

COMPARATIVE & INTERNATIONAL HIGHER EDUCATION

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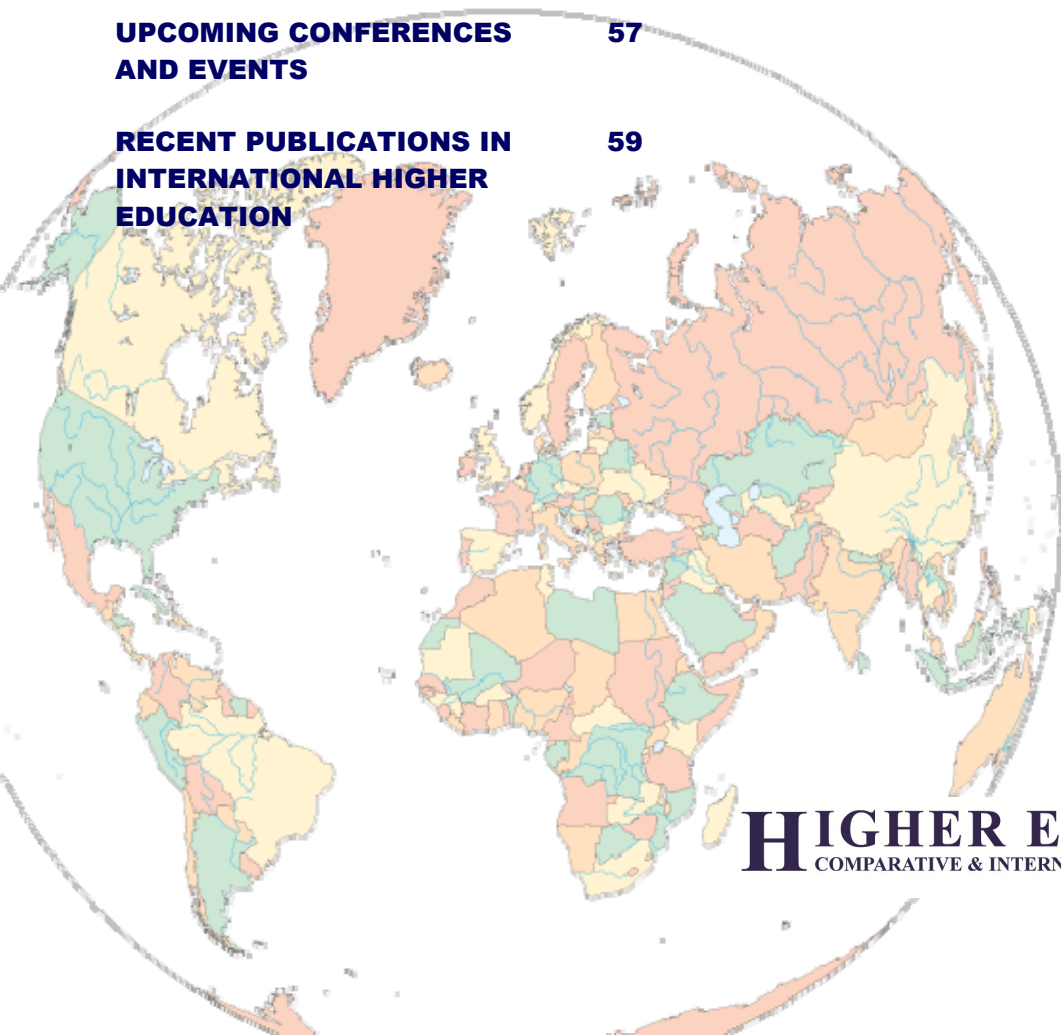
THE OFFICIAL NEWSLETTER OF THE HIGHER EDUCATION SIG

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HIGHER EDUCATION SIG
COMPARATIVE & INTERNATIONAL EDUCATION SOCIETY

COMPARATIVE & INTERNATIONAL HIGHER EDUCATION

Philosophy for *Comparative and Int'l Higher Education*

This is the official newsletter of the Comparative and International Education Society's (CIES) Higher Education Special Interest Group (HESIG), which was created in 2008. HESIG serves as a networking hub for promoting scholarship opportunities, critical dialogue, and linking professionals and academics to the international aspects of higher education. Accordingly, HESIG will serve as a professional forum supporting development, analysis, and dissemination of theory-, policy-, and practice-related issues that influence higher education.

Submission and Review

The Editorial Board invites contributions, normally of around 1,500 words or less, dealing with the complementary fields of comparative, international, and development education and that relate to one of the focus areas listed in the Newsletter Philosophy section above. Electronic submissions are preferred and should be sent to submissions@highered.org. Hard-copy manuscripts, books for review, and inquiries should be addressed to: The Editors or Regional Editors, Comparative & International Higher Education, University of Pittsburgh, School of Education, 5714 Wesley W. Posvar Hall, Pittsburgh, PA 15260, USA. Manuscripts are evaluated by the editorial board—with full confidentiality on both sides—and then accepted, returned for further revisions, or rejected. For more information, please see the website at:

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Principles of Good Governance: A Review of Key Themes Identified at the 7th International Workshop on Higher Education Reform

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During the Higher Education SIG (HESIG) Business Meeting at this year's Annual Conference of the Comparative and International Education Society in Chicago, HESIG members agreed to support the International Workshops on Higher Education Reform. Now in its seventh year, this year's Workshop was held at the University of British Columbia (UBC) in Vancouver, Canada from 6-8 October 2010. Prior Workshops were held in different countries each year, including most recently in Tokyo and Mexico City. We encourage all HESIG members to mark their calendars for a trip to Berlin in September 2011 when next year's Workshop will be held at historic Humboldt University.



FIGURE 1. Photo of Nelly Stromquist, Professor at the University of Maryland, who provided a Keynote Address at the 7th International Workshop on Higher Education Reform on 7 October 2010.

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While each year the International Workshop on Higher Education Reform is organized at a university in a different country, the Workshop Secretariat is maintained at UBC's Centre for Policy Studies in Higher Education and Training (CHET). Hans Schuetze and Garnet Grosjean, both of UBC, served as this year's Workshop Co-Chairs. Members of the International Advisory Committee include Germán Alvarez Mendiola, Departamento de Investigaciones Educativas (DIE), Centro de Investigacion y Estudios Avanzados, Hans Schuetze, UBC, Canada; Mexico; Maria Slowey, Dublin City University, Ireland; Andrä Wolter, Humboldt University, Germany; and Shinichi Yamamoto, Hiroshima University, Japan.

Overarching Themes on Good Governance in Higher Education

Presentations on 27 countries at this year's Workshop with representation from and every major global region. Keynote addresses included renowned comparative and international higher education scholars: Nelly P. Stromquist, University of Maryland; Paul Axelrod, York University; and Motohisa Kaneko, Center for national University Management, Japan.

Four major topics or overarching themes were identified at this year's Workshop:

1. institutional and social responsibilities;
2. tighter fiscal constraints and increased accountability (especially in the aftermath of the global financial crisis and recovery period);
3. identification and establishment of four principles of good governance: *coordination, information flow, transparency, and accountability*; and

4. quality assurance as a major component of governance in higher education.

The emergence of an emphasis on higher education good governance is not new but received a societal call to revisit and reemphasize the importance of including it in higher education curricula in the aftermath of the Enron scandal in the United States in October 2001. The current global financial crisis serves in many ways as a driver for further emphasis on the principles of good governance. Business schools increasingly offer governance courses on topics such as Ethics and Values; Ethical Leadership; Ethics in Accountancy; Foundation Principles of Financial Managers: Competency, Character, and Ethics.

Social justice themes emerged in many of the Workshop presentations and were particularly emphasized in the discussion periods afterwards. This began with Stromquist's Keynote Address, where she sounded an alarm about the rise of managerialism in university strategic initiatives, sometimes at the detriment of traditional academic and governance values. We also identified other social justice topics raised throughout the Workshop including discrimination, emphasis on first nation and indigenous perspectives, and an ongoing dialectic between public and private higher education initiatives.

The Workshop met many of the relatively high expectations Schuetze established as part of his welcoming talk at the beginning of the Workshop: "to provide a venue for mingling, networking, and academic partnerships." We hope that HESIG members will continue to participate in and support this SIG-sponsored International Workshop on Higher Education Reform and that newly-found relationships will grow, old relationships will be strengthened, and network relationships will expand in the coming years. The development of a publication partnership is already under discussion as one institutional way to help this networking opportunity to continue.

