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Making Higher Education Finance Work for Africa†

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Abstract

This paper identifies the twin problems of higher education financing in Africa—inadequate resources and poor use of existing resources—and traces them to the preponderance of free, public tertiary education in most countries, despite a weak economic rationale for such an approach and unintended consequences of inequitable access and politicization of higher education. It proposes a reform of higher education finance based on principles of rationalizing government's role, taking into account the politics of such reforms and the institutional changes needed for a well-functioning system of tertiary education in Africa.

JEL classification: I23, I28, H52, O15, O55

> *"The food in this restaurant is terrible," says one diner to her companion.*
> *"Yes, and the portions are too small," the companion replies.*
>
> Woody Allen

Higher education in Africa shares many of the characteristics of Woody Allen's oft-told story. Universities and colleges are under-staffed,

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under-financed and in poor operating condition. The quality of the education is poor, with outdated curricula and employers complaining that graduates lack the basic skills for doing their jobs. But the stakes for higher education in Africa are much greater than a restaurant meal. Quite simply, to compete in the global marketplace—the only way Africa will sustain growth and reduce poverty—the continent needs highly skilled and well-trained workers, and the current system of higher education does not seem to be fulfilling this objective. Furthermore, thanks to high fertility rates 15 years ago and increases in primary and secondary enrolment, the number of young Africans seeking higher education is growing by leaps and bounds. In addition to missing out on global competitiveness therefore, Africa may suffer a crisis of failed expectations.

This paper addresses one aspect of Africa's higher education problem, namely, the financing of universities and colleges. In Section 1, after a brief review of the history of higher education in Africa, we describe the current problems facing the sector and their links to financing. We then note that, if the current problems appear serious, they pale in comparison with any projection for the future when the sector will face a real crisis. Section 2 provides an analytical framework with which to approach a solution. We show that the two rationales for public intervention in higher education—efficiency and equity—are either weak or have been undermined by 'government failures'. We propose therefore in Section 3 a different way of approaching higher-education financing, one that provides an environment where public and private resources could jointly strengthen higher education in Africa.

1. The state of higher education in Africa

1.1 Historical evolution

There is little documentation about pre-colonial institutions of higher education in Africa, which included training centres for rulers, priest, diviners and centres of Islamic education—the most famous being Al Azhar University (founded in the tenth century) and the University of Timbuktu, which flourished in the fifteenth century. The European colonial powers that ruled most of the continent after the sixteenth century did not consider education a priority. While some missionaries made attempts in the seventeenth and eighteenth centuries to establish schools in their stations in various parts of the continent, most of these efforts were short-lived. As Brydon observes, 'it was not until the era of mission

expansion in the 19th century (and acceptance of the "scientific" belief that Africans were human and therefore had souls to be saved and practical abilities and intellects to develop) that more persistent efforts to educate West African were made' (1997, p. 1).

Missionaries needed some literate functionaries for their churches. With the expansion of colonial territories during the nineteenth centuries, the British and the French governments also needed some locally trained, low-level assistants. They gradually started providing basic education to limited groups of people—often carefully selected within specific social and ethnic groups. The purpose of the newly created 'modern' education systems was therefore not to produce a literate society but simply to create a small class of 'civilized' ('*évolués*') members of intermediaries and to ensure that the colonial state had enough '*auxiliaires d'administration*', as the French put it, to function. The schooling provided was generally along the lines of European primary education, with schools located either in colonial towns or near mission stations. Secondary education was restricted to a handful of schools. There were essentially no institutions of tertiary education.[1]

In the early twentieth century (especially after 1920), there were frequent debates among colonial policymakers about the type of education (practical, vocational or academic) that was appropriate for African territories. In Francophone Africa, many politicians feared that the diffusion of formal schooling would undermine colonial control. They imposed restrictions on the type and amount of education offered to 'natives'. 'Until 1944, metropolitan and colonial education systems were completely distinct. There was no institutional bridge (no examination or academic procedure) enabling African students to move upward from the latter to the former system' (Clignet, 1997). The fact that educational expenditures were mostly financed by local revenues further limited the availability of formal education.

After 1945, because of the intense participation of African soldiers in World War II, the massive human losses sustained by the colonies, and the emergence of decolonisation movements often supported by European trade unions, the French and British governments sought to adopt new education policies across the continent. Under the framework of 'modernization', they placed greater emphasis on enrolments, with the

[1] Fourah Bay College, founded in 1827 in Sierra Leone by the Church Missionary Society, provided the only tertiary education in British West Africa until the 1940s, apart from teacher training colleges that were often associated with missions.

goal of creating a class of university-trained African bureaucrats able and willing to maintain Western influence. As a result, the first generation of African students was often sent to Europe with scholarships to attend metropolitan institutions of higher learning. However, these reforms were not uniformly carried out. Despite some successes, the postwar 'assimilationist' policies mostly yielded little results. It is well known that countries such as the Central African Republic and Chad had virtually no college graduates when they became independent in 1960.

