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Challenged Universities

By Malcolm Gillis

The author reviews issues affecting research universities, particularly private ones. He discusses the phenomenon of the deep underpricing of services that has long been a characteristic of American universities as well as the tradition of a decentralized and diversified higher education system.

The author then discusses the federal role in education in recent years, with respect to the growing number of regulations, specifically the State Postsecondary Review Entities (SPRE's) authorized by Congress in the 1992 Higher Education Amendments. He argues that the SPRE's go far beyond Congressional language intent and would create additional costs for institutions.

What is the principal business of universities? Of course, all universities attempt to educate and train students to cope with the challenges of life. But seen another way, we produce two basic kinds of knowledge: embodied and disembodied. Embodied knowledge is imbedded in the cerebrums of our graduates, and is generally intangible. The second, *disembodied* type of knowledge is more tangible, as it appears as information in journals, books, and compact discs. We generate knowledge through two activities: teaching and research. In this production process we use highly specialized resources such as faculty and research assistants, as well as semi-specialized resources such as bricks and mortar (in labs, office space), support staff, and equipment (computer, spectrometers, etc.). Finally, to function at all, universities must provide a wide range of central services such as building maintenance and repair, food catering, record-keeping, etc.

In any case, production relationships in higher education are no less complex than in manufacturing. A major difference, of course, between a research university, and a manufacturing firm lies in the area of pricing. *Even* for private schools, the prices that we charge for teaching and research services are set well below the costs of providing them. Moreover, we do this deliberately.

For example, the annual cost of educating a Rice student, counting of course capital costs, is about \$40,000. This is comparable to costs at Princeton, Williams College, Swarthmore, etc. But at Rice, for example, even those students who pay full tuition are paying only about one fourth the costs of providing that education. At schools with higher tuition, such as Harvard or Princeton, tuition may cover about half the costs. In any case, private as well as public universities clearly underprice undergraduate education.

Universities also have long underpriced—deeply—our other principal product: research and associated technology. We generally have charged zero prices for our discoveries, and especially until recent years, we have imposed zero or nominal charges for technology trans-

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An earlier version of these remarks were first presented at Duke University, on December 2, 1994, on the occasion of the dedication of the new Terry Sanford Institute for Public Policy. Portions of this address have also appeared in the *Houston Business Review* and also in the 1994 *Report of the President*, Rice University.

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fer. Not until passage of the Bayh-Dole Act liberalizing licensing of university patented inventions, in 1980, did universities begin to collect any appreciable royalties on discoveries financed by *federal* research funds. But even institutions such as MIT, with many active patents, collect less than 2% of their overall revenues in royalties. However, Congress now shows signs of forgetting the lessons of Bayh-Dole, and the 1980-93 gains in technological transfer are at risk.

In any case, deep underpricing of services has long been a major characteristic of American universities. In past decades, these and other contributions of research universities were reasonably well recognized, if not always fully, or widely, appreciated. More recently, however, the perception of research universities, particularly among politicians, has changed. The environment for higher education, once benign at worst, is now uncharitable at best. A major reason has been growing public resentment of rapidly growing costs in higher education. Some of the growth in cost has been due to exogenous factors, some due to internal causes. I will address both these issues, but doing so, let me try to place these problems in appropriate perspective. Whatever the present difficulties plaguing U.S. colleges and universities, American higher education is still far and away the best in the world, by whatever standard employed.

In an era in which there has been a widespread perception that the Japanese, or the Germans, or whomever, have wrested leadership away from America in so many fields, it is still accurate to say that no Japanese or European university could be considered to be in the same league with *any* of the top 25 universities in this country. For corroboration of this statement, one need look no further than the 483,000 foreign students enrolled in U.S. universities in 1993. Consider: in the 98 national Japanese universities, there are a total of 56 endowed chairs (*none* in natural sciences).

Why has our nation been able to retain its superiority in higher education? One of the greatest strengths of American higher education has long been our rich variety of institutions. The higher education tent is large enough to comfortably enfold the huge California and Texas public systems, the private research universities, the small liberal arts colleges, a wide array of church-based schools and hundreds of community colleges. All told, the American higher education system encompasses 3,400 institutions, enrolling about 15 million students a year: one quarter of all postsecondary students in the world.

The foundation for this diversity was established immediately after we gained our independence. George Washington, wise enough to refuse a crown, was not wise in *all* things. He and others initially tried and failed to persuade Congress to establish a *national* university. Had Washington prevailed, we would today probably be saddled with the type of centralized, standardized higher education system established in most of Europe, all of Latin America, and Japan. These cumbersome educational systems have proved to be highly susceptible to bureaucratization, and pressures for conformity and have often been vulnerable to capture by political groups at either end of the political spectrum.