CIES 2011 Annual Conference in Montreal

We also encourage you to join us at next year's CIES Annual Conference in Montreal. We hope we can provide increasing evidence-based higher education re-

search and discussion along with an in-depth ideas sharing and opinion exchanging during next year's conference. Please note the paper and panel submission deadline of 21 November 2010. For more information on submitting a paper or panel, please go to the following URL:

<http://www.cies2011.mcgill.ca>

As you may or may not be aware, CIES determines the number of SIG-allotted panels or SIG-sponsored papers in its annual conferences based on the following two criteria: Annual SIG fee submissions of \$10 and indicating you want your paper/panel to be part of a specific SIG. We want to encourage you to support the Higher Education SIG by (i) submitting your annual SIG fee, (ii) submitting papers and panels that can be sponsored by HESIG, and (iii) participating in the HESIG Business Meeting at next year's CIES Annual Conference in Montreal. For information on how to submit your annual SIG fee, please visit our website at:

<http://www.higheredsig.org/membership.html>

Ongoing HESIG-Sponsored Initiatives

Higher education continues to be one of the most rapidly growing areas in comparative and international education. We have a vibrant community of students, scholars, and practitioners actively participating in our SIG on many levels. Opportunities for contributing to *Comparative and International Higher Education* (our bi-annual HESIG Newsletter) are open to all HESIG members. We also welcome your participation in the annual [HESIG Awards](#) nominations and review process, which has been so well managed by Rosalind Latiner Raby, HESIG Awards Committee Chair, and her colleagues. There is an ongoing call for excellence in higher education scholarship contributions through our [HESIG-Sponsored Book Series Collaboration with Palgrave Macmillan](#). Additional HESIG-sponsored project proposals and ideas are also welcomed. It is our goal that HESIG will continue to serve as a networking hub for promoting scholarship opportunities, critical dialogue, and linking professionals and academics to the international aspects of higher education.

Sustaining Higher Learning: Endowment Building and Financing Higher Education

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Every viable academic institution requires substantial income to operate. During periods of economic stress institutions ask tough questions that demand clear distinctions between institutional needs and wants. In particular, educational administrators may (re)assess the amount and type of income sources and expenditures for the purpose of increasing income and reducing institutional inefficiencies. The recent climate of economic turbulence underscores the need for assessment. In particular, endowment building emerges as a significant force that academic institutions grapple with in light of economic concerns. Why and how to build endowments are questions asked by both public and private universities. A brief look at both the current economic climate and an earlier period of financial challenge during the 1920s and 1930s provides insight into the significance of an endowment as a potentially important income source for colleges and universities. The discussion that follows primarily focuses on The Ohio State University (OSU), since OSU might be considered a quintessential public university, facing challenges comparable to other colleges and universities.

Sources and Types of Income

Maintaining a stream of income secures the lifeblood of the college or university. State universities, like OSU, may draw on a variety of income sources to stay in the black. These income sources may stem from students (e.g., tuition), government, hospitals, athletics, or endowment income. The search for new income may draw in donations from alumni, parents, students, corporations, foundations, non-associated donors, and

other fundraising entities (Ehrenberg and Smith 2003). Financing higher education can be simple or complex, largely depending on the context. Who makes the financial decisions, and how the income and expenses are respectively derived and laid out, may dramatically impact a college or university. Policies and programs that adequately address competing interests between collective and individual forces create economically vibrant climates. A tuition driven institution may see other income as less important. Nonetheless, the varied financial building blocks of colleges and universities should not be underestimated. Reliance on particular sources of income, such as endowments, may serve a significant function in building or weakening an academic institution.

Rising Need for Endowments

Over the past two years, questions on the significance of endowments have buzzed through colleges and universities across the nation. Molly Corbett Broad, President of the American Council on Education, claimed that today endowments are essential, but that people frequently misunderstand sources of revenue for higher education (Broad 2008). Many universities, including Harvard and Stanford, have had hiring freezes and even layoffs. Some point the finger of blame at endowments, claiming they are unreliable (Blumenstyk 2009).

While an institution's large endowment may provide some financial security, the income from an endowment may fall dramatically resulting from difficult economic times. In one year (from 2008 to 2009) the endowment value of OSU dropped 20 percent from US\$2.1 billion to US\$1.7 billion (National Association of College and University Business Officers [NACUBO] 2000).¹ In that same year other public and

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private universities suffered similarly. For example, Harvard University's mammoth sized US\$36.6 billion endowment dropped approximately 30 percent to US\$25.6 billion. While Harvard likely possessed a large enough endowment to support a leaner version of itself for the next 20 years (Thompson 2009), the question remains: how much effort should a state school, such as OSU, place on endowment building? Would this drop in endowment value be reason enough for an institution like OSU to steer away from an endowment-building focus and develop stronger funding ties from the state? The OSU 2009-2010 budget shows appropriations from the state of Ohio contributing just below 13 percent of OSU's total income.² Some might question the role of the word, "state" in OSU's name, but there are other obvious benefits that come with the sanction of the state of Ohio. Nonetheless, whether to focus on the fundraising component of endowment building remains an important question.

In assessing whether to expend resources into developing an endowment, certain factors should be taken into consideration. Endowments are built in three ways: through contributions (gifts and bequests), investment returns, and invested surpluses from an institution's operating budget. While one might think that how an endowment is invested is important to the development of an endowment, securing gifts is just as significant in the long-term building of an endowment (Lapovsky 2007).

Unfortunately, endowments require substantial principal in order to generate any significant income. A US\$50,000 investment at OSU, for example, provides an entry level restricted fund that on a conservative endowment investment of 5 percent would yield US\$2,500 per year. Approximately US\$1,500 of that yield (or 3 percent) would be spent, while the remaining US\$1,000 would be reinvested to allow the endowment to grow and keep up with inflation. While private research universities may relish large, prestigious endowments during prosperous economic periods, they may suffer when an economy turns for the worse. Endowment income can help an institution endure a trying economic storm, but if an institution has relied too heavily on endowments to support its operating expenses, it can lead to sudden financial strain. Though large institutional endowments often provide a college or university increased prestige, it also may have the ef-

fect of deterring donors from giving due to a perception of minimal need. Private research universities, however, may possess significant resources to quicken endowment building. These resources may include funding from robust alumni, community, ecclesiastic, foundation, or corporate, networks that provide a vital component of institutional income. One particularly source of income is the baby boomer generation. Baby boomers are expected to retire in the near future (probably not *en masse*), and may leave great wealth to colleges and universities. How, when, and if the baby boomer generation will leave large benefactions remains to be seen.

A Pivotal Period in Endowment Building

The period of 1920-1940 was critical for endowment building at OSU and the University of Michigan (UM).³ During this period colleges and universities experienced boom and disaster that impacted these institutions and the broader educational culture. This was a time of innovation in fundraising, a key moment in acquiring and investing private donations. It was also a time when many individuals raised political and ethical questions about the nature of private donations, many of which are still asked today.

OSU was ahead of UM in terms of raising endowment from 1895 to 1920, but due to political, economic, and cultural failures on the part of OSU, a gap arose and widened between the schools with regard to the solicitation of private funds and in endowment building. It appears that programs to build the endowment were slow in formation, since there were many critics who feared offending the state which provided essential revenue streams. UM was therefore able to succeed where it had earlier fallen short in comparison to OSU. By the early 1940s, the difference between UM and OSU was nearly insurmountable. It appears that OSU's reticence to engage in endowment building significantly detracted from the school's ability to compete for endowment size. OSU delayed, apparently failing to recognize the value of endowment building. Today's figures put UM's endowment at more than three-and-a-half times that of OSU.

Though major philanthropists were still giving heavily through the Great Depression, state funding was not so reliable. OSU state subsidy dropped 40 percent to

US\$6 million dollars. This decrease was also, in part, attributed to the poor relationship between OSU President Rightmire (Pres. 1925-1952) and Ohio Governor Martin L. Davey (Gov. 1935-1939). However, a positive stroke for the university was hidden in this financial setback. With decreased state funding, administrators looked to other sources of income, notably gifts from alumni and other friends of the University. Other public institutions in Ohio already had significant endowments. In 1935-1936, OSU's endowment value was US\$1,158,318 compared to the University of Cincinnati's value of US\$9,146,438, both publicly controlled universities (Office of Education 1938, pp. 276-277). It was time for OSU to take its place as a financially successful institution that not only drew on state funds, but on interest from endowments as well.

