
The University as an Actor in Development: New Perspectives and Demands¹

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Abstract

This article addresses the obstacles hampering African universities from playing their needed role in national development, particularly challenges stemming from the unfinished agenda of national reforms and emergence of globalization. It examines pervading issues of higher education within the context of HIV/AIDS pandemic and massive brain drain—two major issues currently confronting Africa. Using OECD countries for comparison, it presents demographic, migration, health, and educational analysis for Africa. The paper underscores the presence of substantial differences between countries with respect to incomes, education systems, political institutions, and, in a more dynamic sense, economic performance over time. It also argues that we are undergoing an integration process (through globalization) which is critically based on knowledge. It warns that developing countries are falling behind industrialized ones in terms of low enrollments, low quality of education output, and low retention of qualified persons. The article recommends as more sensible policy options (a) developing standards for “borderless” international education and resource sharing, (b) mitigating brain drain, and (c) untying aid in favor of focusing on the development, retention, promotion, and use of local talent. It describes several model initiatives for each proposal.

Résumé

Cet article porte sur les obstacles qui empêchent les universités africaines de jouer leur rôle au sein du processus de développement national. Il s'intéresse particulièrement aux défis émanant du programme inachevé de réformes nationales

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et de l'émergence de la mondialisation. Il aborde les questions concernant l'enseignement supérieur, dans le contexte de la pandémie du VIH/SIDA et de la massive fuite des cerveaux (deux grands problèmes auxquels l'Afrique est confrontée). Tout en citant les pays de l'OCDE comme éléments de comparaison, il présente une analyse démographique, migratoire, sanitaire et une analyse relative à l'éducation sur le continent africain. Cette contribution souligne les différences énormes existant entre pays en ce qui concerne les revenus, les systèmes d'éducation, les institutions politiques et les performances économiques, à travers le temps. Elle affirme également que nous traversons un processus d'intégration (à travers la mondialisation) basé essentiellement sur le savoir. Elle soutient que les pays en développement sont en retard par rapport aux pays industrialisés au vu de leur faible niveau d'inscription, de la faible qualité de la production dans le domaine de l'éducation et leur incapacité à retenir les personnes qualifiées. Cet article recommande les options de politique suivantes : (a) le développement de normes pour une éducation internationale et un partage de ressources « sans frontières », (b) la maîtrise de la fuite des cerveaux et (c) le déploiement de l'aide en faveur de la promotion, du maintien et de l'utilisation des talents locaux. Plusieurs initiatives modèles sont décrites pour chaque proposition.

Introduction

I approach this subject more as a student of African development than as an expert. African development is very complex. If we consider regionalization as a predecessor to globalization, Africa is the least “regionalized economy” when compared to the European Union, ASEAN, NAFTA in North America, and Mercosur in South America. This is not difficult to explain. There are a significantly higher number of African ethnicities than there are nations. As an aid to making the comparison, consider that there are over 1,000 different languages spoken across Africa.² In my home country of South Africa alone, there are 11 languages, each representing strong historical, cultural, and familial ties.

There is no longer a debate about the importance of knowledge as a critical element of sustainable development in today's competitive global economy. Each nation is challenged to enhance its capability to create, access, and apply knowledge to address the numerous development challenges it faces. Greater attention is being focused on developing viable innovation systems to meet the development needs of each nation within the limits of its resources. The university has traditionally been at the heart of innovation in society. But the idea of a university-based innovation system is new and untested in many parts of the world. The university's effectiveness as an actor in development depends largely on its nimbleness in adapting to the rapidly changing global knowledge society that is set to dominate the 21st century.³

There seems to be a cruel irony in the inverse relationship between the size of the development challenges that nations face and the capacity of their university systems to rise to meet them. The African university system faces the greatest challenge in this regard. The colonial model of the university as an ivory tower is no longer sustainable. Nor has the idea of the postcolonial development university lived up to the promise it held for many. The university as an actor in development has to balance short-term societal needs to address specific problems on the one hand; on the other, it must balance the long-term agenda of teaching, research, and learning to enable society to regenerate itself in sociocultural terms and to take advantage of opportunities presented by the knowledge economy.

In this paper, I will address three major points. First, the university as an actor in development faces challenges on two fronts, those stemming from the unfinished agenda of development and national policy reforms, and those of globalization. Second, brain drain is bedeviling the capacity of the university to act, and to play its traditional and essential role in the service of larger national development needs. This problem is exacerbated by globalization forces. Although my focus will be on the worldwide setting of the university as an actor in development, I will highlight the specific case of Africa in elaborating in these first two points. Third, and finally, I will address the need to evolve more sensible policy options in three key arenas that both national governments and the international community must tackle to address these issues.

