of fiscal revenue.

Botswana's fiscal policy was highly pro-cyclical in the 1980s, when diamond revenue increased exponentially, due to the opening of the Jwaneng Mine and significant firming of diamond prices. Between 1980 and 1990, fiscal revenue grew, on average, by 21 percent per year in real terms (Table 1). The government increased expenditure, in particular, capital expenditure rapidly, by an annual average rate of 15 percent during the same period. The increase in investment was mainly in the housing sector, as the government aimed at improving the supply of commercial and residential buildings, giving rise to a construction boom. The sharp increase in construction spending did however face severe absorptive capacity constraints, and caused a marked acceleration in domestic prices.

Monetary policy was accommodative during this period. Despite the statutory provision, monetary policy in the early years focused on maintaining low levels of interest rates in order to stimulate lending for investment and promote faster economic growth (Bank of Botswana, 2007). Instruments for the implementation of monetary policy were mainly direct controls on commercial banks' interest rates and lending, but exchange rate controls and reserve requirements were also used to mitigate sharp shifts in aggregate demand.

Table 1. Botswana: Real Growth of Revenue and Expenditure (annual percentage change, period average)

	1980/81-88/89	1990/91-95/96
Revenue (excl. grants)	21.0	-1.2
o/w Mining revenue	34.4	-3.1
Expenditure & net lending	14.2	3.3
o/w Wages	14.2	8.0
o/w Development expenditure	15.3	-1.7

Source: Author.

### *First Crisis*

Botswana's fiscal strategy was put to a test for the first time in the 1990s. After a period of strong growth, in 1990 global demand for diamonds dropped suddenly as industrial countries entered into a recession. Between 1989 and 1990, the country's diamond exports plunged by 18 percent in real terms, which, coincided with a decline in SACU revenue, caused a sharp decline in government revenue, of 17 percentage points of GDP. As the global recession deepened further, the international diamond market remained sluggish until around 1996. Diamond exports and fiscal revenue continued to dwindle as a result. The government responded to this situation by cutting down on development expenditure, but current spending, in particular, personal emoluments, continued to grow strongly (Table 1).

Around the same time, there was a major development in the international diamond industry, which caused enormous uncertainties about future profitability of diamond businesses. With the emergence of new diamond producers that chose to distribute diamonds outside De Beers' channel, notably Canada and Russia, the company began to lose its grip on the market. There was considerable fear in Botswana that substantial increases in supply from the new producers could have a detrimental impact on international diamond prices in the future (Bank of Botswana, 1992).

The experience of the 1990s spurred active policy discussions in Botswana. In view of the uncertain external demand conditions and international diamond industry, there was an overwhelming consensus on the need to restore fiscal discipline, in particular, to limit growth of current spending. There was a strong realization that the sufficiency of abundant mineral revenues should not be taken for granted (see Budget

Speech 1994). The country's mineral endowments should be used to build assets that help develop alternative engines of growth, but revenue that cannot be absorbed domestically for productive purpose should be saved. At the same time, the importance of macroeconomic stability was also reaffirmed as a prerequisite for sustainable economic growth and employment creation.

### *Policy Measures*

Against this backdrop, over time, the authorities have introduced various rules and mechanisms broadly to: (i) ensure the use of mineral revenue for investment in physical and human capital in order to sharpen Botswana's competitiveness edge in non-mining sectors; (ii) control expansion of government indebtedness, including that of the parastatals, to keep debt servicing within reasonable limits; and (iii) prevent excessive spending to safeguard macroeconomic stability and fiscal sustainability. The monetary policy framework has been redefined to give greater prominence to the maintenance of price and external stability, thereby reducing uncertainties for economic agents.

First, in 1994 the "Principle of Sustainable Budgeting" was introduced, with the intention of ensuring all mineral revenue to be invested productively or saved, and not used for consumption.<sup>8</sup> This led to the construction of a Sustainable Budget Index (SBI), defined as the ratio of non-education, non-health recurrent expenditure to non-mining revenue. Although it is not a legal requirement, an SBI of no greater than one was targeted, thereby designating mining revenue to public investment and current spending on health and education.

Second, in 2005 a statutory fiscal rule was introduced, limiting the maximum stock of government external debt, including government guarantees, to 20 percent of GDP (Section 20, Stock, Bonds and Treasury Bills Act, Chapter 56:07, 2005). The Act also requires the stock of government domestic debt, including guarantees, to remain no greater than 20 percent of GDP.

In 2006, additional informal rules were introduced as part of the Mid-term Review of National Development Plan 9 (MTR NDP9), setting a ceiling on government expenditure at 40 percent of GDP, to be consistent with the projected medium-term government revenue. In view of the increasing trend of current expenditure, the MTR also introduced a target to raise the share of development spending in the budget to 30 percent by 2008/09.

In parallel to the fiscal initiatives, monetary policy framework was reformed significantly. The most notable was a transition from the low interest rate bias to a focus on price stability. In 1991, Botswana embarked on financial sector liberalization, removing controls on credit and interest rates. At the same time, a new monetary policy instrument, Bank of Botswana Certificates (BoBCs), was introduced, strengthening the capacity of monetary policy operations to mop up excess liquidity through open market operations and facilitate an upward movement in interest rates. The exchange rate policy has focused on maintaining a stable real effective exchange rate of the pula. When Botswana's inflation diverted from that prevailing in trading partner countries, the nominal exchange rate of the pula was adjusted to restore the external competitiveness.

In 1996, the Pula Fund was established with the objective of enhancing the yield on international reserves through investment in longer-dated assets abroad. Although the Act makes no mention of the link between the Pula Fund and fiscal policy, it is generally understood that Pula Fund preserves part of the income from diamond exports that cannot be absorbed domestically for productive purposes (Box 1).

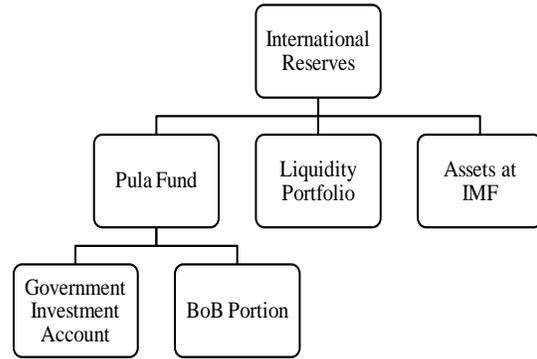
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<sup>8</sup> This is essentially the Hartwick rule, a rule of thumb for sustainability in exhaustible resource based economies. Put it simply, it prescribes investing the resource rents at each point in time in a range of productive capital, including human capital, domestic public and private capital and net foreign financial assets (Hartwick, 1977).

Box 1. The Pula Fund /1

The Pula Fund was established in November 1993, and was subsequently re-established in the current form under the new Bank of Botswana Act (1996) with the objective of providing greater flexibility in the management of international reserves, and greater certainty in the forecasting of annual “dividend” payments to the government from the Bank of Botswana (BoB). The Act came into effect on January 1, 1997.

