

# **The Promise of African Networks: Internationalisation at Stellenbosch University and the University of Botswana**

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## **PANEL 6**

### **Introduction: African Potential, imaginary and imagined**

The global financial crisis and recession of 2008-2010 has accelerated a shift in world economy to the global east and south, with Africa emerging as the next growth hotspot alongside China, India and Brazil. A 2010 McKinsey Global Institute report highlights four groups of industries in Africa that will spearhead this growth in the coming decade, namely “consumer-facing industries (such as retail, telecommunications, and banking); infrastructure-related industries; agriculture; and resources” (Roxburgh et al., 2010).

There is a new wave of optimism sweeping across Africa as growth rates climb, consumer spending rises and returns on investment escalate. By 2008 Africa’s collective GDP was \$1.6 trillion, roughly equal to Brazil’s and Russia’s. Real GDP has increased by 4.9% per year since 2000, more than twice what it was in the 1980s and 1990s. Although these levels of growth are not uniform across all of Africa’s sub-regions, at current growth rates, GDP by 2020 is projected to be \$2.6 trillion underpinned by a rapidly urbanising youthful and increasingly educated population with over 128 million households moving into the middle class to become vibrant consumer spenders.

This optimism is shared across various civil and social sectors. Increasingly Africa’s image is defined from within, rather than from abroad, whether in history, politics, literature or popular culture. Similarly, in African higher education there is a new eagerness among students and academics to engage with their counterparts elsewhere in the continent. Where collaboration has served mainly as a feeder of aid money into the continent from international partners and their donors, African academics are increasingly realizing the value of intra-African collaboration and mobility for the sake of addressing Africa’s development challenges and harnessing its opportunities.

One of the more damaging conceptions of Africa in past centuries has been to view it as a coherent entity within a larger system of actors, intents and outcomes. The historian David William Cohen calls this “the will to explain Africa from a distance”. It is damaging since the next step is to seek “direct, simple, and whole answers” to Africa’s wide-ranging and complex development challenges (Shepherd, 2010).

The reality is that Africa is large and diverse, with a population approaching 1 billion people, over 1000 spoken languages, and a land-mass that exceeds that of Europe, USA, Brazil, Australia and Japan combined. Its development challenges reflect this diversity and while a set of common development themes can be identified (such as the thirteen themes of NEPAD’s Consolidated Science and Technology Plan of Action that was adopted in 2005), the local realisation of each of these common challenges require local expertise and experience.

The goal of international academic networking is to support and participate in sustainable academic networks that will contribute relevant knowledge for Africa's immense developmental potential in the decades to come. To benefit from these current and future opportunities, African universities need to solidify their positions as African knowledge institutions of choice. It is our first hypothesis that this goal will best be achieved with well supported and well coordinated academic networks incorporating public and private partners throughout the continent and elsewhere. The overall aim is to capitalise on the enormous developmental potential of the continent, without losing the method of critical inquiry so important for ensuring equity and true development for all of Africa's inhabitants.

### **Human capital and marginality of African science**

A major challenge to realising developmental goals in diverse and local African contexts is the shortage of trained professionals and intellectuals. A snapshot of Africa's contribution to world science output as measured in share of accredited journal publications shows that sub-Saharan Africa produced only 0.7% of science output in the mid 2000s, compared to 1.5% in 1985, with a few key players (Nigeria, Kenya and South Africa) producing the far majority of this (Anon., 2006). On a different measurement using Thompson Reuters data Africa as a whole produced on average 27,000 papers per year between 1999 and 2008, similar to that published by The Netherlands (Adams, King, & Hook, 2010).

The problem of poor human and intellectual capacity is, of course, multifaceted and resists simple solutions. It has to do, amongst others, with: the massification of higher education in Africa (lecture rooms are overcrowded and academics spend most of their time teaching and yet access to higher education remains painfully low); lack of resources and the lure of better salaries and career opportunities in advanced nations (brain drain out of Africa has reached unprecedented levels over the past decade); weak infrastructure that hampers scientific investigation, communication and access to information; and institutional bureaucracy and leadership styles that inhibit academic freedom.

An additional aspect that appears as an African anomaly is the very limited contact that scientists in Africa have with their colleagues in other African countries. A peculiar consequence of colonisation has been that higher education institutions have maintained contact with their former colonial powers post independence, but were slow to build ties with neighbouring institutions. Moreover, some exceptions seem to be the result of colonial-era measures to link institutions, such as the Inter-University Council of East Africa (IUCEA), which grew from the former University of East Africa with its three campuses in Kampala, Nairobi and Dar es Salaam, a former college of the University of London.

