for some scientists from China, it is highly unlikely that many top researchers will be lured to Okinawa, not only because of the location and surroundings, but because of the generally internationally uncompetitive salaries offered by Japanese national universities at the senior levels.

From every perspective except perhaps for providing some public investment for Okinawa, this is a terrible idea. There are some significant lessons to be learned for higher education generally, and perhaps there is still time for the Japanese government to reconsider.

The decision comes at the same time that Novartis, the multinational pharmaceutical company, announced that it is moving its research laboratories from Switzerland, not exactly a scientific backwater, to Cambridge, Massachusetts in order to take advantage of the scientific infrastructure and entrepreneurial atmosphere there. This illustrates why Okinawa is not the right place for a research university. Even in the era of the Internet, intellectual enterprise requires community infrastructures, and other academic and intellectual stimulation.

There are a few examples of great universities or scientific centers located in isolated places, although it would be especially problematic to attempt this feat in the current environment. Even some of the great American state universities, established in the 19th century in relatively isolated places such as Iowa City or Urbana-Champaign, Illinois suffer somewhat from geographical isolation and find it difficult to retain top scientists and scholars. And this is why great centers of science have for a long time been located in or near metropolitan centers that have a tradition of academic excellence—such as Tokyo and Kyoto as well as Boston or San Francisco, Paris, and London. It is one thing to establish postsecondary teaching-oriented educational institutions in places like Okinawa to provide opportunities for training and education to the local population. It is quite another to build a research university in such a location.

There are a few examples of significant scientific centers located in remote places, and Okinawa must be categorized as a remote place. Novosibirsk in Russia and Los Alamos in the United States come to mind. But both were built to serve military needs more than basic or applied research and were purposely located in places where security would be easier to maintain.

The Japanese experience with establishing Tsukuba University in Ibaraki Prefecture near Tokyo is an example of the challenges. Tsukuba, founded in the 1973 as a way of diversifying higher education from the center of Tokyo, required several decades and much money to establish itself as a major academic center.

The insurmountable problem of the plans for Okinawa is that the location is so clearly peripheral—to other academic institutions as well as to the industries it is intended to serve. It will be very difficult to attract top talent to Okinawa regardless of salary or other incentives—and the Japanese national universities are not noted either for administrative flexibility or high salaries. Top scientists, it should be remembered, are a rare breed. They are attracted by a scholarly community as much as by high salaries and favorable working conditions. The incalculable elements of an intellectual atmosphere—bookstores, cinemas, coffeehouses, and the like—are all significant in the thinking of academics. Okinawa has the multiple disadvantages of location, climate, and the complete lack of other academic or scientific amenities.

There are several relevant lessons to be learned from the current Japanese proposal—not only for Japan, which still has time to drop the idea, but also for other initiatives elsewhere for the establishment of new scientific institutions.

Major research institutions should not be founded in remote or peripheral locations. It is, of course, appropriate to have higher education facilities in such places in order to provide access and skills to local populations. But research universities will seldom be successful. The informal infrastructures of intellectual life are important. While communication is now possible through the Internet, there is no substitute for community or for direct links to both other researchers and the users (companies, government agencies, and others) of the knowledge products to be produced.

Lost Opportunities in the Massification of Higher Education in China

Rui Yang

Rui Yang is a lecturer in international and comparative education at the Graduate School of Education, University of Western Australia, Nedlands, WA 6009, Australia. E-mail: <ryang@ecel.uwa.edu.au>.

One of the latest changes in China's higher education is the dramatic growth in student numbers. This expansion is happening in a policy context that views higher education as a tool for achieving an integrated global system along market lines. Meanwhile, Chinese society is also in transition. While making impressive progress in many areas, China is full of the tensions caused by turbulent social changes. This article aims to illustrate how some parts of the population are losing out on opportunities for receiving higher education while others are

greatly benefiting from the recent fast growth.

Rapid Growth within the Ninth Five-Year Plan (1996–2000)

Chinese higher education has expanded rapidly over the past decade—with gross enrollment rates increasing from 3.4 percent in 1990, to 7.2 percent in 1995, and to 11 percent in 2000. Quantitative growth continued in 2001. More than 1,500 new undergraduate and associate degree programs were launched. In order to further drive economic growth, the Chinese government lifted the longstanding restrictions on marital status (the requirement to be single) and age (a maximum age of 25 years) of student examinees.

China will be well ahead of the goal set in the Action Plan to Vitalize Education in the 21st Century.

With the current growth rate, China will be well ahead of the goal set in the Action Plan to Vitalize Education in the 21st Century, issued by the Ministry of Education in 1999 to achieve a gross enrollment rate of 15 percent by 2010. The national government has recently readjusted its state planning and is determined to increase the gross higher education enrollment rate to 15 percent by 2005, with a total of 16 million students in higher education.

The expansion of higher education has greatly reduced the longstanding gap between social demand and higher education supply. Many people—especially in affluent areas, including major cities and coastal areas—have greatly benefited from the rapid growth in higher education. The Beijing municipal education commission, for example, in 2001 declared its intention to raise the higher education admissions rate to 70 percent of secondary school graduates. Higher education enrollment in Shanghai has reached 38.8 percent of the 18-to-22-year age cohort. With an annual growth of 10 percent, Jiangsu is expected to become China's first province to start the transition from elite to mass higher education.

The decision to increase university student enrollments was made by the national government with the goal of stimulating the economy. The central government hopes to push Chinese parents to use some of their huge savings on their children's higher education. It is anticipated that the expansion will lead to large-scale construction work at higher education institutions, which will further drive up domestic consumption.

