



Mainstreaming Higher Education in National and Regional Development in Southern Africa

Regional Country Profiles

The Study Team are responsible for the choice and presentation of the data and facts contained in this document and for the opinions expressed therein, these are not necessarily those of SARUA nor the AAU and do not make any commitment for either association.

The country study presented here was prepared as a part of the study “Mainstreaming Higher Education in National and Regional Development in Southern Africa” (SARUA, 2009). It forms the background data to that study and is published here as an appendix to that report. The Country Studies data has not been subjected to the same level of editorial scrutiny as the Report itself. However, we publish these country studies as supplemental information to that presented in the Report, and hope that they will be of value to other researchers in the region.

BOTSWANA

2.1 Country Context

TABLE: 1. World Development Indicators

	Yr 2006
Population, total (millions)	1.9
Population growth (annual %)	1.2
Surface area (sq sq km) (thousands)	581.7
Life expectancy at birth, total (years)	49.8
Mortality rate, infant (per 1 000 live births)	89.6
Literacy rate, youth female (% of females ages 15-24)	95.6
GNI (current US\$) (billions)	9.9
GNI per capita, Atlas method (current US\$)	5570
Prevalence of HIV, total (% of population ages 15-49)	24.1

Source: *World Bank Botswana: Quick Facts*¹

Botswana is a small landlocked country which has witnessed unprecedented growth anchored in democratic governance and political and macroeconomic stability. For thirty years following independence, Botswana was the fastest growing economy in the world, leaving behind the South-east Asian tiger economies with its average annual growth rate of about 9 percent. Botswana's economy is dominated by the diamond mining industry which has been the largest contributor to GDP for the past thirty years. Currently the diamond industry accounts for 38 percent of GDP, with services (44 percent), construction (7 percent), manufacturing (4 percent) and agriculture (2percent).

2.2 Planning Context

Vision 2016

The long-term aspirations of Botswana are encapsulated in 'Vision 2016', representing where the country wishes to be fifty years after independence; being a nation which is educated and informed,

¹<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/MADAGASCAREXTN/0,,menuPK:356378~pagePK:141132~piPK:141109~theSitePK:356352,00.html> accessed 19 August 2008

prosperous, productive and innovative, compassionate, just and caring, safe and secure, open, democratic and accountable, moral and tolerant, united and proud.²

Vision 2016 states the following:

- **‘All people will be able to have quality education adapted to the changing needs of the country.’**
- **‘By 2016 schooling will be universal and compulsory to the secondary level.’**
- **‘Promote vocational and technical training as an alternative to academic study.’**
- **‘Aggressively expand tertiary education to produce a highly skilled workforce.’**
- **‘Botswana in 2016 should be an educated, informed society. All citizens should have the choice of continued education, whether in academic fields or in vocational and technical subjects.’**

Ninth National Development Plan (NDP9, 2003/4 – 2008/9)

The Ninth National Development Plan (NDP9, 2003/4 – 2008/9) identifies four sectors for economic diversification and job creation (agriculture, tourism, manufacturing and financial services). The private sector should be the engine of economic growth and diversification while the Government acts as facilitator by ensuring a stable and sound macroeconomic framework, an environment conducive to the private sector and FDI, the provision of necessary infrastructure.

Lifelong learning is a central element of the education strategy for NDP 9. The strategies to be put in place by the Ministry of Education to promote lifelong learning include shared use of resources and access to part-time courses through the use of varying modes of learning, such as distance and open learning and e-learning.

Programmes will be designed to facilitate easy access to learning packages, such as introducing modularised programmes to enable people to build up qualifications. As one of the strategies to ensure quality lifelong learning, a National Qualifications Framework will be developed and implemented to provide linkages and pathways between education and training and ensure quality delivery at all levels of the education and training system.

The NSPR – National Strategy for Poverty Reduction 2003 refers to ‘access to basic health and education,’ but does not make a specific mention of higher education.

