

# PROVINCIAL UNIVERSITIES CAN BE KEY TO ECONOMIC DEVELOPMENT AND SOCIAL EQUALITY

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In 1969 my wife Ann entered Princeton University as part of the very first group of women to be admitted as undergraduate students there. During that first year there were 100 female students and about 3000 male students at Princeton! For 223 years, since its founding in 1746, Princeton had allowed only men to be students.

Princeton, along with Harvard, Yale, Stanford, and several other private universities, is one of the best and most prestigious in the U.S. However, these universities have usually served the interests of the rich and powerful, and most of them excluded women until about a half-century ago.

On the other hand, starting in the 19th century, the individual states formed systems of government universities, and most of them had women students — and in many cases women professors — from the very beginning. In addition, these universities were much less expensive, and hence accessible to the most ambitious youngsters of the working class and even rural areas.

Was the academic quality of the provincial (state) universities as good as that of the prestigious private universities? Not at first. However, the 20th century saw a great expansion of the American economy and a rapidly increasing popular demand for higher education. The needs of the economy and the public desire for greater opportunities could not be satisfied by the existing universities. As a result, both the national and state governments invested heavily in the creation of new state universities and the improvement of old ones. After World War II, from which the U.S. emerged as an economic and political superpower, there was a boom in government-supported higher education.

In addition, many leading scholars and scientists were attracted to the state universities, because they felt that they could have a major impact in building up their field there, whereas in the traditional universities the influence of a single scholar would be small. This was

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especially true of the newer areas of study that did not even exist before the middle of the 20th century — fields such as computer science and gender studies — because the old prestigious universities were slower to move into those areas than the state universities.

Thus, the fields where the state universities especially excel tend to be the newer areas of research and also applied areas such as agriculture, engineering, and medicine that bring immediate benefits to the state or region. For example, my own university, the University of Washington in Seattle, has long had one of the world's best schools of forestry science (the northwest part of the U.S. is known for its logging industry), and UW also has a world-class medical school. And Ann's university, Arizona State University, has one of the leading departments of American Indian studies (Arizona has a particularly high indigenous population) and also a top-notch program in space engineering (most of the design work for the Mars rovers was done at ASU).

Unfortunately, not all of the lessons from the American experience with provincial universities are positive ones. Often the best reason to study the experiences of other countries is to know what pitfalls must be avoided, and this is definitely true of higher education in the U.S. Here are some of the difficult challenges.

- The U.S. has, to the best of my knowledge, the most bureaucratic universities in the world. At most state universities, non-academic employees outnumber academic employees, and more building space is devoted to administrative offices than to classrooms. Whenever there is pressure to cut expenses, it is lecturers and professors who are reduced in number, never deans or assistant deans or associate provosts or assistant provosts or vice-presidents. Bureaucracy is like a cancer weighing on American universities.

- Most state legislatures are unwilling to provide adequate funding to the state university system, and expect the universities to raise funds from tuition and private sources and to drastically cut expenses.

- Because of the financial pressures, administrators look for ways to make major reductions in the cost of instruction, in the process reducing the quality. For example, several years ago Arizona State University started offering a large number of courses online, and even introduced the "ASU Online" option, in which a student takes all courses online. This is attractive to many students, because it requires much less work and much less time. But the online students learn less than the regular students and are poorly prepared for future work or advanced study.

- The universities often resort to unethical practices to make money. An example is “dual enrollment,” in which the university makes agreements with secondary schools in the region. In mathematics, this means that the university recognizes the high school version of calculus or pre-calculus courses as being equivalent to the university’s courses in those subjects, even though in practice they might be far inferior courses with far more generous marks. Then when the students later enroll in the university, they already have credit for those courses. Typically students are required to pay the university 20% of the tuition that they would have had to pay to take the courses there. In other words, the university gets a substantial sum of money for essentially doing nothing.

- Many state universities have an unhealthy set of priorities. Competitive athletics often receives more attention and more resources than academics. My university spent over 250 million dollars to remodel the football stadium. But last year I had to teach in a classroom that had a malfunctioning heating system. The room was so overheated that throughout the winter I taught in a light tee-shirt, and some of the students in my early-morning classes would go to sleep because the classroom was so warm. However, I was told that the defective heating system could not be replaced because that would cost too much money.

- There is little quality control in education at the undergraduate and Masters levels. At the PhD level the situation is better, in part because faculty rather than administrators have direct control of quality and in part because we get a large influx of very well-prepared foreign PhD candidates. But even at the PhD level some state universities have poor quality control, and in certain fields give out PhD’s like candy to a child. An advanced degree from the United States does not signify much if it comes from a university that does not take quality control seriously.

There are several basic principles that should be followed in order to have a top-level system of provincial universities. First, the government must make a long-term commitment to fund the university’s basic mission. It is reasonable to expect universities to obtain some additional funding through arrangements with industry and other private sources; however, those sources will provide a relatively small level of support for special purposes and will not relieve the government of its obligation to provide adequate funding. Second, a provincial university should focus on certain priority fields of study rather than trying to excel in all areas, and these should include practical areas that are of

particular importance in the region. Third, there should be strict limits on the number of administrators and staff, a number that should remain well below the number of teaching faculty. Fourth, the university should recognize that high-quality education cannot be done “on the cheap,” for example through online courses or by hiring less qualified instructors or by imposing huge teaching loads. Fifth, it is important to carefully monitor the quality of degrees. For example, Vietnam should reinstitute the two-round system of approval of PhD’s (where the second round requires approval by a national committee of distinguished scholars) that was used until 2010.

Vietnam already has some high-quality provincial government universities. For example, Thái Nguyên University is a major regional university, serving the needs of the northern highlands. In 2012 I visited that university at the invitation of the mathematician Dr. Lê Thị Thanh Nhân, who was winner of the Kovalevskaja Prize in 2011 and at present is Director of the Faculty of Science.

Finally, a good provincial university should not restrict itself to developing fields that have immediate practical value. It should develop strengths in literature, music, the arts, historical research, and the theoretical sciences, and its faculty should maintain active collaboration with colleagues in other parts of the nation and the world. The future development of a province or region depends not only on advances in the economy and technology, but also on maintaining a high level of research and teaching in diverse fields of human thought and creativity. Stanford University Professor Joel Samoff, who is a leading American expert on Africa but whose words apply equally well to all developing countries, said: “The conduct of basic research and the opportunity for original thought are in the last resort the only means by which societies can take control of their destiny. Such a function is not a luxury that can be dispensed with for a period, pending better economic times, but an integral part of the development process itself.”

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