Under the Act, Botswana’s international reserves were split into two portfolios: (i) the Liquidity Portfolio, to provide the foreign exchange needed for normal day to day international transactions; and (ii) the Pula Fund (officially referred to as “long term investment funds” in the Act) to be invested in long-term assets to achieve higher returns. The Pula Fund, managed by the BoB, is composed of the Government Investment Account (GIA), which reflects savings from accumulated fiscal surpluses of the past, and the BoB’s reserve accumulation above the target for liquid reserves. Pula Fund assets are invested in long-term instruments overseas. The Act charges the BoB to manage and determine investment policy of, and the payment of dividends accruing from, the Pula Fund, in consultation with the Minister of Finance and Development Planning. Together with the Liquidity Portfolio, since 1993 the Pula Fund has been held with a global custodian.



While the Act provides a legal framework for the establishment, management, and auditing of the Fund, it does not specify the objective of the Fund in the context of overall fiscal policy and rules on the operation of the Pula Fund, particularly concerning payments into, withdrawals from and their uses. Although the original idea behind the establishment of the Pula Fund was to invest in long-term offshore assets the financial resources that cannot be absorbed domestically for productive purposes, there are no other laws, constitutions, regulations nor guidelines that explicitly specify the link between the Pula Fund and fiscal policy. Since its establishment, the Pula Fund has, by and large, served as a revenue stabilization fund, despite the absence of clearly defined objectives as such.

1/ Kojo (2010).

**Effectiveness**

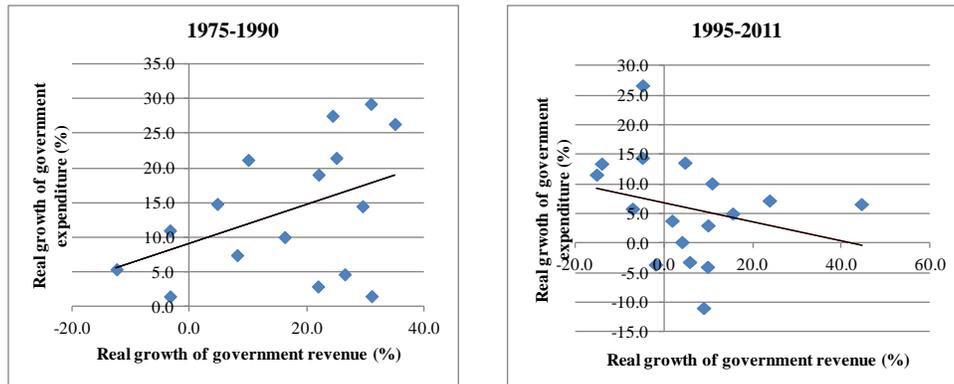
Has Botswana’s policy framework been effective in achieving the stated objectives? The short answer is that Botswana’s macroeconomic policy framework has been very successful in maintaining macroeconomic stability and containing real appreciation of the pula. Diamond revenue has been wisely invested to build the country’s physical and human capital, or saved in foreign financial assets. However, progress towards economic diversification and job creation has been more limited than hoped by the authorities.

Botswana’s fiscal policy turned to counter-cyclical in the mid-1990. As Figure 3 shows, during 1975-90 there was a strong the positive relationship between real growth of government revenue and expenditure, confirming that fiscal policy was pro-cyclical during this period. However, this relationship has turned negative since the mid-1990s, suggesting that Botswana has been implementing counter-cyclical fiscal policy.

Monetary policy has played an effective complementary role by containing demand pressures and reducing inflation, particularly since 1993 (Figure 4). The Bank of Botswana has actively used the Bank Rate in conjunction with open market operations as the main tools of monetary policy to restrain credit

growth and moderate demand pressures on inflation.<sup>9</sup> Subsequent spikes in inflation were attributed to transitory supply-side factors. Reflecting the extent of excess liquidity in the financial system, the stock of outstanding BoBCs has grown substantially since the introduction.

Figure 3. Botswana: Fiscal Policy

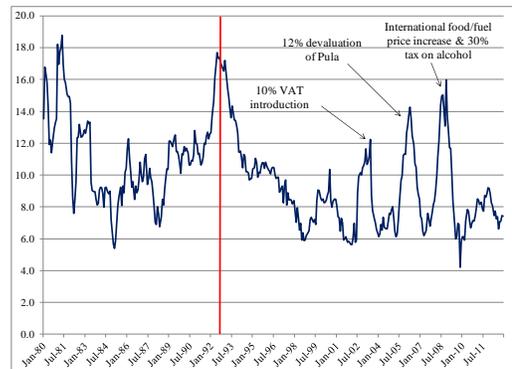


Source: Author.

Exchange rate policy has been geared towards maintaining a stable real effective rate of the pula. Attainment of price stability has contributed to the stability of the real effective exchange rate (Figure 5). In 2005, Botswana adopted a crawling peg/band mechanism, enabling an automatic nominal adjustment of the pula exchange rate, thereby avoiding the need for sizable discrete exchange rate adjustments. The crawling band exchange rate regime is implemented through continuous adjustment of the trade-weighted nominal effective exchange rate of the Pula at a rate of crawl based on the differential between the BoB's inflation objective and the forecast inflation of trading partner countries.

All the fiscal surpluses not used for the small amount of external debt repayment have been transferred to the Government Investment Fund (which constitutes part of the Pula Fund) and withdrawn to expand fiscal policy in lean years in which revenue fell. Although there are no laws, constitutions, regulations nor guidelines that explicitly specify the link between the Pula Fund and fiscal policy, the Government Investment Fund has effectively served as a revenue stabilization fund, providing a cushion in the event of an external shock. It is this cushion, rather than the statutory debt limits, that has prevented Botswana from borrowing externally for budget support purposes.

Figure 4. Botswana: Annual Inflation (in percent)



Source: Bank of Botswana.

Figure 5. Botswana: Real Effective Exchange Rate (2000 = 100)



Source: Author.

<sup>9</sup> In addition, repurchase agreements (repos) were used to mop up intra-auctions excess liquidity.

Despite the stable real exchange rate of the pula, performance of Botswana’s non-mining export sector (agriculture and manufacturing) has been sluggish. Instead, the non-tradable sector has become the engine of private sector growth. The service sector, in particular, the wholesale/retail trade, and finance and real estate sectors, has shown robust growth, contributing to employment creation in the private sector. Nonetheless, despite the strong service sector growth, unemployment has remained persistently high and inequality has widened since independence (Acemoglu, et al, 2003).

