



What Role for Natural Resources in Botswana's Quest for Economic Diversification?

RECOMMENDATIONS

- Prioritise eco-tourism to become Botswana's primary revenue generator and contributor to GDP.

It is inherently sustainable as it depends on a non-exhaustive supply of pristine wilderness, provided that local communities derive genuine benefit from tourism ventures.

- View coal and iron ore as complementary minerals, the combination of which could support domestic processing and/or beneficiation, provided market conditions are supportive.

- Botswana should use its remaining diamond rents to invest widely in human and physical capital to support the above recommendations.

- Any new mining ventures should be viewed as partnership opportunities with local communities, entailing skills transfer and entrepreneurial development, especially in the services sector.

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EXECUTIVE SUMMARY

Botswana is typically perceived as a development anomaly on the continent. With a stable democracy and strong economic growth since 1966, the country's success is in danger of being taken for granted. Diamond revenues are likely to decline in the near future. The government has historically depended on these, through its partnership with De Beers, to fund its development plans. Future economic growth, and by implication political stability, therefore depend on a reliable replacement for diamond revenues. Economic diversification is crucial, yet it has proved difficult to realise in Botswana. This policy briefing examines Botswana's options. It concludes that investment in human and physical capital, and a policy focus on making tourism more successful, is the most efficient way forward for the country. Abundant coal resources, combined with potential iron ore reserves, could provide intermediate revenue streams, but the long-term development orientation should ultimately focus on renewable resources.

INTRODUCTION

Botswana outperformed every other country in the world in terms of per capita income growth from 1965 to 1998.² From 1998 to 2011, gross domestic product (GDP) per capita growth averaged 3.03% a year. The child mortality rate (per 1 000 live births) was 52.66; South Africa, by comparison, averaged 70.07. In governance terms, Botswana scores particularly well, especially in combatting corruption.

This economic and social progress is largely attributable to the inclusiveness and effectiveness of Botswana's political institutions. Pre-colonial institutions such as the *kgotla* remained intact post-independence. Colonialism had a minimal disruptive effect on institutional evolution. The country's first

two leaders – Seretse Khama and Quett Masire – also showed individual integrity in the crucial early stages of independent development. They chose, for instance, to transfer mineral rights away from their tribe into the custodianship of the state. Moreover, the Botswana Democratic Party (BDP) has always been a broad-based coalition that ensured inclusive rent distribution. Diamond rents therefore served to build the state rather than becoming a focal point for rent-seeking conflict.

Despite these successes, poverty in rural areas – where the majority of the population still lives – is extensive, and inequality is high. The Gini coefficient, a standard global measure of inequality, is 0.61 (where 1 reflects perfectly unequal wealth distribution and 0 an equal distribution). This is among the highest in the world. The unemployment rate is 17.8%, and 18.4% of the population lives below the poverty line. HIV prevalence is 23.4%. More inclusive, labour-absorptive economic growth is necessary to sustain Botswana into the future. This is partly hindered by the limited supply of human and physical capital. Diamond rents have arguably not been efficiently spent, given their failure to produce a greater pool of skilled professionals.

This briefing shows that Botswana is at a critical juncture. Diamond revenues are declining. Political power is increasingly contested. New sources of economic growth must be found to sustain development. While coal and potentially iron ore could provide intermediate revenue streams, tourism should become Botswana's economic anchor in the long run. Investment in human and physical capital is the key to sustainable development.

CRITICAL HISTORICAL JUNCTURE

'A critical juncture ... can cause a sharp turn in the trajectory of a nation.'³ In Botswana's case, declining diamond revenues and increasing political competition could create a conduit for new sources of economic growth and greater political inclusiveness. The danger is that growth would continue to be driven by exhaustible resources. This could coincide with increased political instability, reversing the country's development gains.

Politically, Botswana's stability is intimately connected with diamond rents. *The Economist* recently argued that although there is much talk of diversifying the economy, the necessary political will appears to be lacking. Discoveries of coal and iron ore are unlikely

to be sufficient to replace diamond rents. 'Unless new sources of growth are found, Botswana's politics may turn uncharacteristically nasty.'⁴ While Botswana's 2014 elections were declared free and fair, the BDP won less than 50% of the vote for the first time since 1966, only retaining a parliamentary majority because of the constituency system. The party has also been increasingly accused of abusing its power. Globally, in development contexts, political stability is often dependent on new sources of economic growth. As the rent pool diminishes, competition intensifies.

Economically, Botswana's two largest diamond mines can continue production on the basis of current investments for another 10 to 15 years. 'As production costs rise, the rents generated and mineral revenues earned by the government are expected to decline as a proportion of gross output value.'⁵ Mineral revenues have, however, recently declined to one-third of total government income,⁶ suggesting that some economic diversification has occurred.⁷ However, diamonds still constitute the majority of the country's exports, at 82.6% in 2013.⁸ Diamond exports also sustain Botswana's import purchasing power at a ratio of 85:1. As the Bank of Botswana notes: '[T]he rating agencies were concerned about the country's vulnerability to shocks and the fact that not much progress had been achieved in diversifying the economy.'⁹

Given that diamond revenues will eventually be depleted, can coal and iron ore provide sufficient replacement value? If so, what are the most sensible economic options in this respect?