The Unfinished Agenda

To fulfill its potential as a positive actor in development, the university faces the challenge of the unfinished agenda of policy reforms in two domains. First are the national policy reforms needed to spark and sustain development interact in crucial ways to constrain or enable the university's full scope. Second, the policy reform for the overall education sector must also be underway, paying particular attention to the need for reform of the higher education institutions. In this section, I will discuss the overall higher sector trends in developing countries with reference to Organization of Economic Cooperation and Development (OECD) country trends as well as the national policy frameworks in which the university sector must function.

The HIV/AIDS epidemic also creates challenges for the university in many developing countries especially in sub-Saharan Africa where it threatens to reverse the development gains of previous decades. For example, South Africa has an estimated HIV infection rate of 10% of its 43 million people. This figure rises to 25% among those ages 15 to 35. The latter segment is the driver of viable education and economic performance. The full impact of this pandemic

is yet to be established, but life expectancy has already dropped from 70 to 50 years. Projections for the majority Black African population indicate a drop to 38 years by 2010. More generally, in Southern Africa, life expectancies will be falling to levels that have not been seen in over 100 years. In a region that would have expected life expectancies to reach 70 years of age by 2010, many will see life expectancies falling to around 30. Average life expectancy in sub-Saharan Africa is now 47 years, when it would have been 62 years without AIDS (Stanecki, 2002 UNAIDS 2002).

A review of the trends in enrollments worldwide reveals a serious development gap between north and south. Despite the rapid growth of higher education enrollments in most developing and transition countries over the past decades, the enrollment gap in relation to OECD economies has not decreased. In fact, quite the opposite has occurred.

In 1980, the higher education enrollment rate in the United States was 55% compared to an average of 5% for developing countries as a whole. In 1995, the numbers were 81% and 9% respectively. Enrollment rates have diminished slightly in Europe and Central Asia during the last decade, from 36% to 34% on average (UNESCO Statistical 1999; UNESCO 2000).

Regional averages hide significant differences in evolution patterns. Rapid growth has occurred in countries such as Poland, Hungary, Romania, and Bulgaria (now in the 20-30% range), while enrollment levels are stagnant or even decreasing in the Central Asian republics like Tajikistan (9%) and Uzbekistan (5%). Of the other regions of the world, Latin America and the Middle East have the highest averages (18% and 15% respectively in 1997) and South Asia and Africa the lowest (7% and 4% respectively). The East Asia average of 11% also conceals wide differences. In Cambodia less than 2% participate in higher education compared to the Philippines where the rate is almost 30%. Korea is now on a par with other OECD economies at 51%. The need to invest in expanding coverage at the higher education level is nowhere more visible than in the large countries of Asia like India, China, and Pakistan with enrollment rates of 6%, 5% and 3% respectively.

Higher education enrollments are partly dependent on outputs from lower levels of education. For example, while most regions and countries have seen increasing transition rates from secondary to higher education and, in turn, from primary education to secondary, in Africa the growth of secondary school enrollments has slowed down as a result of a decline in primary level enrollment and the dramatic demographic shocks of HIV/AIDS. Eastern Europe and Central Asia have been experiencing decreasing secondary enrollment rates mainly due to an antipathy towards vocational training courses.

The lack of institutional differentiation to accommodate the diverse expression of growing demand for higher education is partly to blame for low enrollments. In Latin America for instance, while countries like Cuba (79%), Peru (43%), Brazil (38%), and Chile (35%) have a significant nonuniversity higher education sector, others like Panama, Guatemala, Honduras, Nicaragua, and El Salvador have a very small nonuniversity sector (less than 5%). Most sub-Saharan African countries also have small nonuniversity sectors, with the exception of Nigeria, Kenya, and South Africa. This is a major concern, not only because nonuniversity institutions can absorb a significant share of the demand for higher education, but also because they are in general more capable of responding to rapidly changing labor market needs and are better positioned to offer lifelong education. Undifferentiated higher education systems overburden the university and throttle its ability to act as an appropriate development actor that gives leadership to an integrated education and training system.

An equally worrisome issue is the slow rate of expansion of graduate education in many parts of the world. In the Latin American and Caribbean region, for example, students enrolled in graduate programs represented on average only 2.4% of overall higher education enrollment in 1997, compared to 13% in the United States. Whereas in OECD countries, there is one new Ph.D. graduate per year per 5,000 inhabitants, in Brazil the corresponding number is one per 70,000. In Chile it is one per 140,000 and in Colombia one per 700,000.