Lack of collaboration becomes an even more pertinent problem when one considers the crucial role that collaboration has played in the history of knowledge. It is only by reading, sharing, criticising and presenting ideas that they develop into meaningful human products.

It is our second hypothesis that the marginality of science in Africa is the reason for its dwindling share of global research output. Marginalisation means "to be less well-integrated into the social network of scientists, to have fewer colleagues to whom to turn for feedback, or to have one's potential contributions ignored" (Schmaus, 2007).

The opposite of this is to be tied into collaborative networks, which is "important not only for receiving criticism of one's work, but also ... for having access to the most recent, unpublished work of other scientists in one's field" and for gaining access to resources and funding (Wray, 2002). A recent report of The Royal Society analyses the rapid increase of academic collaboration worldwide, pointing to more

effective communication technologies and cheaper travel, but importantly also to the realisation that “collaboration enhances the quality of scientific research, improves the efficiency and effectiveness of that research, and is increasingly necessary, as the scale of both budgets and research challenges grow” The report continues with the acknowledgement that “little is understood about the dynamics of networking and the mobility of scientists, how these affect global science and how best to harness these networks to catalyse international collaboration” (The Royal Society, 2011).

### **Office of International Education & Partnerships (OIEP), University of Botswana**

The University of Botswana, founded in 1982, originated from a former University system known as the University of Bechuanaland (Botswana), Basutoland (Lesotho), and Swaziland (UBBS), established in Maseru in 1964 as a way to reduce the three countries reliance on tertiary education in South Africa during the apartheid era. After Botswana and Lesotho became independent in 1966, the University was called the University of Botswana, Lesotho, and Swaziland (UBLS). In 1975 Lesotho withdrew from the partnership and established its own national university. For several years a separate University of Botswana and Swaziland existed until 1982 when the university was amicably divided into two separate national universities. Batswana (People of Botswana) and other stakeholders made contributions of all types (including cash, cattle, grain, etc.) towards accomplishing the set target to build the new university.

The Office of International Education & Partnerships (OIEP) was established in 2005 with a mandate to implement the internationalization Policy of University of Botswana. OIEP currently has 7 fulltime staff members committed to providing service to UB international students and partners. OIEP is responsible for the welfare of all international students at UB and works closely with all administrative and academic departments to assist international students to achieve their academic goals as well as assist students to adjust to the culture of the University and Botswana.

The internationalisation policy of UB was adopted in 2007. It defines internationalisation as “incorporating international dimensions throughout the curriculum; enriching the international diversity of cultural and sports activities; expanding the number of international students and scholars participating in scholarly activities at the University of Botswana; and enhancing opportunities for University of Botswana students and staff to experience and study other countries and cultures.” Furthermore it seeks the realization of three objectives, namely to expand international student and staff exchanges, to expand international research cooperation, and to enhance the internationalization of all curricula.

Of interest here is the policy’s recommendation in terms of geographic distribution of partnerships: “Currently, most of the University’s formal partnerships are with institutions in Europe and North America. But it is important that the University meets its vision of being a leading centre of excellence within Africa, and also that it forms strategic partnerships with higher education institutions in countries which are the economic superpowers of the future. *Whilst continuing to seek partnerships in Europe and North America, the University intends to expand its relationships especially with SADC universities and institutions in other parts of Africa, and to establish a limited number of partnerships with universities located in major countries within Asia, namely China, India, Japan and Korea.*”

### **Talking Points about UB:**

1. Well resourced University enrolling approximately 15,000 students.
2. Visiting international students may enroll in regular classes for a semester or year.
3. All lectures are in English.
4. Special classes offered in Setswana, the national African language.
5. University security is designed to insure the safety of all members of the campus community
6. Science and engineering laboratories are equal in quality to those at many European and North American universities.
7. International students may enroll for three credit hours in research and obtain an academic staff advisor.
8. The university maintains an international student office to provide special services including the handling of visas and advising on a wide range of non-academic matters.
9. There is a major research station on the Okavango Delta, the largest inland delta in the world spreading over 15 000km<sup>2</sup> of the Kalahari.
10. Extensive recreation facilities including tennis courts, Olympic-size pool, sports stadium and exercise facilities.
11. An on-campus clinic providing free medical service and referrals is available to all registered students.