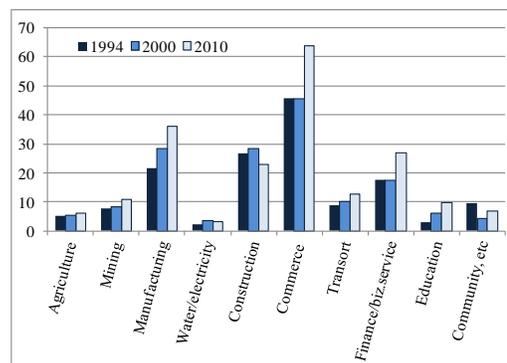
According to the World Bank’s Doing Business Report 2013, Botswana’s business environment compares favorably with other middle income countries, but firms in Botswana are not highly competitive, constrained by, among other factors, shortages of skilled labor—despite years of heavy spending on education—and are more interested in catering to the government than exports.<sup>10</sup> The strategy of converting mineral wealth into human capital has not produced desired results, notwithstanding the favorable exchange rate and business environment.

### Challenges

With limited economic diversification, Botswana continues to be vulnerable to external shocks, as evidenced during the recent global financial crisis. At the onset of the crisis in September 2008, global demand for luxury goods such as diamonds collapsed, bringing Botswana’s diamond exports to an abrupt halt. In 2008, for the first time over the past 20 years, Botswana recorded a current account deficit and negative GDP growth. Fiscal revenue from diamonds fell sharply. The authorities responded to the unprecedentedly large crisis through aggressive monetary easing and counter-crisis fiscal policy, financed by withdrawals from the Pula Fund and budget support borrowing from the African Development Bank. Between 2008 and 2010, government savings in the Pula Fund declined from US\$4.5 billion to US\$2 billion, while external public debt rose sharply from US\$270 million to US\$1.8 billion (12 percent of GDP). The Bank Rate was reduced six times during 2009-2010.

Going forward, Botswana needs to place a greater attention to medium-term considerations, as the issue of reserve exhaustibility figures more prominently now. Fiscal policy needs to strike a careful balance between short-term demand management and medium-term fiscal sustainability, which includes rebuilding the Pula Fund. With the rapid depletion of diamonds starting around 2020, overall fiscal revenue is set to shrink sharply. Long-term fiscal sustainability for Botswana requires a combination of domestic revenue enhancement and expenditure cut down. However, as the scope for raising domestic revenue is limited by the size of the private sector, the major part of Botswana’s fiscal consolidation needs to come from reduced government expenditure. This should be accompanied by the improvement in the quality of spending. In particular, the quality of public services in education and health needs to be enhanced significantly, as a healthy workforce with a right skill set is vital to Botswana’s competitiveness and productivity.

Figure 6. Botswana Paid Employees by Sector (in thousands) /1

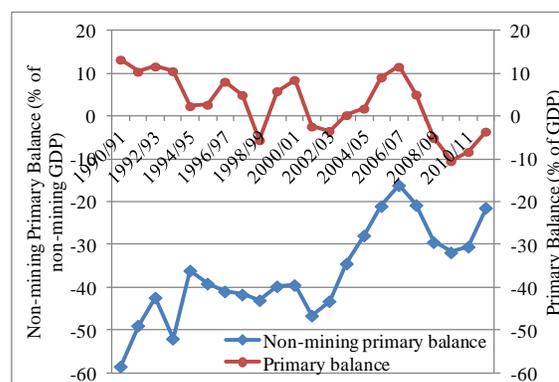


Source: Botswana Central Statistical Office.  
1/ Includes parastatals.

<sup>10</sup> Besides shortages of skilled labor, the demographic crisis created by AIDS has detrimental impact on the economy through lower investment rates and labor productivity. See Lule and Haacker (2012) for the review of empirical studies on macroeconomic consequences of HIV/AIDS in Botswana.

To anchor fiscal policy formulation, Botswana could consider the use of the non-resource primary balance as a benchmark (Figure 7). Literature suggests that the use of non-resource balance, scaled by non-resource GDP, can provide a useful guide by facilitating an explicit link to the medium-term sustainability framework, while helping delink fiscal policy from resource revenue volatility (IMF, 2012). To avoid potentially abrupt fiscal adjustments when diamond reserves are exhausted, Botswana should aim at bringing down the non-mining primary deficit gradually, from 22 percent of non-mining GDP in 2011/12 to a near balanced position by 2020, when a rapid depletion is projected to start.

Figure 7. Botswana: Primary Balances



Source: Author's calculation.

Economic diversification is another policy priority, as it will facilitate a more balanced development that will provide a livelihood for people after diamond reserves are depleted. A vibrant private sector will also help broaden the government's revenue base, and mitigate Botswana's revenue vulnerability to external conditions. These efforts will take time to yield results. The structural transformation of Botswana's economy needs to be well under way before the long-term decline in diamond exports sets in.

Botswana's diversification strategy is to use diamonds as a catalyst to foster non-diamond sectors. As a step to developing a local downstream diamond industry, in 2008 Diamond Trading Company of Botswana was established to sort and aggregate diamonds locally. Cutting and polishing of locally produced gems began in 2009. In 2011, Botswana and De Beers reached a new sales agreement, by which before the end of 2013 DTC will relocate all its sights and sales operations from London to Gaborone, Botswana's capital, in a bid to eventually turn the country into a diamond hub.<sup>11</sup> These initiatives are expected to help Botswana move up the value-chain within the diamond industry and to process diamonds in the country rather than simply export the raw product.

### Discussion

Botswana's accomplishments are really impressive. The country has sustained very high rates of economic growth over a remarkably long period, while maintaining macroeconomic stability. Despite rich diamond reserves, it has avoided conflict over the control of diamonds and rent-seeking behavior and corruption have been kept to a minimum.

What is so unique about Botswana's case? How did Botswana avoid a resource curse and achieve rapid development? We argue here that three factors have worked in Botswana's favor: (i) strong political leadership; (ii) institutions; and (iii) luck.

First and foremost, Botswana's success has attributed greatly to Botswana's first president, Seretse Khama, who made a number of critical and farsighted decisions during the post-independence period.<sup>12</sup> One of his most distinguished decisions was the passing in 1967 of the Mines and Minerals Act, through which he transferred rights over subsoil diamonds away from his own tribe—the Bangwato of which he was the paramount chief—to the state. Before this legislation, the rights were accrued to the tribes (Acemoglu et al., 2003). The timing of this decision was also critical. President Khama transferred rights

<sup>11</sup> DTC authorizes bulk purchasers of rough diamonds. The authorized bulk purchaser is called a "sightholder".

<sup>12</sup> There is rich literature that analyzes the political economy dimension of natural resource management in Botswana. See, for example, Martin (2008).

before diamond revenue began to flood into the country; it is much easier to redistribute hypothetical income than actual income.

The second key factor that led to Botswana's success is the quality of its institutions, in particular, its technocrats. It is not an overstatement that Botswana's macroeconomic management has rested on the capable and diligent technocrats, whose eagerness to identify, analyze and learn from their own mistakes has played an important role in the management of large resource rents.<sup>13</sup> Official publications, such as the Government Budget and Bank of Botswana Annual Reports, published during the early 1990s indeed contain extensive policy analysis based on the country's earlier policy errors and cross country experiences.