The relative underdevelopment of graduate education in several countries is only in part the result of a tradition of sending graduate students abroad. In Thailand, for instance, graduate studies represent 3% of overall enrollment, compared to 8% in South Korea. In Bulgaria, the number of doctoral students has dropped from 5,000 to 3,400 in the past five years. The painful truth is that many developing countries do not have the capacity to expand graduate studies.

Poor management of public expenditures in many countries has undermined their financial capacity to undertake further expansion of the public higher education system while retaining satisfactory levels of quality. In the past 10 to 15 years, expenditures for higher education as a percentage of the total public education budget have experienced a significant reduction in several countries. In some cases (like in Afghanistan, Bangladesh, Brunei, China, Nepal, Oman, Guinea, and Saudi Arabia) this reduction has been nearly half of the respective education budget. In Africa, expenditures per student have declined in real terms in 10 of 15 countries for which data are available. HIV/AIDS have exacerbated the problem of dwindling resources and reduced funding. Universities have been forced to spend much more as a result of the epidemic, including direct costs for medical services, testing and treatment, terminal ben-

efits at an earlier stage; funeral expenses; replacement, recruitment, and training of new staff; higher rates of absenteeism, and a general loss of productivity. But African education faces more problems than the effects of the HIV/AIDS epidemic, severe though they are.

The problem of insufficient or, in some cases, even declining funding is often compounded by the inefficient use of available resources. These management inefficiencies drain scarce resources away from the fundamental objectives of increasing the access, quality, and relevance of education. Examples of such inefficiencies include underutilized facilities, duplicative program offerings, low student-staff ratios, high dropout and repetition rates, uneconomical procurement procedures, and a large share of the budget devoted to non-educational expenditures. Many university facilities are closed during the evenings and weekends in accordance with civil service regulations or agreements with professional associations. In Eastern Europe and Central Asia, the higher education sector continues to be fragmented. As a result, there are too many small institutions that other similar programs operate with high unit costs. At the same time, some countries restrict (or outright prohibit) the operation of private universities.

Low student-staff ratios and high repetition and dropout rates also drive up the cost per graduate. High repetition and dropout rates are among the most important sources of low internal efficiency in public universities, especially in countries with open access. In some countries, the average degree completion time for four-year undergraduate programs is seven years. This problem is sometimes compounded by the longer than usual time required for first degrees. Compared to the three years of undergraduate studies in England, and the four years that are typical elsewhere, in Bolivia, the length of the first degree is five years; but on average, students actually take nine years to graduate. In Guatemala, the public universities spend 22 student-years to produce a graduate from a six-year undergraduate program.

In many countries, a large share of the public higher education budget is devoted to noneducational expenditures in support of student scholarships and subsidized student services, such as housing, food, transport, medical services, loans, and other services. While representing only 6% of recurrent expenditures in Asia and 14% in OECD countries, student support represents around 15% in Eastern Europe and Central Asia, around 20% in North Africa, the Middle East and Latin America, and close to 50% in francophone sub-Saharan Africa. In Sri Lanka, all students receive a maintenance grant, regardless of socioeconomic circumstances. (World Bank 2002a).

Another source of inefficiency in some public institutions is the high proportion of overhead and salary expenditures for nonteaching staff. Nonteach-

ing staff are often more numerous than teachers in the universities. In my previous job at the university of Cape Town, I had to address support staff wages that were more than 40% above the market while professorial salaries were 40% below the market. Imagine how popular I was at the end of the reform process! A number of countries offer relatively generous salary benefits to their staff; such benefits make up the bulk of expenditures, leaving only limited resources for nonsalary expenditures for educational purposes (educational materials, library resources, laboratory products, maintenance, etc.).

In a somewhat contradictory way, the expansion and diversification of higher education systems without fundamental reforms in the public sector has often led to internal brain drain. Low-paid professors in public institutions seek second and third extramural jobs such as teaching at private institutions and colleges which might offer better salaries. This internal brain drain is compounded by the external brain drain.

Despite the incredible constraints posed by globalization and other forces, national governments retain the primary responsibility for ensuring resources for effective higher education systems. The university can contribute to development by internal efficiencies and also by providing leadership to national policy reform, especially in the education sector. Faced with the need for better education and economic policies at home, developing countries bear some responsibility for tackling the unfinished agenda of reforms and for facing human capital development without the undue postponement of often painful policy reforms. Now, with acute awareness of the exacerbating influence of globalization, I will turn to one of the single greatest challenges that the university must face if it is to be a true actor in development—the external brain drain.

