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Public Universities and Decision Frameworks in the Wake of Financial Uncertainty in the US: A Look at Internal and External Environments and Strategic Options

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Abstract

The authors examine factors contributing to the current fiscal uncertainty in U.S. higher education, strategies that are being used to address this issue, and related decision making lenses of both economic and political theory. Ongoing uncertainties regarding the financing of public higher education suggests that higher education institutions should continue to look internally and externally for sustainable solutions and greater resource diversification, and rather than choosing between economic and political frameworks, that "strategic" decisionmaking be employed.

Keywords: *Public universities, financing of higher education, financial uncertainty, financial environments*

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Introduction

Since the 1980s, U.S. public institutions of higher education have experienced an unsteady and stressful fiscal environment. Over the last decade (between 1998 and 2008) state spending on public higher education (in constant dollars), much like during the previous decade, did not keep pace with inflation, and the cost of higher education continues to outstrip the consumer price index. Worse yet, while inflation continued to increase and in many states higher education has not received new funding, enrollments also continued to grow. For example, between 2001 and 2004, "the growth in enrollments (unmatched by increased appropriations) produced a 7.3 percent decrease in educational appropriations per student" (State Higher Education Executive Officers [SHEEO], 2004, p. 23). Thus, fewer dollars were received for more students. At the same time, many higher education institutions today are still attempting to recover from earlier fiscal decreases and ongoing enrollment growth. Throughout this time, states have relied heavily on tuition increases to make up the differences.

U.S. higher education decision-makers must not only become more adept at discerning and determining the nature of the economy they face, but also in ensuring the appropriate response in terms of strategies identified and subsequently implemented to address current and seemingly ongoing fiscal uncertainty.

Factors Contributing to Fiscal Uncertainty in Public Higher Education

The fiscal environment of public higher education in the U.S., like in many other developed countries is largely dictated by its economy, the cost of goods and services, and student enrollment trends (See Tables 1-3). More often than not, public colleges and universities are not able to control these factors that impinge upon their existence. Examples include not only inflation specifically, but also the general cost of doing business (salaries, benefits, goods and services, globalization, competition, the post 9-11 era and its impact on the enrollment of international students).

Impact of the economy and inflation. Between 1998 and 2008 the cost of goods and services changed by 0.1% (Commonfund Institute, 2008). The greatest change in the cost of goods and services, however, occurred immediately after 9-11 and reached a high point in 2005 with a percent change of the cost of goods and services of 5.0%. Between 2002 and 2008,

administrative salaries increased by almost 2%, rising as high as 8.2% in 2003, while faculty salaries over this period remained somewhat constant in terms of percent change. Further, immediately following 9-11, enrollments among international students in U.S. institutions of higher education decreased, impacting economies of scale and thus increasing the cost per student.

Impact of student enrollment trends. Interestingly, although state spending on public higher education was lower in inflation-adjusted (constant) dollars between 1998 and 2008, state governments increased appropriations for higher education during this same time period by $8.2 billion in constant dollars representing a 12% increase. Further, net tuition increased even more, that is, by $14 billion, representing a 49.5% increase. But, full time enrollment also increased during this 10-year period by 24.9% (SHEEO, 2008) resulting in little funding capacity available to respond to unusual challenges or opportunities.

Table 1. *The Economy and Inflation: Cost of Goods and Services*

Cost Component	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Goods & Services	3.5%	2.4%	4.1%	4.9%	4.1%	2.9%	4.6%	3.6%	5.0%	3.4%	3.6%

Source: Commonfund Institute – 2008 HEPI Update. HEPI, Research Associates of Washington and Commonfund Institute, July-June 30 data. Yearly % change.

Table 2. *The Economy and Inflation: Salaries and Benefits*

HEPI Component	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Administrative Salaries	3.1%	8.2%	3.0%	4.1%	5.0%	4.0%	5.0%
Faculty Salaries	3.8%	3.0%	2.1%	2.8%	3.1%	3.8%	3.8%

Source: Commonfund Institute – 2008 HEPI Update. Annual percent change in administrative and faculty salaries, and benefits, FY 2002-2008.

Table 3. *Cost Per Full-Time Student Equivalent*

	FY 1998	FY 2008
Cost Per Full-Time Student Equivalent	$8,383,736	$10,474,401

Source: SHEEO SHEF Early Release FY 2008.