Higher education only became a strategic priority for most African countries after independence. Nationalist leaders such as Kwame Nkrumah, Félix Houphouet-Boigny, Jomo Kenyatta and Julius Nyerere thought that their new nations needed a well-educated populace to reclaim their place on the world stage. Tertiary education was seen not just as key to economic development; it was also a matter of pride. At the 1962 Tananarive Conference on the Development of Higher Education in Africa, African leaders stated somewhat idealistically that universities should be 'key instruments for national development'. The newly independent countries needed to produce human resources necessary to run the public services hitherto under the charge of expatriate staff. Many countries adopted measures considered essential to develop the higher education they needed.[2] They invested heavily in education and training, which led to a rapid rise in enrolments in virtually all countries during the 1960 and 1970s. Whatever their shortcomings, African universities succeeded in providing personnel for the civil service, and local experts in various domains of national development—law, economics, medicine, agriculture, engineering etc.

However, following the first oil shock of the early 1970s, the collapse of African economies and increased corruption and poor governance, universities began to decline. Because of their very nature as intellectual centres, these universities also became strongholds for political opposition, especially under authoritarian, single-party regimes. This led to government intrusion into university matters, the bureaucratisation of the system of higher education and increased state control over the activities

[2] In 1961–62 for instance, Nigeria established a second federal university in Lagos and three regional universities in Nsukka, Zaria and Ife. Around the same time, Ghana established two new universities of science and technology at Kumasi and Cape Coast. Similar trends were observed in French-speaking African countries with the creation of *grandes écoles* and *instituts* for specialist professional studies and *écoles nationales supérieures* that worked directly with government ministries to train technicians in administration, public works, agronomy etc.

of students and teachers. The nature of colleges and universities changed gradually from 'the production of knowledge and skills to create wealth and modernize African societies' as stated at the 1972 Accra African Union Workshop, to training civil servants, mainly to provide employment and contribute to sociopolitical stability.

Even today, many state universities continue to perform these functions, with outdated curricula and over 80% of their funding spent on personnel and student costs, leaving little for research or maintenance. Approximately one-third of the 300 universities currently operating across Sub-Saharan Africa are privately funded, the majority established in the past decade. They have a mixed record. Many have done quite well and established themselves as credible alternatives to failing public institutions (like the Lagos Business School, Yaoundé Catholic University and Daystar University in Kenya). Others have become profit-driven businesses which offer low-quality education despite their high levels of tuition.

1.2 Current challenges

The many problems of higher education in African countries are reflected in the still very low enrollments rates, by far the lowest in the world. Although they have increased from 1% in 1965 (TFHE, 2000) to about 5% according to the most recent estimates, gross enrolment rates in Africa today remain at the same levels observed in other developing regions more than 40 years ago.

Several interrelated factors explain this poor performance. First, the continent's demographic trends have worsened the imbalances of supply and demand in the higher education market: Africa's youth population, age 15–24, has quadrupled since independence, increasing from 52.3 million in 1960 to an estimated 209 million in 2010. Although, during the past quarter century, the number of tertiary students increased from 800,000 in 1985 to more than 3 million in 2002, and to 9.3 million in 2006 (Materu, 2007; World Bank, 2010), there continues to be a shortage of well-functioning colleges and universities—which partially explains the low enrollment rate.[3]

[3] This appears to be a worldwide trend: since the late 1980s, the global market for tertiary education has been growing at an average rate of 7% a year. Worldwide, more than 80 million tertiary students pursue their studies with the help of 3.5 million people employed in teaching and related work. Global annual spending on tertiary education amounts to

Second, public policies in the African context have long focused on primary and secondary education, to the detriment of tertiary education. Prior to the recent wave of empirical research on the rates of return of various levels of education (Bloom *et al.*, 2006), it was widely believed in policy circles that primary and secondary education are more important for economic development than tertiary education. Moreover, providing basic literacy to the largest groups of population was considered a primary social equity objective for poor countries. Furthermore, in countries with authoritarian regimes where colleges and universities were perceived to be the breeding grounds of political opposition and urban protest, shifting public resources from tertiary to primary education was also considered a good strategy to address political economy problems (Kom, 1996).

Third, higher education in Africa suffers from institutional rigidities that make it difficult for colleges and universities to adjust their curriculum and strategies to be more responsive to changes in global knowledge and labour market demands. In some countries—such as Cameroon, Tanzania and Madagascar—universities are highly centralised and under the strict control of ministries of education which select and appoint faculty members (often using political criteria), determine salaries, conditions for promotions etc. In other countries like Angola and Liberia, universities have considerable legal autonomy.

Fourth, there is increasing concern about the quality of higher education in Africa. Materu notes that quality is a challenging notion to grasp. 'Any statement about quality implies a certain relative measure against a common standard; in tertiary education, such a common standard does not exist. Various concepts have evolved to suit different contexts ranging from quality as a measure for excellence to quality as perfection, quality as value for money, quality as customer satisfaction, quality as fitness of purpose, and quality as transformation (in a learner).' (2007, p. 7) Still, perhaps because of the many challenges facing African institutions of higher learning, there is the perception that the quality of education has been deteriorating in recent years.

Despite all these challenges, there is wide consensus in policy and academic circles that Africa's higher education systems should be supported for at least two reasons. First, there are high rates of return on higher

about $300 billion or 1% of global economic output. Annual income from tuition fees is estimated to be over $30 billion, increasingly from private sources (Materu, 2007, p. 9).

education and the potential contribution to economic and social development (mainly through knowledge diffusion and the accumulation of human capital) is very high.[4] Second, the widespread brain drain of graduates from African universities indicates that these institutions still offer training programmes that are valued outside the continent.[5]

1.3 The looming financing crisis

Despite their low levels of revenue per capita, African countries have by and large managed to maintain a steady allocation of resources to higher education since the mid-1990s. On average, the continent has devoted 0.78% of its gross domestic product to tertiary education, compared with 0.66% on average for other developing countries and 1.21% for the OECD countries. This commitment is also reflected in the fact that African governments allocate about 20% of their current expenditures on education to higher education (Figure 1), a rate that is higher than non-African developing countries (18%).

