ance-based model for many years, trying several methodologies for measuring universities' activities and involving groups of experts at many universities. The committee's suggestions were seriously considered both by academic communities and by politicians.

The New Model for Financing Universities

In 2004, following the advice of the National Evaluation Committee, the government adopted a new formula. The main concept of this new formula represents the three groups of indicators: number of students (33%), results of teaching activities (33%), and the amount and results of research activities (33%).

In the first indicator, the number of students is weighted according to different programs to reflect instructional costs (e.g., students in medicine are weighted more than students in economics). The second indicator, results of teaching activities, is measured by the number of credits obtained by students and by the number of graduates (weighted using "time for graduation").

The final indicator, results of research activities, is measured by comparing the number of teachers and researchers (also research assistants and PhD students) with the ability to obtain research-targeted financial resources from public and private companies and organizations and the rate of success in winning research funds from the ministry.

Policy Implications

The new model seems to respond well to the challenges faced by Italian universities, even though critiques of the policy are ongoing. The indicators in the formula are coherent with national political strategies (increasing the number of students and graduates and also improving the quality of research through resources obtained by companies) and also address the multidimensional characteristics of universities' activities.

A few reflections can be drawn from the Italian experience, perhaps with international relevance, in terms of a possible agenda to be followed to develop a good performance-based system. First, the amount of resources allocated through the formula must be quite high, while in Italy it is definitely too low, because the formula is used for allocating only a part of the total public budget. In 2006 and 2007, about 99.5 percent of the budget was allocated according to traditional procedures and only 0.5 percent according to the formula. To improve the effects of incentives, the formula must be rapidly used for distributing at least 10 to 15 percent of the public budget.

Second, the indicators for research must be as increasingly accurate as possible, including measures of quality. In Italy the indicators adopted are still quite rough (e.g., publication counts are not considered at all). The difficulty in adopting accurate measures is well known, but if one of the objectives remains to improve quantitatively and qualitatively the research relevance of Italian universities, adequate incentives must be established. The recent initiatives of the Italian National Evaluation Committee for a qualitative assessment of research products (publications, patents, etc.) seem a feasible way for improving the data available.

Last but not least, the issue of differentiation must be considered. Giving the same incentives to all universities means accepting the uniformity of their activities. Based on the formula, each university should improve the quantity and the quality of its teaching *and* research to obtain a good score. Instead, internationally, the diversity of universities' offerings and their differentiation seem to be a positive trend, to improve efficiency and effectiveness of higher education performance as a whole—especially because the demand for higher education is increasingly differentiated. Perhaps, a possible option to face this challenge would be to separate research and teaching funds and to distribute them according to different formulas.

Examining these three issues can lead to a reconsideration of some important characteristics of the present performance-based formula in the Italian university system and can contribute to a wider international debate about the fundamental topic of better models for distributing public resources among universities. ■

The University Entrance Exam Crisis in Iran

Shahrzad Kamyab

Shahrzad Kamyab is an international education consultant. E-mail: shahrzadkamyabphd@yahoo.com.

In Iran, as in many other countries where a university entrance exam is the sole criterion for student selection, limited space and resources have restricted many talented and enthusiastic applicants seeking access to higher education. Consequently, the phenomenon of the university entrance exam has caused discontent and conflict.

In June each year, high school graduates in Iran take a stringent, centralized nationwide university entrance exam, called the *Konkur*, seeking a place in one of the public universities. The semiprivate Azad University holds a separate entrance exam. The competition is fierce, the exam content rigorous, and the seats at universities limited. In recent years, although the government has responded to demands for improved access and to a rapid increase in the rising number of applicants by enlarging the capacity of universities and creating Azad University, public universities are still only able to accept 10 percent of all applicants. Last year 150,000 students among 1.4 million participants were admitted. Almost 60 percent of accepted applicants were women, as the participation of women in higher education has doubled over the last two

decades. In contrast to public universities, which require no fees, Azad University charges high fees and administers its own entrance exam, which is very similar to the *Konkur* but somewhat less stringent. Although Azad University is one of the largest universities in the world, with almost a million students in campuses around the country, the percentage of students admitted is comparable to public universities. Applicants are willing to pay such a high fee to enter Azad University to gain employment and a higher status in the society upon graduation.

