Positioning Universities as Engines of Innovation for Sustainable Development and Transformation

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Abstract

This article seeks to place discourses about higher education and development in a comparative global context. It begins with brief reflections on development, by revisiting age-old debates about why some nations develop faster than others. This is an important backdrop to any meaningful discussion about the role of universities as engines of innovation for sustainable development and transformation. The article will focus mainly on the value proposition of university education and the ways in which this is reflected in its products, principally the quality of research and graduates. It will argue that, for universities to realize and sustain their institutional value, they need enabling resources, capacities and support from all key internal and external stakeholders.

Résumé

Cet article cherche à placer les discours sur l'enseignement supérieur et le développement dans un contexte comparatif mondial. Il commence par une brève réflexion sur le développement, en revisitant certains débats séculaires sur les raisons pour lesquelles certaines nations se développent plus rapidement que d'autres. C'est un cadre important pour toute discussion utile sur le rôle des universités en tant que moteurs d'innovation pour le développement et la transformation durables. Une grande partie de l'article portera sur la proposition de valeur de l'enseignement universitaire et sur la manière dont elle se reflète sur ses produits, principalement sur la qualité de la recherche et des diplômés. Toutefois, pour réaliser et préserver leur valeur institutionnelle, les universités ont besoin de ressources, de capacités et d'appui de tous ses principaux acteurs internes et externes.

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Introduction

Africa has an unprecedented opportunity to invent the future and contribute to the global search for workable models of higher education through serious, systemic, and strategic reflections. While the challenges facing higher education are indeed global, they are particularly pressing for African societies because of the relentless pressures of development. The enduring triple dreams of Pan-Africanism – self-determination, development, and democracy – find their current articulations in the African Union's Agenda 2063, various national visions including Kenya's Vision 2030, and the United Nations Sustainable Development Goals. These projects seek realization in the context of the youth bulge, the cruelties of climate change, and the convulsions of disruptive technologies, in a world characterized by social and political polarizations spawned by the relentless march and pulverizations of inequitable globalization.

This article seeks to place discourses about higher education and development in a comparative global context. It begins with brief reflections on development, by revisiting age-old debates about why some nations develop faster than others. This is an important backdrop to any meaningful discussion about the role of universities as engines of innovation for sustainable development and transformation. The bulk of the article will focus on the value proposition of university education and the ways in which this is reflected in its products, principally the quality of research and graduates. But to realize and sustain their institutional value, universities need enabling resources, capacities and support from all key internal and external stakeholders.

The Enigma of Development

In 1995, Arturo Escobar (1993), the Columbian-American anthropologist, reminded us in his influential book, *Encountering Development: The Making and Unmaking of the Third World*, that the vast global development industry emerged after the Second World War out of the West's discovery of poverty in what was soon christened the Third World as part of the Cold War. Through its modernization theories, whose technocratic thrust barely concealed ideological and cultural imperialism, the American-led Western alliance sought to project its economic, political, and cultural superiority to the emerging postcolonial countries desperately in search of development after decades of colonial underdevelopment. Fifty years later, Africa had little to show for its subjection to the edicts and experiments of developmentalism, as Dambisa Moyo (2010) bitterly proclaimed in her searing indictment, *Dead Aid: Why Aid Makes Things Worse and How There is Another Way for Africa*.

At the time this book was first published in 2009, development theory had long fallen from its intellectual and ideological pedestal. The post-development turn in development studies reflected the intellectual crisis of orthodox development theories and the perceived failures of development practice in Africa's "lost decades" of the 1980s and 1990s. Through draconian structural adjustment programs, African countries were forced to pray at the altar of neoliberalism, to the uncompromising gospel of the 'Washington Consensus'. It was a conjuncture that reflected the demise of Keynesian economics and the welfare state in the global North, the authoritarian developmental state in the global South, and the socialist experiment in Central and Eastern Europe.

But debates about development persisted: why do some nation develop and others remain underdeveloped? Why are some nations wealthy and others poor? Why do some nations grow and others are stagnant? Needless to say, there is a vast literature on this pressing question on the wealth and poverty of nations. Conventional explanations tend to offer the determinisms of geography, culture, and history. Once race and ethnicity were posited as explanations, but they are no longer entertained in the academy. According to the geographical hypothesis, a country's development is determined by its environment, terrain, and natural resources. Its advocates point to the fact many poor countries are in the tropics and rich ones in the temperate regions. A powerful example of this thesis can be found in Jared Diamond's (1999) bestseller, *Guns, Germs and Steel: The Fates of Human Societies*.

