of the data in the report are out of date. For instance, the document reports 12 private colleges in Ethiopia, while that figure has grown by more than fivefold, to over 60, in recent years. If anything, this situation reflects a lack of a systematic, sustained, and visible source of information and research on higher education in the region.

The absence of major research institutions in Africa is further exhibited by the production of such major reports by an external institution such as the World Bank. With the expansion, differentiation, and complexity of higher education systems on the continent, strengthening research capacity to study the sector is paramount. It is thus urgent that institutions that promote alternatives to the World Bank's undisputed dominance in African higher education discourse be strongly nurtured. ■

India's Effort to Join 21st-Century Higher Education

Philip G. Altbach and N. Jayaram

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India's central government will create 12 new central universities, adding to the 18 that currently exist. This is a mammoth undertaking—Rs. 3,280 crores (about $73 million) has been allocated from the central government budget to it. Earlier in the year India announced it will create 30 "world-class" universities, 8 new Indian Institutes of Technology (IITs), and 7 Indian Institutes of Management (IIMs) in the coming five years. On the recommendation of the National Knowledge Commission, the central government is planning massive investment to upgrade and expand higher education. Other plans include enhancing the salaries of college and university academics—boosting salaries by as much as 70 percent.

This prospect represents welcome news since India currently lacks world-class universities according to the international rankings, and Indian academics, when compared internationally, are rather poorly paid. Students also suffer an immense shortage of places in India's top academic institutions and throughout the higher education system. India today educates only half as many young people from the university age group as China and ranks well behind most Latin American and other middle-income countries.

India exhibits a special problem at the top of its higher education hierarchy. With the notable exceptions of the IITs and IIMs, and a small number of outstanding nonuniversity research and training institutions—such as the All India Institute of Medical Sciences—top-notch schools are rare. Indeed, none of India's 348 universities is ranked in the top 100 in the world. Generally, when India has wanted to innovate in the higher education sector, it has sidestepped the universities and has started entirely new institutions such as the IITs.

> *If India invests large amounts of money and human capital into academic improvement and expansion without undertaking strategies to ensure that the investment will yield results, resources will be wasted and failure will be assured.*

However, if India invests large amounts of money and human capital into academic improvement and expansion without undertaking strategies to ensure that the investment will yield results, resources will be wasted and failure will be assured. Despite a discussion of organizing some of the new university based on the American model, so far neither the ideas nor the funding seems adequate. Yet, a newspaper reported that one official said: "The view was that there should be no hierarchy or disparity in standards amongst universities, and the reforms and changes suggested for world-class universities should be applied to all universities." This attitude shows a complete misunderstanding that the American system institutes significant hierarchy among the public universities.

Just pumping money and resources into a fundamentally broken university system is a mistake. Establishing new universities, especially those intended to be innovative, requires careful planning and an understanding of the weaknesses of the current system. Let us outline some of the problems that need fixing before resources are given.

Bureaucracy Without Accountability

India is world famous for sclerotic bureaucracy, and higher education fits into that mold. Few decisions can be made without taking permission from an authority above, and the wheels of decision making grind slowly. Fear of corruption or of a loss of control entrenches bureaucracy. Teachers and academic leaders at colleges and universities have little incentive to innovate higher education—indeed quite the opposite. It is completely impossible to build world-class universities in this bureaucratic context. If the new institutions must tolerate responsibilities to both the central government and the states in which they are located, the bureaucratic burden will be completely overwhelming.

Location

Great universities need to be located on friendly soil. In general, the best universities worldwide are in or near major urban centers or in places with intellectual traditions and strength. While it is entirely appropriate to have a good university in each of India's states, the idea of a truly world-class university (an institution that can compete with the best universities in the world) in cities like Guwahati or Bhubaneshwar is simply unrealistic. It would be extraordinarily difficult to attract top professors or even the best students, and the "soft" infrastructures, such as most cultural amenities, are missing. High-tech industry is also absent in these locations and would be difficult to lure. No amount of money will guarantee the establishment of a world-class university in such places.

The Academic Profession

Indian academics deserve higher salaries, and the current move to dramatically improve remuneration is a positive step. It would be a serious mistake to simply give more money to the professoriate without at the same time demanding significant reforms in the structure and practices of the profession. Indian academics are rewarded for longevity, rather than productivity, and for conformity rather than innovation. The most productive academics cannot be rewarded for their work, and it is almost impossible to pay "market rates" to keep the best and the brightest in the universities. World-class universities require a salary structure that rewards productivity.

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Academic Culture and Governance

Indian universities are enmeshed in a culture of mediocrity, with little competition either among institutions or academics. Universities are subject to the whims of politicians and are unable to plan for their own futures. Academics are seldom involved in the leadership and management of the universities. Bureaucracy governs everything and holds down innovation. Without essential and deep structural change in how universities are governed and in the culture of the institutions, there is little possibility for improvement. An additional challenge is that some of the world-class universities are to be created by improving existing state universities. This will be extraordinarily difficult, since these institutions are, with very few exceptions, mired in mediocrity and bureaucracy, and hardly amenable to change and improvement, even with the carrot of additional resources.

An element of corruption exists at many levels of the higher education system, from favoritism in admissions, appointment to faculty positions, exam cheating, questionable coaching arrangements, and many others. Damaging at all levels, corruption destroys a research culture and makes a world-class university impossible.

