

CHAPTER

The Economics of Higher Education in the United States

What Can Other Developed Countries Learn from It?

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Higher education is critical to the social and economic future of developed nations. This is more true now than ever before due to the exponential growth of technology, which requires a better educated workforce that is more flexible, more technologically sophisticated, and better prepared to address the complex problems of tomorrow's global economy and society. In addition, higher education opens the door to upward mobility to ameliorate the trend toward a locked-in, two-tier society. It allows members of disadvantaged groups to obtain the knowledge, skills, and credentials that will enable them to compete economically and achieve personal fulfillment.

However, at a time when higher education is in greatest demand, access to it is jeopardized as it becomes less and less affordable. A poll in 1990 reported that 88 percent of the American public believed that a high school diploma was no longer adequate to qualify for a well-paying job. Yet 87 percent believed that rising costs would put college out of the reach of most people.

Financial constraints are forcing both public and private institutions in the United States to radically change the way they operate. Total revenues simply no longer cover the cost of operating as they have in the past. We tend to think of the 1960s as the golden age in higher education, with the expectation that we will return to that period of prosperity. But it is now apparent that those days, not these, were the abnormal times. We must quickly find ways to meet the challenges of today's reality.

In response to diminishing public support, European universities, which are mostly publicly funded, are exploring ways to supplement with private-sector

funds. In the United States, traditionally public universities rely more and more on private support. Based on the assumption that state support will continue to decline relative to demand and may eventually disappear, some publics are "privatizing," moving toward ultimate total dependence on private funds. As a result, these traditionally "publicly funded" institutions are now characterized instead as "publicly assisted."

Although the fees at public universities remain lower in absolute dollars, they mirror the tuitions of the privates and account for an increasing share of total revenues. And while private institutions still rely heavily on private support, private research universities depend heavily on federal research funding. For both publics and privates, nontraditional revenue sources, such as royalty income, are increasingly important.

It is apparent that financial equilibrium cannot be achieved without substantial change and restructuring. Tough questions must be answered: What can be forfeited? What can be shared? What can be changed? How can existing resources—such as the potential of the faculty, which is the core asset and the largest cost—be maximized?

An evolutionary response will not suffice. In the United States, research universities have adapted well over time, but not in step with a world that is changing at an unprecedented rate, particularly in technology and globalization. And stopgap measures have been exhausted. Inevitably, higher education must be restructured to survive.

In 1997, Peter Drucker predicted that because of uncontrolled expenditure, universities will not survive current socio-cultural and economic upheavals. Joel Elson (1992) concluded that without substantial improvement in the quality and content of higher education, the traditional college campus will disappear, replaced by distance learning and computer technology. Karen Arenson (1997) observed, "Welfare has had to change. Healthcare has had to change. The corporate world has had to change. Now it is higher education's turn."

THE DEMAND FOR HIGHER EDUCATION

Population growth is more of a factor in the increased demand for higher education in the United States than it appears to be in other developed countries. The U.S. is on the verge of a second-generation post-World War II population bulge. By 2002, the number of high school graduates will increase 14 percent; by 2006, 17 percent. California will experience an 18.3 percent rise by 2006, with a projected growth of 488,000 students.

Also unique to the U.S. is the rate of change in the racial and ethnic mix of American society and the need to ensure that the growing ethnic groups, particularly the Hispanic populations, have full access to higher education as they assume an increasingly significant role in American society and polity.

Perhaps more universal is the growing need for continuing education, particularly for studies that are not necessarily degree-oriented. As the demands of the workplace become more technological and more sophisticated, and as approaches to management as well as developments in the professions constantly change, lifelong learning becomes essential.

According to the U.S. Census Bureau, the number of adults aged 25 and older enrolled in college jumped 28 percent between 1987 and 1994 (United States Census Bureau, 1988-95). A recent study in California reported that a third of the students enrolled in the college systems already had a bachelor's degree and were returning to college for technical programs related to new employment opportunities. Perhaps as many as 20 million nontraditional students in the United States will be seeking additional higher education in the next decade. To what extent nontraditional institutions, rather than the colleges and universities, will ultimately meet this growing demand remains a question.

THE COST OF HIGHER EDUCATION

To the Student

Between 1975 and 1994, the cost of attending a private institution rose from 30 percent less than to 200 percent more than the median income for the American household. From 1975 to 1998, the cost of four years at a public institution rose from a third of median household income to the equivalent of median household income. Increased costs are forcing the middle class into public institutions and threatening to reinforce a two-tier society, with the less affluent—including much of the growing minority ethnic populace—pushed out.