The cultural thesis posits development emanates from a society's cultural norms, social conventions, and even religious beliefs. Max Weber, the German sociologist, famously attributed the development of the Anglo-Saxon countries to the Protestant work ethic, and some attribute the rise of Southeast Asian countries to Confucianism. David Landes (1998) stresses both geography and culture in his tome, *The Wealth and Poverty of Nations: Why Some are So Rich and Some So Poor*. The historicist perspective comes in many guises: Eurocentricists applaud the genius of European civilization for the West's wealth, while their critics blame the poverty in the global South on European colonialism and imperialism.

Undoubtedly, geography, culture, and history affect the processes and patterns of development. But they only offer partial explanations at best. Abundance of natural resources doesn't guarantee sustainable development. In fact, it may be a curse as it fosters the growth of corrupt rentier states and extractive economies that are structurally anti-development. The rapid growth of some tropical countries in Asia such as Singapore and in Africa such as Botswana undermines geographical determinism. Culture is equally insufficient as an explanation. The same Confucianism held as the secret to

Southeast Asia's economic miracles, was once blamed for the region's grinding poverty decades ago. History is a more compelling explanation. But formerly colonized countries in the world and in Africa have had different trajectories of development, even those colonized by the same imperial power. Moreover, the historic shift of global power from the West to Asia punctures the narrative of eternal Euroamerican superiority.

Contemporary scholarship remains as contentious as ever. Some continue to put faith in vague and ideological notions of market freedom as the driver of growth and development, as Robert Genetski (2017) does in his polemical *Rich Nation, Poor Nation: Why Some Nations Prosper While Others Fail.* Ali Mahmood (2013) in *Saints and Sinners: Why Some Countries Grow Rich, and Others Don't* argues that democracy is not a precondition for development as China's spectacular story demonstrates. Instead, he stresses as explanations variations in the levels of conflict and stability, patterns of corruption and investment, the presence of capable and committed leadership, and geopolitical affiliation to a superpower.

One of the most theoretically sophisticated and historically compelling analyses can be found in Acemglu and Robinson's (2012) voluminous treatise, *Why Nations Fail: The Origins of Power, Prosperity and Poverty.* They show that historically development prospects (not just rates of economic growth) have depended on the emergence and expansion of inclusive economic, political, and social institutions. Countries with extractive institutions have not fared as well in achieving sustained growth and development. To the quality of institutions, I would add two other critical factors: the quality of human capital and the quality of the social capital of trust.

Since the first Industrial Revolution in the mid-eighteenth century, all the subsequent revolutions – we are apparently in the fourth – have been dependent on the indestructible link between intellectual inquiry, research, and innovation. This is the hallowed province of the university as society's premier knowledge producing institution. The university is also the primary engine for producing high quality and innovative human capital. There is a growing body of research that shows a positive correlation between social trust and economic development including the accumulation of physical capital, total factor productivity, income, and human capital formation and effectiveness. There are of course strong connections between university education and the production and reproduction of social capital, and intriguing linkages between university learning and the generation of civic attitudes and engagement.

At best, university education goes beyond the provision of vocational, technical, and occupational training. It imparts flexible and lifelong values,

skills, competencies or literacies. In several essays, I have discussed four intersected values: intrinsic value (the sheer pleasure of learning, asking the big questions, making discoveries, and cultivating lifelong quest for learning); intellectual value (exposure to the vast treasures of human thought, experience, creativity and innovation across the expanses of time and space and academic disciplines); instrumental value (cultivation of critical thinking, communication, problem solving, and adaptability skills for employability); and idealistic values (nourishment of ethical reasoning, empathy, and moral and narrative imaginations for civic engagement and enlightened citizenship).

There are also four interconnected literacies that effective university education promises: interdisciplinary literacy (the ability to view phenomena and solve problems from multiple disciplinary or analytical angles); international literacy (the ability to understand the complex, contradictory and always changing connections among the world's regions, polities, societies, economies, cultures, movements, and environments); information literacy (the ability to locate, evaluate and use information that continues to explode exponentially); and intercultural literacy (the ability to understand and navigate effectively multicultural realities and relationships).