If India is to succeed as a great technological power with a knowledge-based economy, world-class universities are required.

Meritocracy at All Levels

World-class universities are deeply meritocratic institutions. They hire the best professors, admit the most intelligent students, reward the brightest academics, and make all decisions on the basis of quality. They reject—and punish—plagiarism, favoritism in appointments, or corruption of any kind. Much of Indian academe, unfortunately, does not reflect these values. Some of the problem is structural. The practice of admitting students and hiring professors on the basis of rigid quotas set for particular population groups—up to 49 percent—however well intentioned or justified, virtually precludes meritocracy. Deeply ingrained in Indian society and politics, the reservations system may well be justified—but to have successful world-class universities, meritocracy must be the primary motivating principle.

The Role of Research

World-class universities are research intensive. All highly ranked universities in the world exhibit this characteristic. India faces several problems in developing a research culture. It is fair to say that no Indian university today is, as an institution, research intensive. India's universities can claim a small number of departments that have a high level of research—and many highly accomplished professors work in the system. And some institutions, such as the IITs and some nonuniversity agencies like the Tata Institute of Fundamental Research and the All India Institute of Medical Sciences, produce impressive research and are respected internationally. The creation of a research-intensive university is mandatory to achieve world-class status.

Resources

Rs. 3,280 crores for the 12 new central universities, plus the other impressive amounts announced for related projects, sounds like a lot of money. In fact, it is very inadequate. Creating a world-class research university that can play in the best international leagues is an expensive undertaking—to establish and then to sustain. As an example, one large research-intensive new Chinese university cost around $700 million to build and has a total annual budget of close to $400 million.

Conclusion

The challenges facing the creation of world-class universities are daunting. Indeed, if India is to succeed as a great technological power with a knowledge-based economy, world-class universities are required. The first step, however, is to examine the problems and create realistic solutions. Spending large sums in a scattershot manner will not work. Nor will copying the American academic model succeed. ■

Higher Education Transformation in Pakistan: Political and Economic Instability

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The news about Pakistan over the last few years has been dominated by reports of political turmoil, terrorism, religious fundamentalism, economic decline, and the Afghan War. What has been missed is the phenomenal transformation in higher education over the last six years, which represents a critical development for Pakistan and a potential engine for growth and national recovery.

Higher education in Pakistan has suffered from decades of neglect. It was among the world's laggards with only 2.6 percent of university-age students attending higher education in 2001. A mere 23 percent of university faculty had PhDs, little research took place, teaching was not emphasized, the infrastructure had deteriorated, and not a single university ranked in the top 500.

The crisis in higher education was acknowledged as early as 1947, followed by more than a dozen commissions and policy documents. In 1998 some small steps were finally taken to improve access by increasing the number of higher education institutions from 18 to 78 and encouraging private higher education. Despite agreement about the magnitude and seriousness of the problems, there was no consensus about what should be done or who should drive the changes—government or universities.

The Higher Education Commission

In 2000 President Pervez Musharraf asked the Ministry of Education to develop a plan for higher education. That was followed by a task force, a steering committee, and several other efforts. The system was described to be in a virtual state of collapse, lacking the capacity for change. These deliberations resulted in a recommendation to create the Higher Education Commission, which was established in September 2002 as an autonomous and largely financially independent body. From the outset, the commission began a major reform effort producing the Medium Term Development Framework: 2005–10 that focused on faculty development, increased access, quality improvement, and relevance.

Since 2002 a number of extraordinary changes have taken place. Over the last six years almost 4,000 scholars have participated in PhD programs in Pakistan. More than 600 students have studied in foreign PhD programs. The Higher Education Commission instituted major upgrades for laboratories and information and communications technology, rehabilitation of facilities, expansion of research support, and development of one of the best digital libraries in the region. A quality assurance and accreditation process was also established.

The commission's goal for access was a 10 percent increase in enrollments per year. In fact, enrollments have grown 89 percent since 2001. In an effort to ensure faculty accountability and reward those who demonstrate excellence in teaching and research, a tenure-track system was introduced with salaries two to three times higher than existing civil-service levels for those who qualify.

The commission controls government funding for public higher education and some private education projects. Its successes have been remarkable as the recurrent and development budgets increased 340 percent in real terms from 2001 to 2005/06. Nonetheless, these increases basically restored university capacity lost over the years. Much of the budget growth was needed to cover the costs of increased enrollment, with expenditures per student increasing only 41 percent during that period. After 2005/06 the budget continued to increase the next year by a little more than 30 percent but remains low by international standards. The proportion of the age group attending university remains well under world standards, at 3.9 percent.

The change process was not without critics. Indeed, at the outset, many of the major institutions refused to cooperate. They argued that the commission was trampling on their autonomy, infringing on faculty authority, usurping powers delegated to the regions, and instituting changes without consultation. Indeed, the commission saw its change process as being top down by necessity, arguing that was the only viable alternative after decades of institutional failures. In addition to its academic critics, the commission's successes in obtaining funding resulted in criticism from several other ministries that did not fare as well and in jealousy about its achievements and autonomy.

By 2008, as a result of its policy and financial successes, most universities had become strong proponents of the Higher Education Commission. For the first time in decades university budgets were at reasonable levels. Quality had increased sig-