There are many questions that emerge when comparing OSU and UM. Why did OSU abstain from securing funding from private sources? What were the debates on whether to accept private monies for endowment? Why did UM, also a public institution, excel in acquiring income for new endowments? How did these institutions view income from state sources as opposed to private revenue streams?

It might be argued that higher education is sometimes not a rational actor. Decisions based on qualitative vantage points may not make sense from a financial perspective. For example, why do faculty hire so many graduate students as opposed to adjuncts, especially since many graduate students will never end up in faculty positions? While faculty cannot with exactness assess the needs of the future academic job market, they realize that, in the long-term, hiring graduate students may be a better choice. One factor may be the expectation of the graduate to bestow wealth and prestige to his or her alma mater.

The challenges faced by OSU and UM remain relevant today. Institutions need to be innovative in fundraising policies in order to face a faltering economy and prevalent social transformations. Issues of public and private fundraising, including endowment building, are vital to any discussion of educational reform or reinvention. Endowment building and securing private donations are important to higher education today. Endowment funds, though sometimes overly-restrictive, can maintain intergenerational equity in higher educa-

tion. A study on endowment building not only serves as a reference point for current issues in financing higher education, but identifies issues important for today's changing educational climate.

Notes

1. On 30 June 2009, OSU's endowment was valued at US\$1.716 billion. A statistical summary of OSU's endowment is available online at <http://www.osu.edu/osutoday/StatisticalSummary2009.pdf>.
2. OSU's 2009-2010 budget included a total income of US\$4.45 billion, including total state appropriations of US\$577 million. Available online at: <http://www.osu.edu/osutoday/stuinfo.php>.
3. I am currently analyzing published and unpublished primary sources detailing endowment building at OSU and UM.
4. UM's endowment boasted US\$6 billion compared to OSU's US\$1.7 billion in 2009. Sometime between 1915 and 1920, UM technically surpassed OSU in the amount of total university endowment; OSU had been in the lead since 1895. For endowment values in 1915 and 1920, see U.S. Commissioner of Education (1917, v. 2, pp. 239, 253-319) and U.S. Bureau of Education (1925, pp. 384-425).

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Brain Drain to Brain Gain: What are the Implications for Higher Education in Africa?

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Introduction

Brain drain is the movement of the highly educated individuals from their countries of birth to other countries where they anticipate better opportunities. It denotes the migration of human capital as a strategic resource from countries where it can make the greatest contribution to national output to countries already well supplied with high-level of manpower (Ramin 1995).

In his address to the UN General Assembly, Uganda President Yoweri K. Museveni (2002) contends “education must do more than just making people literate . . . it must produce skilled people, scientists and managers that are absorbable by the labor market either inside the country or abroad.” Indeed, education empowers people and promotes democracy, health, political awareness, and poverty reduction (UNDP 2002). Education is a powerful engine of production and an important component of human capital that support national economic development (Schultz 1993). Belfield (2000) concurs that the effects of education do not only benefit the individual but also spillover into society.

In this article I highlight the concepts of *brain drain* and *brain gain* and their implication to higher education in Africa. I argue that although African countries are more vulnerable to lose their highly-skilled manpower given the region’s political instability, social conflicts, civil wars, and poor overall economic situation (Katz and Rapoport 2001), it is also possible to reverse this situation.

Brain drain is a constant phenomenon given that developed countries are often more politically and economically stable and offer better working conditions. Mountford (1997) contends that the constant flow of

highly-educated people to developed countries may push developing countries into a vicious cycle of poverty. In fact, emigration may mean lost investment in human capital as well as lost potential taxpayers. Indeed there is a direct connection between the level of education and migration decision (Katz and Rapoport 2001). The higher the educational level the higher the probability of migration. It is not surprising that with the broadening global economies and global village, education has become a passport to migration.

For many years much emphasis has focused on finding ways to reduce brain drain in Africa as the continent continues to lose the best of its brains to the West through emigration. However, given that the brain drain may not stop in the near future, rather it may instead increase, this is an opportune time to examine the positive effects of brain drain that can benefit home countries. Some of the benefits can be realized through increased remittance and return migrations especially for those people who have gained more advanced skills abroad (Rapoport 2002). Meyer (1996) suggests new possibilities of developing knowledge and human resources in the national community, through the use of its expatriate citizens abroad (international Diaspora). This could especially benefit African governments that do not have the capacity to restrict their highly educated citizens from migrating to international destinations, to rather explore the possibilities of tapping into the expertise and resources of African nationals currently working overseas (European Economic and Social Committee [EESC] 2001; Lowell 2002). African higher education institutions (HEIs) may have to take the lead in establishing viable networks with Africa’s Diaspora as they are challenged not only to produce nationals that can thrive in Africa, but also those that could compete in the global job market.

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Brain Drain

The growing international transfer of human capital from Africa to the developed countries undermines the human capital development efforts in this region. Evidently most migrants are even more highly educated than the average citizen of their home countries (Belfield 2000). Often the best brain immigrants have enjoyed subsidized education offered by their government from taxpayer money and afterwards leave for greener pastures once their higher education training is completed. Tikki Pang, Mary Ann Lansang, and Andy Haines (2002, p. 500) provide brief data on human capital loss for South Africa and African immigrant in the medical field:

With 600 of its medical graduates registered in New Zealand, the financial cost to South Africa was estimated at \$37 m[illion]. The United Nations Commission for Trade and Development has estimated for each migrating African professional represents a loss of \$184 000 to Africa. Paradoxically, Africa spends \$4 b[illion] a year on the salaries of 100 000 foreign experts.

A major challenge confronting developing countries—and especially those within the Africa Region—is optimizing the levels of human capital to cope with the stiff competition created by the global economy. Thus, human capital accumulation remains extremely unpredictable today. Straubhaar (2000, p. 17) argues

Human capital has become internationally mobile. People can move around the world within hours, their human capital even goes much faster and is available worldwide within seconds. Highly skilled people have the opportunity to communicate and to sell their knowledge around the globe . . . they can choose their residence by maximizing the expected return on their human capital investments . . . they may not even need to move in person. Cyberspace and Internet allows them to become functionally mobile while staying at their home base.

Migration opportunities are more open today than ever before. Post (2001) indicated that 15 member countries

of the European Union (with more than 375 million inhabitants) will need some 219 million immigrants from now until 2025 to maintain the ratio between aged persons and working persons. Rapoport (2002) also reported that more than 2.5 million highly-educated immigrants from developing countries reside in United States alone, excluding students. Nevertheless, U.S. Congresswoman Zoe Lofgren lamented: “after allowing foreign students to study at our fine American universities, we force some of the best and brightest minds in the world to leave America and relocate to other countries to compete against us” (Puzzanghera 1999, p. C1).

Subsequently, the introduction of the High-Tech Visa Bill in 1999, which ultimately led to the *Brain Drain Act* that was intended to relieve the shortage of skilled professionals for high-tech companies. The *Brain Drain Act* enables all foreign students graduating in hard sciences such as, mathematics, computer sciences, engineering, and medicine to secure work permits and to stay in the United States. Therefore the US and other developed nations are committed to encouraging more highly-skilled foreign individuals to stay permanently and work in the host country. Considering the ever-increasing demand for highly-skilled experts in high-tech knowledge in the developed world, inevitably brain drain will remain a menace to Africa.

What Motivates the Migration of Highly-Educated Workers from Africa?

The reasons why many highly-educated and skilled workers from Africa are willing to leave their home countries are many and not entirely understood. Grubel (1995) reported that professional research opportunities abroad is a primary motive for the migration of highly-skilled workers. Carrington and Detragiache (1999) also indicated that wage differentials, quality of life, educational opportunities for their children, and job security as the likely explanation for the migration of the elites from Africa and other developing countries (Carrington and Detragiache 1999). Others isolate political insecurity, poor working conditions, and lack of career opportunities as factors that ignite migration of the highly educated from Africa to developed nations (Vaknin 2002). A poor funding atmosphere is the major factor underlying the Cameroonian intellectual migration

(Edokat 1997). During a conference address on brain drain and capacity building in Africa, Tapsoba (2000) indicated that

We are spending less and less on our higher education systems, and our research laboratories are in a state of decay. Equipment and documentation materials are not regularly renewed. How can we keep the best of our minds if we continue to pay less to our top researchers and skilled [workers] than the youngest unskilled military personnel and our security guards? When wars are not making living conditions impossible for [our diverse] populations, we are doing everything possible to keep the best minds out of Africa. . . . It is time for Africa to value and treat its experts like it values foreign experts. Even today, it is not surprising to see policy maker[s] select foreign experts over well qualified Africans. . . . Brain drain is expensive for Africa and we cannot afford it. (Tapsoba 2000)

The conditions expressed by Tapsoba are in common practice in Africa and governments must support HEIs in order to reverse the effects of brain drain.