### **Postgraduate and International Office (PGIO), Stellenbosch University**

With the establishment of the Office for International Relations (OIR) (currently the International Office – IO) in June 1993, the University confirmed that internationalisation should be pursued purposefully. The OIR was the result of a vision that the University should become an international role player and purposefully position itself as such. When the political dispensation changed in 1994, it meant that the University, by means of the OIR, could begin to exploit the opening up of the international academic world in a proactive manner and the OIR was an important support mechanism for and facilitator of international mobility.

Since then, a set of policies has been created on the establishment of cooperative agreements, the handling of international students, the funding of international academic visitors and exchange programmes and the promotion of overseas study and research. The OIR, and later the IO, was managed accordingly and, as the context changed and new challenges presented themselves, new strategies were developed. Significant successes were achieved in the management of the University's formal

international relations, as is clear from the increase in student numbers, improved international mobility of academics and more sustainable international cooperative research projects.

The working definition of internationalisation in the case of SU has been based on that of Jane Knight (Knight, 1999): “Internationalisation is a process of integrating an international dimension into the teaching, research and service function of an institution of higher education, with the aim to strengthen international education, which is understood as education which involves and / or relates to the people, cultures and systems of different nations.” Internationalisation is therefore a process by which an international dimension AND an intercultural dimension are integrated into the three key functions of a university.

Since 2010 the International Office added a significant component to its service to the university by incorporating all postgraduate support into a new “Postgraduate and International Office” (PGIO). Such a centralised support function for postgraduate students had not existed before, and given the IO’s expertise in supporting international students, it was decided to locate the service here.

A new position was created in 2011 to manage all international academic networks of the university, but then with the task to integrate the university’s well-developed links and partnerships in the global north with its more recent links and partnerships in Africa and other developing regions. A strategy is being developed for this task with the preliminary goal of “nurturing academic networks and scholarship communities that span the African continent and link it worldwide across regional and language boundaries that will enhance the diversity of Africa’s intellectual resources, stem the brain drain from Africa, and harness the continent’s massive economic and social growth potential in coming decades.” Concrete preliminary objectives include:

1. Continue to develop and strengthen bilateral university agreements with African HEI’s, providing support for student and staff mobility, including development of joint PhD supervision and eventually joint degrees;
2. Support development of south-south and south-south-north thematic student & staff exchange and research networks and collaborative world-class master’s and doctoral programmes;
3. Develop technological support options and programmes to enhance communication, joint e-learning, and access to library resources for partner universities;
4. Support individual African initiatives with advice, links, logistical support, funding opportunities and internal seed funding;
5. Collect and record collaboration activities of SU staff with their counterparts locally, regionally, continentally and globally.
6. Engage stakeholders such as alumni, South African high commissioners and ambassadors, academic and policy organisations, and development agencies for buy-in and support of south-south-north collaboration

## **Supporting cooperation between SU and UB**

UB decided to become a member of the International Education Association of South Africa in 2006, which ensured greater ongoing contact with South African universities. During the 2006 IEASA conference at the University of the Western Cape the former Director of the OIEP visited Stellenbosch. This coincided with a number of academic visits, including a visit by SU's Dean of Arts to UB in December 2005, followed by visits from the Dean and Deputy Dean of UB's Social Science and Humanities faculties respectively to Stellenbosch in February 2006. Staff members from Engineering and Education also visited SU during this time. By the end of 2006 there was consensus that a Memorandum of Understanding would facilitate these contacts. An opportunity arose for the newly appointed VC of SU to visit UB in April 2007 for an Alumni event. A delegation of academic staff members from SU visited UB and this coincided with the signing of the MoU. Since then new collaboration programmes have emerged in renewable energy studies, Social Sciences, Political Science, Economics, Health Sciences, Water sciences, and Engineering.

The SU International Office has agreed to provide support to mobility with its African partner universities as follows: up to two students per year (preferably postgraduate) are offered free accommodation at SU for a semester each; up to a cumulative total of six months accommodation are offered to visiting staff members; up to two SU staff members are offered return flight tickets. Partner institutions are not required to offer similar support, but where resources allow many have provided free accommodation.

The PANGeA programme (see paper by Groenewald in this panel) includes UB as partner and this has become an important partnership to further UB-SU relations. UB is likely to become the second PANGeA partner to host one of its themes after the initial themes hosted by SU, namely on the developmental potential of sport.