Finally, Botswana struck an extremely good profit sharing deal with De Beers, which has delivered significant and continuing revenue flows to the government. The country has taken full advantage of its unique position as the world's largest gem-quality diamond producer, to obtain a large share (80 percent) of the profit from diamond production. Coupled with the extremely high profitability of diamond business, this arrangement has ensured sizable revenue flows to the government, thereby contributing to the country's economic development. The arrangement has also eliminated the needs for the government to borrow externally to finance developmental needs. Furthermore, the country has taken full advantage when a sales agreement with De Beers gets renewed every 10 years. The deal to relocate DTC's sights and sales operation to Gaborone was struck when a new sales agreement was under negotiation with De Beers.

Nonetheless, Botswana's success should be balanced against its uneven development. Most importantly, even after decades of rapid economic growth, income inequality has widened, and Botswana's inequality is one of the highest in the world. Although poverty headcount has fallen dramatically, the country's human capital development index lags behind that of many other countries with similar income levels. The longstanding policy goal of economic diversification remains unaccomplished, and unemployment remains persistently high. Clearly, years of rapid economic growth has not benefited the population equally.

### **3. Bhutan: Large Aid Inflows and Hydropower Development**

The Kingdom of Bhutan is a landlocked state in South Asia located at the eastern end of the Himalayas. It has a population of less than 750 million. Bhutan is mostly mountainous and has a rugged terrain, and its size is roughly that of Switzerland. Bhutan is well known for its distinctive vision of Gross National Happiness, which focuses on improving the quality of life, ensuring the conservation of the national environment, and preserving the country's rich culture in more holistic and psychological terms than only the economic indicator of GDP. In 2008, Bhutan transitioned peacefully from absolute monarchy to constitutional monarchy following a decade long planning and consultations.

Bhutan is one of the few countries in recent times to achieve rapid growth with little of its own resources. Over the past 30 years, the Bhutanese economy grew by an average rate of 7.7 percent per year, and GDP per capita rose more than five times, from US\$260 in 1981 to US\$1,400 in 2011 (both in constant 2000 US dollar). At this pace of growth, Bhutan is expected to become a middle income country by 2015.

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<sup>13</sup> Some researchers (see, for example, Parsons et al., 1995) attribute this to President Seretse Khama's conscious decision to delay the "indigenization" of the public service until qualified Batswana were available. This is in stark contrast to most other African countries after independence.

Bhutan’s strong economic performance has been driven by two important factors: (i) generous foreign aid; and (ii) aid-financed hydropower development, which has boosted GDP directly through power exports to India, and indirectly through transport and construction activity for the power projects in the pipeline. Since hydropower development began in the mid-1970s, the country has gone through a major economic transformation, from a largely agriculture-based economy to one with modern sectors such as services, construction, and manufacturing.

Despite the immense benefits they bring, the size and cyclicity of foreign aid inflows have posed significant policy challenges to Bhutan. Generous donor assistance has been directed to finance critical infrastructure investment and to harness huge hydropower potential. However, over time, large-scale aid inflows have stretched the capacity of macroeconomic policies to adjust and led to overheating. Imports have grown rapidly, outweighing growth of exports. Bhutan’s external current account deficit widened to 24 percent of GDP in 2010/11. International reserves have come under tremendous pressure, while borrowing for hydropower projects has led to a large accumulation of external public debt, which stood at 80 percent of GDP in June 2012 and is projected to reach 110 percent by 2014/15.

This section reviews Bhutan’s experience of managing large and volatile foreign aid inflows.

### **Background**

Foreign aid has played a crucial role in Bhutan’s development since the country began to open its door to outsiders in the late 1950s. During the 1960s, economic aid from India was the only source of cash revenue to the government (Aris, 1980). However, with the admittance to the UN system in 1971, Bhutan began to receive development assistance from multilateral and other bilateral donors, which together with aid from India, has allowed Bhutan to implement important development programs.

Foreign aid to Bhutan, all channeled through the government systems, can be classified into two types (Table 2). The first is the financial assistance from the Government of India for hydropower development (“GoI hydro financing”). GoI hydro financing is denominated in the Indian rupee, to which the ngultrum is fixed at par, and disbursed through a combination of loans and grants. Since Bhutan embarked on hydropower development in the 1970s, GoI has provided funding for six mega hydropower projects, of which three has been commissioned and the rest at various stage of construction (Box 2).<sup>14</sup> The second type is foreign aid other than GoI hydro financing. Other aid takes the form of grants and loans, some of which are project tied, and provided in a variety of hard currencies, except for financial assistance from GoI, which is denominated in the Indian rupee.<sup>15</sup>

Table 2. Bhutan: Foreign Aid

	GoI hydro financing	Other foreign assistance
Donor	Government of India (GoI)	Multilateral (WB, ADB, IFAD) Bilateral (Japan, India, Austria, etc.)
Form	Grant (project tied) Loan (project tied)	Grant (project tied/budget support) Loan (project tied/budget support)
Currency	Indian rupee	Convertible currencies/Indian rupee
Characteristics	Lumpy but predictable	Unpredictable
On/off budget	Off budget	On budget

Source: Author.

<sup>14</sup> There are two small power projects, constructed exclusively for domestic power supply. Financing for these projects was provided by the Government of Austria and Asian Development Bank, and is classified as the second type of foreign aid.

<sup>15</sup> For example, GoI provides Rs. 800 million annually as a budget support grant to Bhutan.

## Box 2. Hydropower Sector in Bhutan

Bhutan is endowed with an enormous wealth of hydropower potential. Out of its huge hydropower potential, estimated at 30,000 MW, presently a little over 1,480 MW or about 5 percent of the potential has been harnessed. The government is aiming at achieving a total installed capacity of 10,000 MW by 2020. To this end, 10 projects have been identified and are currently at various stage of construction.

Bhutan embarked on hydropower development in the mid-1970s with the objective of providing energy security for domestic consumption, and developing opportunities to export surplus power to India. The hydropower sector is developed and operated by the public sector. The construction of hydropower plants is executed by an autonomous body, “hydropower project authority”, set up under the Ministry of Economic Affairs.<sup>1</sup> Within two years after the completion and commissioning of the project, the hydropower project authority is dissolved and the project is amalgamated into Druk Green Power Corporation (DGPC), a wholly-owned corporate entity of the government. DGPC is charged with the maintenance and operation of the plants, including exporting power to India. Currently, DGPC has four hydropower plants generating about 7,000 GWh of hydropower annually, of which 5,000 GWh is exported to India.

