

# Pressures on American Research Universities

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The APS membership is represented by many faculty in research universities. Research universities are both the backbone of the education of future scientist for the country and the core of current basic research. So, APS members are probably well aware of the increasing dilemma in which higher education finds itself — caught between the skepticism of the public on the one hand and uncontrollable expenses on the other.

In the press and legislative bodies, the following criticisms are endemic. Universities are seen as out of control; unable to act; lacking leadership and direction; demonstrating poor business practice; and overcharging students despite rich endowments.

Faculty are seen as avaricious — not in the classroom and not working very hard (e.g., Prof Scam).

Everywhere but in the United States, the American university system is considered the best in the world. I have read over 100 domestically authored articles unfavorably comparing United States K- 12 education with other countries. I have yet to see one article positively compare the quality of American universities to other countries.

Changes in federal regulations have made life more complicated for universities. It has become very expensive to deal with changes in regulations regarding institutional safety (e.g., radioactive waste), accounting of indirect costs (Circular A21), animal care, and many other areas. A university can spend several million dollars a year supporting a bureaucracy to deal with regulatory change, while being accused by the government of spending too much on non-teaching activities.

The long partnership between the federal government and universities to promote basic research and educate future generation of scientists is threatened. The true costs of doing research are not being reimbursed, and indirect cost recovery is being further reduced, often without any rational basis. Instead of acknowledging the special role of universities in basic research and graduate education, the federal government treats universities less well than independent research institutes, not only in terms of indirect cost recovery but direct research time as well. No research institute would contribute free time to a project. Yet the cost of a university doing so can exceed its total indirect costs recovered.

American universities have a myriad of objective problems which are not well understood. For example, we are still bedeviled by deferred maintenance that dates back to short-term response to the high inflation times of the 1970s. In my experience, the huge estimates one sees in the press regarding deferred maintenance in some of our best universities are very likely to be accurate and will continue to rise if unattended.

Another objective problem relates to price indices. I have seen the Consumer Price Index (CPI) used dozen of times to judge tuition increases, but never the Higher Education Price Index (HEPI). There is

no specifiable relationship between the CPI and HEPI (although the latter is usually higher), but in 1984-90, the HEPI rose 60% more than the CPI.

Further, the HEPI is representative of all colleges and universities and underestimates the costs of a major university. Major research universities invest more in technology — in the classroom and in research — and replace it more quickly. They are also more dependent on a base of cutting-edge scientific journal and books, the price of which are going up much faster than, say, the periodicals index. Further, the HEPI does not take into account increasing demands of the federal government on grants accounting, safety in research space, and the sharing of research costs.

One important way in which universities as organizations are different from big business is that their personnel costs represent a much larger proportion of total costs. Thus, although rapidly increasing costs of health care and Medicare and raised salary ceilings of social security affect all businesses, they have a disproportionate financial impact on universities.

There are no simple answers in this complicated situation. Clearly, we must get on top of our financial situation, and convince the public that we are. American universities must become more sophisticated in business principles of management. However, we certainly must avoid perhaps the major problem of American business today — namely, the tendency to emphasize short-term gain at the expense of long-term stability. The problem with an emphasis on management is that it typically requires a greater centralization of authority. Already, polls indicate that faculty tend to regard their university administration as authoritarian, and greater centralization is unlikely to be well appreciated.

But, these business issues are only part of the challenge, because if American universities are actually run principally as corporations, they will cease to be the best in the world. The defining quality of American universities is faculty independence. The clash of ideas and values provides a haven for the outspoken and those ahead of their times, and a sense of intellectual excitement that, in my opinion, distinguishes the very best universities from all others.

To be effective, American universities must adequately represent publicly two quite different cultures: the business/management perspective, which tends to be what is emphasized by the public; and the creative/scholarly perspective, which is the one emphasized by the faculty. The creative/scholarly perspective is typically represented by individual entrepreneurs within the university, leading Cohen and March (1974) to refer to the American university as “organized anarchy,” and Karl Weick (1985) to describe universities as representing “loosely coupled nodes.” The special quality of a research university comes through its scholarly effort, and the more deeply ingrained and special that effort is, the more difficult it is to run a university as if it were a business.

The emerging great universities in the coming decades will be those which can develop conceptual umbrellas under which seemingly contradictory cultures can flourish — those of the business and creative worlds. While we ask a skeptical public to sacrifice on our behalf, we also must sacrifice. The overriding issue should be to maintain the American university system as what it has been for decades — the best in the world.

References

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