Brain Drain and Globalization Forces

Language and its uses among different professions is a fascinating subject. As a medical doctor, I find the term “brain drain” disconcerting. How can one survive with one’s brain drained of its content? On the other hand, working at the World Bank, I have come to admire the linguistic gymnastics of economists. I recently heard the expression “endogenous growth,” as if growth at any other point came from Mars. When I noted at the beginning that I consider myself a student of Africa, I should have also added that I have unwittingly become a student of economics.

Greater labor mobility is an inextricable part of the process of globalization. The benefits of labor movements and greater integration have been known for a long time. More recently it has been amplified through the idea of endogenous growth theory. The idea is that workers with the same skills—be they

farmers, factory workers, or engineers—are less productive and earn less in developing economies than in advanced ones. Integration through trade in goods, foreign investment, international telecommunications, and migration reduces these gaps by raising productivity in the developing world. In this way globalization can be a powerful force for poverty reduction. But closer examination of the nature and direction of global migration is critical for a clearer understanding of these patterns in today's knowledge economy. What are the implications of migratory patterns that encourage the movement of skilled labor from developing countries but raise barriers to unskilled labor and primary commodities from the same countries? How sustainable will those countries be that are losing their best brains at rates outstripping their ability to regenerate them? Are remittances offering enough compensation?

There is nothing new in people voting with their feet—or boats or planes, for that matter. In fact, compared to 100 years ago, the world is much less globalized in terms of labor flows. Between 1870 and 1910, approximately 60 million people migrated from Europe, primarily from its less developed regions, to the United States and other parts of the New World. South-south labor flows were also extensive in the early periods of globalization. Though less well-documented, the flows from densely populated China and India to Sri Lanka, Burma, Thailand, the Philippines, and Vietnam were of the same order of magnitude as the movements from Europe to the Americas. That would make the total labor flows nearly 10% of the world's population in 1870. In contrast, the total legal immigration into the top 10 receiving countries in the past 25 years amounted to about 1 percent of the world's population (World Bank 2002b).

The world has become one world and is no longer the sum of nation states. Declining communication and transportation costs have further facilitated globetrotting. This dynamic has led to a global market for advanced human capital in which individuals with higher education are the most likely to participate.

In this 21st century marketplace, the richer countries manage to attract and retain the world's best-trained minds in many ways. Among the more powerful pull factors are effective policies that stimulate research and development (R&D) activities and increase direct investments; offer attractive graduate training and research opportunities; and recruit younger graduates and professionals. OECD countries are increasing their investments in research and development (R&D) not only in the science and technology (S&T) sector but also in other knowledge based sectors, thus creating job opportunities for well-trained people.

Three examples drawn from early 2001 illustrate this point. The Australian government announced a 100% increase in the funding of the Australian Re-

search Council and a tax write-off equivalent to 175% of the value of research and development spending of firms. France and Germany relaxed the issuance of visas to attract foreign professionals in technology-related areas. Similarly, the United States introduced an amendment to the immigration law that included 600,000 new visas for scientists and engineers (U.S. Public Law 2000). Roughly 25% of science and engineering students in U.S. graduate schools come from other countries.

Countries like Canada, Australia, and member countries of the European Union all compete for their share of well-trained people in the global market place. Overall, advanced countries are placing recruitment offices in countries where graduates are available because of lack of opportunity on the home front and political instability. All these graduate recruits received their basic education and first degrees abroad. The cost of their initial training was assumed by other countries, the sending countries. What does this translate into on the sending side of the equation? It is estimated, for example, that at least 40% of the graduates of the prestigious Indian Institutes of Technology seek employment abroad. In Venezuela, one of the most prestigious private universities, the Metropolitan University, lost 50% of its graduates in the 2000 academic year to multinational corporations abroad. In Bulgaria, the Union of Scientists estimates that 65% of all university graduates (close to 300,000 persons) have left the country during the past decade.

The economic foundation for migration is obvious. Hourly labor compensation is about 100 times higher in Germany than in China or India. That gap is particularly extreme; but even between the United States and middle-income countries such as Malaysia or the Philippines, the compensation gap is more than tenfold. That gap in part reflects the value of higher education or skills for the average worker in Germany or the United States, compared to developing countries. But skill gaps and the higher costs of living in industrialized countries explain only part of this differential.

There are typically substantial real gains to individual workers who migrate to more developed economies. And nowhere else in the world are these gains more pronounced than in Africa, for two reasons. First, Africa has the lowest average incomes and this constitutes a “pull” factor by the richer countries. And, second, the political environment often constitutes a powerful “push” factor out of Africa.