As a recent World Bank study indicates, however, the priority given to tertiary education in the distribution of the overall budgetary envelop for public education varies considerably, from less than 5% in Cape Verde to almost 40% in Egypt and Lesotho (World Bank, 2010). Even in countries such as Burkina Faso, Côte d'Ivoire, Ethiopia and Rwanda that are still far from ensuring universal school enrolment at the primary level and where a balanced allocation rule would suggest a smaller share of public resources to post-primary education, this subsector still accounts for more than 20% of the education budget. Conversely, several countries such as South Africa, Kenya, Ghana, Cape Verde and Namibia—where universal primary school enrolment has already (or almost) been achieved and one would expect to find a larger share of the education budget devoted to higher education—show low ratios (Figure 2).

Because of demographic trends, the demand for higher education has been increasing faster than the funding capacity of African governments. The total number of higher education students has increased from 2.7

[4] Some empirical studies, such as Bennell (1996), have suggested that returns to education in Africa could be smaller than previously estimated. This may be due to methodological problems in earlier studies, especially the bias in OLS estimates caused by the endogenous nature of the schooling variable or the validity of some of the instrumental variables used for the analysis. Even in countries where average returns to education may be low, it has been shown that returns can be substantially increased with reforms (Oyelere, 2008).

[5] It is estimated that about 30% of Africa's university-trained professionals—including some 50,000 PhDs—live outside the continent (InterAcademy Council, 2004).

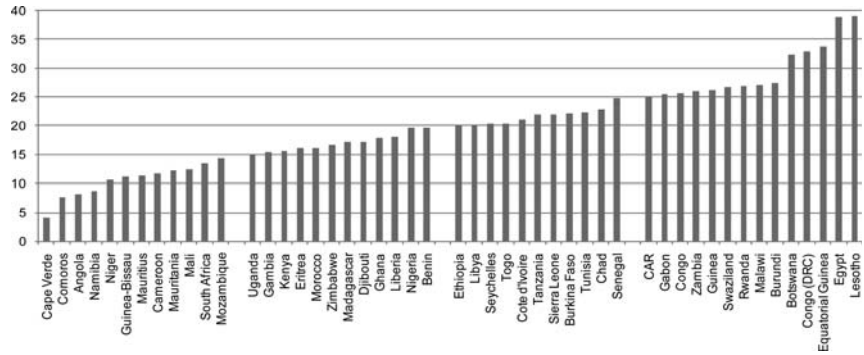

Figure 1: Higher Education's Share of Current Public Expenditure on Education, African countries, 2006 (or closest year), as a Percent of Total Current Expenditure.
Source: World Bank (2010).

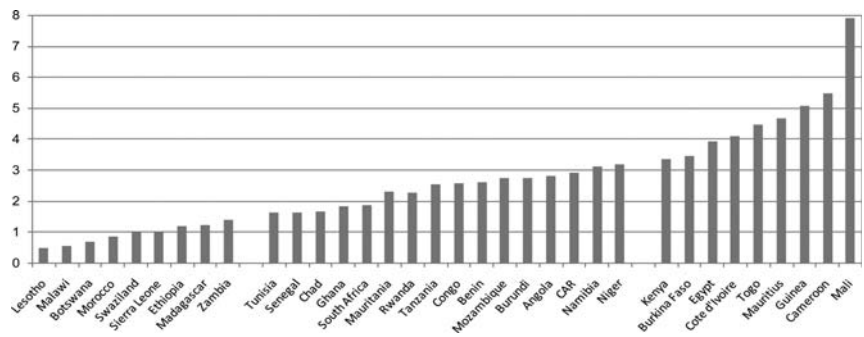

Figure 2: Ratio between Change in the Number of Higher Education Students and Change in Public Resources Allocated to Current Expenditure on Higher Education, 1991–2006*. *A Ratio Value Above 1 Indicates an Increase in the Number of Higher Education Students Greater than the Increase in Public Resources Allocated to Current Expenditure on Higher Education.

million in 1991 to 9.3 million in 2006 (16% annually), while aggregate current expenditures in this sub-sector have only increased at an average annual rate of 6%. The mean ratio between the average increase in the number of students and the increase in the resources available during the period was 1.45 (for a sample of 36 countries), again with wide variations from Lesotho (0.5%) to Mali (almost 8%).[6] Africa has therefore

[6] A ratio value above 1 indicates an increase in the number of higher education students greater than the increase in public resources allocated to current expenditures on higher education. *Source*: World Bank (2010).

experienced a 30% decline in the volume of current public expenditure per student in the last 15 years.