² A Framework for a Long-Term Vision for Botswana, p.3-4

However in the Annual Poverty Report (2007) it is stated that higher education expands employment opportunities for the labour-force, tackles skills shortage and supports economic growth.

Country Strategy and NIP 2008 – 2013

GDP stood at some 52,7-billion Pula in 2005 (€8-billion), with four sectors accounting for over 70 percent of GDP: mining, government services, trade/hospitality and financial/business services.

Diversification away from mining remains critical, both to lessen economic vulnerability and to promote employment, but Botswana faces several challenges such as inadequate levels of investment, a small domestic market, mismatch between labour skills and the needs of the market, low productivity, uncompetitive production costs (landlocked situation, high utility costs), and remoteness from export markets. E and T is seen as a critical area for economic development and technological change.

Focal Sector: Human Resources Development (HRD)

The overall objective is poverty reduction through economic growth. The specific objective is economic diversification and greater global competitiveness through maximising the development and utilisation of Botswana's human resources. HRD has been identified by the national strategic documents (in particular NDP 9 and its MTR) as a key driver of economic diversification, job creation and poverty reduction. In order to ensure that the benefits of education lead to development, there is a need to widen the focus to include the links between education/training and employment. Actions in the focal area will aim at three main results:

- (i) Improved relevance of demand-orientated formal and informal education and training, ensuring that the education and training system equips individuals with relevant and appropriate knowledge, skills and attitudes to meet Botswana's economic needs, its challenges and national development goals.
- (ii) Improved equitable access and quality of education and training, and
- (iii) Increased effectiveness of the Government's response strategy to fight against the HIV/AIDS pandemic.

2.3 Education Context

UNESCO statistics show that Botswana devotes 8,7 percent of its GDP to education, resulting in impressive enrolment rates (c.100 percent at Primary, 80 percent at lower-secondary and between 50 percent and 100 percent at upper secondary). Botswana has been acknowledged as one of the few countries in the region that has successfully distributed funding proportionally between the

levels of the education system; primary receives 19 percent, secondary 48 percent and tertiary 32 percent. (Dieter Telemans, Africa Report 2007)

TABLE: 2. Overview of the education environment

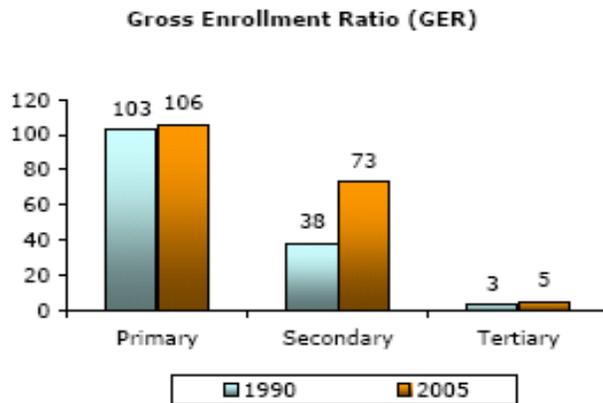
		Age group	Entrance Requirement
Pre-primary		4 – 6 years	
Primary	Std 1 - 7	6 – 15 years	
Secondary	Form 1 – 5	16 – 20	Form 1: national examination equivalent to Standard 7 (PSLE) Form 4 : Form 3 JCE

Source: Ministry of Education <http://www.moe.gov.bw/>

Primary education in Botswana is a joint responsibility between the Ministry of Education and Local Government. The aim of the Department of Primary Education is to provide appropriate and effective education to enable the young generation within the country to acquire basic skills, abilities, talents and general knowledge and thus become self-reliant and useful members of society.