In short, universities are crucibles for forging the skills, competencies, and literacies that engendered economic development in some societies in the past and will generate sustainable development in the twenty-first century with its exceedingly complex demands and volatile changes. In so far as the jobs of the future are yet to be known, our educational systems must go beyond valorizing vocational and technical skills, by embracing the enduring values of the liberal arts.

The Value Proposition of African University Education: The Quality of Graduates and Research

In examining the value proposition of Kenyan and African universities, it is important to understand the way the sector has grown. As we all know, the number and size of universities has increased rapidly in recent years, which has had a discernible impact on the quality of teaching and learning, and not always for the better. It is often stated that Kenya has too many universities. This is simply incorrect. Kenya and Africa lag behind the rest of the world in the provision of university education. The issue is not necessarily the number of universities, but their capacity to deliver quality education and graduates.

The number of universities across the continent increased from 170 in 1969 to 446 in 1989. In the 1990s, 338 new institutions were established, and in the 2000s another 647. Currently, according to the World Higher

Education Database, there are 1,682 universities. Clearly, this is nothing short of phenomenal. Yet, in global terms, Africa has the smallest number of universities of any region, except Oceania. Worldwide there are 18,772 higher education institutions, putting Africa's share at 8.9 per cent. Asia boasts the largest share at 37 per cent, followed by Europe with 21.9 per cent, North America 20.4 per cent, Latin America and the Caribbean 12 per cent.

Equally revealing is data on enrollments. According to UNESCO data, enrolments in Africa remain small. The total number of students in African higher education institutions in 2017 stood at 14,654,667.7 million, out of 220,704,239.5 worldwide, or 6.6 per cent, which is less than the continent's share of institutions. Forty-five percent of the African students are in Northern Africa. To put it more graphically, Indonesia has nearly as many students in higher education institutions as the whole of sub-Saharan Africa (7.98 million to 8.03 million). Enrollment ratios tell the story differently. In 2017, the world's average enrollment ratio was 37.88 per cent, compared to 8.98 per cent in sub-Saharan Africa and 33.75 per cent in Northern Africa. Only Algeria and Mauritius boasted enrollment ratios higher than the world average, 47.72 per cent and 38.84 per cent, respectively. Kenya's stood at 11.66 per cent in 2016 behind twelve other African countries that had data.

Clearly, we have a long way to go. In 2017, the enrollment ratio of the high income countries was 77.13, for upper middle income countries it was 52.07 per cent, for the middle income countries 35.59 per cent, and for lower middle income countries 24.41 per cent. The proverbial development case of South Korea is instructive. As pundits never tire of pointing out, in 1960 the country's level of development was comparable to some African countries: its enrollment ratio in 2017 was 93.78 per cent! And China, the emerging colossus of the world economy had a ratio of 51.01 per cent. Put simply, not enough Africans are going to university. The continent needs to build more universities. The city of Boston alone has half the number of higher education institutions as Kenya.

But the challenge is not simply to grow the number of universities, which is essential for our countries to meet the pressures of the youth bulge, the fastest growing in the world, but to grow in a smart and sustainable way. Much of the growth in Africa's higher education sector has been haphazard. This has predictably led to declining educational quality. A critical measure of quality is the employability of university graduates. Reports on graduate employability show that there are glaring mismatches between what universities are producing and what the economy needs, resulting in graduates spending years "tarmacking," unemployed and underemployed.

A 2016 British Council Report, *Universities, Employability and Inclusive Development* covering Ghana, Nigeria, Kenya and South Africa makes sobering reading. A story in *World University News* (Nganga 2018) quotes a survey by the Federation of Kenya Employers lamenting that "at least 70 per cent of entry-level recruits require a refresher course in order to start to deliver in their new jobs." Further, it notes that a study by the Inter-University Council for East Africa, "shows that Uganda has the worst record, with at least 63 per cent of graduates found to lack job market skills. It is followed closely by Tanzania, where 61 per cent of graduates were ill prepared. In Burundi and Rwanda, 55 per cent and 52 per cent of graduates respectively were perceived to not be competent. In Kenya, 51 per cent of graduates were believed to be unfit for jobs."

