

protesters see themselves as being on the frontline in the battle against “corporate” globalization. They are fighting to protect the integrity of the Greek state and to maintain its strong control of the education system and the economy as a whole, in the face of what many describe as “Anglo-Saxonic imperialism.” Greece has long had a highly regulated economy; and the widespread suspicion of markets fuels broad sympathy, if not support, for the student movement. Even the youth wing of the conservative New Democracy does not support allowing for-profit institutions to operate in the higher education sector.

The students’ opposition to private providers also stems from a more practical concern about their job prospects upon graduation. The Athenian newspaper *Kathimerini* recently editorialized that student reactions can be largely attributed to anxiety about their likely postuniversity unemployment (or underemployment) and concluded that “their rage is directed against the broader political system, which has in past decades set up a largely useless industry churning out degrees with no practical value” (June 10–11, 2006). Sadly, most student and academic groups are hostile toward any suggestion that higher education qualifications should be made more relevant to the labor market. Instead, most of those inside the state university system are set on ensuring that jobs in the public sector and regulated professions will not be open to the more readily employable graduates of private institutions with better facilities, internationalized curricula, and much shorter degrees. The Greek labor market is highly regulated, which effectively protects those in the workforce against competition from those outside it, resulting in a high rate of youth and graduate unemployment. The student movement offers the same logic in seeking to maintain the state’s preferential treatment of those who have managed to gain admission to the public universities in the face of competition from those who have not.

*The students’ opposition to private providers also stems from a more practical concern about their job prospects upon graduation.*

#### **MORE TEAR GAS TO COME**

Both major political parties favor constitutional reform, regarding it as one of many steps that will in the long run benefit the Greek economy while bringing it into line with practice in much of the EU. The changes are therefore likely to happen, but will take several years, much dialogue with stakeholders, and work to establish appropriate regulatory systems. The amendments would open the way for local private colleges to seek university status and for foreign universities to establish recognized branch campuses in Greece. This could have several benefits for the country, including helping to address unmet demand in certain disciplines, promoting professional mobili-

ty for more of its citizens, and allowing for the establishment (long overdue) of accreditation and quality assurance systems for private providers. Public universities and their student movements will most likely maintain their strident opposition to the private sector and, if the amendment passes, will seek to ensure that the state enforces the same debilitating conditions on the new private institutions as it imposes on the public system. The question on everybody’s lips is whether the current government considers university reform important enough to fight for. The time frame required to amend the Constitution and implement a new regulatory framework for private institutions promises to create a decade of skirmishes on the streets of Athens. ■

## Higher Education and Poverty in Sub-Saharan Africa

DAVID E. BLOOM, DAVID CANNING, AND KEVIN CHAN

*David E. Bloom is professor of economics and demography at the Harvard School of Public Health. Address: HSPH, 665 Huntington Ave., Boston, MA 02115, USA. E-mail: dbloom@hsph.harvard.edu. David Canning is professor of economics and international health at the Harvard School of Public Health. E-mail: dcanning@hsph.harvard.edu. Kevin Chan is a doctoral student in the Department of Population and International Health at the Harvard School of Public Health. E-mail: kchan@hsph.harvard.edu.*

For several decades, donor institutions have placed great emphasis on primary and, more recently, secondary education in their development assistance to sub-Saharan Africa. But they have neglected tertiary education as an added means to improve economic growth and mitigate poverty. There is a persistent belief in the international development community that tertiary education has little role in promoting poverty alleviation. New evidence suggests that this belief may be misguided and that tertiary education may play a significant role in enhancing economic growth and poverty reduction.

