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EXPORT DIVERSIFICATION AND INFRASTRUCTURE

THE COST OF UTILITIES FOR BUSINESS

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1. Introduction

This policy brief focuses on the role of infrastructure and, in particular, the cost of utilities and their impact on export growth and diversification. The availability of and access to infrastructure is an essential prerequisite for the competitiveness of firms and countries in world markets. Inadequate access – in terms of cost and availability - to water, power supplies and telecommunications make it difficult for firms to operate efficiently.

Where these utilities are not available, firms have to incur the cost of providing them, or else be highly constrained in the type of activities they can undertake. The upfront costs of installing private facilities can be high, and may be prohibitive for small and medium-sized firms which do not have sufficiently high output levels to recover these costs.

More generally, where utilities are available but expensive, this tends to push up production costs and ultimately product prices. High utility costs may limit the competitiveness of firms and the potential to expand and diversify exports.

This policy brief is based on the study, "Diversifying Botswana Exports: An Overview", carried out by BIDPA and the World Bank in 2005. The brief discusses the business cost of utilities and compares utility costs in Botswana with those of other African countries. It further discusses three utilities, namely telecommunications, electricity and water.

2. Business Costs of Utilities

A comparison of utility costs in Botswana and other African countries reveals that in 2002 Botswana had the highest costs for electricity and telecommunications across the selected countries, and amongst the highest costs for water (Table 1).

Table 1: Comparative Cost of Freight, Electricity, Water and Telecommunication (US$)

	Botswana	Kenya	Mauritius	Mozambique	Namibia	South Africa	Zimbabwe
Air Freight (per kg)	1.84	1.7	2.57	2.18	2.33	1.17	2.22
Sea freight to Europe (20 ft container)	2	1.4	1.8	1.5	1.08	1	2
Electricity (per kwh)	0.096	0.02	0.076	0.036	0.036	0.064	0.048
Water (per m3)	1.02	0.35	0.52	0.35	0.67	1.3	0.34
Telecommunication Cost to EU (per minute)	4.04	4	1.65	3.6	1.23	2.21	2.58

Source: UNCTAD (2002)

Botswana does not, as a matter of general policy, provide utility subsidies, except on a limited basis for poverty alleviation reasons. The high costs of utilities are largely due to the country's geographic, geological and climatic conditions which affect the provision of power, water and telecommunications. These conditions are policy-insensitive, and the resulting costs have to be factored into consideration of which economic activities are likely to be competitive in Botswana.

However, there may be some scope for addressing high utilities costs through policy and institutional reform. In Botswana the public sector[1] is a monopoly provider of key utilities such as water and electricity. It also plays a dominant role in the provision of certain telecommunications services. In view of the monopoly status of some of the utility providers, it is possible that production and distribution inefficiencies may also contribute to the high costs.

While the geographical, geological and climatic conditions are policy insensitive, it is possible that policy changes could contribute to reduced inefficiencies in utility provision. These changes may include the privatisation of utility providers, public-private partnerships, market liberalisation and the removal of monopoly powers, and permitting competition with utility providers from neighbouring countries.

3. Telecommunications

UNCTAD (2005) makes two distinct definitions of technological infrastructure: narrow and broad. The narrow definition covers telephone lines, personal computers and mobile phones while the broader definition covers electricity, transport, clean water, etc. Technological infrastructure makes it possible for firms to take advantage of information and communication technologies (ICT) and participate in global markets; the advantages of technological infrastructure may be of particular importance to small and medium-sized firms.

The ICT revolution has enhanced the possibilities for new firms to enter export markets and for existing ones to expand their markets, and provides an enabling environment for export growth and diversification.

Botswana's telecommunications systems are generally reliable and are progressively being upgraded. However, relative to other countries in the region call charges are high and internet infrastructure is poor. Table 2 shows a regional cost comparison of fixed line call charges.

[1] The public sector includes both government departments and government-owned firms (parastatals)

Table 2: Regional Fixed Line Call Comparison in 2004 (US$/Minute)

To / From	USA	UK	Norway	Switzerland
Botswana	1.06	1.06	1.19	1.06
Namibia	1.26	1.26	1.42	1.25
South Africa	0.25	0.25	0.61	0.25

Source: BIDPA (2005)

There have been improvements in recent years, and the advent of cellphones has introduced welcome competition into the sector.

Internet user costs are high; according to BIDPA and World Bank (2005), connection costs in Botswana are 10 times that of Mauritius and 8 times that of South Africa.

While costs of telephone calls may not be a major cost element in manufactured exports, exporting firms still have to install information technology especially that based on the internet, to participate in global markets. For service exports such as consultancy, tourism, business process outsourcing and financial services, telecommunication costs be a significant cost item.