Brain Drain and Source Countries Development

Recent studies indicate that the possibilities of migration could lead to increasing human capital accumulation in the source country. Reichling's (2001) study revealed that possibilities of migration lead to a greater number of highly-skilled workers remaining in the source country as well as a greater human capital ratio than if there is no migration. Increasing the possibility of migration stimulates the returns to education, hence causing more people to become educated (Reichling 2001). Stark and Wang (2001, pp. 40, 42) concur that "when the migration prospect leads to a higher average human capital" then the "behavioral response to the prospect of migration nourishes both a 'brain drain' and 'brain gain'." However, conventional policies designed to stop brain drain may succeed only in retaining those who are mediocre professionals while the brightest continue to emigrate (Miyagiwa 1991; Gould 1994; Odek Stark, Helmenstein, and Prskawetz 1998). Most countries combining low levels of human capital and low

migration rates of skilled workers can be positively affected by the brain drain phenomenon.

Evidence shows that the greater the wage discrepancy between the destination country and the home country, the greater the incentive to accumulate human capital and the more likely that brain drain of migrants will be outweighed by the brain gain of non-migrants (Oded Stark and Wang 2001). Thus, the poor in poor countries stand to gain more and need to fear less from properly controlled migration by skilled members of the country's workforce (Stark et al. 2001). As earlier indicated, there are also possibilities of positive effects of brain drain such as remittances, return migration of skilled professionals, and the creation of business networks (Beine, Docquier, and Rapoport 2002; Pang, Lansang, and Haines 2002). Such dividends of brain drain could accrue to those left behind in the home country.

The estimated 10-20 million illegal immigrants currently residing in the United States receive more than return significant money to their respective home countries, including billions to Mexico alone. The seven million foreign workers in Saudi Arabia send home US\$18.6 billion dollars per year and Brazilian migrants working in Japan send home between US\$1.2-1.6 billion a year (EESC 2001). However, according to Straubhaar (2000) the foreign students studying in the United States contribute annually over US\$7 billion to the US economy.

Brain Gain and Intellectual Diaspora

Those within the Diaspora often take a different perspective from the traditional argument that brain drain is predominantly viewed as a loss. The Diaspora can be a potential gain to the home country (Meyer 1996; Brown 2002). Highly-skilled expatriates are seen as a pool of potentially useful human resources for the country of origin; the challenge is how to mobilize these brains (Brown 2002). Capitalizing on the possibilities of maximizing international business networks and connecting immigrant professional citizens in foreign countries could be a new direction for developing nations especially in Africa (EESC 2001). Meyer (1996) contends that establishing successful intellectual Diaspora through the connection of expatriate nationals abroad

provides opportunities with a multiplying effect whereby their home country could take advantage of the embodied knowledge as well as other resources that are tied to their professional environments such as colleagues, equipment, institutions, financing, etcetera (Meyer 1996). Forty-one expatriate-knowledge networks were identified through 2002 (see Brown 2002) and many additional ones have been established afterwards. The main goal of these networks is to connect expatriates amongst themselves and with their countries of origin (EESC 2001; Lowell 2002). The Diaspora offers the opportunity to allow expatriates to transfer their expertise and skills to their country of origin, without necessarily returning home on a permanent basis. Lowell (2002) argues that when emigrants maintain ties to their home country through backward connections, then, human and financial networks spillover to the source country that often yield significant benefits to the source country. With the global knowledge economy, increasingly relying on science and technology, the issue of intellectual Diaspora should be taken more seriously (Tapsoba 2000).

Discussion

The dilemma facing the African governments is to positively address the brain drain question while being mindful of their human capital development needs. They should also recognize that their efforts to reduce or eliminate brain drain altogether have not been forthcoming given the rapid expansion of the global economy and constant changes associated with technologies. National boundaries may not mean anything in a situation where anybody is able to sell and share their expertise with anybody anywhere on the globe without necessarily emigrating. HEIs in Africa are challenged to create an environment that offers opportunities for academic staff to conduct worldwide cutting edge research. Efforts to prevent massive brain drain particularly in Africa may no longer be necessary if HEIs can carry out massive production of highly-specialized and skilled persons such as doctors, nurses, engineers, and computer scientists that are competitive on the global job market.

Higher education in the twenty-first century must not necessarily buy a person the ability to migrate in re-

sponse to higher incomes offered elsewhere (Katz and Rapoport 2001), but rather should enable individuals to compete in the global job market irrespective of being in Africa or elsewhere on the globe. African governments and their HEIs after educating their own highly-skilled labor force at a huge expense, most of this labor force migrates permanently to international areas where quite often they are even being underpaid (Vaknin 2002). Many of these HEIs whose most highly educated graduates have left are often forced to hire expensive foreign experts. For example, Vaknin (2002) indicated that African countries spend more than US\$4 billion annually on purchasing foreign expert advice and it is in common practice offering better working conditions to foreign experts rather than their own national experts. This practice of course undermines the patriotism of the highly-educated faithful nationals that have opted to remain and serve their home countries.

In Africa, when the highly-skilled people leave their own countries for greener pastures; those left behind are also encouraged to pursue further education in hope of future migration. As more people pursue further education, it leads to the accumulation of human capital in their home countries since not all the highly-educated can migrate to foreign countries. Thus the ones that remain behind can offer services to benefit their home countries. However, most African countries are not prepared to sufficiently utilize the skills of the highly-educated workforce they train locally and abroad. This is especially so with those highly qualified in specialized fields such as high technology in space science, nuclear physics, etcetera. Consequently, these individuals may end up doing jobs outside their careers that they are not even qualified for.

African national expatriates working in developed countries certainly earn much more than their counterparts left behind in their home countries. African HEIs should examine the potential associated with the African intellectual Diaspora as a strategy to counteract the negative effects of brain drain. The brain drain phenomenon can be turned into brain gain by enhancing opportunities for creating business and academic research networks through the intellectual Diaspora. Scholars currently working for African HEIs can be linked to their colleagues (African nationals) laboring abroad to boost research and economic development in Africa. By

doing so African scholars in HEIs back home can gain access to current advanced knowledge, skills, and technologies through their African counterparts working as expatriates in foreign countries.

Increasingly, in Africa we will see more private HEIs given that with the increasing private returns to education, people will feel increased need to become more educated and also be more willing to finance their own education either through their family members or through loans (Reichling 2001). When the educated leave their home country, their remittance indeed boosts the economies and GDP growth of Africa.

The efforts of HEIs must be matched with the local needs of Africa. In order to contribute in a positive way for human development in Africa, curricula at African HEIs should focus on expanding people's choices, thus helping to create an environment for people to develop their full potential and lead productive, creative lives (UNDP 2002).

Conclusion

The international flow of highly educated workers presents a critical challenge to developing countries particularly in Africa. We have explored the concept of human capital investment in least developing countries in the context of brain drain. Research suggests that brain drain presents both negative and positive impact to the human capital resources in Africa. The major challenge facing Africa is to devise means to reverse the negative effects of brain drain so that Africans can benefit out of this phenomena. Africa has the potential of benefiting from the effects of *brain drain* and *brain gain* provided wise strategic policies are constituted. The African Diaspora could be a powerful tool to enhance higher education in terms of contributing knowledge, expertise, and other resources to Africa's HEIs. Many African nationals in the Diaspora are willing to share their resources with their colleagues back home. The challenge is to create a favorable environment to facilitate the opportunities of tapping into such resources and opportunities.

I conclude with five recommendations I feel are necessary to achieve greater brain gain in African higher education. First, encourage joint ventures in academic research agendas and joint publications among local and

international professionals. Second, improve the national communication infrastructure especially in regards to the Internet for the entire African Region. This is essential to better link Africa with the rest of the world. Third, support HEIs (universities and colleges) to establish the technology and brick and mortar infrastructure needed to compete on a global level. Fourth, support academic research with a primary focus on the local needs of Africa and Africans. And finally, increase financial assistance opportunities through grants, donations, and scholarships.

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Trends in the Publication of Refereed Journals in Spanish- and Portuguese-Speaking Latin America?