The development of hydropower projects is highly capital intensive, requiring a large up-front cost. So far, all the major hydropower projects are financed by the Government of India in the proportion of 60 percent grant and 40 percent loan. Bhutan provides free land, timber and firewood for the projects and waives taxes on construction material. In line with the bilateral agreements between the Governments of Bhutan and India, all surplus power—the electricity over and above that is required for use in Bhutan—is exported to India, which suffers from chronic power shortages. The rates at which electricity is sold to India are fixed at mutually agreed levels, and are reviewed by the two governments every three years. The electricity tariffs for exports are denominated in the Indian rupee, to which the ngultrum is fixed at par. This arrangement has assured Bhutan of steady revenue flows without financial risks.

Over time, Bhutan has become heavily dependent on the hydropower sector for its exports and growth. Since the commissioning of Tala Project (1,020 MW) in 2008, power exports have contributed to 40-45 percent of Bhutan’s total merchandise exports. Although direct value added of the power sector have accounted for 20 percent of GDP, the sector has boosted GDP indirectly through transport and construction activity for hydropower projects in the pipeline.<sup>2</sup>

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1. Each hydro financing agreement with GoI requires an autonomous body, “hydropower project authority”, to be set up to oversee the construction process. For example, Tala Hydropower Project Authority (THPA) was created for the development of Tala Hydropower Project.

2. Construction of a main power project involves pre-construction infrastructure works, including building access bridges and roads, for which a growing share of local businesses is involved.

Foreign aid inflows are significantly large relative to the size of the Bhutanese economy, highly volatile and unpredictable, all of which make macroeconomic management challenging. Over the past decade, inflows of foreign assistance have fluctuated widely, ranging between 15 and 48 percent of GDP, or 40 percent and 180 percent of total revenue (Figure 8).

Of the two types, GoI hydro financing flows are particularly large and volatile, driven by the cycles of hydropower development, but are more predictable than other aid flows.<sup>16</sup> GoI financing is released on a “pay-as-you-go” basis, linked to the progress of the construction of the project. The size of each year’s fund release is equal to the amount spent on hydropower development. For this reason, hydro financing inflows rise sharply during the height of the construction, and taper off immediately following the completion of the projects.

### Macroeconomic Policy Framework

Macroeconomic management in light of large, volatile foreign exchange inflows is extremely challenging. Since Bhutan’s fixed exchange rate regime with India allows little scope for independent monetary policy, fiscal policy has to play the central role in ensuring macroeconomic stability. Macroeconomic management in Bhutan has been guided by the following practice and principles.

First, with the intention of removing the cyclical components from the budget, all financial flows associated with hydropower development—receipts of GoI hydro grants and loans and capital expenditure towards the construction of hydropower projects—are excluded from the entire budgeting cycle (preparation, approval, execution and accountability). GoI hydro grants and loans are disbursed directly to the hydropower authorities bypassing the national budget, but the financing agreements stipulate the Royal Government of Bhutan as the beneficiary. All GoI hydro loans are treated as if they are on-lent to the hydropower authorities, albeit there is no formal agreement as such.

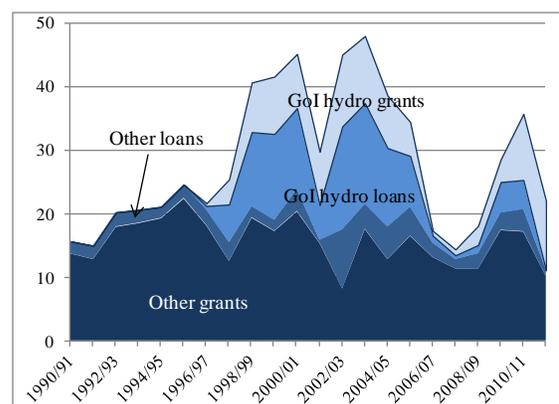
Once a power project is commissioned, all financial flows related to the project are brought to the national budget. These flows include: (i) corporate tax revenue and dividends from Druk Green Power Corporation (DGPC), a 100 percent government owned entity that operates and maintains hydropower plants; (ii) transfer from DGPC towards debt service payments on GoI hydro loans; and (iii) debt service payments on GoI hydro loans, which start immediately after the commissioning of the power project (Table 3). All other foreign assistance is consolidated in the budget.

Table 3. Hydropower-related Financial Flows

	On budget	Off budget
Revenue	<ul style="list-style-type: none"> <li>• Corporate tax from DGPC</li> <li>• Dividends from DGPC</li> <li>• Transfer from DGPCs for interest payment on GoI hydro debt</li> </ul>	<ul style="list-style-type: none"> <li>• GoI hydro grants</li> </ul>
Expenditure	<ul style="list-style-type: none"> <li>• Interest on GoI hydro loans</li> <li>• Transfer from DGPC for GoI hydro debt repayment</li> </ul>	<ul style="list-style-type: none"> <li>• Capital expenditure for construction of hydropower plants</li> </ul>
Financing	<ul style="list-style-type: none"> <li>• GoI hydro debt amortization</li> </ul>	<ul style="list-style-type: none"> <li>• GoI hydro loan disbursement</li> </ul>

Source: Author.

Figure 8. Bhutan: Foreign Aid Inflows /1 (in percent of GDP)



Source: Bhutanese authorities.  
1/ Gross.

<sup>16</sup> For example, the total project cost for Bhutan’s first major hydropower project, Chukhha Hydropower Plant, was Nu. 2.5 billion (US\$180 million at the prevailing exchange rate), almost equal to Bhutan’s GDP at the time when the Project was commissioned in 1988.

Second, Bhutan’s fiscal policy is guided by a rule that requires: (i) current expenditure should be covered by the internal resource of the country; and (ii) over the medium term, the current operating deficit should be maintained near zero. Bhutan’s fiscal rule is a slightly modified version of the golden rule adopted by the UK in 1998.<sup>17</sup> It directs all foreign grants and loans, including budget support assistance, to exclusively fund public investment. In 2007, the Public Finance Act was enacted, making the rule a statutory fiscal rule (Chapter II:7).

Monetary policy has been confined to the support of the exchange rate peg and the management of financial sector liquidity to smooth out undesirable liquidity fluctuations in the system. To address excess liquidity, the Royal Monetary Authority (central bank, RMA) has mainly used the reserve requirements, given the cost implication of the open market operations through the sale of treasury bills.<sup>18</sup> Short-term interest rates have been negative in real terms.

### *Effectiveness*

Has Bhutan’s policy framework been effective in dealing with large, volatile aid inflows?

On the surface, at least, Bhutan’s fiscal policy has appeared prudent. The government has adhered to the fiscal rule, by covering all current outlays by domestic revenue. Although current expenditure has shown an increasing trend since 2007, the increment has been fully covered by domestic revenue, which increased temporarily following the commissioning of the Tala Hydropower Project (Table 4). The current operating balance has remained in surplus. On-budget public investment has been executed only when concessional resources are available to finance them. As a result of generous aid, Bhutan has been able to spend about 20 percent of GDP on public investment every year. When foreign assistance fell short, public investment was cut back. The “budget” balance, which excludes hydro development financial flows, has been in deficit most of the time. However, concessional loan inflows have been more than enough to cover the deficit most of the time, enabling the government to save part of the concessional loans.