While the quality of higher education is not a linear function of the resources available, there is some evidence that the decline in financing may have led to the deterioration in outcomes. Faced with economic crises and hard budget constraints—most notably in the 1980 and 1990s—many African governments reduced maintenance budgets and public wages, froze recruitment of teaching staff and infrastructure investment, cut social aid and scholarships, eliminated expenditures on books and equipment, all of which resulted in overcrowded lecture halls and excessive student–teacher ratios. Student protests and teachers' strike often prevented the completion of the curriculum and weakened academic achievement. Limited funding and poor management are also associated with the low level of contributions from researchers based in African colleges and universities to international academic research.[7] Inadequate funding also worsens the existing problems and diminishes the incentives for good faculty members to stay in the academic or research field when other activities are more profitable and more valued.

The financing gaps are likely to worsen in the future and raise even more problems for Africa's higher education system. The ever increasing number of college and university students (directly related to progress achieved in primary and secondary school enrolment) suggests that the current trends may be financially unsustainable. It is conservatively projected that Africa will have between 18 and 20 million higher-education students by 2015, with about 10 countries (including Tanzania, Senegal, Mali, Ethiopia and Rwanda) recording at least triple the number of students they had in 2006 (Figure 3). Given the currently narrow tax base and fiscal constraints of most African economies, and their dependence on foreign aid for much of their investment budgets, it is critical that the challenge of accommodating a large number of students and providing them with high-quality education be carefully analysed.

A baseline scenario—which assumes the maintenance of African countries' macro capacity, no change in the current levels of public expenditure per student, same share of private education and similar budgetary allocations among education sub-sectors—projects that for a sample of 27

[7] In 2002, Sub-Saharan Africa contributed 3,696 scientific publications (compared with 4,468 in the Middle East and North Africa and 16,789 in Latin America and the Caribbean), and its residents submitted only 101 patent applications (compared with 926 in the Middle East and North Africa and 40,003 in Latin America and the Caribbean). *Source*: World Bank (2010).

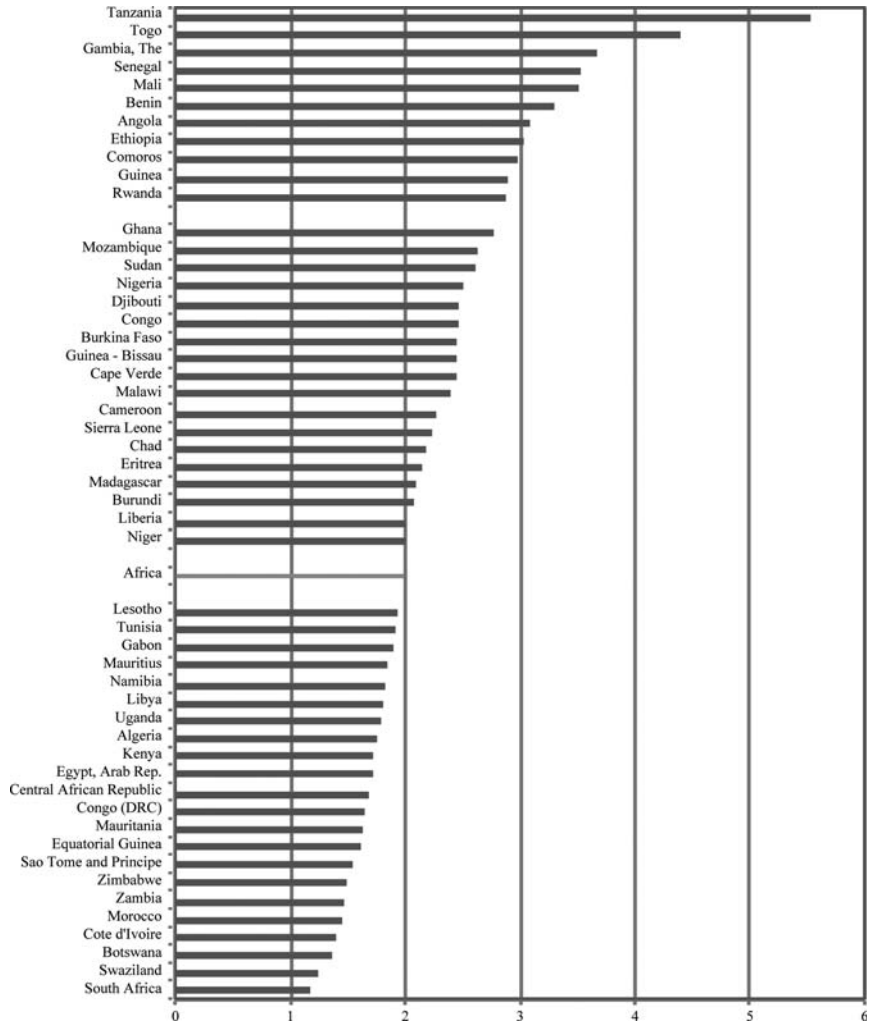

Figure 3: Number of Students, Expressed as a Multiple of the 2006 Level, Expected in 2015 on the Basis of Current Higher Education Growth Trends.

countries, public resources for recurrent expenditures on higher education (excluding studies abroad) would amount to $914 million (in 2004 dollars) in 2015, compared with $594 million actually spent in 2004, an increase in 54% (Figure 4). The cumulative virtual gap for the 27 countries would amount to $6.75 billion for the period 2004–2015 (World Bank, 2010). In fact, this scenario suggests that maintaining the current rates of expansion of higher education would lead to a cumulative level of current