Another major motivation for the expansion is to maintain social stability by delaying employment for some of the population. Gradually, a trend is emerging for large numbers of secondary school graduates to go on to various institutions to receive their tertiary education. The tension caused by thousands of secondary school graduates competing for a very limited number of places in universities has been lessened.

The overall picture, however, is not all rosy. While many Chinese have increased access to higher education, some others have suffered a decrease in access. Among these are university students from poor families and the population in China's less-developed regions.

Students from Poor Families

The issue of disadvantaged university students, who comprise 10 percent of the total student population at national universities, emerged in 1997 when Chinese universities began to charge students tuition and accommodation fees. By the late 1990s, when student fees were still relatively low, a student needed at least 10,000 to 10,500 yuan annually for a 10-month academic year, already an astronomical amount for many families. A survey in Shandong showed that only 8.01 percent of families could cope with the whole amount on their own, 22.43 percent could only manage half, 43.68 percent could afford less than one-third, and 10.2 percent felt absolutely helpless.

Chinese parents are well known for diligently saving up for their children's education, enduring hardships that would be unimaginable for many people living in affluent industrialized nations. However, as some families live in absolute poverty, they have no savings and little chance to borrow money. In such cases, assistance from universities, while important, is insufficient.

Such straitened circumstances can hardly fail to exert a strong negative impact on the spiritual and social life of these students. While some students face their economic difficulties courageously, many experience great mental pressures. The Chinese government, at various levels, and the universities have worked together to implement some policies to address the problems facing the poorest students. Yet, within the globalized competitive culture of corporate managerialism, efficiency, and accountability in higher education worldwide, efficiency has been given the highest priority in China. University students from poor families will continue to be a knotty issue well into the coming years.

Opportunities in Less-Developed Regions

Globalization never meant global equality. Disparities are widening in China between the thriving export-oriented coastal zones and the provinces, especially those in the interior. There is great variation across provinces with regard to available human, financial, and material resources. Under such conditions, it is not surprising that

higher education development is poor quantitatively and qualitatively in China's less-developed areas.

Despite recent spectacular economic development, 6.7 percent of the Chinese population still lives in poverty. The introduction of university fees does not favor students living in remote areas with little money. As higher education is becoming more expensive, the gap in higher education opportunities between the developed and underdeveloped areas is rapidly widening.

Most affected are the impoverished areas, which are often those with large minority populations. For instance, by the end of 2000, the number of students studying at higher education institutions in Tibet was 5,400; whereas in 2001, 38.8 percent of the 18-to-22-year age cohort in Shanghai went to universities; and 70 percent of secondary school graduates in Beijing went directly to universities.

To make the situation in poorer areas worse, China is still practicing a discriminative university admissions policy, which gives preference to students from the major cities. Top universities have a quota system and admissions requirements that favor local students. Such a policy was originally designed to ensure that the best students in underdeveloped areas would have a chance to attend key institutions and enjoy the same quality of education. As academic qualifications become more important in China's job market, the disparity in access to higher education in different regions will have an even greater negative impact. A distribution of quotas between the central and local governments will be even more of a problem as the Chinese government begins to decentralize.

Conclusion

Parallel to international changes in the philosophy of governance and the way higher education is managed, there has been a strong trend toward diversification and decentralization in China's higher education. Meanwhile, the latest developments confirm findings reported by many comparative studies that decentralization can be a mechanism for tightening the control of the central government over higher education. Thus there is a coexistence between decentralizing and centralizing trends in higher education governance. While higher education in China is under increasing pressure to follow international trends, the lingering influence of the country's longstanding centrally planned system and the complex domestic situation combine to create difficulties in easing China's ongoing social transformation. The role of the state, while still strong, is undergoing change. Considering China's social, cultural, and historical realities, the state remains necessary as a regulator, facilitator, and negotiator. Currently, the state performs all these roles, although arguably such diverse roles often do not play out in a consistently beneficial way. ■

Trends in International Student Flows to the United States

Hey-Keung Koh

Hey-Kyung Koh is on the staff of the Institute of International Education. Address: 809 United Nations Plaza, New York, NY 10017. E-mail: <HKOH@iie.org>.

The year 1999–2000 was a milestone year. For the first time since the Institute of International Education began collecting data on international student flows to the United States, the number of international students in the United States passed the half-million mark, rising to 514,723. This past year, in 2000–2001, 547,867 international students were studying in the United States. The institute has been collecting this data since its founding in 1919 and began publishing this data independently in 1948 and, with United States Department of State funding, since the early 1970s in the annual *Open Doors Report on International Educational Exchange*.

In 2000–2001, over half, or 55 percent, of these students came from places of origin in Asia, followed by Europe (15 percent), Latin America (12 percent), the Middle East (7 percent), Africa (6 percent), North America (6 percent), and Oceania (6 percent). China is the leading place of origin for the third year in a row, with 59,939 students, or 10.9 percent of the foreign student total. India is ranked second, with 54,464 students, or 10 percent of the total; this number represents a 29.1 percent increase from the previous year, the largest percent increase of all the places of origin.

Although international students are studying throughout the United States, they are mainly concentrated in just a few metropolitan areas. Over one-fifth of all international students are found in seven states and the nation's capital. The New York metropolitan area hosts the most international students (49,283), followed by the Los Angeles area (27,426). In comparisons by county, Los Angeles County hosts the most international students, with New York County (Manhattan) a close second. Regionally, the Northeast hosts the most international students (25 percent), followed by the Midwest (22 percent), the South (21 percent), the Pacific (18 percent), the Southwest (11 percent), and the Mountain Region (11 percent).

The overwhelming majority of international students are at Research I universities, Master's I institutions, and community colleges. These three institutional types host more international students than the other 16 Carnegie Classification types combined, with 368,169, or 67.2 percent of the total. Business and