Table 4. Budget Indicators /1  
(2001/02-11/12 average, in percent of GDP)

Budget balance	-2.3
Current operating balance, excl. grants	2.3
Primary balance	-0.3
Budget balance, excl. grants	-15.9

Source: Bhutanese authorities.

1/ Including on-budget grants unless otherwise indicated.

GoI-financed off-budget hydropower investment has been executed by the hydropower authorities. In 2008, Tala Hydropower Project (1,020 MW) came on stream, which has more than doubled Bhutan’s power generation capacity, boosting power exports to India, while construction of power projects in pipeline—10 ongoing projects as of end-2012—has stimulated transport and construction activity, contributing to robust growth. Although rapid hydropower development has led to a substantial increase in external debt, neither the government nor donors have questioned high commercial viability of Bhutan’s hydropower projects, in view of the rapidly growing electricity demand from India.

Bhutan’s approach has proven to have major weaknesses.

<sup>17</sup> The standard golden rule requires, over the economic cycle, the government to borrow only to invest and not to fund current spending. It does not specify if government borrowing should be sourced externally or domestically.

<sup>18</sup> Prior to December 2009 RMA bills were used for open market operations. RMA bills was discontinued and replaced by Treasury bills in December 2009.

In late 2009, Bhutan began to show signs of macroeconomic instability. Inflation began to rise markedly, initially driven by food price inflation imported from India. However, inflationary pressure has become more generalized and intensified, reaching 13.5 percent year on year in June 2012 (Figure 9).<sup>19</sup>

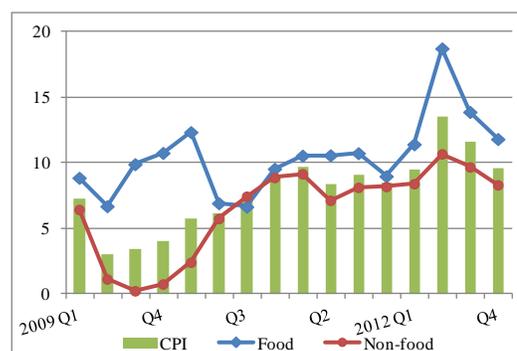
Bhutan's external position deteriorated markedly. Despite the significant increase in electricity exports, the trade account deficit has widened sharply, as export growth was unable to keep pace with growth in imports – particularly imports from India. Part of the increased imports from India was related to the construction of new hydropower projects and fuels, but consumption-related imports have also grown strongly. Generous grant inflows have been unable to offset the growing trade deficit. Bhutan's external current account has continued to deteriorate significantly, to reach almost 25 percent of GDP in 2010/11. The deterioration of the external account with India was particularly serious, putting significant pressures on Bhutan's rupee reserves.<sup>20</sup> In November 2011, having nearly depleted the rupee reserves, Bhutan resorted to expensive short-term liquidity facilities from India in order to make debt service payments on GoI hydro debt.<sup>21</sup>

What went wrong?

Bhutan's economic woes are attributed to macroeconomic mismanagement of large, volatile foreign aid inflows. It is aid-financed expansionary fiscal policy—coupled with the weak liquidity management by the RMA—that created a rapid credit expansion, amplifying aggregate demand pressures, exerting inflationary pressures, and exposing the domestic financial system to the boom-bust cycle of aid. Between 2001 and 2012, credits to the private sector expanded, on average, by 34 percent per year. Although the RMA has raised the reserve requirements significantly over time, this has been ineffective in controlling the liquidity condition. Treasury bills have been issued periodically, but at artificially low discount rates, doing little to influence the interest rates. The rapid credit expansions have spilled over into the external sector through greater demand for rupee imports, while increased demand for non-tradables has led to the emergence of a real estate bubble and rising prices of domestically produced goods and services.

In March 2012, the Royal Monetary Authority (RMA), the country's central bank, introduced a number of administrative measures to restrict access to, holding of, and control of payments in, the Indian rupees, while suspending new lending to specific sectors to cool down aggregate demand and tame credit growth. This has not only undermined the credibility of the one-to-one exchange rate arrangement with India, but also intensified price hikes, in particular, of food items imported from India.<sup>22</sup> At the same time, the regulatory framework was strengthened to safeguard financial sector soundness. However, unaware of the root cause of overheating, the Ministry of Finance continued with business-as-usual fiscal policy

Figure 9. Bhutan: Inflation (annual percentage change)



Source: Bhutan National Statistics Bureau.

<sup>19</sup> As the ngultrum is pegged one to one to the Indian rupee, and Bhutan's inflation rate tracks that of India very closely. However, during the heights of hydropower construction, inflation in Bhutan becomes markedly higher than in India. It is believed that Bhutan's CPI tends to underestimate real inflation on the ground, and that that real appreciation of the ngultrum has been more rapid than what the data suggest.

<sup>20</sup> Balance of payment transactions with India take place in the Indian rupee, to which the Bhutanese ngultrum is pegged one to one.

<sup>21</sup> Although the short-term facilities are recorded as liabilities in the RMA's balance sheet, the facilities were extended to the Royal Government of Bhutan, according to the legal agreements, and signed by the Finance Minister.

<sup>22</sup> The hardest hit was fruits and vegetables imported from India, whose prices rose, respectively, by 56 percent and 40 percent in the second quarter of 2012.

focusing on the national budget, which captured only part of the country's fiscal activity (Figure 10). In parallel, large-scale hydropower investment was pursued outside the budget, adding to the overheating pressures.

Over the course of 2012, Bhutan has increased short-term liquidity financing, to meet import needs and pay installments for the GoI loan taken to build the Tala Hydropower Project. At end-2012, total public external debt amounted to 81 percent of GDP, of which 13 percent of GDP was short-term liquidity borrowing. The high interest rate charged on short-term rupee borrowing has strained the external account further. During 2011/12 alone, Bhutan's debt service ratio exceeded 130 percent, of which debt services on the short-term facilities were equivalent to 120 percent of exports of goods and services.

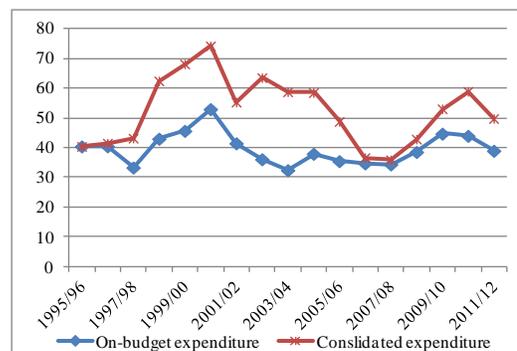
### Challenges

Bhutan's medium-term growth prospects appear favorable, underpinned by hydropower investment, but significant challenges remain. There are three major challenges: (i) addressing the ongoing macroeconomic imbalances; (ii) dealing with large hydropower revenue in the medium term; and (iii) public debt sustainability and hydropower sector performance. If not addressed effectively, these challenges will seriously constrain Bhutan's future economic growth and development prospects.

