A Proposed Study of The Changing Nature of The American Research University Ecosystem

The highly competitive nature of higher education in America, where universities compete for the best faculty members, the best students, resources from public and private sources, athletic supremacy, and reputation, has created an environment that demands excellence. However, while competition within the higher education marketplace can drive quality, if not always efficiency, it has an important downside. When serious imbalances arise in available funding, policy restrictions, and political constraints, such competition can deteriorate into a damaging relationship that threatens not only institutional quality and capacity but more seriously the national interest. Today an intensely Darwinian, 'winner-take-all' ecosystem is evolving in which the strongest and wealthiest research universities have become aggressive predators, raiding the best faculty and students from less generously supported and politically or policy constrained institutions while manipulating federal policies (e.g., research funding, student financial aid, tax benefits) to sustain a system in which the rich get richer and the poor get devoured.

This ruthless competition poses a particularly serious challenge to the nation's leading public research universities. These flagship institutions now find themselves caught between the rock of declining state support and the hard-place of the predatory practices of rich private universities. Aging populations are not likely to give higher education a priority for state tax dollars for perhaps a generation or longer. Hence, even as states are depending more on their public universities–expanding access to underserved communities, achieving world-class performance in research and graduate studies key to regional economic competitiveness–state appropriations are declining while demands for higher efficiency and accountability are intensifying.

In sharp contrast, due both to booming financial markets and favorable federal financial aid and tax policies, many private universities have managed to build endowments so large (at least on a per student basis) that they have become essentially independent of the traditional revenue streams supporting higher education, e.g., student tuition, R&D grants, even private giving. This creates a serious competitive imbalance in the marketplace for talented faculty, outstanding students, and public and private resources, since the wealth gap between the rich privates and flagship publics is growing ever larger. This is aggravated by the political constraints on public universities

that not only limit their flexibility and agility, but also hinder their capacity to compete (e.g., constraints on tuition, affirmative action, technology transfer, and globalization).

The plight of the public research university is not only a serious challenge to the states but as well as to the nation, since these institutions represent the backbone of advanced education and research, producing most of the scientists, engineers, doctors, lawyers, and other knowledge professionals, conducting most of the research, and performing most of the public service sought by states. Erosion in the quality and capacity of leading public research universities would also harm private higher education in the long run because of the strong and beneficial interdependence among these institutions. It would be a national disaster if the public research university were to deteriorate to the point in which research and advanced education of world-class quality could only occur in the 20 to 30 wealthiest private universities.

To understand these challenges and determine how best to respond at the national, state, and institutional level, several organizations are in the early planning stages of major projects concerning "the changing U.S. research university ecosystem":