As noted in a recent essay by Zeleza (2018), employability entails the acquisition of knowledge, skills, and attributes, in short, capabilities for gainful employment and self-employment. Essential employability qualities (EEQ) go beyond subject knowledge and technical competence. Acquisition of soft skills is paramount. Graduates with EEQ are good communicators, critical thinkers and problem solvers, inquirers and researchers, collaborators, adaptable, principled and ethical, responsible and professional, and continuous learners. Ironically, therefore, it is the much-derided liberal arts disciplines that can equip graduates with employability skills. That is why enlightened advocates of Science, Technology, Engineering, and Mathematics (STEM) education talk of STEAM, Science, Technology, Engineering, Arts, and Mathematics.

Cultivation of employability skills raises questions about curriculum design, assessment, and teaching methods. It entails the intersection of the classroom, campus, and community as learning spaces for a holistic educational experience. The classroom requires a transforming pedagogy, adequate learning resources, curricular relevance, balance between theory and practice, passionate and enthusiastic teachers with high expectations, and motivated students. The campus needs robust career services, extra-curricular activities, student engagement, employer involvement, and innovation incubators. And the community contributes through the provision of internships and service learning opportunities.

In short, experiential learning, undergraduate research, and common learning experiences through a core curriculum and learning communities are among high impact pedagogical practices that can foster learning and acquisition of employability skills. To what extent are they embedded in our institutions? What opportunities do we provide our faculty for training and continuous improvement in teaching? How effective are faculty teaching

evaluations? How seriously do we take course and program assessments beyond obligatory genuflections to CUE inspection visits? How adequately do we measure learning over the rote memorization of examinations?

In many countries, the issue of teaching quality has leapfrogged to top of the agenda even for some of the leading research intensive universities as the value proposition of higher education comes under increased scrutiny by employers, politicians, and parents. In the United States, the book by Arum and Roksa (2010), *Academically Adrift: Limited Learning on College* Campuses triggered a storm of commentary and concern. An avalanche of critiques followed including the blistering attack on the Ivy Leagues by William Deresiewicz (2014), *Excellent Sheep: The Miseducation of the American Elite and the Way to a Meaningful Life*. This gave an opening to private firms to enter the higher education teaching market aggressively, as noted by Goldie Blumenstyk (2018). It also provoked critiques against higher education rankings that put a premium on research, as noted by Suellen Pillay (2018) in the South African newsweekly, *Mail & Guardian*.

As for technology enhanced learning what is the state of our infrastructure and faculty preparedness? While the challenges are acute in many African universities, they are evident in some of the developed countries as well where faculty uptake of instructional technology remains problematic. Beyond the adoption of online learning from flipped classrooms to blended learning to online degrees, how prepared are we to meet the technological disruptions of the 4th industrial revolution of artificial intelligence, the internet of things, and robotics? How are we preparing our students for this brave new world of the twenty-first century when it is estimated "up to 50 per cent of jobs are predicted to disappear in the next 20 years," and the jobs of tomorrow are unknown?" (How do we provide what Robert Aoun (2017) calls a robot-proof education, one that "is not concerned solely with topping up students' minds with high-octane facts. Rather, it calibrates them with a creative mindset and the mental elasticity to invent, discover, or create something valuable to society." He calls the new model of education "humanics" that encompasses three new literacies, data, technological, and human. The new model embodies the humanities, communication and design.

Equally critical is the question of research, the other key product of higher education institutions. Here, too, African countries and universities face many challenges. According to UNESCO data, in 2013 gross domestic expenditure on research and development as a percentage of GDP in Africa was 0.5 per cent, compared to a world average of 1.7 per cent, and 2.7 per cent for North America, 1.8 per cent for Europe and 1.6 per cent for Asia. Africa accounted for a mere 1.3 per cent of global R&D. Global spending on R&D has now reached US$1.7 trillion, 80 per cent of which is accounted

for by only ten countries. In first place in terms of R&D expenditure as a share of GDP is South Korea with 4.3 per cent and in tenth place the United States with 2.7 per cent.

In terms of total expenditure, the United States leads with $476 billion followed by China with $371 billion. What is remarkable is that among the top 15 R&D spenders expenditure by the business sector is the most important source, ranging from 56 per cent in the Netherlands to 71.5 per cent in the United States. In contrast, for the 14 African countries that UNESCO has data, business as a source of R&D is more than 30 per cent in three countries led by South Africa with 38.90 per cent and is less than 1% in four countries. In most countries the biggest contributor of R&D is either government or the outside world. The former contributed more than 85 per cent in Egypt, Lesotho and Senegal, and more than 70 per cent in another two countries, while the latter contributed a third or more in four countries. Higher education and private non-profit hardly featured.