The cost of a college education continues to grow in excess of increases in the cost of living. In 1998, private colleges and universities increased average tuition by 5 percent, and publics by 4 percent, while the Consumer Price Index (CPI) rose only 1.6 percent (United States Bureau of Labor Statistics, 1983–98). In the past 15 years, tuition costs have increased 195.3 percent while the overall CPI has risen just 63.3 percent. While recent increases in cost are less than those of the late 1980s and early 1990s, they are still too high. For most Americans, paying for college has become a daunting task. Loans now make up 60 percent of the financial aid available, with grants accounting for less than 40 percent. That ratio is almost exactly the reverse of 20 years ago. Institutions are drifting from grant-based to loan-based financial aid, causing many students to graduate with enormous debt obligations. As a result, many decide they can't afford higher education or are discouraged from considering less remunerative careers such as teaching or public service.

To the Institution

The public is generally unaware that, despite tuition and fee increases, the institution's cost of providing education, even in private institutions, significantly exceeds what it receives in tuition or public funding—a gap that grows annually and must be closed by funding from other sources.

While average tuition for private institutions rose from \$10,040 in 1990 to \$15,399 in 1997, an increase of 53 percent, net tuition, after discounts, increased only 33 percent. In fall 1997, 76 percent of entering freshmen received a discount averaging 49 percent of tuition. Further increases in tuition will produce proportionally less net revenue.

The “basket of goods and services” relevant to higher education (the Higher Education Price Index, or HEPI) differs from the components of the CPI. The fact that education is people-intensive accounts for perhaps half the difference. Most of the other half is caused by (1) high administrative costs necessitated by increased government demands and regulations and by the unwillingness of the federal government to fund the full share of overhead incurred in government-funded research activities and (2) expenditures necessary to compete for the best students, “faculty stars,” and student amenities.

In addition, the number of faculty members has risen slightly faster than enrollments, and there has been an explosion in nonteaching staff. In fall 1976, universities across the U.S. had an average of 31.5 administrators for every 1,000 students. By 1993, the number had reached 51.4. By the mid-1990s, only about 35 percent of university employees actually taught students.

Instructional expenditures for each of the California public higher education segments increased dramatically from 1961 to 1990. At the University of California, expenditures per student increased 589.4 percent. Adjusted by the HEPI, the increase was 25.3 percent; adjusted by the CPI, the increase was 61.4 percent (United States Bureau of Labor Statistics, 1962–91). For the California State University, the increases, respectively, were 444 percent, 10.5 percent, and 32 percent. For the community colleges, the changes were 413.2 percent, minus 6.6 percent, and 20.1 percent.

Currently, 78 percent of college- and university-level students in the United States attend public universities. Excluding community colleges, 66 percent attend public institutions. Given the competing demands on public tax revenues for health, welfare, prisons, etc., the percentage share of state revenues being devoted to higher education is decreasing. For example, at the University of California, revenues from the state increased 16 percent in the decade from 1988 to 1998—far less than the CPI, let alone the HEPI. The U.C.'s share of state revenues dropped from 5.72 percent to 4.11 percent during the period, while its enrollment increased by 7 percent, and student fees tripled. Given present trends, the university's share of state revenues can

be expected to decline further. Yet, if more were invested in higher education today, less expenditures would be required to treat social ills in the future. The balance between state revenues devoted to current societal needs and investments in the economic and social future of the state are disproportionately tilted toward the former.

THE RESPONSE OF HIGHER EDUCATION

Without limiting access by restricting admission or increasing tuition, higher education is forced to contain its costs. With public pressure to cap the growth of tuition, the focus has shifted to cost control. Administrative and service costs were addressed first. Random reduction in faculty and academic support followed. Some institutions have focused on areas of excellence and discontinued marginal programs. Some have hired lower-cost, younger, and part-time faculty and increased teaching loads and class sizes. But these measures will not contain the underlying pressures to increase costs and will not support structural changes that might alleviate the pressures. Overall, there seems to be a lack of institutional mechanisms to set priorities or make judgments about reductions.

Will “privatizing” work for public institutions? Becoming more like private higher education will not solve the problem, although it may provide some interim amelioration. Can other sources of revenue be generated to close the gap over time? I do not believe so. Can the HEPI be brought down so that the real cost does not increase more than consumer purchasing power? Not unless faculty members are engaged more efficiently.