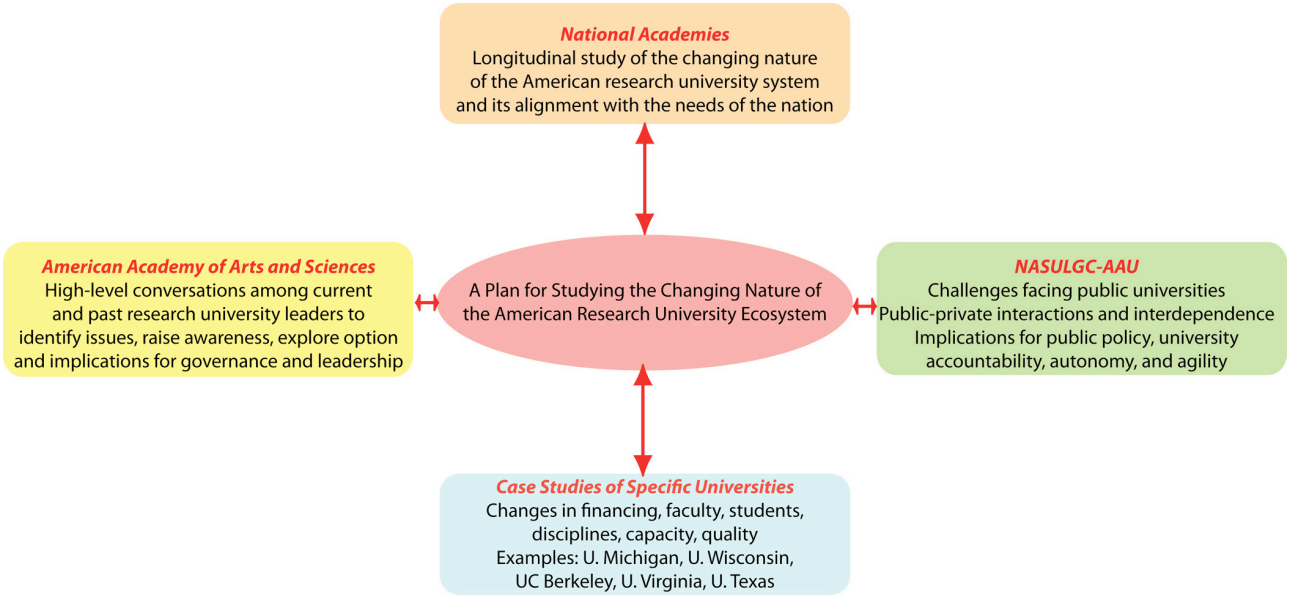
- National Academies: The Global and Policy Division of the National Research Council is exploring the possibility of launching a major study on "Sustaining the Competitive Position of U.S. Research Universities". (MRC Greenwood, Rich Bissell, and Peter Henderson)

- The National Association of State Universities and Land Grant Colleges (NASULGC) is in the final stages of completing a major longitudinal study of the shifting financial support of public research universities (e.g., eroding state support, increasing student tuition, etc.) and is clearly interested (Peter McPherson). There is also interest on the part of the Association of American Universities (Bob Berdahl).

- The American Academy of Arts and Sciences is unusually well positioned to convene a series of meetings of both current and former university leaders concerning the competition and interdependence between public and private research universities aimed at exploring issues, raising awareness, and identifying options.

- Several public universities are in the process of launching internal studies to understand the implications of disappearing state support, including both

longitudinal studies of their changing character (financial, programmatic, demographic, capacity, and quality) and possible doomsday scenarios for privatization.



More detailed descriptions of these efforts are provided below:

National Academies (National Research Council)

Premise: The health and competitiveness of research universities are critical to the national interests. The sufficiency and optimal application of resources across fields by these institutions to sustain a healthy cadre of outstanding researchers, a robust research infrastructure, and the ability to translate research discoveries into useful applications are critical to the research enterprise and the global position of the United States and the well-being of its citizens.

Issues of Concern:

1. The changing nature of the interdependence of various elements of the American research university enterprise, both through competition and cooperation.

2. The degree to which shifting state and federal policies (e.g., tax policy, financial aid policies, tuition constraints, sponsored research policies, affirmative action constraints) differentially affect various elements of the U.S. research university enterprise.

3. The anticipated erosion of state support of public research universities over the next several decades as aging populations give highest priority for tax dollars to retirement security, health care, and tax relief rather than education.

4. The impact of the increasing demands for disclosure and accountability of instructional outcomes upon the research mission of universities.

5. The implications of the changing needs, missions, and environment of American higher education for the leadership and governance of research universities.

6. The role that industry, private foundations, and donors play in funding and determining the direction of research.

7. The standing of American research universities relative to those in both the developed and developing world.

An understanding of the research enterprise in the United States, including the roles of the federal government, state governments, research universities, industry, and others is important for addressing the central issues in this project. This includes knowledge of the science that is being carried out and its funding and organization. An understanding of the political, economic, and organizational dimensions of the research enterprise is critical to discerning both the current situation and policy options going forward. The target audiences for the National Academy project are: (1) federal policymakers in Congress and the Administration, (2) state policymakers, (3) university administrators, (4) foundations, and (5) firms that partner or wish to partner with academic researchers.