Not surprisingly, other research indicators are no less troubling. In 2013, Africa as a whole accounted for 2.4 of world researchers, compared to 42.8 per cent for Asia, 31.0 per cent for Europe, 22.2 per cent for the Americas and 1.6 per cent for Oceania. Equally low is the continent's share of scientific publications, which stood at 2.6 per cent in 2014, compared to 39.5 per cent for Asia, 39.3 per cent for Europe, 32.9 per cent for the Americas and 4.2 per cent for Oceania. The only area Africa claims dubious distinction is in the proportion of publications with international authors. While the world average was 24.9 per cent, for Africa it was 64.6 per cent, compared to 26.1 per cent for Asia, 42.1 per cent for Europe, 38.2 per cent for the Americas and 55.7 per cent for Oceania. Thus, like our dependent economies, African scholarship suffers from epistemic extraversion. As Zeleza (1997, 2006, 2007) has written, African knowledge production systems seem more beholden to problems, paradigms, and perspectives especially those derived from the intellectual traditions of Euroamerica, which limits the relevance and efficacy of local research.

In short, the project for intellectual decolonization remains as pressing as ever. Complicating the task are two key developments. First, is the emergence of global rankings which reproduce and sanctify the geographies and hierarchies of the international division of intellectual labor. The second is the explosion of predatory journals and conferences that ensnare uncompetitive and desperate academics. While these unsavory practices are evident around the world, African academics in underfunded universities with weak research support systems are particularly vulnerable (Allen 2018; Gillis 2018a, 2018b; Perlin *et al.* 2018).

Fostering Enabling Capacities and Conditions

Notwithstanding the challenges noted above, the African higher education sector has made significant strides from the days of structural adjustment in the 1980s when the very future of African universities seemed in doubt. But if African universities are to thrive, not just survive, a social compact needs to be forged between all the key stakeholders, namely, governments, the private sector, civil society, and the universities themselves. The object must be to position universities as engines of high-quality learning, rigorous research, and innovation for sustainable development and socio-economic transformation, the theme of this conference.

Advancing such a transformational project requires universities to address the pressing capacity challenges that severely curtail their potential and creating more enabling conditions throughout the ecosystem that sustains higher education. Specifically, the potential and promise of African universities is compromised by the persistent deficits in financial, infrastructural, human, and leadership resources. Ever since the neo-liberal turn in the 1980s, in many parts of the world the state progressively withdrew from being the sole funder of higher education, as the latter came to be seen as a private good rather than a public good.

The privatization craze manifested itself in the explosion of private universities, the growing privatization of public institutions, and emergence of the for-profit institutions. Worldwide the proportion of private universities grew from 40.6 per cent in 1969 to 57.5 per cent in 2015. During the same period the number of private universities in Africa grew from 35 in 1969 to 972. Thus the majority of African universities are now private and this trend will continue. UNESCO data shows that between 2000-2013 government expenditure on education as a percentage of GDP fell in 39 countries, 12 of them in Africa. Expenditure on tertiary education as a percentage of total government expenditure fell in 34 countries, of which 11 were African. In the meantime, expenditure on tertiary education as a percentage of government expenditure on education fell in 33 countries, 12 in Africa, while government expenditure per tertiary student fell in 37 countries, 16 of them in Africa.

Clearly, many parts of the world were gripped by 'higher education austerity' as Johnstone and Marcucci (2007) call it. This was variously reflected in the deterioration of instructional resources and facilities, loss of secure faculty positions and declining morale, and rising student debt loads. To address the austerity pressures, higher education institutions were forced to adopt various strategies to rein in costs and raise alternative

sources of revenue. The former included "enlarging class sizes and teaching loads, deferring maintenance, substituting lower-cost part-time faculty for higher-cost full-time faculty, dropping low-priority programs and cutting or freezing financial assistance." On the revenue side, solutions included "instituting tuition fees (or rapidly raising them), encouraging faculty and institutional entrepreneurship, promoting philanthropy, and allowing or encouraging a demand-absorbing private sector."