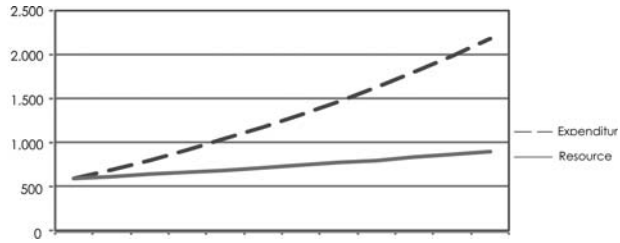

Figure 4: Current Expenditure on Higher Education and Public Expenditure Required for Expansion of Higher Education at Current Rates and Unit Costs (Annual Expenditure Per Student in US Dollars).
Note: This Simulation Concerns only 27 African Countries.
Source: World Bank (2010).

expenditures 75% higher than the volume of public resources that could be mobilised. Moreover, such a large increase in student enrolment would require a sizable number of new teachers whose training would require time and resources. In order to simply maintain the current student–teacher ratio (20 per instructor), the number of instructors would have to be increased from 456,000 in 2006 to 908,000 in 2015. With a rate of departures (mostly due to retirement) estimated at 20% during the period, 566,000 new instructors would have to be recruited and trained between 2006 and 2015 for the 27 countries in the sample.

In addition, expanding African higher education systems to meet the projected demand in 2015 would necessitate large infrastructure investment, which the World Bank estimates at $45 billion (in 2006 dollars). An assessment of the current capacity for public investment in higher education shows that it would only meet about one-third of total requirements; the implied investment financing deficit is therefore of the order of $30 billion in the years ahead (Bruns *et al.*, 2003). These projections highlight the need to rethink the financing framework of higher education in Africa.

2. An analytical framework for addressing higher education finance in Africa

As the previous section made clear, not only is the higher education system in Africa suffering from numerous weaknesses—many of which are tied to financing—but an extrapolation of current trends shows that the system is financially unsustainable. In this section, we begin the process of developing a solution to the problem by specifying an analytical framework for

evaluating higher-education finance in Africa, and then assessing options relative to that framework.

Government intervention in tertiary education—or in any kind of economic activity for that matter—can be justified on two grounds. First, if there is an externality or public good, so that the market by itself will not achieve the socially desirable outcome. If a university education confers benefits to society over and above those that are enjoyed by the degree holder (where the latter is usually captured by higher lifetime wages), then there is an externality associated with tertiary education. Government intervention in the form of a subsidy to higher education would then be justified, as it will lead to a higher level of university graduates (and greater benefits to society) than the market-determined levels.

While this argument is compelling, empirical evidence showing that there is such an externality in higher education is quite thin. A number of studies associate tertiary education with economic growth, based on the traditional production function that links accumulation of factor inputs (including human capital) and total factor productivity growth with overall economic growth. For instance, Bloom *et al.* (2006) show that by raising the stock of tertiary education by 1 year, African economies could raise their growth by 0.24 percentage points from factor inputs and an additional 0.39 percentage points through an increase in productivity (World Bank, 2008). But this finding does not distinguish between the individual and collective benefits from tertiary education. Do individual graduates capture all those gains in growth, or do some of them accrue to the rest of society? Other studies estimate the rate of return to tertiary education by distinguishing between the 'private' and 'social' rate of return. Psacharopoulos and Patrinos (2004) review the worldwide estimates of the social rate of return to higher education and find the average of 10.8% to be *lower* than the private rate of return of 19%. At first blush, this sounds as if the externality is a negative one. The problem is that the social rate of return does not incorporate the social benefits to higher education, but it does take into account the social costs, which is mainly the subsidies given to universities to educate these students. The term 'social' is therefore somewhat misleading in this context. Psacharapoulos (2006), among others, has alluded to the social benefits of higher education—in terms of safety, democratisation and less corruption—but not provided any quantitative estimates of their magnitude.

Even if there were no externality, there is a second rationale for government intervention in higher education, namely, equity. The argument here is that the private returns to tertiary education are so high that it is a possible means for poor people to escape poverty. Yet, without some form of

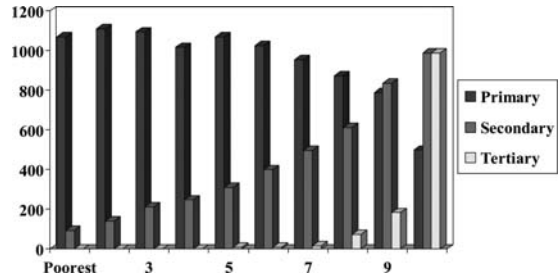

Figure 5: Distribution of Education Subsidies in Indonesia, Early 1990s (in Rupiah Per Month).