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Introduction

Globalization is transforming the ways people live their lives, communicate with each other, and do business. The revolution of telecommunications, electronics and satellite technologies, for instance, has changed the speed of production, use, and distribution of knowledge, as evidenced by the increased publication of scientific papers and the number of patent applications (World Bank 2002). Knowledge has gained a more relevant role with the emergence of knowledge-based economies. It is seen as critical for sustained economic development and improved living standards. This happens because the comparative advantages between nations are less related to profuse natural resources or inexpensive labor and more from technical innovations and the competitive use of knowledge (Task Force on Higher Education and Society 2000; World Bank 2002).

There are two challenges that mainly developing and transition countries face to reach economic development: sustainability and competitiveness. On the one hand, economies need to foster the capacity to generate and use knowledge in the pursuit of sustainable development and improved living standards, which is not shared equally among nations (World Bank, 2002). On the other hand, those countries must achieve greater economic productivity if they want to be able to compete effectively and not to be excluded from the global arena (Task Force on Higher Education and Society, 2000).

There are important disparities between rich and poor countries in science and technology (S&T) investment and capacity. In 1996, OECD member countries were estimated to account for 85 percent of total

investment in research and development (R&D); China, India, Brazil, and the newly industrialized countries of East Asia contributed 11 percent; and the rest of the world only 4 percent (World Bank 2002). But there has been consensus that governments need to get more involved in stimulating research and development, especially through collaboration between universities and the private sector (Reid 2007). But the disparities are not only related to S&T investment. Regions like Latin America and the Caribbean (LA&C) have also been relegated to the bottom of the global academic/scientific arenas due to other reasons of which communication of research is one of the most challenging. For instance, the lack of English writing skills of scholars from Spanish- and Portuguese speaking countries (Bergeron 1999; Buela-Casal et al. 2006; Steenkist 2008); the monopoly and high cost of subscription to well-reputed refereed journals and bibliographic databases and indexes (Charum et al. 2002; Charum 2004; Cetto and Vessuri 2005; Borrego and Cristobal 2006; Utges 2008; Vessuri et al. 2008); the weakness of regional and university press units to communicate the work of LA&C scholars (Rama 2006; Uribe 2006), and the lack of value given to research produced locally (Meneghini et al. 2006; Utges 2008) are some of the obstacles that have prevented the region from having a greater influence and impact in the region and worldwide.

However, global, regional, national and even institutional reforms and initiatives are changing that panorama of scholarly publication. The open access movement for democratization of knowledge; the development of regional networks, scientific repositories and bibliographic databases and indexes; the status elevation of national agencies specialized in science and technology; the enactment of policies in higher education and in science and technology; and the growth in number and quality scientific and scholarly (refereed) journals are some of those current trends in the region.

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The aim of this article is to describe some of those trends, focusing on the publication of refereed journals in Spanish- and Portuguese-speaking countries to answer the question, how are trends in scientific publication shaping scholarship in the LA&C region?

Importance and Measurement of Journal Publications in LA&C

Communication, essential for scholarship, has traditionally taken place through several channels, including presentations in conferences, preprints, abstracts, books and journals. Scholarly papers published in peer-reviewed or refereed journals have been essential for the dissemination of research results (Borgman 2007). In recent decades, refereed journals have become the preferred means of communication in LA&C academic contexts.

Usually, results of research are measured through number of publications, numbers of citations, and patents. This is a limited method to determine the social impact of research represented by the publications but is one of the few that allows international comparisons. In that order of ideas, the indicator “*number of publications in international databases*” has a highly explanatory level of the contribution to S&T by the countries regarding the scientific mainstream (de Moura Castro et al. 2001; RICYT 2007). Citation indexes are tools to observe trends, emergencies, disappearances, and thematic concentrations or dispersions, providing information for policy making and dissemination among sectors such as the productive (Charum et al. 2002). However, the volume of contributions to specialist publications is a partial and imperfect indicator because it leaves out other products of scientific activity such as textbooks, monographs, and popular introductions (Cetto and Vessuri 2005), as well as the fast growing blogs and electronic repositories. Citations and number of papers only take into account those papers and authors in mainstream journals and bibliographic indexes excluding a vast number of publications that may be contributing to global knowledge but lack the access to renowned publications. In addition, citations and the impact factor (number of times that a journal, paper or author is cited in certain period of time) do not necessarily represent quality. A paper might be highly cited for the opposite

reasons, for instance, to critique its low quality research design.

Overall, indicators highlight the general problem of the shortage of resources, both human and financial, going to S&T in LA&C (Cetto and Vessuri 2005). Western Europe, North America, Japan, and newly industrialized East Asian countries share 84 percent of publications in S&T and 97 percent of patents registered in Europe and the United States (Task Force for Higher Education and Society 2000).

Trends in Publications of Refereed Journals

Currently, science and innovation are more competitive and more cooperative. Globalization increases competition, while the growing complexity must be addressed through team work, coordination, interaction, and the re-utilization of resources. Coverage and scale are achieved less through scaling investment, and more by sharing data, knowledge, and infrastructure, at times in association with competitors (Vessuri et al. 2008). Cooperation can emerge due to the need of access to some particular field or resource, or priorities for the countries of a region. It also includes a multiplicity of levels and actors involved in cooperation: groups or institutions, bilateral and multilateral (international) organizations and funding agencies (Task Force for Higher Education and Society 2000; Cetto and Vessuri 2005). Scientific journals are one of the most important areas where collaboration can take place. They are the platforms to keep up-to-date academic content in constant circulation. They fulfill a double role of certification or scholarly canon and dissemination of knowledge, but there is more. They increase researchers’ prestige and salary, consultancy offers, speaker fees, and invitations to participate in other activities to talk about their intellectual work (Steenkist 2008).

LA&C has taken advantage of possibilities of collaboration at different levels for the development of scientific periodicals, the region as a whole, but also in; individual countries and institutions. They include regional and national bibliographic databases such as Latindex and Publindex (Gomez 1999; Charum 2002; CNIH et al. 2006; Colciencias 2006); open access electronic repositories of scientific journals such as the Scientific Electronic Library Online—SciELO, the Red de Ameri-

ca Latina y el Caribe—RedALyC and the CLACSO Library (Pessanha 1999; Charum et al. 2002; Cetto and Vessuri 2005; Holdom 2005; Mendonza de Araujo et al. 2005; Borrego and Cristobal 2006; Farga Medin et al. 2006; Meneghini et al. 2006; Steenkist 2008; Utges 2008); and some reforms at the national level such as the creation of ministries and departments of S&T, the enactment of S&T and higher education legislation, and the creation of accreditation systems in higher education (Colciencias 2006; RICYT 2007). Under the two following titles, attention will be put to regional and national initiatives.

Regional initiatives

Worldwide, between 1665 (when the first scientific journal was published) and 1960, 50,000 journals that published 500,000 articles every year were created. Scientific societies from industrialized countries created databases to identify the most relevant discoveries and the ways of dissemination with the highest coverage (Charum 2002; CNIH et al. 2006). There are different kinds of bibliographic databases. The simplest ones are *bibliographic directories* that include basic information about journals (such as country, publisher and discipline). The most famous are the ISSN database, the Serials Directory and the Ulrich's International Serial Directory. A second group consists of indexation and abstract services (IAS), which includes information on content. There are sub-categories of IAS that depend on the type of evaluation that is carried out to publications. During the twentieth century, IAS multiplied to the point that there were around 800 in 2004. Explanations given for this include the need to group journals by thematic fields, the emergence of editorial companies, the regional, national and institutional efforts to have databases, and the initiatives of international organizations to meet information needs (CNIH et al. 2006).

At the regional level, the developing of bibliographic databases with quality filters is on its way with initiatives such as SciELO that has established the evaluation criteria for admission and permanence of scientific electronic journals. Even though the concept is old, the initiative for universal and free-of-charge access to information, open access (OA), was created in December 2001 during the Budapest Open Access Initiative.