The National Academies have both the unique capability and public visibility to address issues central to the health and competitiveness of the research enterprise. Congress has turned to the National Academies to address these issues on many occasions, including those that led to such seminal reports as *Science, Technology and the*

Federal Government: National Goals for a New Era (1993) and *Rising Above the Gathering Storm* (2007) to which this activity is a natural follow-on.

Possible Questions for Investigation:

1. What is the impact of America's public research universities on graduate and professional education and research? How does this compare to the impact of American private research universities and leading research universities throughout the world on both an absolute and relative basis? How do US universities in general stack up against those of other countries? Are any of the national rankings accurate or meaningful enough to be a basis for policy decisions?

2. How do public research universities compare with private research universities in the following areas?:

i) total support per student or faculty member (including faculty salaries)
ii) public subsidy per student or faculty member (including tax "expenditures")
iii) private philanthropy per student or faculty member
iv) flexibility and agility (tuition, affirmative action, etc.)
v) governance
vi) commitment to public engagement (regional, national, global)

3. How have these characteristics changed over the past two decades, and how are they likely to change over the next decade? Is there direct evidence of a shifting balance among public and private research universities in areas such as faculty hiring (including raids), student quality, student demographics, and research awards? Has the erosion of state support for the public research universities undercut the core of the institutions such that research capacity, however measured, has been compromised seriously in that sector?

4. Thirty years ago at a similar time of nervousness about research and graduate education, one concern was the allocation of resources among the top vs. the middle and lower-ranked universities, with the fear that the growth was

occurring in those of lower rank, while higher ranked programs were cutting back. What is happening in that regard today?

5. Are the moves toward privatization of the publics that are politically viable, (e.g. the Virginia restructuring plan) sufficient to keep the publics in the game or will such changes be too little, too late?

6. Has the return to a doctoral degree in the sciences and engineering declined so much relative to other professional degrees that incentives to enroll are sharply diminished relative to earlier times?

7. What have been the recent patterns of support for academic research by industry and private foundations? How have these patterns influenced research by institution, by field or both? What have been the positive outcomes and negative consequences of these patterns on the direction of research and the competitive position of the U.S. within specific fields?

NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND GRANT COLLEGES

The premise of the NASULGC effort is that an affordability challenge for public higher education looms in the years ahead. Public higher education and state and federal governments must deal with this challenge by wise, thoughtful and decisive leadership. Although public higher education has done a good job managing its resources, very large challenges are ahead. For the past two decades inflation adjusted expenditures per FTE student by U.S. public higher education have been nearly flat while state appropriations have not kept up with the increase in student enrollment. Accordingly, tuition has substantially increased as a percentage of the total cost per student (revenue from tuition plus state appropriations). In short, public higher education has lived with about constant revenues while being forced to deal with increased costs of technology, employee health care, student services, etc.

This situation is likely to become even more serious as aging populations shift priorities for state tax dollars away from investment in education to expenditures on retirement, health care, security, and tax relief. Yet if the current decade-long trajectory of tuition and family incomes continues, lack of affordability could greatly limit both student choice and weaken institutions. The body politic in the years ahead will likely

intervene before the affordability challenge places the possibility of earning a college degree beyond a significant proportion of the public. That political intervention could take the form of price controls, faculty workload mandates, uniform limitation of the maximum credit hours needed to earn a degree, forced reduction of the attention given to research, or some yet unimagined but perhaps even more potentially harmful intervention. The widely reported status of U.S. higher education as "best in the world" could be jeopardized by actions that threaten our universities' independence and the diversity of their highly successful approaches to delivering higher education. While such actions are directed at reducing "out-of-control" costs, they are misdirected and will not produce the desired effect.

The NASULGC effort is exploring a series of possible options:

1. Perhaps individual universities can find additional ways to reduce costs that permit them to reduce tuition increases. We certainly recognize that most public universities have reduced certain costs. They have done so with great effort and rarely received much public credit for doing so. Yet more may be possible.