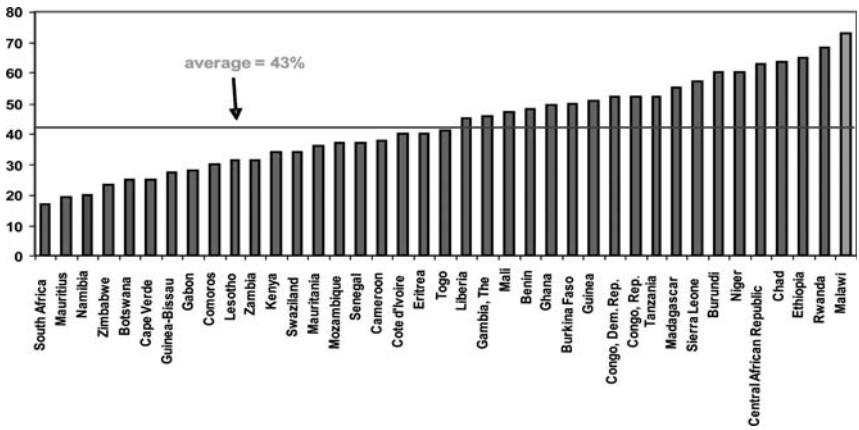

Figure 6: Share of Public Resources used for the 10% Most Educated, Africa Region.

subsidies, the families of qualified, poor students would not be able to afford to send their children to university. To the extent that society would prefer to have a more equal distribution of wealth, subsidising higher education is a means of achieving this goal. Once again, the logic of the argument is compelling. The problem, however, is that the empirical evidence seems to indicate the opposite. Throughout the developing world, including in Africa, the lion's share of public spending on higher education accrues to the non-poor. The chart on Indonesia (Figure 5) in the early 1990s is typical of the distribution of higher education subsidies around the world.

The pattern is one where the distribution of primary education subsidies is mildly progressive (because poor people have more children and send them to public schools). The distribution of secondary education is

increasing in income levels. And the distribution of tertiary education subsidies is concentrated in the top two deciles. This same pattern is found almost everywhere in Africa. In fact, when we consider the share of total public spending in education that goes to the 10% of the population that is most educated (also the wealthiest), we find that in Africa, the average is 43%, with some countries like Malawi and Rwanda exceeding 60% (Figure 6).

In short, if the rationale for public intervention in higher education were equity, the resulting distribution appears to be going in the opposite direction. The explanation for this seemingly paradoxical finding is the following: Given the high private rates of return to higher education, the existence of free, public universities represents a huge rent to those who are fortunate enough to get access. Universities ration the excess demand for places through competitive entrance exams. To increase their chances of scoring well in the competitive exams, the wealthier students enroll in high quality, private secondary schools. The net result is that these wealthy students get into universities and benefit from the free tuition, while only a small fraction of the poor gain access.

To sum up, the two rationales for public intervention in higher education are found to be lacking. One, the 'efficiency rationale' has very little empirical evidence behind it. The other, the 'equity rationale' has plenty of empirical evidence, but it all points in the opposite direction from the rationale. Nevertheless, as we saw in Section 1, governments intervene almost everywhere in higher education. And, as we also saw in Section 1, the state of higher education in Africa is extremely poor. We will now explore whether there is a connection between these two observations.

By providing free, public universities, governments have created a range of government failures that have come to characterise higher education in Africa. First, as mentioned above, given government budget constraints, the number of places at universities is severely rationed. While there are now almost 4 million tertiary education students in Africa, and the number is growing at about 8% a year (World Bank, 2008), the number of secondary school graduates in African countries is almost 10–20 times these numbers, implying that there is significant excess demand. As mentioned in Section 1, this excess demand will increase significantly over the next decade. Given the explosion in the numbers of private universities, there are enough Africans that are willing to pay more than the current price of public education.

Second, the universities themselves face financial difficulties (especially in fiscally constrained governments), resulting in low salaries, poor

facilities and generally low quality of education. The staff to student ratio in West African universities rose from 1:14 in 1990 to 1:32 in 2002. The universities are subject to the vagaries of their governments' overall fiscal balance. By relying on public funds, universities are having to compromise on quality. Again, given the number of fee-paying universities and students studying abroad, it is apparent that there is a demand for quality that is not being satisfied.

Third, the choice of subjects at universities does not seem to be geared to the labour market. For example, engineering, science and health science are among the subjects with the highest salary for graduates; yet 47% of African university graduates had degrees in social sciences and humanities, and another 22% in education. It is possible that, when students do not pay for their education, their desire to enroll in high-return subjects is diminished.

Fourth, and most disturbingly, the universities have become politicised. Various political parties have taken over student governments in many universities and are using students as agents for their political purposes. While some of this is due to the fact that students are of an impressionable age, it is also a function of the fact that university education is free. Political activity in fee-paying private universities is much lower. Kapur and Crowley (2008) suggest that the growth of the non-university private tertiary institutions is due to the fact that they offer a 'safe haven' from staff strikes and student demonstrations.

It is clear therefore that the system of financing higher education needs to change. Not only is the current system not meeting its objectives, but it is unsustainable. At a minimum, the free public universities should introduce fees, with means-tested subsidies, for poor students. Furthermore, governments should provide a regulatory environment to allow private and public universities to compete on the same footing.

To be sure, there has been a virtual explosion of private universities in Africa. Whereas public universities doubled from 100 to 200 between 1990 and 2007, the number of private tertiary institutions in the same period went from 24 to 468. These private universities appear to be responding to the excess demand for university places. Their programmes emphasise social sciences, economics/business and law because of their low start-up costs (World Bank, 2008). Some of their teachers are moonlighting from public universities. And with some exceptions, they are neither regulated effectively nor is there much quality assurance. World Bank (2008) notes that the attempts to regulate private universities are 'overly restrictive or controlling; [including] cumbersome registration procedures

that are less transparent than they should be' (p. 81). Importantly, the emergence of private universities does not appear to have had an effect on the quality or management of the public universities.