On the other hand and linked to this movement, there is a norm that defines the architecture to create applications: OpenURL. SciELO puts together both techniques (Farga Medin et al. 2006). As a multinational project, the main base (in Brazil) splits functions with its national parts. It started as an electronic library in 1997 publishing digital versions of a selected collection of Brazilian scientific journals. Soon it expanded to all Latin America and today it is the biggest OA platform hosted in the LA region in a wide array of disciplines but has an emphasis in the social sciences and health disciplines. The SciELO project is an initiative of the Sao Paulo's State Foundation for the Support of Research (FAPESP: Fundação de Amparo à Pesquisa do Estado de São Paulo) and the Center of Information about Health Sciences for Latin America and the Caribbean (BIREME). In addition to 12 Latin American countries (Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, México, Peru, Uruguay, and Venezuela) Spain and Portugal have joined the initiative. Since 2002, the project is also supported by the Conselho Nacional de Desenvolvimento Científico e Tecnológico—CNPq. Each country joining the SciELO-initiative has Brazilian-based technical support (the maintenance and actualization of programs that make the sites possible, among other aspects, are done by the main platform). However, no SciELO subdivision gets any monetary help from the Brazilian base. In every country journals that want to be part of SciELO need an approval of a national official scientific and technological entity. Generally speaking, these entities are in charge of rating the researchers and their products and rank them according to international standards. The journals that are evaluated by those entities usually want to achieve high distinctions, usually passing through very strict editorial controls. Each country has its own science and technology institute and they work in close alliance with the SciELO managers (Charum et al. 2002; Cetto and Vessuri 2005; Farga Medin et al. 2006; Meneghini et al. 2006; Steenkist 2008; Utges 2008).

The second largest OA repository in Latin America originated in Mexico. The Autonomous University of the State of Mexico RedALyC project started officially in the year 2002. In its first stages it published only journals related to social sciences and humanities. Seeing the great success and rapid growth, by 2006, Re-

dALyC received the first journals on natural and hard sciences. The project was well received and it continued to expand. By June 2007, RedALyC stored 374 specialized journals (291 dedicated to the social sciences and the humanities and 91 to natural sciences) and almost 60,000 articles of all kinds of disciplines. In its main window, the RedALyC web page has more than six hundred-word articles describing the OA movement and explaining its addition to it. In addition, RedALyC seeks to increase the quality of the scientific publication, to give visibility to Latin American qualified scientific production and to impulse a general and equalitarian information society (Steenkist 2008).

Another initiative is the database of the Mexican National Autonomous University—UNAM called Latindex, whose purpose is to create a directory of the journals that have reached high levels of quality in the Latin American region, Spain and Portugal (Charum et al. 2002). Latindex established a set of 33 criteria to evaluate editorial quality, which is done to the last three published issues of a journal. To be included in this catalogue, periodicals should comply with the eight basic characteristics and at least 17 of the other criteria. Many of these criteria are already part of evaluative models such as São Paulo and Colciencias (Colombia) (Borrego and Cristobal 2006). The first of its products, the online Latindex Directory, contains basic information on more than 13,000 scientific or academic journals. Present members of the system are institutions in Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, Nicaragua, Peru, Portugal, Puerto Rico, Spain, Uruguay, and Venezuela (Cetto and Vessuri 2005).

National Agencies and Experiences

In general, Latin American governments, have created agencies or reinforced the existing ones to promote the development of S&T. In many cases, such as Venezuela and Brazil, they have created Ministries of Science and Technology. Along with the agencies, legislation for science, technology and innovation has been enacted.

In Latin America, national programs have been created to categorize periodicals and evaluate performance of scientists, budgetary cuttings, efforts of edi-

tors to increase the quality of scientific publications, and the growing relevance of secondary publications and information services (Cetto 1999). Many countries have started creating national bibliographic databases. In the 1980s, countries such as Brazil, Mexico, Venezuela, and Colombia developed initiatives to evaluate scientific/academic journals (Gómez 1999). For instance, the Spanish Information and Documentation Center (CINDOC) has a database of Spanish authors that will allow developing bibliometric studies of their publications as well (Charum et al. 2002). Argentina recently started to give concrete steps in order to get publications indexed by CAYCIT, the government agency that also has the responsibility of relationships with Latindex and SciELO (Utges 2008).

The development of the Brazilian scientific and technological infrastructure as well as the training and expansion of the scientific community are recent events when compared with developed nations. For the medical sciences, the turning point in this process was the foundation of the Oswaldo Cruz Institute in the city of Rio de Janeiro in the early 1900s. For decades, this institute was the main Brazilian institution devoted to medical research (Mendonza de Araujo et al. 2005). The program for the development of Scientific Publications of the Ministry of Science and Technology—CNPq-FINEP was created in 1982 with the purpose of assigning resources in a permanent basis, transferring information as part of the science and technology policy that includes financial support, improving tools for dissemination. It is limited to scientific-technical periodicals (Pessanha 1999). There is also the Foundation for Research Development of the State of São Paulo—FAPESP, which was created by mandate of the Political Constitution of that State, and finances scientific publications. SciELO project was created by FAPESP (Nardi 2008). The Brazilian Agency for the Improvement of Higher Education Personnel—CAPES coordinates the Qualis system for the evaluation of periodical publications. It includes a ladder of categories (A, B, and C, being A the highest possible) at national and international levels (Nardi 2008). That system of categories is similar to that of Colombia.

Another one is the Colombian National Bibliographic Index—Publindex that was created in 1996. Publindex evaluates editorial and scientific quality, sta-

bility and visibility of journals. The creation of Publindex has allowed the Permanent Service of Indexation to classify in predetermined dates the scientific and technological journals based on criteria of quality. There are four categories of indexation, A₁, A₂, B, and C and are assigned with a validity of two years so editors must submit the information of new numbers frequently. Editors have submitted their publications responding to formal callings of invitations from Colciencias and the Colombian Institute for the Promotion of Higher Education—ICFES. Information of journals is entered regularly in the database, so that each publication can build its own history within the National System Colombian ST+I Publications (Colciencias 2006).

Conclusion

There is an important growth in quantity and improvement in quality of scientific journals as a response to regional, national and institutional efforts. The movement of publication has enhanced publishing and other processes related to the dissemination of scientific knowledge. This has been helped by the open access movement. Networks of institutions and researchers are being created, giving space also to the region's main languages, Spanish and Portuguese. Though there are some research about this topic and many experts in the field, scientific publication is a fresh and interesting topic to develop scholarship in the LA&C region.

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Reflecting on Sudan's Higher Education Revolution under Al-Bashir's Regime

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The history of modern higher education in Sudan goes back to the era of British rule. The University of Khartoum, the mother of higher education in Sudan, was first established in 1902 as Gordon Memorial College (University of Khartoum 2010). Since then, Sudan has witnessed remarkable expansion of its higher academic institutions. This article is designed to present a critical reflection on higher education in Sudan under the government of President Omer Al-Bashir who came to power in 1989 in a military coup that ended Sudan's third democratic period since it gained independence.

Al-Bashir's regime announced a highly ambitious political, economic, and social agenda that aimed at transforming Sudanese society. It was the first time in the Sunni Islamic world that an Islamic movement was successful in reaching power and controlling government. However, this had been achieved through a military coup, which was organized and backed by the Islamic National Front (INF), rather than via ballots.

Al-Bashir's regime conducted a series of national conferences in the early 1990s to address significant changes in Sudan's political institutions, economy, peace process, and higher education. A Conference on higher education was held in the capital city in 1990. The *1990 Higher Education Act* that resulted from the conference deliberations mandated a reform to Sudan's higher education system. This reform was generally referred to as the higher education revolution, and was designed to Arabicize, Islamize, and expand Sudanese higher education in unprecedented ways.

Instead of opting for gradual implementation, the Arabicization of curriculum was a political decision executed in a hasty manner. The academic staff were not consulted about this decision (News from Africa Watch

1992). The government took a decision to make Arabic the official language of instruction in all social, human, and some natural sciences. This change was enforced in the academic year 1990-1991, just one year after Al-Bashir seized power. It has been argued that this process of "Arabization" was introduced without adequate materials available in Arabic, both in terms of textbooks and references. Many of the teaching staff lacked the training for teaching in Arabic.

The higher education revolution also aimed at the Islamization of curriculum in a way that would reflect the country's core policies of promoting Islamic values and norms. The Islamization of knowledge was an intellectual project carried out by some Muslim scholars in the areas of philosophy and social sciences in order to promote an "Islamic worldview" that would reflect deeply rooted Islamic scientific traditions. Most of these scholars were academically trained and had taught at western academic institutions (Al-Attas 1995). The government established a special administration in the Ministry of Higher Education and Scientific Research (MOHESR) to oversee the project. Courses designed to introduce students to Islamic studies were added to the curriculum. However, this was not what the philosophers advocating the Islamization of knowledge meant to accomplish with their project. The Islamization of knowledge was intended to connect Muslim scholars with both their Islamic heritage and advanced Western scientific knowledge. A similar project had achieved limited success in the development of the international Islamic university in Kuala Lumpur, Malaysia. Unlike Malaysia, Sudan had only a fraction of the financial and academic resources allocated for this project, making the success of such a process in Sudan almost impossible.