The Case of Africa

Economists increasingly argue that the geography of development is important in many ways. It is a phenomenon of agglomeration economies that firms tend to cluster together with significant vertical linkages among them. According to

some estimates, two thirds of manufacturing output consists of intermediate goods, sold by one firm to another. The presence of a rich network of manufacturing firms provides a positive externality to each firm in the system. Once this effect is allowed for, the location decisions of firms become interdependent. This factor can give rise to a divided world which makes it more difficult for an underdeveloped region to attract productive investments.

This hypothesis begs for further research from a human development perspective. How realistic is it to expect educated people to stay in Africa instead of coming to the West and joining 30,000 of their counterparts who hold Ph.D degrees? Issues of geography and migration are very important for the current wave of globalization, also among and within developing countries. In Africa, in particular, are many small countries that could benefit economically from fuller regional and international integration. But this fuller continental integration is constrained as no individual country is above a critical threshold of development to provide the catalytic impetus to sustainable mutually beneficial socioeconomic linkages.

Many countries in sub-Saharan Africa do not have the resource base to develop dynamic education systems for the knowledge economy. They also lack the base for vibrant private sector development. Socioeconomic integration within the Southern Africa Development Community (SADC) could enable all of these countries (including South Africa) to benefit from the comparative advantage they have and the larger market they would create for goods and services. They would be in a better position to tackle HIV/AIDS and other health challenges that do not respect national boundaries. Fragmented approaches, as currently practiced, are doomed to fail.

To add insult to injury, in some countries the university has been captured by elites who use their monopoly on access to higher education and employment as patronage. The public sector has not only reduced returns on investments in Africa but also has increased the already high risk in private investments. Capital flight, both human and physical, becomes inevitable. The unfortunate outcome of this vicious cycle is the creation of a top political elite, a very thin middle class, and an impoverished many. Democracy cannot thrive in such an environment. The absence of the robust voice of an independent middle class allows for even greater nonaccountability on the part of the ruling political elites.

The public good element of higher education was until recently not accorded the value it deserved. The economic return on investment approaches neglected the value-added of educated people to the quality of government and their essential role in sustainable development (World Bank & UNESCO 2002). We now know that good government, transparent and effective public institu-

tions, good public expenditure management, and accountability are central to development effectiveness.

Africa is also deprived of the equalizing effects of an outward labor mobility with the beneficial effects on domestic wages of the emigration outflows that are found in other parts of the world, such as migration from Ireland and Italy to the United States.⁴ In addition, Africans also lose much of their university outputs. A few statistics will illustrate the gravity of the losses. Even though Africa's average higher enrollment rate is only 4%, compared to 81% in the United States, an estimated 30,000 Africans holding Ph.D. degrees live outside Africa. Although total immigration from Africa to the United States is quite small, immigrants from Africa consist primarily of highly educated individuals (about 95,000 of the 128,000 African migrants). The biggest migratory flows from Africa to the United States are from Egypt, Ghana, and South Africa. More than 60% of immigrants from these three countries have completed some form of higher education degree. Migration of those with only a primary education is almost nil. The migration rate of highly educated individuals for Ghana to the United States is a dramatic 26% and more than 8% in South Africa. These numbers are relatively small compared to Jamaica where 33% of those with secondary education and 77% of those with tertiary education leave the country. This means that Jamaica needs to produce five doctors to be able to keep one.

Public investments in human development in Africa will no longer make sense if these emigration patterns continue. Of all the medical graduates of the medical school in Jos (Nigeria) in 1998, 80% had left the country at the end of 2000. In Ethiopia, despite the increase in medical school students, there are large regions where there is only one physician per half a million people. To better visualize what this ratio means, think of countries with a population of around 10 million such as Sweden, Austria, and Greece. It would mean that these countries would have only 20 doctors instead of 20,000. The integration of global markets and more open systems for the movement of people and professionals, for all its positive effects for economic growth and reduction of poverty, has also caused a major human capital flight out of an entire continent.

To add insult to injury, some OECD markets and even governments are actively engaged in recruiting physicians and nurses from Africa for their own domestic markets. It is not difficult to see that poor countries are thus subsidizing richer ones. In more economic terms, medical curricula in African medical and nursing schools are starting to reflect "export" demand. Raising academic standards is a good thing in and of itself, but standards that are purely exter-

nally driven have costs. The costs in this case seem to be borne by the poor people in Africa.