Most recently, Stellenbosch participated in a UB-coordinated proposal for EU mobility funding under the Intra-ACP mobility Scheme. If successful, this will greatly enhance the number of student exchanges between SU and UB. To date this has been the one area which has not developed far, with only a handful of SU students having studied at UB on exchange.

In general, the experience of SU-UB cooperation has shown that memoranda of understanding can encourage greater exchange and collaboration, when followed up with ongoing personal contact between the respective international offices and

## **Better management of international collaboration?**

The Royal Society report cited earlier relies almost exclusively on publication data provided by Elsevier, yet admits that:

Publication and patent data are incomplete proxies for scientific output and scientific translation ... however, they are the two main quantifiable, globally collated, and commonly used sources of data on the production and consumption of science. ... It is widely accepted that they are

inadequate to fully explore the richness of 21st century science. The paucity of richer sources of data offers a challenge to national, multilateral and global bodies to explore ways of better measuring the inputs, outputs and impacts of the global scientific landscape (The Royal Society, 2011).

One such potential 'richer source of data' was initiated by Stellenbosch University with a collaboration management programme in 2005 to support and encourage academics to enter into partnerships elsewhere in Africa. This programme included a number of components, such as identifying potential partner institutions for bilateral student and staff exchanges, liaising with national and continental higher education role-players and identifying institutions and organisations in the north that were willing to support south-south-north interactions.

A crucial component has been the development of an information system tool that records and tracks all African collaboration of Stellenbosch University staff. The database records two sets of data for each entry. 1) Project data about the collaboration, such as its discipline, aim/objective, methodology, and outputs; and 2) details about the collaborators involved, i.e. the name, institution and contact details of the partners and donors involved.

The numerous fields in the database allows for a wide range of sort and search functions, for instance to view projects by type of collaboration, country, institution, discipline, faculty or individual collaborator. Of particular interest has been to compare the collaboration data with citation index data, which creates a much richer and more detailed map of the connections and activities that are taking place in African higher education.

The database therefore creates a map or typology of our African networks. It also provides a wealth of contact details of scientists in the region which enables targeted dissemination of information. Important, however, is to use the database as a tool to raise the visibility of networks and outputs in Africa. This enables more effective support and management of collaboration, but also of advocacy and lobbying for policies and funding for increased collaboration.

Finally, the entries provide a major source of information for case studies on different forms of academic collaboration in different fields of study. Such studies can lead to new insights on challenges, opportunities, and good practices of south-south collaboration.

After the first year of gathering data 90 collaborative projects were recorded (July 2007); a year later a further 30 projects were submitted and by June 2009 the database had 170 project entries. At the last full update (Dec 2010) a total of 244 projects have been recorded. In the meantime 78 of the collaborative projects recorded had reached completion and 28 had been suspended due in many cases to lack of funding. Although much of this growth has to do with more effective data gathering, there has been a marked increase of new collaborations in the last two years.

One particular challenge in the implementation of an information system is effective data gathering. In many higher education institutions the demands on academic staff are high and often a general and impersonal survey to collect data would receive a weak response rate. With this particular database

academic environments were informed via deans and heads of departments about the potential benefits of a central repository of collaboration data. Stellenbosch University had also prioritised African partnerships as one of the indicators used by management to rate individual academic departments' performance. Heads of departments were asked to identify individuals within their departments who were involved in African partnerships. Data collection could then take place in person with these staff members, mainly via email and telephone. To lessen the load on academics as much data as could be harvested from existing documents (grant applications, web pages, reports) were entered into the database before they were requested to complete the remaining fields. Throughout the emphasis on personal relationships of trust between data collectors and university staff has been important to guarantee feedback.

The value of a source such as this will increase exponentially if more higher education institutions in the SADC region and beyond can add information on their respective collaborative projects and programmes. Stellenbosch University and the Southern African Regional Universities Association (SARUA) are currently investigating the possibility to expand the existing collaborations database to the Southern African region for this purpose.