“Deep underpricing of services has long been a major characteristic of American universities.”

Because the United States opted early on for decentralization and diversification in higher education, we have had no central higher educational authority perpetually looking over our shoulders, setting standards, dictating curriculum or regulating salaries. This is, in fact, why U.S. higher education has retained superiority: because the central (federal) government has largely left us alone, up to now. As a result, American universities are much more “light on their feet,” and able to respond to new challenges, not only in technology, but in efforts to understand new political and cultural currents. European and Japanese universities must rely on the benevolence and competence of bureaucrats from ministries of education who are intrusive even when benevolent. The American approach to higher education relying upon experiment and competition, provides the best assurance that higher education will find ways to enable us to remain responsive to the rapidly changing needs of our students and our society.

There are two types of not-so-good news for American higher education.

First, contrary to the lessons of American history, the federal government is now moving to intrude in higher education in potentially serious ways, through the back-door, specifically, through the accreditation process. Second, much of American higher education is in financial distress, to one degree or another, because of rapidly rising costs.

Consider first the federal intrusion through something called SPRE (State Postsecondary Review Entities). The SPRE's are almost a perfect illustration of the “Law of Unintended Consequences,” wherein benign, if not necessarily good, intentions lead to disastrous results.

Three years ago, Congress passed the Higher Education Amendments of 1992. Section H of those amendments, establishing the SPREs, was intended to correct abuses in the federal Title IV student aid programs. Indeed, the final regulations issued in April 1994 do say that the purpose of the SPREs is “to reduce fraud and abuse in Title IV.”

There has been plenty of fraud and abuse in federal Title IV loan programs. Although default rates on federally supported student loans have declined sharply over the past three years, about 10% of higher education institutions had default rates of 30% or more. More than anything, high default figures such as these sold Congress on the need for action. However, over 90% of the institutions with high loan default rates were among the 5,000 proprietary “for profit” trade schools, that train truck drivers, medical technicians, etc.

It was bad enough that institutions with default rates on student loans running 5% or less were tarred with the same legislative brush intended for those with higher default rates. But worse still, the Department of Education in 1993 and 1994 proposed regulations to implement Section H that went far beyond congressional language *or* intent. Administrators in the Department of Education sought to use the SPREs to materially enlarge federal and state intrusion in the autonomy and integrity of universities. They sought to strengthen state oversight of *all* colleges and universities; to impose federal mandates for how states should carry out their responsibilities under the statute; to establish federal standards for accreditation in areas ranging from curricula and

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faculty to student services; and, in a number of instances, to assign administrative, enforcement, or ongoing oversight responsibilities to the accrediting agencies.

Following a sustained and often angry outcry from the higher education community and Congress, the regulations were modified by the Department of Education in April 1994. As issued, these provisions were somewhat less onerous and intrusive than earlier versions. Still, the regulations as finally adopted clearly presaged the Department's interest in establishing federal standards and procedures for matters related to curriculum, academic practices, and accreditation. Some senior officials of the Department have gone so far as to suggest that the government *ought* to be determining what college students should learn, measuring what they have accomplished, and assessing whether they have received “sufficient” value for their money. This kind of oversight is not too much different from that found in highly centralized educational systems overseen by “Ministries of Education,” as illustrated by the following discussion.

First, there is a system of 11 tripwires that would cause an institution to be referred to a SPRE for review. The Department of Education calls these *triggers*. Then, there are 17 *standards* to be used by the SPREs in reviewing schools, plus 12 *other* standards to be used in accreditation of educational institutions. Further, there is a list of 26 *requirements* that institutions would need to meet to be certified. Private, non-profit, non-proprietary universities would *also* have to satisfy seven *factors* of financial responsibility.

Universities such as Princeton, Rice, Trinity, Baylor, SMU, Stanford and Emory last April were soothingly assured by senior Department of Education officials that the SPREs would never affect us. Any president of any university who believes that would believe anything. The SPREs are perhaps best seen as the camel's nose in the tent of higher education; it represents, in my opinion, the first stage in an effort to ultimately exercise federal control over critical aspects of higher education. The fact that proponents of SPRE may be well intentioned is irrelevant. In spite of assurances offered by the Department, already this year the cumbersome SPRE review process has shown high-handed disregard for a number of highly respectable colleges and universities across the nation. These institutions received last July and August lengthy, officious letters from the Department of Education notifying them that, for transgressions, they had been referred to their state SPREs for review. This was done in spite of the fact that SPREs in most states were not yet functional.