A paradox that is perhaps even more painful is that of “tied aid” where the donor agencies that explicitly aim to help Africa to develop undermine the programs and the ability of the university to play a strong role in development. Tied aid is defined as bilateral aid that is given on condition that the expertise needed for undertaking development programs is provided by donor country nationals.

The World Bank estimates that tied aid to Africa amounts to \$4 billion per year providing 100,000 technical assistance opportunities to work abroad. Tied aid undermines the institution building that traditionally occurs in universities in developed countries. Typically, such universities cover substantial proportions of their overheads by winning research contracts from both the public and private sector to design and implement development projects and policy interventions. The university in the developing world is, in this respect, denied the opportunity to serve as a development actor. Its hands are tied. The missed opportunities of tied aid related contract work add to the brain drain problem. How can skilled people remain stimulated if they are denied the challenges of tackling the development problems affecting their own societies? Development effectiveness is fundamentally undermined by this practice.

The inescapable conclusion is that socioeconomic and political differences between Africa and the rest of the world are not merely quantitative. The magnitude of the differences is such that they constitute a qualitative difference. Africa is caught in a vicious cycle of underdevelopment, and the exodus of its qualified people constitutes a severe leak in a bucket that is hard to fill. Still, there are policies which, if pursued by Africans and also by donors and the international community, can help Africa integrate faster with the rest of the world.

Policy Options

Globalization has important implications for higher education in all countries, but individual countries are not always in control of the major policy drivers to effect change for the better on their own. National governments have the primary responsibility for providing the resources for appropriate quality higher education systems. The university as a development actor can contribute to this process by getting its own house in order; for example, it can effect improvements in its internal efficiencies while also providing national leadership for policy reform within the education system as a whole. Improvements can come from better education and economic policies at home, the unfinished agenda of reforms. Developing countries bear some responsibility for the chal-

lenges they continue to face in human capital development by continuing to postpone deeper and often painful policy reforms.

The “failure to retain” human capital is more of a mixed bag as it relates to push and pull factors. Push factors lie within the domain of responsible governments in developing countries to ensure better investment climates, good governance, and adequate support for universities to fulfill their research, teaching ability, and learning functions. However, on the pull side, selective immigration policies and targeted recruitment practices by governments of recipient countries undermine the investments made by the development community.

I would like to propose policy reforms that loom larger than Africa and the university itself. More specifically, I would like to offer policy propositions in the following three areas:

- the development of standards for borderless education
- mitigating brain drain
- untying aid

Borderless Education: Setting the “Rules of the Game”

The rapid development of virtual providers of higher education programs on a global scale, the increasing mobility of professionals across national borders, and the absence of quality assurance infrastructure and capacity in many developing countries make it imperative to establish an international quality assurance framework that can set out minimum common standards worldwide. This is a first requirement. Such international accreditation systems are already being developed in some regions of the world. For instance, the higher education policies of transition countries in Eastern Europe are very much influenced by international coordination efforts to promote mobility, employability, and competitiveness. These characteristics result from the 1999 Bologna Declaration, the 2001 Prague Declaration, and the 2001 Salamanca convention. In South America, the Ministers of Education of the Mercosur countries (Brazil, Argentina, Uruguay, Paraguay, Chile, and Bolivia) have defined a minimum accreditation framework to facilitate the circulation of professionals from all member countries in their common labor market (World Bank 2002a). Second, countries could contribute towards the goal of establishing an international qualifications framework. The six Spanish-speaking countries of Central America, for example, are in the process of constructing a regional accreditation system instead of having each country creating its own quality assurance mechanism. A thematic, rather than a regional example, here is the current effort of the World Federation for Medical Association towards the establishment of “International Standards in Medical Education.”

Third, in the past few years, the World Trade Organization (WTO) has spearheaded international efforts to reduce national trade barriers. The inclusion in these negotiations of an increasing number of goods and services is now raising fears in the academic community, especially in developing countries, that WTO rules for tradable goods and services might extend progressively to higher education services. The specter of invasion by virtual and other nontraditional providers is leading some governments to take protectionist stances against foreign providers. The following principles could serve to guide governments, licensing bodies, and higher education institutions: minimum infrastructure; clear mission statements; facilities and staffing requirements; appropriate, transparent, and accurate information on policy, study programs, and feedback mechanisms of foreign providers, including channels for complaints and appeals; the capacity for building partnerships between foreign providers and local institutions; and comparable academic quality and standards including the full recognition, in the home country, of degrees and qualifications delivered by foreign providers in a developing country.