As I've noted in my book mentioned earlier, in some countries implementing the cost-side and revenue-side solutions at the institutional level was increasingly accompanied at the system wide level by more radical strategies that encompassed sector diversification through greater differentiation among institutions to reduce costs for the lower tier, mergers, and the promotion of distance learning, technologically assisted instruction, and virtual universities. Above all, cost sharing assumed greater salience in the funding of higher education. The primary parties to the cost sharing equation were governments, parents, students, and individual or institutional donors including business.

Five forms of cost sharing emerged. First, the introduction or imposition of sharp increases in tuition fees; second, establishment of dual-track tuition fees for different groups of students; third, the imposition of user-charges for services that were previously free or heavily subsidized; fourth, the reduction in the value of student loans, grants, and other stipends; and fifth, the diminution in the size of the public sector and official encouragement of the expansion of tuition-dependent private institutions, both non-profit and for-profit. To its proponents cost sharing was justified in terms of social equity, efficiency, and needs of universities, while its critics charged it disadvantaged the poor and undermined access and equity.

In reality, the debate between the proponents and opponents of cost sharing was less about its desirability, but about its appropriate level. On the whole, cost sharing tended to be more accepted in countries that espoused aggressive forms of free market capitalism, had a robust private education sector, and enjoyed high rates of enrolment, as opposed to countries attached to welfare-state policies, where the higher education sector was predominantly public, or enrolments rates were low. In some countries, the government set tuition fees. More commonly, institutions set their own tuition fees subject to government approval, or within a range set by the government. In some countries tuition fees were linked to the rate of inflation.

The adoption of tuition fees was often accompanied by the development of student assistance schemes, many of them sponsored or subsidized by governments. Student financial assistance from governments took the

form of grants, loans, and through indirect family assistance programs and tax credits and deductions. Many countries used multiple student assistance programs to meet the needs of different groups of students and their families. In Africa, several countries, such as Ghana and Tanzania in 2005, established market-oriented loan trust funds or loan boards in the early 2000s. Generally, the grant or loan programs were means-tested, merit based, or universal. In addition to government supported financial aid schemes, in some countries both public and private institutions provided student financial aid.

The challenges of financing higher education are daunting. Even in the United States, many universities and colleges are facing financial and demographic peril and some are not expected to survive over the next decade (Eide 2018; Hildreth 2017; Selingo 2016). Moody's, the ratings agency, has given negative outlooks for the higher education sector for several years including in 2017 and 2018 (Chatlani and Donachie; Harris 2018). Student debt surpassed credit card debt years ago and reached $1.5 million in 2018. Thus, African countries are not alone in trying to devise more effective and sustainable models for financing higher education.

How can university funding be improved through increased government support and an enabling policy environment? The former can include providing full tuition for fewer and mostly needy students or allowing universities to charge the difference between government scholarships and the cost of education. Governments can also provide tax incentives to facilitate philanthropic support for universities. It is ironic that while society often accepts differentiated costs for lower levels of education, for university this is met with resistance. This reflects the legacy of public funding of higher education,

As for the private sector and high net worth individuals (HNIs) how can they be mobilized and motivated to increase support for higher education institutions through research funding, student scholarships, and endowed programs and faculty positions? I noted earlier that in the developed countries business is the major source of R&D. In several African countries private-public-partnerships are emerging as vehicles especially for financing infrastructural capital projects. Such partnerships are developing in Kenya (Patrinos *et al.* 2009; Pantheon 2017; Gudo 2014).

As for the high net worth individuals, according to the 2018 Africa Wealth Report, there "are approximately 148,000 HNWIs living in Africa, each with net assets of US$1 million or more" whose collective wealth is $920 billion, which represents 40 per cent of individual wealth on the continent (AfrAsia Bank 2018). Over the next decade private wealth is expected to grow by 34 per cent. How many of them invest in the African

higher education sector as do their counterparts in the global North that have helped build the enormous endowments of their alma maters. Harvard's endowment of about $39 billion is more than half Kenya's GDP and the GDP of 39 African countries! Need I mention African HNWIs are more likely to donate to the Harvards and Oxfords and Sorbonnes than to the cash-strapped universities in their own countries, including their alma maters? Can you imagine the impact if a fraction of the wealth of Africa's HNWIs was directed to universities?