#### **HIGHER EDUCATION IN AFRICA**

By decreasing its funding of higher education, the international development community has encouraged African governments’ relative neglect of higher education. From 1985 to 1989, 17 percent of the World Bank’s worldwide education-sector investment financing focused on higher education. But from 1995 to 1999, the proportion allotted to higher education declined to just 7 percent. Higher education in Africa has suffered from such reductions. Many African countries struggle to maintain even low enrollment levels; sub-Saharan Africa’s

gross enrollment ratio of 5 percent is by far the lowest in the world. Academic research output in the region is also poor. In 1995, the region was responsible for fewer than 6,000 published academic papers. Only the Middle East and North Africa produced fewer papers, yet this region's total had doubled since 1981, while sub-Saharan Africa's had risen by only one-third.

The World Bank's lack of emphasis on tertiary education has resulted in the absence of higher education from the Poverty Reduction Strategies in all but a few African countries. These strategies do not recognize the specific contributions of higher education to Africa's development needs. For example, a specialized trained workforce can support physical infrastructure development—constructing roads, railways, power plants, and telecommunications systems. With more well-trained people in these areas, strengthening the continent's infrastructure would become easier and less expensive because of a reduced need for expatriate workers. A problem with the strategy of expanding higher education is that educating Africans at the tertiary level often leads to “brain drain.” Many Africans have long asserted that the key means of keeping educated people in their countries constitute attractive working conditions, better salaries, and a more vibrant, self-sustaining local intellectual community.

#### BENEFITS OF HIGHER EDUCATION

Historically, low levels of tertiary education have not created much concern within development initiatives, since, as alluded to above, there had been little empirical evidence of economic benefits for the population as a whole (let alone specifically for the poor). Most studies found higher returns to individuals from primary and secondary schooling than the returns from higher education. However, new evidence sug-

*By decreasing its funding of higher education, the international development community has encouraged African governments' relative neglect of higher education.*

gests that higher education can significantly increase incomes and the rate of economic growth—based on analysis of data covering 103 countries from 1960 through 2000.

In our framework, through two distinct channels expanded higher education can enhance economic growth. The first stems from the fact that higher education can increase an economy's potential by extending its potential production frontier: the level of output the economy could reach if it were operating as efficiently as possible. If Africa could increase the tertiary education stock of its population by one additional year (averaged over the whole population), the GDP per capita growth rate in Africa would rise by 0.24 percentage points in the first year. It would be elevated in subsequent years, as well,

though by lesser amounts as the frontier is approached over time.

In addition to the common contribution of human capital to productive potential a second channel works via technological upgrades. In a knowledge economy, tertiary education can enhance graduates' awareness of and ability to use new technologies and thus participate more effectively in the global economy. Countries thus empowered can diminish the divide between them and more technologically advanced societies. As the expansion of tertiary education promotes faster technological advances, a country is better able to maximize its economic output. In the case of Africa, increasing its stock of higher education—as above, by one additional year (on average)—would raise the per capita GDP growth rate by 0.39 percentage points in the first year. This higher rate of technological growth would be sustained until Africa reaches the world technological frontier.

Although these figures may not appear large at first glance,

*In addition to the common contribution of human capital to productive potential a second channel works via technological upgrades.*

they imply that a one-year increase in tertiary education stock may boost incomes by roughly 3 percent after five years and by 12 percent eventually, holding constant other factors that influence economic growth. Such growth, although not huge, would be significant, especially when considered in light of incomes that have been falling in some African countries. This analysis indicates that tertiary education could play a recognizable role in promoting economic growth in Africa.

#### NEW DIRECTIONS FOR POLICY

In recent years, organizations such as the World Bank and major donor governments have begun to reconsider their exclusive focus on primary education and are now reaching out to secondary and tertiary education, as the balance between poverty reduction and growth promotion is adjusted within development assistance strategies. There are signs of progress for higher education in sub-Saharan Africa, and some African countries have implemented innovative policies to strengthen tertiary education systems. But this progress is limited in comparison with the progress in other world regions. The relatively small changes in Africa may result from insufficient understanding of the positive effects that higher education can have on economic development. The new research discussed here suggests that increased investment in higher education may be justified—at a minimum, more research into the role of higher education in development. With this new, quantified, economic justification at their backs, African advocates of higher education have some reason to be emboldened. ■