Fourth, a related issue faced by higher education institutions in developing countries is that of intellectual property rights for online programs and courses and for access to digital libraries and digital information. The current debate involves two opposing views. On one hand, many universities in industrialized countries favor enforcing strictly commercial rules of protection of the intellectual ownership of digital courses and materials, either on behalf of the university itself or of its professors as authors of intellectual property. On the other, there are the proponents of a public-good approach who, following MIT's recent initiative to offer all of its course materials free of charge publicly on its Website, advocate flow-cost access to digital courses, textbooks, and journals for higher education institutions and scholars in the poorest countries. An agreement among six leading publishers of medical journals was recently announced which will give free access to their scientific journals to more than 600 institutions in the poorest 60 countries of the world and low-cost access to an additional 30 low-income countries. This is a magnificent example.

Another example is the African Virtual University (AVU), an independent nonprofit organization headquartered in Nairobi, Kenya. The AVU was started by the World Bank as part of its efforts to promote the use of information and communication technology (ICT) to enhance development effectiveness. It now enjoys a broader base of donor support with the Canadians and Australians as major donors. It gives people in 17 sub-Saharan African countries access to advanced scientific and technical information and knowledge, thereby promoting economic and social development. The AVU was launched in 1997 and now provides students and professionals with over 3,000 hours of interactive

instruction in English and French. More than 24,000 students have completed semester-long courses in technology, engineering, business, and the sciences; and more than 3,500 professionals have attended executive and professional management seminars on topics such as strategy and innovation, entrepreneurship, and e-commerce. AVU provides students access to an online digital library with over 1,000 full text journals. Over 45,000 free AVU e-mail accounts have been created and the AVU Website currently receives more than 1 million hits per month.

Many developing countries, especially low-income nations and small states, have limited resources with which to build up their information and communication technologies infrastructure. They also lack the economic and political leverage to negotiate favorable access and price conditions. Efforts here can include work with specialized international agencies, such as the International Telecommunications Union (ITU) and large communication technology companies, in order to support the efforts of the poorest nations. In this area, the World Bank was instrumental in negotiating the introduction of a special tax paid by big cruise companies to finance waste management programs on behalf of the small countries of the Caribbean (United Kingdom 2002). The bank could equally intervene on behalf of low income and small states to help them get preferential treatment from telecommunications firms to enhance access to ICT connectivity.

The World Bank is well positioned and willing to work with its partners in the international community to help facilitate or create a discussion platform and promote an enabling framework for global public goods which are crucial for the future of higher education in the developing world.

Mitigating the Brain Drain Risk

Brain drain can reduce the effective growth rate of human capital in the economy. Migration of human capital may even lead to long-run differences in both economic growth rates and the levels of per capita incomes across countries. To the extent that these two propositions are empirically valid, donor agencies should not contribute to this problem themselves by supporting programs and projects between higher education institutions in developing nations and universities in industrial countries that could generate a net loss in skilled human capital. Rules of conduct for such training programs could be defined and embraced by donor agencies and national governments to facilitate the return of professionals trained abroad with external funding.

These rules could even be extended to public agencies in donor countries, following the example of the British National Health Service, which has adopted ethical guidelines excluding recruitment from any country likely to suffer a negative effect on its own health care services. Another approach could be to

promote increased reliance on “sandwich” or joint degrees, whereby scholars from developing countries who study in a foreign institution receive their degree from their home institution within the framework of established academic partnerships. The University Science, Humanities, and Engineering Partnership (USHEPIA) involving the University of Cape Town and seven other sub-Saharan Africa sister institutions provides an interesting model of south-south sandwich programs. (See <http://www.uct.ac.za/misc/iapo/ushepia>.)

The experience of the German Academic Exchange Program (DAAD) is also valuable as a model. It includes additional funding that enables repatriating scholars to purchase a minimum set of equipment and materials needed to continue their pursuit of research interests developed as part of their studies abroad. This seed-funding creates opportunities for enhancing the working conditions of academics in poorer countries.

Finally, the possibility of introducing a cost-sharing arrangement to promote investments in the development of intellectual capital for a global skills market should be seriously debated. Such an innovation could go some way toward establishing collaboration between the developed and the developing world by leveling the playing field with regard to human capital formation and utilization.

The demographic realities are that the OECD country populations are getting older and are not likely to be replaced by higher birthrates, while most developing countries face a prolonged demographic transition. Mutually beneficial complementarities could be developed to meet the needs of both sides.

The current reality of public budgets in developing countries is that continuing to subsidize developed countries goes against the interests of both sets of countries by exposing them to all the risks of an unsustainable model. Continuing the present course also undermines the global public good element of higher education.