High call charges and poor internet infrastructure in Botswana undermines the ability of firms to take full advantage of the opportunities offered by ICT and participate in global markets. For an export driven economy, it is important to continually enhance competitiveness through among other measures, effectively using ICT. Telecommunications infrastructure should be upgraded to facilitate the use of ICT; international communications should be enhanced, for instance, by the proposed EASSy undersea cable project linking countries in east and southern Africa.

In the long-term the liberalisation of telecommunications has a huge potential to reduce prices through increased competition. The package of liberalisation measures announced in 2006, which includes liberalisation of licensing conditions for telecommunications service providers, and permitting new technology such as internet telephony, should make a significant contribution to achieving this.

4. Electricity

As it is the case with other utilities, electricity is an essential input in the operations of most firms. High electricity costs, especially for firms that use electricity intensively, push production costs up and may compromise the competitiveness of firms, and their ability to maintain their competitive edge in export markets.

Power costs in Botswana are around the regional average but substantially higher than in South Africa and Angola (Table 3). Average power costs in Botswana are more than twice those of South Africa, despite the fact that Botswana produces only 28% of its power requirements and imports the rest from South Africa. However, in line with current government policy of keeping electricity price increases at less than 50% of inflation rates, average power tariffs fell in real terms between 2000 and 2003 (World Bank, 2005).

Table 3: Comparison of Average Tariffs

	Power Company	Average Tariff (US$/kWh)	Operating Cost Recovery Ratio[1]
Angola	Empressa National de Electridade	0.012	-
South Africa	ESKOM	0.017	-
Swaziland	Swaziland Electricity Board	0.038	123%
Botswana	BPC	0.040	154%
Malawi	ESCOM	0.056	162%
Mozambique	Electricidade de Mocambique	0.066	-
Kenya	Kenya Power and Lighting Corporation	0.068	96%
Uganda	Uganda Electricity Distribution Co. LTD	0.091	112%

Source: World Bank (2005)

In terms of stability of supply, Botswana performs better than many countries in the region. However, there are reports, particularly from the textile sector, that power interruptions are frequent during the rainy season. According to the 2003 FIAS report, the way in which installation charges are levied by the Botswana Power Corporation is a significant disincentive to investment.

While Botswana's power costs are, with the exception of South Africa and Angola, comparable with regional ones, they are still high. It is likely that regional electricity costs will rise in the short-to-medium term as a result of regional power shortages, but this will affect most countries in a similar way. Nevertheless, Botswana needs to reduce her power costs in relative terms and improve the reliability of supply.

This could be done by improving efficiency of the Botswana Power Corporation, encouraging private sector power provision, and reviewing the way in which installation charges for new supplies are charged and attending to problems of power outages.

5. Water

Water supplies are another essential utility for almost all firms, and if they are not available, firms have to incur additional costs to provide them. The costs of providing their own water supplies, or of acquiring available but expensive public supplies, increases production costs and forces firms to increase product prices. For export oriented firms, especially those using water intensively such as textiles, high water costs which in turn increase production costs, often make it difficult to withstand competition in export markets. This may adversely affect export growth and diversification efforts.

Given Botswana's arid climatic conditions and low population density, water is inevitably scarce and expensive (Table 4). Very high capital investment is required to bring water from the north of the country (where water is more plentiful) to the south (where most of the population and demand is). Nevertheless, water connection charges in Botswana compare favourably with other countries in the region.

1 Calculated as operating revenues divided by operating costs (excluding depreciation)

Table 4: Comparison of Average Water Tariffs

	Water Utility	Average Tariff (US$/m3)	Operating Cost Recovery Ratio
Botswana	Water Utilities Corporation	1.21	261%
Malawi	Lilongwe Water Board	0.37	142%
Malawi	Blantyre Water Board	0.54	145%
Swaziland	Swaziland Water Services	0.65	120%
Uganda	National Water and Sewerage Co.	0.55	126%

Source: BIDPA and World Bank (2005)

Certain productive activities require large amounts of water, such as textiles and apparel production, especially during the dyeing process. For reasons of limited water availability and high cost, some water-intensive activities may not be suitable for Botswana, and it would not be appropriate to encourage them through water subsidies.

While cheaper, untreated (non-potable) water is in principle available; availability is frustrated by the prohibitive costs of the dedicated reticulation required. Nevertheless, the Water Utilities Corporation should consider supplying raw water to textile and apparel industrial estates.

Conclusion

This policy brief has demonstrated that Botswana has high utility costs by regional standards. Infrastructure services such as telecommunication, power and water are backbone services in the manufacturing of goods and therefore have a bearing on initiatives aimed at expanding and diversifying exports.

Efficiency in these services is a key component in reducing transaction costs and enhancing the competitiveness of exports. While some aspects affecting utilities are policy insensitive e.g. climatic conditions, some issues require policy intervention to improve efficiency in the provision of utilities and create an enabling environment for export growth and diversification.

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