The higher education revolution also wished for expanding the higher education in Sudan to meet the needs of the country's economic development and to

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keep up with a growing population. There were five public universities in addition to some public colleges in the country in 1989, and approximately 5,000 enrolled students in the academic year 1989-1990. Four of these public universities were in the north: University of Khartoum, Islamic University of Omdurman, Cairo University in Khartoum, and Gezira University. However, As a result of the violence in southern Sudan, there was only one public university, Juba University, which had to operate in the north for several years in the 1990s due to security concerns. Additionally, Sudan sent thousands of students to study abroad in countries such as Egypt, India, Russia, Iraq, Morocco, and Eastern European countries. Egypt, for historical and strategic reasons, accepted a number of students almost equal to those accepted by all Sudanese public universities before 1989.

Thus it is fair to argue that there was an urgent need to expand Sudan's higher education due to the huge cost associated with sending students abroad, for a developing country like Sudan, and to the growing population. By 2006, there are more than 300,000 students enrolling in Sudan's public universities and colleges as a direct result of the unprecedented horizontal expansions of public universities under Al-Bashir's higher education revolution. However, it was almost Sudan's destiny that such expansions tended to take place during military regimes, more particularly under Numeiri's and Al-Bashir's regimes. Both regimes were at odds in terms of their ideological orientations. Numeiri's was backed by the communist party until the early 1970s. Numeiri's regime expanded higher education in 1975 by establishing two public universities outside the capital city for the first time, the University of Juba and Gezira University, two years after signing a historic peace agreement with the southern rebels that lasted for a decade. Compared to Al-Bashir's expansion of higher education, Numeiri's was well-planned and executed. Moreover, no other regime, whether military or democratic, has enjoyed the decade of enduring peace which allowed Numeiri to concentrate on economic development projects including building new universities. Sudan also received hundreds of millions of US dollars in the form of economic aid from Western and Gulf countries. All such economic help, however, ceased when Al-Bashir assumed control of the Sudanese government.

No University has suffered more severe consequences from the higher education revolution than the University of Khartoum. The university was one of Africa's most renowned academic institutions, with one of the highest admission rates on the continent. In 1989, the school accepted only about 2,000 students out of more than 125,000 who took Sudan's high school certificate exams that year. The institution was closely connected to many highly respected western institutions, with a large number of professors and researchers trained in top British and American universities. Thus, it has remained a dream for many Sudanese families to have their children admitted to this school.

Until the early 1990s, before the full implantation of the policies of the higher education revolution, attending the University of Khartoum tended to impose almost no financial burden on students and their families. Students were fully sponsored by the school, to the extent that those from far regions such as Darfur would live in the dorms year-round. Students enjoyed free healthcare from the university hospital and financial stipends to return home by public transportation at the end of each academic year. The University of Khartoum has actually helped elevate many families from the poverty zone by educating their children. Graduates from the University of Khartoum tended to work and occupy key positions within the public and private sectors, both inside the country and abroad. In short, the University of Khartoum was the best academic institution in the country, and yet it was entirely free.

Under the higher education revolution, however, students at the University of Khartoum lost all of the aforementioned benefits. The government's decision to end students' free education and accommodations has imposed huge negative social costs on students and their families. In order to limit these effects, the government established a Student Welfare Fund to administer the housing and accommodation of public university students. The establishment of this fund was also aimed at relieving public universities from such tasks. However, the task assigned to this fund, especially in early years of its operation, was beyond its financial and administrative capacities. This fund now appears more organized, but many poor families in Sudan are still facing economic challenges sending their children to college.

Critics of the higher education revolution argue that horizontal expansion occurred at the expense of elementary and secondary education (El-Hassan 1992). Most newly established colleges and universities outside the capital city were actually opened in buildings that were formerly high schools. The change in elementary education from 12 to 11 years (from 6+3+3 to 8+3) gave the government an opportunity to facilitate its policies by transforming many high schools into public universities. In many cases, especially in the early years of the higher education revolution, the only innovations added to these buildings in the course of their change into public universities were fresh paint and huge billboards bearing their new names. However, with the discovery and production of oil in the mid-1990s and the signing of the Comprehensive Peace Agreement (CPA) in 2005 ending the civil war in southern Sudan, the government was able to initiate limited expansion of the infrastructure at many newly established universities and colleges. The government also increased the number of higher education instructors who were sent abroad to earn their master's and doctoral degrees in the mid- and late 1990s. Unlike their predecessors from the 1960s to the late 1980s, most of these instructors were educated in non-western countries. Hundreds of public university instructors have been sent to Malaysia, a country that enjoys special economic ties with Sudan.

One of the grave mistakes made by Al-Bashir's regime during the beginning of the higher education revolution was the firing of many professors and instructors under a very controversial policy known as *Al-Saleh Al'Am*, which literally means "for the sake of public interests." As a result, the country and top public universities such as the University of Khartoum witnessed the largest "brain drain" since Sudan gained independence. Many professors who once declined attractive offers from Persian Gulf nations and other countries, preferring to remain and work in their home country, began seeking opportunities to work abroad. Distant places, such as Kuala Lumpur, have become a preferred destination and second home for prominent Sudanese scholars.

With the exception of the University of Khartoum, the total number of faculty in Sudan's public higher education institutions was 9299 for the academic year 2004-2005, including all academic ranks from teaching

assistant to full professor (MOHESR 2010). Nearly 26 percent of the total number of faculty is comprised of teaching assistants, and about 40 percent are lecturers, both groups who generally hold only master's degrees. This means that almost two-thirds of the faculty in these institutions did not hold doctoral degrees. There were only six universities with more than 20 full professors and there were 11 universities with fewer than ten full professors. To conclude, the higher education revolution will continue to shape Sudan's higher education for many years to come. The tens of thousands of college students graduated under this revolution will affect in both negative and positive ways the landscape of Sudan's public and private sectors. Although these graduates will help meet demands for job market, their under-academic training will be an issue of a major concern for their potential employers. With their current structures and resources, many Sudanese public universities and colleges are in need of profound reforms and improved financial and human resources to function effectively. Reforms should include improvements in the overall academic infrastructure and student development and academic life. The end of conflict in Darfur and stabilization of the fragile peace between northern and southern Sudan will likely enable the government to allocate additional resources to the public universities and colleges. Two decades since its inception, the accomplishment of the objectives of higher education revolution in Sudan; the expansion of public universities and the Arabicization and Islamization of curriculum, is still far from complete.

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Skill Development and Policy Implications in East Asia and Australia

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The last decade has witnessed a rapid increase in student enrollment at the postsecondary level worldwide. In Asia, postsecondary enrollment rose by 76 percent from 2000 to 2007. There was a 30 percent increase in Oceania during the same time period (National Center for Education Statistics 2009). As the number of college students grows, the number of college graduates in these regions has also increased significantly. In countries like China, Indonesia, and Thailand, the percent of college graduates has doubled from what it was two decades ago, comprising about 20 percent of the entire workforce in these countries (World Bank 2010).

Anecdotal evidence suggests that expanding the tertiary education may not be well matched with the rapidly changing needs of the economy (Dahlman, Zeng and Wang 2007). One concern that arose from the expansion is that “demand for high-level skills is increasing faster than the institutions are able to deliver them” (Sarvi 2008). Some evidence shows that skill mismatch between the job market and the higher education institutions is indeed worthy of attention.

On the one hand, the increasing demand for professional, managerial, and technical services has raised the quest for skilled labor in developing countries in Asia (Asian Development Bank 2003). On the other hand, higher education institutions are not ready yet to cope with the changing market demand. For example, as the new market economy takes over the old planned economy, institutions in China are experiencing a growing demand for skilled workers, and more specifically for workers equipped with a set of skills distinct from those

who were trained under the old command economy. Programs of study used to be very narrow and overspecialized (Wang 2001; Min 2004), producing graduates that were tightly bound by the subject matter. Jobs were assigned to all the college graduates within a highly controlled job allocation system and job mobility was extremely limited. To acquire transferable skills was neither an explicit goal in higher education nor a motivator for working college graduates. Nevertheless, operating under a regime of a socialist market economy requires a more diverse and transferable set of skills for college graduates, such as computer and internet skills, and the ability to think creatively in order to constantly adapt to changing job needs and skill mixes (Dahlman and Aubert 2001). In India, more than half (56 percent) of the disciplines offered in higher education institutions are non-technical disciplines, such as arts, science and commerce (Palit 2009). Students obtaining degrees in these fields of study often have difficulty finding appropriate employment opportunities partly due to the fact that the institutions seldom develop skills that are essential in the workforce.