The challenge of fundraising for African universities is related to both capacity and culture. With the notable exception of some South African institutions such as the universities of Cape Town, Witwatersrand, and Stellenbosch, most universities simply do not have the personnel, skills and IT infrastructure to undertake fundraising (Nordling 2012; Pennington 2018; King Baudouin Foundation 2017; Makoni 2017). Typically, sophisticated fundraising operations involve dozens, and for the major universities hundreds, of professionals involved in a variety of roles. Major campaigns involve the governing Boards who are expected to contribute as much as a third of the fundraising target.

The culture of giving to higher education institutions is also underdeveloped. This is not because philanthropic cultures are weak as such. On the contrary, in many African communities giving to family members and even religious institutions is quite common. Making donations to universities is unusual given the fact that higher education was a state-funded enterprise for so long. And alumni were not socialized into institutional giving as students. In systems with well developed fundraising cultures, alumni provide up to 70 per cent of donations.

But securing adequate financial resources is only part of the story. The other is prudent financial management. How robust are the budgeting models and processes we use in our institutions? How prudent are we in our expenditures, in combining cost containment with growth in strategic areas, in focusing relentlessly on our core business of teaching and learning, research and scholarship? How immune are we from the rampant corruption that scars many of our economies and politics?

Time does not allow me to comment on the three other capacity challenges we need to address if universities are to contribute to the African renaissance. Massive investments are required to improve the physical and electronic infrastructures of many African universities. For some of the continent's older universities, deferred maintenance has turned them into depressing replicas of their golden years, while some of the newer fly-by-night universities can be worse than middling secondary schools. As for

electronic infrastructure, which in today's world is an essential institutional utility like water and power, not only are many of our universities awfully ill-quipped but the continent lags behind. One example will suffice.

As noted earlier, the world is in the middle of an economic revolution, and this revolution is largely digital. The catalyst for this revolution is the ability to process, and analyze the unpresented and current explosion of data. "Data is the new oil" headlines abound and countries that can harness this data to extract value will have a significant competitive advantage. High Performance Computing (HPC) is critical to harnessing big data, which is indispensable for research and innovation. Regrettably, Africa boasts a measly 0.2 per cent of global HPC capacity, while Asia has 42.4 per cent, followed by the Americas at 35.4 per cent, and Europe with 21 per cent.

In recognition of the potential that High Performance Computing has, we at USIU-Africa have a vision whose aim is to harness the power of HPC to provide support for research, policy making and innovation across Africa. To this end, we have implemented a continent-wide citizen science organisation that will employ HPC and big data analytics to solve African problems. On behalf of USIU-Africa, it therefore gives me great pleasure to invite you to collaborate with other like-minded organizations in a partnership that will help raise awareness and work towards setting up a Pan-African platform that will lead to the utilization and application of high performance computing in industry, research, academia, government and non-governmental organizations.

The challenges of human capital are especially evident when it comes to faculty. The rapid growth in the number of universities has outstripped the supply of faculty. While in several parts of the Global North such as the United States, there are more people with terminal degrees than there are academic jobs, across Africa there is a severe shortage of qualified faculty. In Kenya, for example, according to data from the Commission for University Education, in 2018 there were 18,005 faculty in the country's 74 universities and colleges, but only 34 per cent had doctoral degrees.

Finally, many African universities suffer from problems of governance and leadership that undermine their effectiveness and capacities to contribute meaningfully to national development. All too often despite the liberalization of the sector and declining state investment political interference especially in the appointment of university leaders remains rampant. Also, there are hardly opportunities for training and development for university leaders from heads of departments to school deans to DVCs and VCs all the way to members of University Councils and Boards of Trustees. This is another area we need to develop shared capacities. I am

pleased to announce that at USIU-Africa we are setting up an Institute for Higher Education Leadership Development in collaboration with various partners to cater for this need locally, in the region, and beyond.

Conclusion

In March 2015, the first African Higher Education Summit was held in Dakar, Senegal to plan for the future of higher education on the continent to realize the ambitions of the AU's Agenda 2063. The Framing Paper for the Summit (Zeleza 2015) laid out six key issues for deliberation, that were eventually incorporated into the *Summit Declaration and Action Plan* (Trust Africa 2015). First, moving from growth to quality massification; second, improving institutional financing and management; third, promoting articulation, harmonization, and quality assurance in African higher education systems; fourth, ensuring institutional autonomy and shared governance; fifth, enhancing research and innovation; and finally, strengthening internationalization and diaspora mobilization. Time doesn't allow me to elaborate.