Untying Aid

Billions of U.S. dollars have been spent on technical assistance to the developing world. This comes in the form of official development assistance of approximately US\$58 billion annually as well as significantly more in bilateral and multilateral aid. The fact that so much money has gone into this area with so little to show for it in terms of “capacity building” calls for a fundamental questioning of the approach adopted thus far.

The traditional use of foreign technical assistance to address human capital inadequacies does not appear to be yielding sustainable development outcomes. The focus needs to be directed at the development, retention, promotion, and

use of local talent. Brain-drain repatriation can be a more efficient policy than foreign technical assistance, but repatriation would also need to be complemented by reforms in the public sector's employment policies to reduce the incentive to migrate.

It seems that the global community is finally taking on the challenge of reviewing this question. The 2001 Bretton Woods Development Committee's Communiqué (the joint ministerial committee of the IMF and the World Bank) reemphasized the critical importance of trade for economic growth and poverty reduction, but the communiqué went further in two important respects (World Bank 2001).

First, the committee agreed on the particular significance of focusing on such "behind the border" issues as investment regulations, obstacles to efficient transport of goods and materials, standards and technical regulations, telecommunications, and business services. All of these issues hinge on the ability of developing countries to take advantage of the opportunities presented by globalization. The creation of this ability depends critically on whether the university can play its role as an actor in development by producing the expertise to develop and manage policy reforms.

Second, the committee welcomed efforts to "untie aid," including the recent *ad referendum* decision by OECD donors to untie their aid to the Least Developed Countries. This means that an increasing proportion of the \$58 billion in development aid traditionally earmarked to fund donor country expertise can become available to the developing world's intellectual formation process.

Conclusion

In this paper I provided evidence that the world is a very diverse place. There are substantial differences among countries with respect to incomes, education systems, political institutions and, in a more dynamic sense, economic performance over time. I also argued that we are undergoing an integration process (via globalization) which is critically based on knowledge, to the extent that the capability to create, access, and apply knowledge determines how successfully a country can address its numerous development challenges. In this respect, developing countries are falling behind industrialized ones in terms of low enrollments, low quality of education output, and low retention of qualified persons.

Unless universities become active actors in development, there will be a point at which this two-speed world will snap, as is very much the case in Africa today. The results can also be detrimental for those who currently ben-

enefit from globalization; everyone may lose when collaboration is reduced. The university is at the heart of innovation, and its effectiveness as an actor in development depends on its ability to adapt to the rapidly changing global knowledge society. However, the university alone cannot turn the world around. Even the best university system in a developing country may fail to produce commensurate results in *that* country if push or pull factors are operating in a negative way. Examples include adverse political realities or plain economic calculations which give rise to undue cost/benefit differences between individual and social considerations. Furthermore, national policies that genuinely aim to foster economic development and improve governance and political conditions can be undermined by the international community to the extent that rules for technical assistance and foreign aid are tied to specific purposes that largely favor the interests of the donor country rather than those of the recipient one.

The global community has little choice but to address the destabilizing effects of the continuing growth in the gap between the developed and the developing world. Failure to do so will put the future for all of us at risk. Global competition cannot be allowed to run rampant. We are part of one world. Damage to one part affects the whole. The university as a development actor must be given the space to speak and act to promote greater collaboration and shared understanding before it is too late.

Notes

- 1 The views, findings, interpretations, and conclusions expressed in this paper are entirely those of the author and do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent. The author thanks Ruth Kagia, Nancy Ruther, Jamil Salmi, Zafiris Tzannatos, and the participants of the conference for their valuable comments and suggestions.
- 2 It is difficult to count languages, but on some accounts there are over 1,000 languages spoken in Africa. Some 50 languages have more than half a million speakers each, but many others are spoken by only a few people (Gregersen 1977 ; Mann & Dalby 1987) see also <http://www.sil.org/ethnologue/countries/Africa.html>.
- 3 "University" typically refers to the flagship institutions of higher education, from undergraduate through Ph.D. and postdoctoral levels as well as professional schools. However, for the purposes of this paper, "university" will refer to the general concept of higher education rather than a specific type of institution.
- 4 Emigration is estimated to have raised Irish wages by 32%, Italian by 28%, and Norwegian by 10%. Immigration is estimated to have lowered Argentine wages by 22%, Australian by 15%, Canadian by 16%, and American by 8%. Lindert and Williamson (2001) conclude from these results that all of the real wage convergence before World War I was attributable to mass migration, about two thirds of the GDP per worker convergence, and perhaps one half of the GDP per capita convergence (pp. 16–17).

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