Likewise, many countries have attempted to increase cost-sharing in public universities. The East African universities have gone the furthest and have been able to reduce the share of tertiary education in their education budgets even as enrolments have increased. Southern Africa started off with a similar system but was not able to withstand the explosion in enrolments after 2000, resulting in an increase in tertiary education's share in the budget. While there has been some progress in West Africa, Central Africa has been unable to control its level of public spending on tertiary education. Brossard and Foko (2008) note that student welfare expenses constitute 45% of the tertiary education budget in Francophone countries.

The main reason for this mixed record, despite the compelling empirical evidence on the need for reform, is that entrenched interests will resist such reforms. The problem is compounded by the point made earlier about the politicisation of universities. During the early 1990s, Senegal put in place a consensus-based reform at the Université Cheikh Anta Diop, only to have it overturned when the opposition party won the national elections. Ghana, Mali, Nigeria and Senegal have all found that strong staff unions and student associations can stalemate reform efforts.

What we have here, therefore, is a low-level equilibrium trap. Thanks to weakly justified and poorly implemented government interventions in the tertiary education sector, public universities are under-performing. But attempts to reform the system are resisted by the few who are benefiting from the system. Private universities may try to work around the system and meet the excess demand but they cannot fulfill their potential unless there is a system-wide regulatory framework. And yet this framework is also driven by a desire to control rather than facilitate higher education in the countries.

The next section explores possible options for Africa's higher education institutions to emerge from this low-level equilibrium.

3. Reforming higher education finance in Africa

Any reform of higher education finance will have to be tailored to the circumstances of individual countries. However, this review of the state of higher education finance in the continent, and the application

of the market failures/government failures framework, suggests that there are certain principles that can guide the reform in each country. We provide below some of the principles and a discussion of how they may be implemented in what is clearly a highly politicised environment.

3.1 Principles

Given the weakness of the rationale for public intervention in higher education—in theory and in practice—a starting principle should be that the costs of higher education should be borne by the students unless there is a compelling reason for these costs to be subsidised. This principle may seem controversial, even radical, in light of the tradition of government-funded public universities in Africa. Yet, it is little more than a validation of what is actually happening in Africa today, with hundreds of thousands of students paying for higher education in the 400+ private universities on the continent, and the millions of students at public universities who have the ability to pay but do not have to because of the policy of free public tertiary education. The aim of this principle is to shift the presumption from free education to cost-sharing in higher education. The key word here is 'presumption', for it does not follow that everyone should pay to attend university. On the contrary, the application of this principle includes the possibility that students from poor families will receive subsidies so that qualified students are not prevented from gaining tertiary education for financial reasons. The revenues from fee-paying students will release funds to finance these scholarships. There is also the possibility that universities produce some externalities, such as through research by professors on various applied topics. If the externality is faculty research, then governments should subsidise this research directly rather than indirectly, through subsidised student tuitions (which are likely to have only a tenuous relationship with the research output).

The second principle is that governments should provide a regulatory environment for all institutions of higher education, public or private, to address some of the information market failures in the system. As with other private goods such as food, government has a role to play in ensuring that minimal standards of quality are met, and that consumers are informed about it. In the case of higher education, governments should provide certification of the curriculum and teaching standards of all universities and colleges by, for instance, regularly inspecting them, and making this information available to the public. Again, many countries

have such bodies in place but they typically regulate only the private institutions (the regulation and quality certification is often done by faculty and administrators of the public university). As a result, the regulation becomes one of control of the private sector rather than the provision of a public good to the citizenry. To avoid this outcome, the regulatory bodies should be independent of any institutions of higher learning and should certify the quality of both public and private universities.

3.2 Politics

While both of these principles follow from the economic logic and empirical evidence presented in the paper and, as stated above, they do not deviate dramatically from the status quo, they will be seen as controversial and are likely to be resisted. They threaten the 'rents' of many of the participants in higher education today. For instance, the large number of students currently enrolled in public universities may oppose the imposition of fees. Similarly, faculty at public universities may not welcome being regulated and having the quality of their teaching certified, especially if they are in one of the most prestigious universities in the country (although it should be noted that the most prestigious universities in the world—such as Harvard, Oxford and Cambridge—subject themselves to the same scrutiny).

The application of these principles will therefore have to take into account these potential obstacles. The policies should be designed to build political support, or at least overcome political opposition, so that they have a chance of being implemented. While there are no clear rules for achieving this, a few simple ideas may be helpful.

One is to exempt the current generation of university students from cost-sharing, so that campus protests and the like may be diminished. It would be more difficult for prospective students to mobilise against a policy, so that pre-announcing the policy to take effect 4 years from now may dampen resistance.

A second approach would be to link increases in costs with improvements in quality. Most students would be willing to pay higher fees if they were assured that it would lead to better quality education (those who go to private universities are expressing this sentiment by voting with their feet). A programme where indicators of quality that can be monitored would be announced alongside the introduction of student fees may have a better chance of being accepted than one where students are being asked to pay more with a vague prospect of getting something in return.

Third, a system-wide regulatory framework that oversees public and private universities should be rolled out after an intense publicity campaign that informs the public about the potential benefits of quality standards for all institutions of higher learning. Otherwise, the public universities may launch a publicity campaign pointing to various drawbacks of such a system (including, possibly correctly, that it will become a witch-hunt of faculty who are critical of the present government).