Botswana like all other countries in the world invests heavily in the provision of secondary education. A Junior Certificate is attained after three years of secondary education. The Botswana General Certificate of Secondary Education (BGCSE) is a two-year course that a student takes after attaining his/her Junior Certificate. Currently there are 206 Junior Community Secondary Schools and 27 Senior Schools. At present the transition rate from junior schools to senior schools stands at 50,8 percent which is an increase from the 49,1 percent of 2001. With the expectation and prospect of building more schools and upgrading others, the government hopes to achieve its objective of universal secondary education by increasing access. (MoE)

FIGURE 1. Gross Enrolment Ratio in Botswana Education



Source: http://siteresources.worldbank.org/INTBOTSWANA/Resources/BWA-Educ_at_a_Glance.pdf

Enrolment

TABLE 3. Access, Coverage and Efficiency in Botswana Education

Access, Coverage and Efficiency			
	Total	Male	Female
Gross Intake in Grade 1 (%)	105	109	102
Primary Gross Enrollment Ratio (%) (7 years)	106	107	105
Primary Repeaters (% of primary cohort)	4.8	5.2	4.3
Primary Drop Out Rate (%)	14.5	17.0	12.0
Primary Completion Rate (%)	93	74	113
Expected Primary Completion Rate (%)	90	90	90
Number of Primary Age Children Out of School (thousands)	42	22	20
Primary Gender Parity Index (GER ratio) ^a	0.98		
Secondary Gross Enrollment Ratio (%) (5 years)	73	77	75
Lower Secondary (%) (3 years)	87	84	89
Upper Secondary (%) (2 years)	53	53	54
Vocational and Technical (% of secondary enrolment)	6.6	8.3	4.9
Secondary Gender Parity Index (GER ratio) ^a	1.05		
Tertiary Gross Enrollment Ratio (%)	5.1	5.1	5.1

Source: http://siteresources.worldbank.org/INTBOTSWANA/Resources/BWA-educ_at_a_Glance.pdf

Data is for the most recent year available in 2000 – 2005.

TABLE: 4. Primary Education 2004 Enrolment: Council schools

STANDARDS

	1	2	3	4	5	6	7	SPED	TOTAL
Boys	25,405	23,638	23,271	24,864	21,522	20,763	19,496	339	159,298
Girls	22,911	22,305	21,918	23,002	21,717	21,701	20,240	260	154,054
TOTAL	48,316	45,943	45,189	47,866	43,239	42,464	39,736	599	313,352

Note: SPED - Children in Special Education Units

Source: *DoE Website*

TABLE: 5. Primary Education 2004 Enrolment: Private schools

STANDARDS

	1	2	3	4	5	6	7	SPED	TOTAL
Boys	1,328	1,321	1,253	1,143	1,178	1,055	914	74	8,266
Girls	1,305	1,280	1,234	1,212	1,199	1,087	962	51	8,330
TOTAL	2,633	2,601	2,487	2,355	2,377	2,142	1,876	125	16,596

2.3.1 Focus on Higher Education

2.3.1.1 Policy environment

Botswana's Vision 2016: The third element of Vision 2016 states that 'Botswana in 2016 should be an educated, informed society', and should 'promote vocational and technical training as an alternative to academic study', so that 'all citizens ... have the choice of continued education, whether in academic fields or in vocational and technical subjects' and 'all people will be able to have quality education adapted to the changing needs of the country'.

The prioritising of vocational and technical skills over 'academic' study indicates an interpretation of the current skills requirements in Botswana. Botswana's economy is one of the fastest growing world economies (World Bank 2008) at 9 percent per annum. 38 percent of this is attributed to diamond mining and 44 percent to services. The Government of Botswana is placing equal emphasis on higher education and TVET, with enrolment figures almost on a par. An explanation of the Vision 2016 goal to promote vocational and technical study over academic study is hidden in the definition of 'academic' and 'technical'. Academic refers to 'humanities and social sciences' and technical includes degree-level technical training. This is shown in other planning documents such the 9th Development Plan, and is further reflected in enrolment figures at the University of Botswana, which are increasing in technical and engineering subjects and stay constant in humanities.

9th National Development Plan (2003 – 2009) aims to increase secondary and tertiary expenditure (combined) by 300 percent. In addition, plans are made to open a second university – the Botswana University of Science and Technology.

The Annual Poverty Report (2007): 'higher education expands employment opportunities for the labour force, tackles skills shortages and supports economic growth'.