Let me just address the third and final challenges and opportunities. African countries need well-articulated, diversified, and differentiated higher education systems combining flagship research-intensive and primarily graduate universities that train for the rest of the system and are globally competitive, and other universities that are primarily undergraduate and focused on high quality teaching. As for internationalization and diaspora mobilization, we need to position some of our top universities to become serious players in the lucrative international student market. Out of the 5.09 million internationally mobile students Africa accounted for a mere 4.39 per cent of inbound students, but 10.26 of outbound students.

In short, African higher education systems hardly feature among those globalizing fastest according to a report in *Times Higher Education* (2018). There is an urgent need to articulate clear and comprehensive policies on internationalization at the national, intra-continental, and inter-continental levels that most benefit the continent's educational systems, students' learning, faculty, and research capacities. Critical in this endeavor are the removal of immigration barriers and the development of enabling policies for professional and academic mobility throughout the continent. Also important are policies on the transfer of academic credits and recognition of academic and professional qualifications.

African institutions need to develop multiple and innovative forms of internationalization in addition to traditional student and staff exchanges. This includes the creative use of information and communication technologies in the provision and expansion of distance and learning and open educational

resources. African higher education institutions must make regional and continental student and faculty exchanges and institutional collaboration in academic programs and research a priority. The establishment or expansion of regional learning centers and research networks is a critical part of internationalization.

The African academic diaspora must have a special place in the internationalization of African universities. The historic and new diasporas constitute the continent's biggest international resource. The diaspora possesses huge economic, political, social, cultural capitals that need to be fully harnessed. Economically, the new diasporas are Africa's biggest donor. In 2017, diaspora remittances to the continent reached $67.4 billion., and accounted for a significant portion of the GDP of several countries, including Kenya where the diaspora remitted $1.8 billion (2.4 per cent of GDP) (Zeleza 2017). Besides remittances, the diaspora also provides philanthropy, human, and investment capital.

As universities, we need to tap what Zeleza calls the diaspora's intellectual capital. The Carnegie African Diaspora Fellowship Program has tried to do so. Since 2013 when the program was established out of a research project Zeleza conducted for the Carnegie Corporation of New York, has to date sponsored nearly 400 African-born academics in Canada and the United States to work with universities in six countries – Ghana, Nigeria, Uganda, Kenya, Tanzania and South Africa. There are plans to scale up the program to sponsor at least 1,000 academics each year from the historic and new diasporas for the next ten years. It is being called the 10/10 program (MacGregor 2015, 2016; Marklein 2016; Frittelli 2018).

Undoubtedly, African universities face many challenges, but the flip side of every challenge is opportunity. They can turn their challenges into opportunities by refusing to be intimidated by the challenges and working together. As they do so they should always be focused on the singular project of positioning our universities as engines of the African renaissance, of the enduring Pan-African struggle to create integrated, inclusive, innovative, developmental and democratic states and societies that will bring the peoples of this continent well-being and make its diasporas truly proud.

Notes

1. The following articles are quite instructive: Dearmon and Grier (2009); Algan and Cahuc (2014); Hovath (2013); Jacon and Grier (2011); Baliamoune-Lutz (2011); Papagapitos and Riley (2009); and Bjǿrnskov and Mėon (2015).
2. See Helkliwell and Putnam (2007); Campbell (2006); Liu (2017).

3. See Paul Tiyambe Zeleza, "Cultivating Academic Excellence: The Power and Promise of the Liberal Arts," October 21, 2010; "Grounded in Our Past, Navigating Our Future," November 7, 2011; "Prioritizing Our Future: Mission, Election and Action," November 4, 2012.

4. The data in this section unless stated otherwise is from Paul Tiyambe Zeleza, *The Transformation of Global Higher Education*. New York: Palgrave Macmillan, 2016, Chapter 2.

5. All the data in this and subsequent sections, unless indicated otherwise, is from UNESCO Institute for Statistics, http://data.uis.unesco.org/, accessed on November 28, 2018.

6. This is discussed at length in Zeleza (2016: Chapter 3). Also see the articles by McMurtrie (2018) and Basken (2018).

7. See *Trusteeship Magazine* (2018); also see Robinson (2018), and DePaul (2018).

8. The data used in this section is derived from Zeleza (2016 Chapter 3) and UNESCO (2015) and data from UNESCO Institute for Statistics.

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