3.3 Economics

The proposed shift in higher education financing is one of many reforms that are required for Africa's higher education system to fulfill its promise As noted in Section 1, many institutions of higher education in Africa are still suffering from the intellectual and political legacy of colonialism and its aftermath, authoritarianism. As a result, their current function is primarily a sociopolitical one, as they essentially produce generation after generation of civil servants to run the state, or graduates whose final objective is not to create wealth and value in the private sector but rather to use their diplomas to position themselves either on the administrative scene or in the broader public sphere. The main goal of tertiary education should be re-centered to give priority to economic motives, and to ensure that colleges and universities are organised to generate and disseminate knowledge, and satisfy labour market needs.

In order to better perform these economic functions, African institutions of higher education should implement a series of reforms:

First, they should review their selection procedures and admission criteria. Many reputable African universities still follow the old European models of selecting students whom they consider the brightest. They generally do it through tests to determine the students' ability for mathematics or quantitative analysis. Those considered most talented are therefore selected, not on the basis of their overall application package—as is done in most top universities in the world—but on the basis of test results in mathematics. Because of the obsessive focus on selection, a 16-year-old high school student with average grades is almost certainly excluded from admissions to the top academic institutions. Yet, we know from experience and from history that if given the opportunity, some of these average high schools students can turn their life around and go on to achieve greatness (Albert Einstein was only one of many such students). Tertiary education should not focus on testing but on identifying potential leaders, training them, helping them explore, discover and develop their

talents and providing them with good theoretical and applied knowledge so that they creatively respond to the challenges of a constantly changing economic environment.

Second, early specialisation, which is often required from undergraduates and even high school students (especially in Francophone Africa), should be dropped. The idea that students at age 14–18 should be forced to make definitive and sound decisions on their choice of academic specialisation (and career) is unrealistic. It has so far served African economies and societies poorly. Few people know at that young age where their real intellectual interests are—especially without prior exposure to the nuts and bolts of the discipline they are contemplating. Students should not be pushed to make career-path decisions until completing at least 2 or 3 years of tertiary education. The Anglo-Saxon model appears optimal, as it leaves some time to test the waters, investigate the quality of professors and courses and adjust academic choices consequently. The American model of maximum flexibility seems to be working quite well and should be considered by African universities. A student can obtain a Bachelor's degree in music history or chemical engineering (for which he does not have to select a major before his last year), and subsequently decide to pursue a Master's in business administration or a PhD in sociology. In fact, the majors that students choose in college do not set the course for the rest of their lives—they are usually the starting point. The academic system allows them to follow their interests and discover what they love.[8] It also offers second and third chances to students who may not get off to a good start. As Blanchard notes, a high school student with average performance can be initially rejected by top academic institutions and left only with the option of attending a small, unknown community college. Still, if he/she does well, he/she will automatically be accepted in a 4-year university, and could 1 day end up at Harvard University. 'If that is not the rule, it is certainly not the exception.' (1998). The moral of the story is clear: ensuring that there are intellectual bridges among academic paths is an essential ingredient for success.

Third, African institutions of higher education should revisit and update (or modernise) their academic curriculum. This is certainly true for most universities, whose structures, organisation and programmes often date back to colonial times. It is also true for many professional schools of administration, business and engineering in Francophone Africa (*Ecoles nationale d'administration* and *Ecoles nationales de magistrature*) that

[8] The majority of students in America change their major at least once during their college career and many others do it several times.

train most of the ruling elites.[9] Despite their claim to specialisation, many of these institutions produce graduates who are generalists—in the best of circumstances—and who lack the cutting-edge knowledge and the mastery of new techniques that would allow them to enter the labour force as anything else but civil servants. One way to induce the necessary changes in the curriculum and make African universities more responsive to the demands of the labour market could be to grant public universities more complete autonomy. Making them responsible for their own objectives, financial management and hiring and firing decisions would force them to become more competitive and to focus on the private and social benefits of their activities.

Fourth, it is important to change the current incentive system, which tends to assign the entire responsibility of the design and implementation of tertiary education policies to the states, with no (or very little) involvement by students, teachers, parents or the private sector. Charging fees to students (or graduates) who can afford it would change the dynamics by creating a more accountable system of mutual responsibility: students acting as investors for their own future would be more demanding on the quality and relevance of their education—they would choose fields with the highest probability of employment opportunities. Getting tertiary education would no longer appear like a handout with sociopolitical underpinnings from the states, but a transactional business with economic significance. Universities would receive higher revenues but would be forced to adjust their programmes to labour market dynamics, knowing that they would eventually go out of business if they produced graduates who could not find jobs. In order to ensure quality they would be forced to recruit qualified staff and develop solid systems for supporting study and research programmes that are of relevance to economic needs. The likelihood of mismatches and gaps in fields of study and graduate competence with job markets will be reduced. Teachers would be more accountable for results as they would understand the business rationale of generating knowledge and providing effective and good training to students. The business sector would be more willing to get involved in the design of the curriculum, in teaching and in the funding of research. In sum, all key stakeholders would feel the need—and obligation—to ensure that tertiary education serves its primary purpose, which is to satisfy the needs of the economic system.

[9] They were built on the model of the so-called *Grandes Ecoles* that even the French Government is now trying to reform completely (Lebègue and Walter, 2008).

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