Skills misalignment has a negative impact on the transition from higher education into work, which directly affects the vitality of individual graduates. First, the lack of diversity in the curriculum (Bai 2006) and instructional approaches does not allow the graduates’ flexibility and competence as they adapt to the market. For example, the rate of private return for a Chinese college graduate used to be much higher than students graduating from a senior high school or a junior high school. In recent years, the return to higher education relative to secondary education has been narrowed thanks to the increasing number of college graduates, which is associated with a climbing unemployment rate and lowering starting salaries (Dahlman et al. 2007). Second, skills misalignment raises the question of external efficiency of higher education. The external effi-

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ciency of education is improved when more education outcomes are produced at given education resources or fewer education resources are used in producing the same amount of education outcomes. For graduates, skill misalignment is related to less-paid and lower-skilled jobs after graduation. Skill mismatch affects efficiency and further economic growth by preventing the labor market from using the available human capital to its fullest potential (World Bank 2007). Consequently, the misalignment is detrimental to external efficiency and potentially reduces graduates' career choices.

To tackle the problem of skill mismatch, a few countries in East Asia, such as Cambodia, Indonesia, Malaysia, Mongolia, the Philippines, Thailand and Vietnam have published policy reviews on national skill development, and generated measures to help higher education become more responsive to the labor market needs (World Bank 2010). A number of similar policy proposals have been made across these countries. All countries except Mongolia are expected to provide incentives to improve university-industry linkages to design more relevant curriculum, to strengthen consultative mechanisms between industry and academia, as well as to encourage resource sharing to achieve long-term benefits for national innovation capacity. All countries except Malaysia and Thailand are suggested to conduct graduate tracer studies and/or use other supplemental research strategies to help establish a feedback loop between the workplace and the institution. Cambodia, Indonesia, Malaysia, and the Philippines are expected to work on accreditation and quality assurance processes based on well-developed evaluation frameworks.

In a national workforce development report released recently, Skills Australia¹ proposes twelve recommendations in great detail, three of which directly address policy implications of skill development in higher education. The report suggests that the Australian government promotes partnerships between tertiary education and industry that align training with business strategies. It delineates a strategic investment plan to enhance the capacity of tertiary education and training providers to meet future skill needs. The report also suggests a cumulative amount of US\$600 million to be channeled by 2025, to allow a 3 percent annual growth of enrollment in higher education and vocational education and train-

ing (Skills Australia 2010). Finally, Skills Australia put forward a proposal of investing US\$40 million each year in a six-year period to develop and implement a workforce development strategy for the post-secondary sector (Skills Australia 2010). This will allow opportunities for creating joint industry/university faculty and staff appointments and sabbaticals, and other flexible strategies that mobilize industry and university personnel.

High-level skill mismatch is a common phenomenon as higher education expands, particularly among countries in economic transition. The mismatch has a negative impact on college graduates' career development and higher education institutions' efficiency. Several countries in East Asia and Australia have embarked on making policy recommendations to mitigate the consequences of skill misalignment, including but not limited to improvements on university-industry linkage, external funding, and institutional accreditation, as well as graduate tracer studies.

Note

1. Skills Australia is an independent statutory body, providing advice to the Minister for Education, Employment and Workplace Relations on Australia's current, emerging, and future workforce skills needs and workforce development needs.

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Upcoming Conferences and Events

Global

World Innovation Summit for Education (WISE), 7-9 December 2010 Doha, Qatar. Theme: The Summit will focus on improving existing educational structures and exploring innovative trends, particularly addressing the crucial issue of how twenty-first century education should be funded. Website:

<http://www.wise-qatar.org/en/Summit/Summit-2010>

55th Annual Comparative and International Education Society Conference, 1-5 May 2011, Montreal, Canada. Theme: Education is that which Liberates. Website: <http://cies2011.mcgill.ca>

8th International Workshop on Higher Education Reform, September 2011, Humboldt University, Berlin, Germany. Website: TBA.

Africa

International Academic Association for the Enhancement of Learning in Higher Education (LIHE) 10 Africa – Postgraduate Education. Form and Function, 21-25 November 2010, Stellenbosch, South Africa. Theme: LIHE has specialized in creating symposiums that rethink the original academic format, centered around collaborative and integrative knowledge creation. Website: <http://lihe.wordpress.com>

Third Biennial Conference on Postgraduate Supervision, 18-21 April 2011, Stellenbosch, Western Cape, South Africa. Theme: The third biennial international conference on postgraduate supervision with the topic: “Promoting a culture of postgraduate scholarship” will be held at Spier Wine Estate near Stellenbosch and Cape Town, South Africa. Website: <http://www.sun.ac.za/chaec>

Asia/Pacific

International Association for the Study of Cooperation in Education (IASCE) Conference, 25-27 November 2010, Brisbane, Australia. Theme: For those who research and practice cooperative learning in order to promote student academic improvement and democratic, social processes. Website:

<http://www.uq.edu.au/education/index.html?page=120110>

Enhancing Learning Experiences in Higher Education: International Conference, 2-3 December 2010, Hong Kong, China. Website:

<http://www.cetl.hku.hk/conference2010>

Europe

Innovation through Knowledge Transfer 2010 Conference, 7-8 December 2010, Coventry, UK. Theme: The impact of university-business interaction through the knowledge transfer mechanisms, including: (1) Knowledge Transfer Partnerships (KTPs); (2) commercialization (licensing of intellectual property, spin-outs formation, and incubators); (3) collaborative applied research and consultancy; and (4) other methods of achieving knowledge transfer and innovation. Website: <http://innovationkt.org/>

Curating the European University: European Exposition and Public Debate, 10 February 2011, Leuven, Belgium. Theme: The aim of the event is to bring together individuals and groups who share a concern about the public role of the university and who have developed concrete initiatives for promoting and enhancing the public role of the university. Website: http://rd-ir.vub.ac.be/en_GB/news/show/id/1514

Latin America

VI International Conference on Assuring Quality in the Professoriate, from 8-10 December 2010, Mexico City, Mexico. Theme: The debate about assuring quality in professors from Latin America region. Website:

http://www.upn.mx/index.php?option=com_content&view=article&id=710&Itemid=468

Middle East and North Africa

First International Conference of the Omani Society for Educational Technology 2010, 6-8 December 2010 Muscat, Oman. Theme: Blended and Mobile Learning: Potential and Challenges. Website:

<http://en.omaniset.com>

Effective Teaching and Learning in Higher Education, 10-11 December 2010 Beirut, Lebanon. The Center for Teaching and Learning (CTL) and the Academic Computing Center (ACC) at the American University of Beirut will hold their first international

conference on “Effective Teaching and Learning in Higher Education.” Theme: The Conference will focus on the following strands: teaching with technology in higher education; teaching, learning and assessment in higher education; and program and course learning outcomes. Website:

<http://www.aub.edu.lb/conferences/etlhe/Pages/index.aspx>

The Second International Conference of E-learning and Distance Education (eLi 2011), 21-23 February 2011, Riyadh, Saudi Arabia. Theme: the examination of new visions and successful international experience. The aim is to authenticate e-learning in educational institutions and to support the wider goals for development. Website:

<http://eli.elc.edu.sa/2011/index.php?&ln=en>

The First Iranian International Conference of Management, Futurism, Entrepreneurship and industry in Higher Education, 17-18 May 2011, Sanandaj, Iran. Theme: The aim of the conference is to provide an opportunity for academics and professionals from various fields with cross-disciplinary interests to review and discuss issues arising from higher education management, futurism, and its links with

industry from international perspectives, and to facilitate academic national and field collaboration.

Website: <http://www.ihea.ir/?en/conferences/>

United States and Canada

2010 Association for the Study of Higher Education (ASHE) Conference, 17-20 November 2010, Indianapolis, Indiana, United States. Theme: Higher Education Scholarship and Public Policy: What is the Optimal Alignment. Website:

<http://www.ashe.ws/?page=704>

Being Global 2011: Strategies and Models for Internationalizing Canadian Higher Education, 13-15 January 2011, Toronto, Canada. Theme: Being Global 2011 is an opportunity to focus on the internationalization of higher education within Canada. Topics covered include internationalization strategy, recruiting, campuses and programs abroad, policy, learning outcomes, and more! Website:

<http://www.beingglobalconference.ca>

Recent Publications in International Higher Education

Select Journal Articles by Geographic Region

Global

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