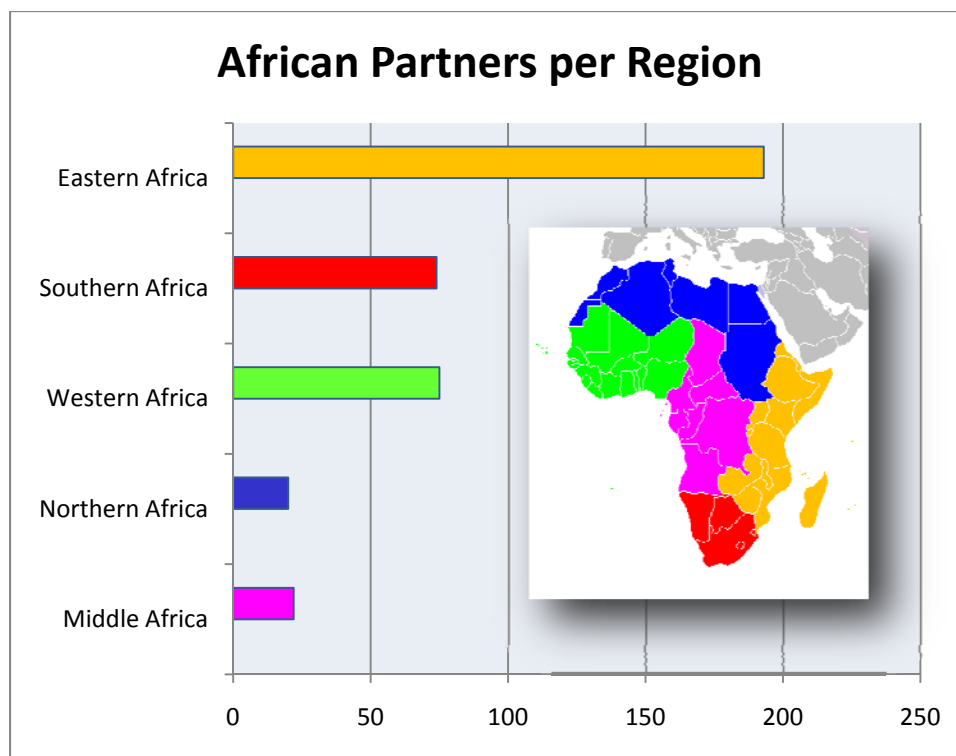


Figure 1: Stellenbosch University's African partnerships by region; the majority of interaction is Eastern and Southern Africa, with Kenya, Botswana and Uganda collectively comprising 30% of partners (data as of Dec 2010).

A search for all collaboration recorded where UB is involved revealed 20 different contacts at UB involved in 29 different projects in the followings fields:



- Analysis of educational statistics in Botswana
- Collaboration agreement in Civil Engineering
- Conflict Resolution and Cultural Production
- Course in Adapted Physical Activity
- Cross-Cultural Management and Health Sector Project Delivery in Sub-Saharan Africa
- Interventions and policies to address the human resources crisis in the health sector
- Ecology, physiology and conservation of the Nile crocodile in the Okavango Delta
- Establishing a knowledge network in renewable energy for sub-Saharan Africa
- Exchange agreement Mechanical Engineering
- Education Exchange Botswana
- External Examination in Psychology
- Family Medicine Education Consortium
- Global Engineering Teams
- International co-operation in criminal justice matters in the SADC region
- International Political Sociology - Networked Expertise of the World
- Making Markets Matter Workshops
- Monitoring poverty, inequality and polarisation: Trends and prospects
- NEPAD Water Centre of Excellence
- One party dominant systems in Botswana, Namibia, South Africa and Zimbabwe
- Partnership for Africa's Next Generation of Academics
- Pragmatics and Information in African Languages
- Research & Innovation Management Improvement for Africa and the Caribbean
- Research capacity support to University of Botswana
- Seasonal range, habitat use and feeding preference of the reintroduced White rhinoceros in the Okavango Delta
- Southern African Information Technology and Nutrition Research Group
- Southern African Values Project
- Study of the design and design optimisation of electro-mechanical energy conversion systems
- University of Botswana and Stellenbosch University Family Medicine twinning Project
- World Conservation Learning Network, Southern Africa

The database will in future be transferred from its current version in Microsoft Access to a web platform where collaborators will be able to amend information on their collaborative projects directly and where users will be able to withdraw information on existing collaborations and their topics. The long-term goal is to create a reliable information source alongside citation indexes and bibliometric databases.

## Conclusion

The aim of the endeavours described in this paper must be to reclaim ownership of African images, metaphors and conceptions. This means to not view Africa “from a distance,” nor as the “Other of the Western self”, and especially not as “a problem to be fixed” (Shepherd, 2010), but a view of Africa from within, cognisant of the diverse and often conflicting layers of knowledge and value systems that characterise the continent’s societies and cultures. This is a route of greater uncertainty and structure than the one preferred by development agencies and their partners, but given the wake of failed

developmental interventions in Africa's history it is a route one can no longer avoid, and especially a route to be led by Africa's own knowledge workers.

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