COAL

Botswana possesses an estimated 208 billion tonnes of coal. Much of this (about 77%) is likely to remain categorised as sub-economic (speculative and hypothetical).¹⁰ In total, 11 coalfields have been identified. Only Morupule is currently being mined, and only Mmamabula and Morupule have been extensively explored. Approximately 23% (47.63 billion tonnes) of Botswana's coal is economically extractable (depending on future prices, demand and technological improvements). The government expects that 90 million tonnes can be exported per year at peak production. Uncertainty exists, however, over the availability of future export markets. Although Botswana is the site of one of the last 'greenfield' coal deposits, its coal is

of relatively low calorific value, and traditional import markets are under increasing pressure to reduce carbon emissions. China, for instance, has announced a limit on coal imports, and India is likely to be Botswana's only viable export market. This suggests a narrow window of opportunity for Botswana to export its coal. Internally, a number of other challenges exist.

Due to Botswana's being landlocked and having insufficient rail networks, the direct export of coal has not been considered economically feasible until recently.¹¹ In March 2014, the governments of Botswana and Namibia signed a Trans-Kalahari Railway bilateral development agreement to build a wide gauge railway from Mmamabula to Walvis Bay. The estimated cost of the port and loading facility is \$3.7 billion, and the estimated route cost is roughly \$11 billion. Operational costs are expected to be approximately \$27 billion over 30 years. These costs are potentially prohibitive when weighed against the potential benefits. At present there is insufficient economic modelling, controlling for downside risk, to make a credible assessment. A primary concern is that the railway would serve little purpose beyond the dedicated export of raw material. With few spillover development benefits envisaged and large capital sunk costs, the risk of building a white elephant should not be dismissed.

Mining the coal itself requires large volumes of water, primarily for washing the coal to increase its calorific value for export. Estimates suggest that anywhere between 5 and 10 million m³ a year would be necessary to sustain an export industry. Such volumes are technically available from Botswana's riparian extraction rights from the Zambezi, but that water would have to be piped at large infrastructure cost to the eastern Kalahari. Furthermore, the power requirements of 216 MW are roughly equivalent to a third of Botswana's current available power supply (when all units at Morupule B are in full working order). It is not clear that sufficient water and power would be available to support a 90 million tonne-a-year export industry.

IRON ORE POTENTIAL

Given the uncertainty associated with a large-scale coal export industry, the country could instead seek to complement coal with other minerals and base metals to build a steel industry in Selebi-Phikwe, supplying the growing SADC region. Revenue generated by this activity

could supply part of the infrastructure capital required for large-scale coal and iron ore exporting, provided the constraints noted above can be alleviated. Policymakers could thus consider a 'vent-for-surplus' trade model rather than a static 'comparative advantage' model. Raw coal and iron ore could first be consumed locally to produce higher value products such as pig iron or steel. Surplus raw material could then be exported. By that stage, policymakers may also have a clearer idea of how much longer the window of opportunity for coal exports will remain open.

Gcwihaba Resources (Pty) Ltd. has been sampling near Shakawe, in north-western Botswana, since 2008. A mineral resource estimate produced for Gcwihaba by an independent consultant in August 2014 indicated that high-grade iron ore deposits have been discovered through sampling and drilling but the geological evidence is not yet sufficient to imply economic viability.¹² The location of the deposit is environmentally sensitive, occurring within 50km of the western panhandle of the Okavango Delta. However, this need not be a hindrance to its development, provided the mining company becomes an ally in preserving the delta.¹³

As far as economic diversification is concerned, building inter-industry linkages is crucial. A first step in this direction may be to process iron ore locally using locally available thermal coal. Coal and iron ore could thus be employed as complementary resources to develop domestic value addition and an industry that could be sustained beyond the life of Botswana's own coal and iron ore mines. Downstream beneficiation should not be treated as a development panacea, however, as it is not clear that simply because a country possesses a particular resource it will develop a global comparative advantage in transforming that resource into a more valuable product.

TOURISM

'International tourism is a major and growing contributor to national output, employment and foreign exchange earnings.'¹⁴ From 2012 to 2013, as contributions to GDP growth, 'trade, hotels & restaurants' grew by 4.9%, and 'social and personal services' grew by 7.2% (only a part of which is tourism orientated).¹⁵ In 2012, while mining contributed 21.9% to the country's GDP, 'wholesale and retail trade, hotels and restaurants' followed in second

place at 16.6%.¹⁶ Tourism has significant potential for growth in terms of tapping into global value chains. A major challenge, however, is retaining higher levels of tourism revenue within the country. According to Botswana Tourism Statistics, only 10% is retained. This is partly because the bulk of Botswana's tourist bookings are handled in South Africa and partly because the sector's supply chain is foreign dominated.¹⁷ If this leakage can be efficiently addressed, tourism appears to be the future economic anchor into which the government could invest its current rents. Investing in human and physical capital that could improve Botswana's attractiveness as a tourism destination would bring renewable returns well beyond the life of coal and iron ore.

CONCLUSION

Diamond revenues, on which Botswana has depended since shortly after independence, are likely to decline in the near future. Although these revenues currently constitute only a third of government revenue, the diamond industry is inextricably linked to other industries, both upstream and downstream, that provide much of the remaining revenue. Some analysts argue that diamond rents have not been efficiently allocated. Thus, despite a stable democracy and growing economy, investments in human and physical capital have been insufficient to ensure the creation of alternative industries to diamonds. This briefing has considered some of Botswana's strategic diversification options. It has argued that human and physical capital investments to support tourism – as a future economic anchor – will probably yield the highest, most sustainable returns.

ENDNOTES

- 1 Ross Harvey is a senior researcher at SAIIA's Governance of Africa's Resources Programme, specialising in mining and development.
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