The most imminent challenge is the restoration of macroeconomic stability. In recent years, development projects have been pursued at a scale that was well beyond the economy's absorptive capacity, that is, at the expense of macroeconomic stability. A stable macroeconomic environment is one of the most critical elements to foster private sector led growth. While the desire to address pressing development needs is understandable, Bhutan needs to strike a better balance between short-term macroeconomic management and long-term development objectives.

Given the fixed exchange rate arrangement, fiscal policy has to take a greater role in providing a stable macroeconomic environment. Ensuring macroeconomic stability requires fiscal policy to adjust in light of the country's absorptive capacity, while minimizing the impact of aid volatility to deliver more counter-cyclical fiscal policy. The overall budget balance can be misleading as an indicator of demand management, especially when the national budget captures only part of the country's overall fiscal activity. Generally, rising inflation, rapid credit growth, and falling international reserves—signs of overheating—would call for fiscal tightening when the country has a pegged exchange rate. Such policy decisions need be informed by analysis of reliable and comprehensive fiscal data. In this context, it is paramount important to shift to a system of a consolidated national budget, which integrates all fiscal flows including flows associated with hydropower development.

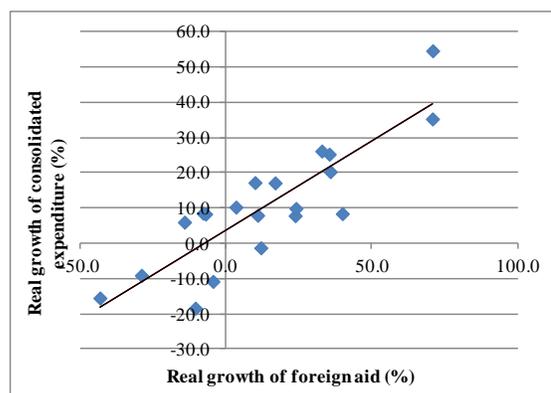
Figure 10. Bhutan: Government Expenditures (in percent of GDP)



Source: Author.

In parallel, the existing golden rule may be replaced by an alternative fiscal rule. While the rationale of the existing rule was to institute fiscal discipline by requiring recurrent spending to be covered by domestic revenue, it has allowed a rapid increase of current spending, in particular, civil service wages, as domestic revenue grew. Meanwhile, the policy of directing all foreign aid to fund public investment has exposed capital outlays to the volatility of foreign aid (Figure 11). As capital expenditure comprises more than half of government consolidated outlays, the golden rule has induced fiscal pro-cyclicality, an unintended consequence. Rules such as a ceiling on current expenditure could contain growth of current outlays, while diverting operating surpluses to fund a greater proportion of public investment, instead of consumption.

Figure 11. Bhutan: Aid and Capital Expenditure



Source: Author.

Monetary policy should play a more active role to manage the liquidity condition. In combination with the reserve requirements, open market operations should be conducted more decisively in order to mop up excess liquidity and push up the interest rates in order to cool aggregate demand and alleviate balance of payment pressures. Efforts to deepen the financial system need to be stepped up to enhance the effectiveness of monetary policy, while the health of the financial system should be kept in check.

Along with macroeconomic policy tightening, Bhutan needs to remove the administrative measures to control credit and restrictions on current account transactions, to restore credibility of the peg and ease distortionary impacts on the economy. Cross-country experience shows that no matter how well the controls are executed, the distortions they impose on the economy are severe and get worse, and incentives for evasion grow over time. New methods of evasion could, in turn, encourage the authorities to widen the coverage of controls, compounding initial distortions. The administrative burden on the government will also rise.

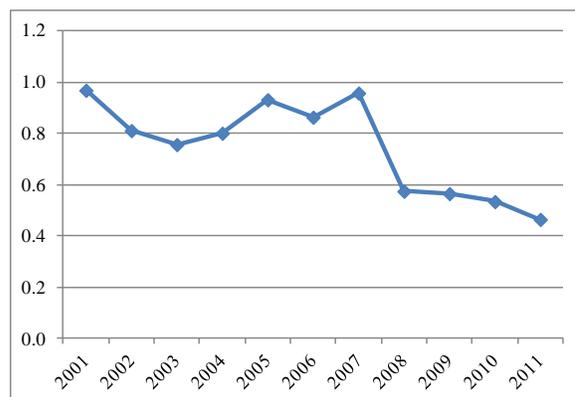
The second challenge pertains to the management of hydropower earnings in the medium term. Over the next ten years, government hydropower revenue is projected to rise considerably in a lumpy manner as the next generation power projects come on stream. The magnitude and the timing of revenue increases are yet to be made available by the government. Nonetheless, it is certain that hydropower revenue will replace foreign aid, becoming the main source of government revenue in the near future.

Bhutan needs to formulate a holistic strategy as to how to transform hydropower wealth in other assets that support balanced, sustainable development, while maintaining a mechanism to delink fiscal policy from volatility of hydropower revenue.<sup>23</sup> As hydropower revenue begins to bounce, the government is likely to come under tremendous pressures to create public sector jobs and improve their compensations, as already witnessed for the past five years. There is risk that the private sector may be crowded out through the labor market, with few educated young Bhutanese willing to work for salaries or benefits below those offered by the government. Once this happens, as evidenced in the Middle East, it will be difficult to reverse and a private-sector led, diversified economic growth will be even more challenging. The strategy needs to be in place before government revenue increases substantially and new entitlements are created. Rules such as a structural balance rule could prevent expenditure from rising too sharply, while creating a fiscal buffer that can be drawn on in the event of revenue shortfalls.

<sup>23</sup> Power revenue exhibits volatility as the volume of electricity generation is subject to strong seasonality due to the seasonal changes in water levels and the lack of water storage capacity.

The third challenge relates to the performance of the hydropower sector, which could derail Bhutan’s development strategy unless managed appropriately. Bhutan’s hydropower projects have largely been perceived risk-free, and thus rapid hydropower investment through heavy borrowing has not caused much concern until recently. Yet available information suggests that the sector’s financial performance has been deteriorating since 2007. The net profit (before tax) per unit of electricity sold has fallen sharply since 2007, driven by rising costs and declining revenue (Figure 12). The sector’s regular contribution to the budget has also declined for the past 10 years, from 6-8 percent of GDP during the early 2000s to 2.7 percent in 2011/12, notwithstanding the significantly increased electricity generation capacity. All this indicates that the sector’s “high commercial profitability” cannot be taken for granted. Should the hydropower sector’s financial performance continue to deteriorate, Bhutan’s solvency could be threatened. Although debt service costs are being borne by DGPC at present, after all, the hydropower debt is the government’s liabilities. The source of the performance deterioration has to be identified, and, remedial actions taken soon to avoid debt service difficulties.