History and Trends

Konkur is a comprehensive, 4.5-hour multiple-choice exam that covers all subjects taught in Iranian high schools—from math and science to Islamic studies and foreign language. The exam is so stringent that normally students spend a year preparing for it; those who fail are allowed to repeat the test in the following years until they pass it.

A very lucrative cram industry offers courses to enthusiastic students. The Ministry of Science, Research, and Technology has established the Education Evaluation Organization to oversee all aspects of the test.

As the sole criterion for student admissions into universities in Iran, *Konkur* has gone through many phases. In prerevolutionary Iran, the exam was—as currently—a comprehensive test of knowledge and assessment of academic achievement for admissions. However, the problem in this era was that the selection methods provide advantages to candidates from urban areas, especially those from the upper and upper-middle classes with better education and preparation. Thus, almost 70 to 80 percent of university entrants came from large urban cities.

In the early years of postrevolutionary Iran, the purpose of testing shifted from being just a mere test of knowledge to an instrument to ensure the "Islamization of universities," aimed at admitting students committed to the ideology of the revolution. The university entrance exam judged admissions candidates not only by their academic test score but also by their social and political background and loyalty to the Islamic government.

In the early 1980s, a quota system was introduced to further democratize the selection criteria by allowing preferential treatments to underprivileged students. A year after the Iran-Iraq war ended, a law was passed to help handicapped and volunteer veterans to enter universities, reserving 40 percent of university seats for war veterans.

An additional criterion for student selection was introduced in the early 1990s to localize the student population, giving priority to candidates who applied to study in their native provinces. This policy was to prevent student migration into the larger cities. The requirement of service after graduation also was instrumental in providing education and health to the needy areas.

Ongoing Problems

Despite attempts made in recent years to reform university selection criteria and to promote the equalization of educational opportunities, the *Konkur* remains an impediment to equal education access. Both quantitatively and qualitatively, the quota criteria have worked against students whose academic performance is superior to those favored by the quota system. Another factor that contributes to the phenomenon of student elimination is the lack of infrastructure and facilities in spite of the expansion of infrastructure and establishment of an "open" university, Azad University. Azad University, a semiprivate university, favors its autonomy in governance, but its degrees and curriculum are overseen by the Ministry of Science, Research, and Technology.

The other drawback is the nature of the test itself. As in many other countries where only a long multiple-choice, mostly memory-based exam is used to select qualified applicants to enter universities, Iranian schools have been turned into factories for exam cramming.

Konkur, especially in recent years, has further contributed to the massive brain drain from Iran and has created psychological and social problems such as anxiety, boredom, and hopelessness among the youth who fail the test.

Reform Options

In Iran, admission to university—especially prestigious public universities like Tehran University or the highly selective Sharif Polytechnical University—remains a means of achieving elevated status in a society where education is a major determinant of class mobility. Graduates of such universities have a better chance of securing the increasingly limited jobs in the prestigious professions in Iran—medicine, engineering, law—making success in the entrance exam the first and perhaps the most important hoop through which Iranian youths must jump.

As the *Konkur* crisis persists, authorities are contemplating a replacement mechanism for student selection. One of the options being considered is to use the cumulative grade-point average (GPA) of the final three years of high school to admit students. While this policy seems more humanistic and fair than using a single exam to measure students' preparedness, it still cannot ensure fairness or reveal students' aptitude for further learning. Perhaps incorporating interviews, essay writing, and aptitude tests, in addition to GPA would be a more effective way of measuring students' qualifications to enter universities.

Another long-term approach to remedy the *Konkur* crisis in Iran would be to rely on midcareer education and training in place of the precareer pattern of university education by introducing the community college concept into the education system of Iran. This approach could serve to divert less academically inclined students from participating in the university entrance exams and hopefully eventually alleviate the *Konkur* crisis. ■