2. Perhaps ongoing trials and research into student learning and pedagogical design will discover less costly methods to deliver quality instruction than the traditional lecture method.

3. Perhaps we can better articulate the "public good" value derived from higher education and persuade state and the federal governments to return the per student subsidies they provided two decades ago.

4. Perhaps individual universities can provide evidence that will persuade individual students and their families that higher tuition is worth the additional cost and thereby create greater willingness to pay an even higher proportion of family income to obtain a degree.

5. Perhaps over time we can build substantially greater endowments and use those additional funds in some part to help attenuate the affordability for the financially most vulnerable portions of the student body. (However, the sums required are so much greater than what is now available that it is highly unlikely that public universities can obtain enough additional funds in the near or

medium term to moderate tuition increases for a large number of students, much less to reduce tuition.)

6. Perhaps state governments, university boards and universities can develop compacts that will establish acceptable affordability targets and tuition policies, cost policies, financial aid and funding levels that will permit those targets to be met.

7. Perhaps we can persuade governments at all levels to significantly reduce the regulatory burden on universities and to pass the cost savings along to students and families.

AMERICAN ACADEMY OF ARTS AND SCIENCES

Part of the challenge is to encourage the leaders of higher education to reaffirm the importance to the nation of a balanced mix of world-class public and private research universities, to recognize the strong interdependence of these institutions and the dangers of predatory behavior that could damage not only individual institutions but the entire system, and to explore options that might address these concerns. The American Academy of Arts and Sciences is uniquely suited for hosting such conversations, drawing together university leaders and others from the public and private sector in a series of small focus groups (roughly a dozen participants each) to consider these issues. While the involvement of current research university leaders in such discussions is essential, so too are separate discussions involving former leaders whose detachment from the current responsibilities (and mindset) of competing in the higher education marketplace might lead to more candor and perhaps wisdom.

The American Academy would host such daylong discussions, provide staff support (and perhaps facilitators), and provide summaries that could be used to develop a final report for public distribution. Examples of participants might include:

Past Leaders: Rosovsky, Bok, Rudenstine, Shapiro, Rhodes, Kennedy, Rupp, Vest, Ward, Carnesale, Duderstadt, Dynes

Current Leaders: Faust, Levin, Hennessy, Simmons, Tilghman, Coleman, Birgenau, Wiley, Powers, Moeser, Boren

Higher Education Scholars: Ehrenberg, Chiat, Breneman, Zemsky, Massey, Miller, Callen, Alexander, Kane, Wegner

CASE STUDIES OF THE CHANGES OCCURRING IN PUBLIC RESEARCH UNIVERSITIES

Key in these efforts are detailed studies of how specific public research universities have changed over the past several decades, in funding sources, faculty distribution (e.g., tenure-track vs. part-time, academic vs. professional disciplines, age, diversity), student data (enrollments, major distributions, socioeconomic distribution).

To develop a template for such efforts, the University of Michigan intends to launch a research study in its Gerald R. Ford School of Public Policy to understand better the changing nature of public research universities (e.g., financing, priorities, competitiveness, faculty, students, management, etc.) and the options that might be considered to address the erosion of state support over the next several decades. More specifically:

1. The seminar will examine in detail the changing nature of several major public research universities over the past several decades (including the Universities of Michigan, Wisconsin, Illinois, Texas, California and perhaps others, where we have particularly strong relationships with leadership).

2. Through this analysis and comparison, it will develop a template to serve for a broader study of the changing nature of public research universities within the research university ecosystem (perhaps conducted eventually by the National Academies or other national groups).

3. The seminar intends to identify the promise and pitfalls of various paths to the future (e.g., the implications of "privatization" for public universities, the possible emergence of "privately-financed but publicly-committed" universities similar to Cornell, actions that might be considered at the federal level such as a "21st century land-grant act", policies that might be developed by various national higher education organizations to protect the capacity and quality of public research universities during a particularly difficult period, etc.).