The NSPR does not make specific mention of higher education. However, the Annual Poverty Report (2007) makes a strong link between higher education and economic growth. Despite their impressive economic track record, HIV/AIDS has halved life expectancy and poverty indicators are not at the same level as those of other countries of Botswana's economic status. The growth in Botswana's economy is showing signs of slowing (it was at 14,5 percent in 2001). The country's strategy should raise its profiling of higher education to allow for this sector to reach the levels that can take Botswana to the next level of economic independence and stability.

Higher Education policy: Tertiary Education White Paper 'Towards a Knowledge Society'. On 10 April 2008 Botswana's parliament approved a Tertiary Education Policy. The objective of this policy is to achieve a gross tertiary enrolment rate of 17 percent by 2016 and 25 percent by 2026.

University of Botswana: Shaping our Future 2009 and Beyond

- Target 15 000 undergraduate student enrolment;
- Gender equity in all programmes (especially those under-represented by women, such as engineering and technical);
- Increase postgraduate enrolment to 10 percent of undergraduate (through introducing a Graduate Scholarship Fund);
- Increase international student population to 10 percent; and
- Become recognised as a national and international leader in research

2.3.1.2 Profile of Higher Education

The Tertiary Education White Paper 'Towards a Knowledge Society' suggests significant expansion to achieve enrolment ratios of 17 percent by 2016 and 20 percent by 2020.

In line with participation rates Botswana has also witnessed improved attainment rates. The proportion of over 24 year olds with a tertiary level qualification increased from 2 percent in 1995 to 7 percent in 2001 and it is now estimated to be 11 percent (2008).³

Under the National Development Plan 8 (1997 – 2003) the University of Botswana achieved the target staff-student ratio of 1:16 across all Faculties and over 60 percent of faculty are Batswana.

University of Botswana (UNIBO)

The total enrolment at the UNIBO is 16, 238. The demographics of UNIBO students are:-

Full-time students	12,934
Part-time students	2,820
Distance Education	484
% of female students	54%
Undergraduate enrolment	15 248
Postgraduate enrolment	990
Percentage Students in residence	30%
Staff	
Total	2,640
Academic	38%
Academic Support	44%

³ Tertiary Education Council, 'Tertiary Education Policy for Botswana: Challenges and Choices', Consultation Paper, prepared by the Working Group on the Tertiary Education Policy for Botswana, February 2005, p.9

Industrial	18%
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TABLE: 6. Undergraduate Enrolment by discipline area

	2006/07	2007/08	2008/09
Business and ICT	2,194	2,530	2,996
Education	2,682	2,960	3,020
Humanities and Social Science	5,256	5,756	5,256
Science and Engineering	3,575	3,995	4,167

TABLE: 7. Undergraduate Enrolment by Faculty

Faculty	2004/05	2005/06	2006/07
Business	1,053	1,284	1,668
Education	2,161	2,278	2,652
Engineering & Technology	699	845	1,010
Health Sciences	496	625	780
Humanities	2,798	2,824	2,804
Science	1,270	1,573	2,041
Social Sciences	2,374	2,557	2,752

Source: Actual and projected figures from University of Botswana. Website 2008

As with all countries in this study, the largest proportion of students is registered in social sciences and humanities. The university does however indicate its commitment to Vision 2016, by increasing the level of their output in technical skills. They plan to grow enrolment in health sciences by 36% over two years; engineering and technology at 30% while keeping enrolment in humanities constant and social sciences at only 13%.

The Government of Botswana plans to open BIUST in 2009. Initial enrolment will be

2 500 in the fields of:-

- Business, Finance and Management
- Sciences – Physical, Chemistry & Computer
- Biotechnology
- Environmental Management
- ICT, Agriculture and Food Science

BIUST will be located in the Serowe-Palpaye area, about 200 km Northeast of the capital and close to the South African border. The plan is not to have the same subjects offered at University of Botswana and BIUST, which may lead to some faculties shifting from University of Botswana to BIUST.

