

## Asia's Academic Aspirations: Some Problems

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Not long ago, Singapore's education minister, Teo Chee Hean, articulated his government's long-held desire to build a "world-class" higher education establishment as an underpinning for its "knowledge economy." Minister Teo makes the argument that "in a knowledge economy, intellectual capital is a prized resource" and points out that universities are the central institution in creating and maintaining a highly educated population. He aspires to make Singapore, the "Boston of the East," pointing out that the Boston area's unparalleled network of academic, scientific, and high-tech entrepreneurial resources have given it worldwide leadership in higher education and in the industries, such as biotechnology and informatics, that are so dependent on knowledge.

Singapore is not alone in aspiring to use the knowledge economy as a means of economic growth. For example, South Korea's recently announced "Brain Korea 21" program has similar aims. Asian countries have invested heavily in higher education and research, with mixed results. The links between universities and technology industries at Hsinchu in Taiwan, begun two decades ago, proved to be quite successful. Japan's Tsukuba University has had more mixed results. Peking and Tsinghua universities in Beijing have also linked with high-tech industries, and there is talk of merging the two institutions. While these, and other, initiatives have yielded impressive results, none has yet produced the "Boston of the East." There are some interesting reasons for this. One can build institutions, but it is more difficult to instill an intellectual environment of sustained creativity and academic innovation.

### *Boston's Advantages*

It is worth analyzing what has made the Boston area such a hub of academic and scientific strength over time with a view to suggesting how Boston's example may be applicable in Singapore, and elsewhere in Asia.

- *Scale.* There are some 60 academic institutions enrolling close to 400,000 students in the Boston area. These rank from Harvard and MIT at the very top, but also include other "top 50" American universities and colleges such as Tufts, Boston College, Boston University, Wellesley, and Brandeis. Specialized institutions such as Babson College in management, the Massachusetts College of Art, and the New England Conservatory add to the mix. Scale creates synergy and possibilities for collaboration as

well as competition among both academics and institutions. It contributes to an environment of ideas and intellectual vitality.

- *Competition.* The American academic system is highly competitive—for students, research funds, and prestige. The Boston area is an especially competitive environment. Institutions, and individual academics, seek to maximize their advantages. Institutions tend to be entrepreneurial in that they carve out market niches and stress their specific strengths. Bentley College, for example, has built up an information technology-based management education program. Schools that cannot survive in a competitive environment die. Bradford College recently announced that it is closing its doors because of inadequate enrollments and financial problems.

- *The private sector.* The large majority of academic institutions in the Boston area are private. They are responsible for their own funding—and survival—and have almost complete freedom to chart institutional goals and manage their own resources. The more prominent schools have large endowments that provide funds for special initiatives, scholarships for students, and the like. Harvard, with its \$14 billion endowment, is said to be the second-richest private institution in the world after the Roman Catholic Church. A half dozen other Boston area schools have endowments approaching \$1 billion each.

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- *Academic freedom.* The environment of intellectual and academic freedom that pervades American higher education generally and the top sector of the system in particular is a central factor in its success. Research can be conducted in any area without external constraint, and professors are free to express their views, on matters academic or nonacademic, unfettered.

- *A vibrant metropolitan environment.* Boston is itself an attraction for both students and scholars. Despite high living costs, the city's cultural resources and its reputation as a exciting place to live lure people to the area. The academic community is an important part of this environment, but Boston is also home to the nation's largest concentration of healthcare and medical research facilities, a major biotech industry, information technology firms, and other knowledge-based industries.

*Implications for Asia*

How does all of this relate to Singapore and to Asia? It takes more than central planning and government funding to ensure a successful academic and high-tech future. Kuwait has for several decades invested heavily in higher education, building an effective but hardly world-class or research-based university. A tradition of academic excellence is important, as is an environment of academic and intellectual freedom. Scholars work best in an atmosphere of freedom. Size is important, too. Small academic communities can be quite good, even world-class, but can seldom achieve the highest academic pinnacles. Take Sweden or Denmark as examples.

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An environment that encourages but does not dictate university development or academe's relations with industry and government has been key to Boston's academic strength. Diversification is important, too. Not all postsecondary institutions can be Harvard or MIT. There is room for different kinds of schools, with different aims, patterns of funding, varying quality. A mix of public and private initiative helps as well, providing more avenues for funding and greater possibilities for diversity and the cre-

ation of niches. The possibility of failure provides an added incentive.

Most Asian countries cannot aspire to excellence in all fields of knowledge. Choices need to be made, and here a combination of academic, public, and private decision makers may be the most effective way to determine higher education policy. A fine balance of institutional autonomy and a sense of the broader public interest is necessary for academic planning.

Singapore's aspiration to become the "Boston of Asia" will not be so easy. Boston, after all, started its academic quest in 1636. And the structural problems are formidable. Some, such as commitments to academic freedom and diversification, are attainable. Others, such as size, are more difficult, although regional consortia may be a partial answer. Singapore's substantial investments in higher education, its stress on internationalization, its growing links to some of the world's most prestigious universities, and its targeted research and training strategy all contribute to building a world-class academic system.

As Singapore, and Asia, think through strategies for participation in the knowledge economies of the 21<sup>st</sup> century, realistic approaches to higher education development are necessary. Universities are central contributors to a knowledge economy, providing both the trained personnel and the research that is necessary. Yet, universities cannot be bought "off the shelf." They require both freedom and resources. They are at the same time national and international institutions, linked to local realities as well as to the wider world of research. They require freedom to flourish, and yet must serve the public interest. ■

## Financing Higher Education in the United States: An Overview

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The most significant distinction in revenue sources for the 3,600 nonprofit institutions of higher education in the United States is between public institutions governed by one of the 50 states and private institutions governed by private boards of trustees.

#### *Sources of Revenue*

*Tuition* payments account for only 19 percent of the revenue for public institutions, but they make up 42 percent of the revenue—the largest single source—for private institutions. Tuition is a smaller but still significant part of the revenue for public institutions. In contrast to many nations, all public and private institutions of higher education in the United States charge tuition.

*State government* is the source of 36 percent of the revenue for public institutions but only 2 percent of that for private institutions. Revenue from state government is the largest single source of revenue for public institutions, which receive block grants for core functions such as their instructional program. The small portion of their revenue (2 percent) that private institutions receive from state government is usually in the form of grants or contracts awarded competitively for a specific purpose, such as a special research or training project. The states generally do not supply any general operating funds for private institutions.

*Local government* is a minor source of funding for both public (4 percent) and private (1 percent) institutions. However, the revenue to public institutions from local governments usually consists of operating funds for local public institutions, typically two-year community colleges. The revenue to private institutions from local governments is