Not atypical was the case of Carleton College in Minnesota, a school usually mentioned in the same breath with Williams and Amherst, where quality is concerned. Carleton, like several other schools, was referred by the Department of Education to the Minnesota SPRE for “failing to file an audit report for 1990.” The President of Carleton College, in showing that in fact an audit report had been filed, spoke for much of higher education in saying, in a letter to Senator David Durenberger, the following:

“The Federal agency with the most unfettered powers, in my view, is the IRS. Even the IRS has the decency to write and ask if they are mistaken in what their records show about one’s filings with them—no such courtesy from the Department of Education, which is charged with promoting “educational excellence throughout the nation.” They do not ask if their records are incomplete—they tell us we have “triggered” review by the Minnesota SPRE—a review which would be impossible in any case, since the process had not yet been decided upon.

“Institutions should be accountable; we expect to be accountable; we *are* accountable. What is maddening is the time, energy, and cost devoted to needless—and I mean needless—correspondence and documentation.”

“The federal government is now moving to intrude in higher education in potentially serious ways, through the accreditation process.”

Moreover, the SPREs were not needed to rectify problems and curtail abuses in student loan programs. *If* that were the intent, then the Department of Education could have sought higher appropriations for the Department’s own Inspector-General. This would have allowed aggressive pursuit of violators with appropriate civil and criminal action. Instead, the Department opted to create another large, clumsy, unresponsive bureaucracy that unless curtailed could soon be obtrusively meddling into affairs of higher education previously deemed well outside its area of competence. With the SPREs, the Department of Education has managed to make itself not a part of the solution to the problems of higher education, but one of the chief problems facing higher education.

In the end, key senators and house members heeded the warnings from higher education. As a result of timely intervention from Congress and unrelenting protests from leaders of universities and colleges across the nation, the Department of Education finally abandoned the SPRE program in July of 1995. It is to be hoped that this victory over needless and unwarranted federal intrusion in higher education will not prove to be a temporary one.

The second category of bad news in higher education pertains to widespread financial distress across many types of institutions. While most state-supported institutions are in somewhat better shape this year, the years 1988-93 were very hard ones: 36 states made cuts, often sharp, in financial support to state colleges and universities during that period. In 1993, the *Chronicle of Higher Education* reported that 20 states made mid-year cuts in support of higher education.

Of course, private universities, including many of the best in the nation, have not been immune. Since 1988, serious episodes of budgetary distress have beset over a dozen private members of the American Association of Universities.

For example, Stanford’s *operating* budget, at \$461 million for 1993-94, has been cut by \$80 million since 1991. At MIT, things were so tough last year that President Charles Vest not only took steps to reduce faculty size by 5%, but actually began discussing enacting a parking

fee. These are among the most unpopular acts a president can consider on any campus.

Financial distress on American campuses has been due both to pressures on the *cost* and revenue side.

On the cost side, the crux of the problem is that higher education is a very labor intensive *service* industry. Salaries and benefits are typically 55-60% of costs at schools like Rice, Duke, Stanford, and Harvard. Being very labor intensive, it is much more difficult to increase productivity in higher education than in industry where the principal source of productivity gains has been provision of steadily greater amounts of capital per worker and ever increasing automation. And of course, the flip side of being labor intensive is that measures to cut costs appreciably will necessarily involve cuts in staff.

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It is possible that over the next 25 years resourceful use of new technology may enable universities to achieve sizable reductions in costs of teaching and research—with no loss in quality—we should not *assume* that new technology will have a significant short-term impact on productivity in academia. To be sure, universities could secure major productivity gains by the simple expedient of sharply increasing class sizes. At Rice, for example, we could double the student body, while keeping faculty size consistent. As a result, average class size would rise from 18 to 36. *Measured* productivity might double. But, this would be correctly seen as a clear decline in educational quality.

Also, on the expense side, the costs of investments critical for sustaining high educational quality have been rising rapidly. In recent years, the costs of library books and journals have consistently risen much faster than inflation. And, instrumentation and equipment costs essential for doing good science are now appallingly high. For new faculty members in chemistry, start-up costs for laboratory renovation and equipment range from not less than \$500,000 all the way up to \$1.7 million, *per* hire. Start-up costs in computer science and biology tend to be a bit lower, but are comparable. These costs *can* be avoided: by hiring not-so-good chemists and computer scientists and obsolete biologists.

And at many universities, the backlog of needed but postponed maintenance—deferred maintenance—has risen alarmingly. Costs of restoring dangerously under-maintained plant and equipment are ultimately the larger for having been long delayed. Some universities have a deferred maintenance backlog of well over \$500 million, many have backlogs of \$100 million. At the same time, virtually all research universities are operating with much higher real levels of debt than was the case two decades ago. Rare is the *private* research university that has not accumulated the maximum of \$150 million in tax-free debt outstanding. With higher debt goes higher debt burdens, of course.