Ultimately, the fiscal problems can be addressed only by basic changes within higher education. Reducing per capita expenditures significantly will require fundamental rethinking. The governance structure must be changed to enable the essential institutional-level investment and trade-off decisions to be made so that leaders can assess the relative value of departments, programs, and systems to reallocate scarce resources, streamline services, and respond to the changing needs of their constituencies. In the corporate world, a number of chief executives have been accused of short-term thinking and decision making on the premise that they will have retired before “the deluge.” To what extent is this also true of leadership in higher education? Yet it must be noted that the ability of leadership is severely constrained by the decentralization of decision making, the process of shared governance, tenure, and the conflicting loyalty of faculty to discipline rather than institution.

The report of the Commission on the Academic Presidency (1996), on which I served, entitled *Renewing the Academic Presidency—Stronger Leadership for Tougher Times*, recommended that

shared governance can and should be maintained—but not in its present imprecise, undisciplined form. It must be clarified and simplified so that those with the responsibility to act can exercise the authority to do so. Shared governance cannot ensure that all parties will agree on all issues.

Any proposal that can be interpreted as an effort to increase productivity is met with intense opposition. The conventional view is that higher education cannot achieve increases in productivity without a loss in quality any more than a chamber music trio could increase productivity by playing more rapidly or eliminating one of the players.

Nevertheless, the faculty must be enabled to be more productive. The solution lies in using the faculty in the most effective way as *one* of the resources available in the learning process. We have learned so much about the different ways in which students learn, and yet we continue to focus more on teaching than learning. Increasing teaching loads and class sizes and substituting lower-cost younger and part-time faculty for more expensive senior faculty are not the ultimate answer and will not produce the necessary gains in productivity. None of these approaches challenges the fundamental assumption that faculty members meeting with groups of students at regularly scheduled times and places is essential to achieve effective student learning. This assumption underlies the entire organizational framework for higher education, affecting everything from course accounting and faculty workload to tuition and state funding.

Information technology enables education to move away from synchronous learning. Faculty, while the most essential, are only one of many resources important to learning. Pedagogical opportunities need to be explored and applied. The focus has to shift from teaching to learning and from time to results. The role of technology lies not so much in the technologies themselves but in how they are employed to enhance learning. Information technology can reposition and revitalize teaching, much as it already impacts research. The real advantage of technology is its ability to transform pedagogy and extend the use of faculty while preserving, and perhaps increasing, quality of learning, student/faculty contact, and inter-university collaboration.

While distance education expands the ability of current programs to reach off-campus populations, this is not the greatest potential of information technology. Rather it is to challenge the assumption that education must take place in classrooms where professors teach groups of students. It is now feasible to distribute contents and allow high levels of interaction between and among teachers and students without requiring schedules to be synchronized. Non-synchronous education, already common in doctoral programs, can now be available to all students.

The cost structure for technology-mediated instruction is different than for traditional classroom-based courses. For the latter, the cost is mostly the salary

of instructors and the expense of their support services. Especially in larger institutions, the marginal costs of traditional instruction are close to the average costs. And costs tend to remain constant over time except for incremental increases to keep up with inflation, and salary increases in excess of inflation. In contrast, costs for technology-mediated instruction are more akin to those of software development. Up-front costs for development are relatively high but the expense of ongoing delivery can be lower than for classroom instruction. Development costs can be amortized over the period in which a course or program is used, which could be several years. Periodic modification involves less cost.

Faculty must be expected and enabled to employ technology and pedagogy to enhance student learning. This needs to be an institutional policy and priority with leadership from the president. Examples of effective pedagogy can be found at most institutions but they remain marginalized to the dominant mode of lecture-based, didactic instruction. Incentives can encourage re-design of instructional approaches to achieve cost savings as well as quality enhancements through technology. The approach to budgeting for such change will need to be modified because it is difficult to fit the costs of technology-mediated programs into annual budget cycles.

Another area that must be re-examined is the system of faculty rewards and incentives. We must raise the status of teaching with commensurate award. We must rethink faculty appointments and the commitments that faculties and institutions make to each other. This rethinking could well lead to reconsideration of the criteria for tenure and for long-term, nontenure track appointments. It also requires that we produce Ph.D.s who are qualified and prepared to participate in such a changing higher education environment.

While technology can easily extend access to higher education to new populations at lower cost than traditional classroom instruction, the real question is whether higher education will organize itself to maximize the potential benefits of technology in quality, access, and cost. Unless and until that happens, technology just represents an additional expense. Once *learning* becomes the central focus, the response centers on how best to use *all* available resources to produce the most effective results for the most people. That must be the objective if society is to have the access to higher education that it expects and deserves.

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