1st University – University of Botswana

2nd University in 2009 – Botswana International University of Science and Technology (BIUST) – initial enrolment planned at 2 500.

TVET colleges: 50 (enrolment approximately 14/15 000)

Distance Education: The University of Botswana, like many other universities and institutions of higher and tertiary education is investing in remote learning and mixing traditional media with ICTs. However the market for tertiary level distance learning remains very small (about 500 students in 2007).

2.3.1.3 Governance

Legislation: University of Botswana Act, 1982; Tertiary Education Act of 1999.

The Tertiary Education Council (TEC) was established in terms of the Botswana Tertiary Education Act of 1999 to promote and co-ordinate tertiary education and determine standards for the entire tertiary sector.

2.4 Financing Context

In terms of expenditure the government has demonstrated consistent and significant commitment to tertiary education (both TVET and higher education). Since 1990 the government has on average been spending 1 percent of GDP on tertiary education alone. This compares well with first world economies. OECD countries over the same period have been spending 1,5 percent of GDP and the USA is the biggest spender with 2 percent.⁴ The Tertiary Education Council has since challenged whether such levels of investment can be sustained.

In 2004 the Government established the Tertiary Education Development Fund and with an initial capitalisation of P1,2-billion expanded the University of Botswana, established a medical school and a second university. However, in line with worldwide trends, Botswana is recognising a shift in the financing of tertiary education. As demand increases more and more individuals and families are carrying the financial costs of tertiary education. Such financing is made possible through a series of financial aid and student loan programmes at a time when institutional efficiencies and the principle of entrepreneurship is being encouraged. Botswana first introduced a grant/loan scheme in the mid 1990s.⁵ The Tertiary Education Development Fund and the Department of Student Placement and Welfare sponsored 26 943 tertiary students in 2004, with 17 932 placed at local institutions and 9 011 sent for training outside Botswana.⁶

2.5 Issues and Observations

There is strong suggestion that the investment in higher education has fallen short in its contribution to national capacity. This is partially because education has historically lacked emphasis on technical subjects and business skills. Traditionally the proportion of science and engineering students has been low by world standards (in 2004 only 23 percent of full-time undergraduate students were enrolled in science, engineering and technology). Public tertiary education institutions have been slow to respond to changes in the labour market and poor at adapting the curricula to the market. Vision 2016 and the strategic plans of UNIBO are showing significant effort to reverse these trends. Private institutions are not well established and are disconnected from Botswana's tertiary education system. They have, however, been responsive to labour market demands and have quickly responded to certain employers' needs for specific skills offering primarily non-degree, technical courses.

⁴ Tertiary Education Council, 'Tertiary Education Policy for Botswana: Challenges and Choices', Consultation Paper, prepared by the Working Group on the Tertiary Education Policy for Botswana, February 2005, p.9-10 and 25

⁵ Tertiary Education Council, 'Tertiary Education Policy for Botswana: Challenges and Choices', Consultation Paper, prepared by the Working Group on the Tertiary Education Policy for Botswana, February 2005, p.9-10 and 25-26

⁶ Tertiary Education Council, 'Tertiary Education Policy for Botswana: Challenges and Choices', Consultation Paper, prepared by the Working Group on the Tertiary Education Policy for Botswana, February 2005, p.10

Botswana is recognised by the World Bank as having a strong potential as a knowledge economy. Like South Africa and Mauritius, Botswana's KEI score sits in the middle and above all other SADC country scores.⁷ Nonetheless like many other countries in the SADC region Botswana is disadvantaged by a migration of skills to more developed countries, where expensively trained talent choose to contribute their expertise. This applies particularly among advanced students in the science and engineering disciplines.⁸

⁷ Bloom, D., Canning, D, and Chan, K., *Higher Education and Economic Development in Africa*, Harvard University, February 2006, p.9

⁸ Tertiary Education Council, 'Tertiary Education Policy for Botswana: Challenges and Choices', Consultation Paper, prepared by the Working Group on the Tertiary Education Policy for Botswana, February 2005, p.9 and National Development Plan 9 p.27