University costs are also impacted by many of the same legislative, regulatory and legal factors affecting the costs of business firms. All of you know what has been happening to the costs of providing health care benefits for students and faculty. Compliance with steadily growing federal mandates in dozens of fields is expensive for universities too; and research universities, like many firms, have been hit with near-

explosive growth in litigation costs. This is true even for universities *without* medical centers. Let it be recognized too, that management in universities was often terribly lax throughout the past few decades, with little or no attention given to serious cost control programs. Indeed, by some accounts, growth in administrative staff in higher education may have been ten times as rapid as growth in faculty over the period 1975-85.

Finally, on the cost side, there has been an explosive growth in financial aid expenditures. In most private universities in recent years, financial aid has been growing at about three times the rate of inflation. At Princeton, the financial aid budget increased by 30% over the period from 1990-93. At Duke, financial aid grew at an average compound rate of growth of nearly 16% from 1984-93. At Rice, financial aid expenses grew by 13% per annum over the period 1987-93.

Reasons for the explosion in costs of financial aid are fairly clear. First, the recession of 1990-91 and the less than robust recovery since has meant that more families qualify for aid. Second, student demographics have been changing. Few students each year come from two-parent, middle income families, yet federal financial aid policy is still based on such students. This is one reason why the federal government has been progressively withdrawing aid to university students. In response, universities sought to replace the lost federal support for needy students with cost-subsidies financed by higher tuition collected from wealthier families. However, higher tuition means that more students become eligible for aid. So we have the vicious circle: the greater the shortfall in federally financed aid, the greater the increase in tuition required to replace the lost support, which then leads to greater outlays for financial aid.

This brings us to the revenue side, and to a closer examination of tuition. Throughout most of the eighties, the rate of growth in university costs, and in tuition, closely tracked the rate of growth of family income.

However since the late eighties, growth in *real* family incomes has stagnated, and both university costs and tuition have grown faster than family income. Consequently, higher education has become less affordable for many families. As a result, universities now find it essential to curtail tuition increases.

In any case, future growth in tuition income is likely to be quite slow. And unfortunately, other major sources of university revenue also remain under severe pressure, including federal funding of research. This was long a significant source of income for research universities, public and private. To illustrate, federal funding of university research increased—inflation-adjusted dollars—by 13 fold from 1955-90. Today however, growth in this source of funding for universities has come to a virtual halt—for both bad and good reasons.

The only other main sources of revenues are endowment income, and secondarily, annual gifts. Growth in endowment incomes has recently been down sharply from the 1980's, for most public and private schools. Moreover, *public* higher education institutions are becoming ever more aggressive in fund-raising. Today, in contrast to 15 years ago, public universities are competing strongly for many of the same

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endowment dollars as privates, and growth in annual giving has been anemic in most schools.

These financial problems are occurring at a time of extremely rapid—and portentous—changes in the external environment. As a nation, we have been accustomed to cope with continuous change, in science, the economy, in our culture. Now however, university graduates confront a world of rapid, discontinuous changes. There is a world of much greater economic inter-dependence, major geopolitical realignments, demographics shifts, and revolution in electronics and informational technology, molecular science and biomedicine, a world in which biology has been transformed from the passive study of life to a discipline that can *alter* life itself. This is also a world in which a college degree—even from a highly selective school—is no longer a good guarantee of challenging, remunerative employment.

What can we make of all this? Higher education has faced financial difficulties before, especially during the depression, and has surmounted them. However, the current financial difficulty facing higher education is of an order of magnitude more serious than prior episodes. To recapitulate, higher education faces serious pressures on the cost side, arising partly from our labor intensity, from rising costs of library books and instrumentation, growing backlogs of deferred maintenance, (in many schools) sharply increased debt burdens and explosive growth in financial aid. On the revenue side, growth in tuition income is to be sharply constrained, while federal support for university research has been diminishing and is likely to further decline. At the same time, competition in higher education fund-raising has become more intense than ever before, while job prospects for bachelors' and even some Ph.D. fields are more uncertain than at any time in the post-war period.

Many of us can remember times when universities had to deal with one or two of these problems at once, but, can any of us recall a period in which higher education had to deal with *all* of these problems at the same time? That is exactly what we face in the present and near future.

Under such circumstances, the last thing we need is another set of problems emanating from our own government, from a Department of Education that is supposed to *promote* education *excellence*. Instead, we have a Department that, in the name of curbing abuse of student loans from certain institutions, seems determined to find new ways to harass sound institutions, saddle them with needless paperwork, and perhaps even deliver them to the SPREs, overseen at the state level, by the very people who have already managed to take most of the substance out of public primary and secondary education. If the Department of Education is intent upon hobbling higher education as well, it could do no better than persist in its misguided efforts to promote the SPREs at a time when colleges and universities are trying to cope, with mixed success, with multiple vexations. ♦

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