Figure 12. Bhutan: Profit per Unit of Electricity Sold (in millions of 2000 Pula)



Source: Author.

### 3. Policy Discussions

What can we learn from the experiences of Botswana and Bhutan? There are three lessons.

First, in the face of large, volatile foreign exchange inflows, demand management is critically important in ensuring macroeconomic stability. This is particularly so for small developing countries, where small swings in the absolute amount of inflows represent major fluctuations relative to the size of the economy. Fiscal policy needs to play a dominant role in cushioning the impact on the domestic economy, especially in small economies where government is the major driver of domestic demand. Although monetary and exchange rate policies can play a complementary role, its effectiveness may be limited given an underdeveloped financial system.

Second, all government financial flows need to be integrated into the national budget process to ensure its integrity and protect its role as the mechanism for setting expenditure priorities and allocating public resources. In Bhutan, financial flows for the construction of hydropower projects are entrusted with autonomous spending authorities, and are executed outside the country’s fiscal framework. There is no consolidated fiscal account that aggregates budgetary and extra-budgetary operations, making it extremely difficult to formulate fiscal policy to moderate aggregate demand pressures and, as a result, undermining the accountability of national institutions. Fiscal flows—regardless of the objectives and source of funding—should not be entrusted with extra-budgetary authority, and all fiscal inflows and outflows should go through the budget.

Third, if designed well, fiscal rules can be helpful in smoothing government expenditure and guiding towards long-term fiscal sustainability. The fiscal rules in Botswana and Bhutan are both intended to impose fiscal discipline, by preventing current expenditure from growing beyond structural revenue—non-diamond revenue in the case of Botswana and domestic revenue for Bhutan—and directing exhaustible revenue flows to fund investment. Neither of them has an element aimed at smoothing

government expenditure thereby protecting the economy from revenue volatility. As a consequence, Bhutan's fiscal policy has been exposed to volatility of foreign aid, with government expenditure fluctuating sharply in concordance with the inflows of financial assistance. In addition, the golden rule has allowed current expenditure to rise sharply in line with growth in domestic revenue. In Botswana, despite the absence of a smoothing mechanism, its fiscal policy has been counter-cyclical since the mid-1990s. It is evident that fiscal policy emphasis has been placed on the maintenance of stable domestic price and real exchange rate, rather than mechanical adherence to the rule. Botswana's adherence to the rules has been mixed (Kojo, 2010). Flexible monetary and exchange rate policies have also played a role.

#### **4. Conclusion**

This paper has discussed the experiences of two small states, Botswana and Bhutan, in dealing with large, volatile foreign exchange inflows. Over the past few decades, both countries have achieved remarkable economic growth. Botswana's growth has been driven by diamond mining, while Bhutan has made full use of generous foreign aid to accelerate development.

Botswana's macroeconomic management has been impressive. Through counter-cyclical fiscal policy, it has avoided boom-bust cycles of diamond exports and heavy borrowing against future diamond revenues. This, together with effective monetary and exchange rate policies, has helped achieve a stable real exchange rate of the pula. However, behind the remarkable macroeconomic management lies uneven development, characterized by rising income inequality, persistently high unemployment, and low human development index for the level of per capita income, all despite years of heavy investment in health and education.

A large influx of foreign aid seldom represents a curse. Bhutan's economic growth rate has been impressive, making full use of foreign financial assistance for development. Yet generous foreign aid has allowed a rapid expansion of fiscal policy, creating overheating pressures, and as a consequence destabilizing the macroeconomic conditions.

Whether large capital inflows become a blessing or curse depends on the effectiveness of macroeconomic policy response. Policy lessons drawn from the experience of two small states are nothing out of ordinary, and nothing special for small states. Faced with large volatile foreign exchange inflows—regardless of the source (grants, export proceeds, loans, FDI)—macroeconomic policy needs to adjust to protect the economy from volatility. Particularly in small countries where government is the main driver of domestic demand, fiscal policy is the first line of defense, although monetary and exchange rate policies can play a supportive role. Off-budget activity complicates the conduct of fiscal policy, and should be integrated into the national budget. Fiscal rules, if designed well, can help delink fiscal policy from revenue volatility and smooth out government expenditure, while guiding long-term sustainability.

Several considerations arise from the analysis this paper has provided with respect to future research. One is economic diversification. Botswana has maintained a competitive real exchange rate for many years, allocated diamond rents to build physical and human capital, while building a favorable business environment. After all this, however, growth in the non-mining export sector has not been as strong as the government had envisioned. What is missing? For a small, land-locked country like Botswana, is economic diversification a realistic goal? If it is not a realistic goal, what is the alternative economic model could Botswana pursue in view of the depleting diamond reserves? These are the agenda for future research.

## References

- Acemoglu, D., S. Johnson and J. Robinson (2003), “An African Success Story: Botswana”, in D. Rodrick (ed.), *Analytic Development Narratives*, Princeton University Press, pp. 80-119.
- Aris, M. (1980), *Bhutan: the early history of a Himalayan kingdom*, Warminster, England: Aris & Phillips.
- Bank of Botswana (1978), *Annual Report 1978*.
- Bank of Botswana (1990), *Annual Report 1990*.
- Bank of Botswana (1992), *Annual Report 1992*.
- Bank of Botswana (2007), *Annual Report 2007*.
- Rodrick, D. (2003), *Analytic Development Narratives*, Princeton University Press, Princeton.
- Government of Botswana (1996), *Mid-term Review of National Development Plan 9*.
- Hartwick, J. M. (1977), “International equity and investing of rents from exhaustible resources”, *American Economic Review*, 66: 972-74.
- International Monetary Fund (2012), “Macroeconomic policy frameworks for resource-rich developing countries”, IMF Policy Paper, August 24, 2012.
- Kojo, N. (2005), “Bhutan: Power exports and Dutch disease”, Monograph 16, June 2005, the Centre for Bhutan Studies.
- Kojo, N. (2010), “Diamonds are not forever: Botswana medium-term fiscal sustainability”, World Bank Policy Research Working Paper No. 5480, October 2010.
- Lule, E. and M. Haacker (2012), *The Fiscal Dimension of HIV/AIDS in Botswana, South Africa, Swaziland and Uganda*, the World Bank.
- Martin, P. (2008), “A closer look at Botswana’s development: the role of institutions”, *Paterson Review*, Vol. 9, 2008.
- Parsons, N. T. Tlou and W. Henderson (1995), *Seretse Khama, 1921-1980*, Macmillan, Bloemfontein.
- Republic of Botswana, *Mines and Minerals Act*, 1999.
- Republic of Botswana, *Stock, Bonds and Treasury Bills Act*, 2005.
- Republic of Botswana, *Bank of Botswana Act*, 1996.