Consequently, rather than being totally dependent on state appropriations from appropriations cycle to appropriations cycle, by the middle of the first decade of the new century, "the era of robust public funding for higher education was over" (Ward & Aubrey, 2005, p. 2).

Impact of higher education's discretionary nature. American higher education experienced one of its steepest declines in federal funding in 2004 in comparison to earlier years (see Figure 1). Much of this decline can be explained in terms of higher education's discretionary nature with regard to government funding in comparison to non-discretionary obligations such as K-12 education, corrections, and health care where there is much less latitude, as well as perhaps unintended government incentive. For example, Medicaid serves as a prime example; that is, when a state reduces state spending on Medicaid, it loses federal funds. In contrast, when a state reduces its subsidies to higher education and raises its tuition, it may actually receive additional federal funds (at least indirectly) in the form of greater student eligibility for financial aid. More specifically, when a state reduces its subsidies to higher education and raises its tuition, the residents of the state may actually receive additional federal funds in the form of greater eligibility for federal financial aid (Kane & Orzag, 2003).

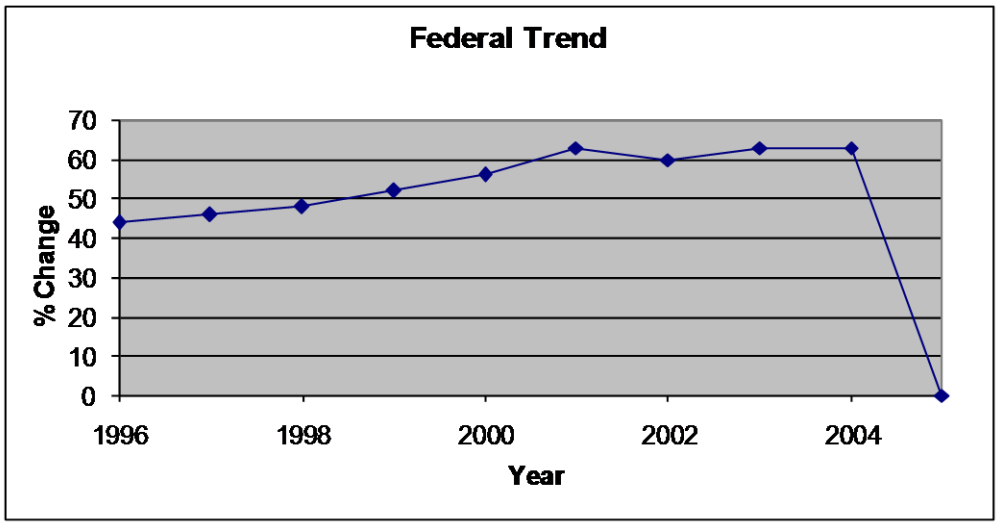

Figure 1. Percent change in federal funds, 1996-2004 (Source: Kane & Orzag, 2004)

In addition, although the current U.S. Obama administration's stimulus package helps, state funding for higher education has once again slowed due to slowed revenue growth as a result of difficulty collecting tax revenues. This slowed revenue growth is anticipated to continue well beyond the end of the decade (Center for the Study of Educational Policy, 2008; Jones, 2006). As such, many public colleges and universities are being forced to come up with alternative sources of funding.

Higher Education's Reaction and Strategies

American Higher Education institutions have reacted to the current financial uncertainty using a variety of strategies. Specific strategies adopted often depend on the perceived length of the fiscal shortfall, the degree of flexibility decision makers have for making fiscal decisions, and the diversity of the institution's revenue sources (Brinkman, 1991). Public U.S. higher education institutions have depended more on tuition than other alternative revenue sources to cover increasing costs. But, increased dependence on tuition revenue, in and of itself, also brings a certain amount of financial stress, given the unknown level at which students will seek a less expensive alternative. Of late, endowments are also beginning to be considered much more extensively as a source of operating funds if not directly, indirectly, through the provision of funds for student scholarships and faculty salaries (Johnstone, 2004).

According to Etzioni (1967), however, within such an uncertain fiscal environment, higher education decision makers will also need to take both a long term and short term view. Etizoni goes on to note that these two views, considered collectively, will enable decision makers to better grasp the nature of the fiscal problem and subsequently pose more appropriate options to address it. This means…

> looking at internal processes, patterns of organizational spending behavior and structure for ways to reduce expenditures and increase flexibility, as well as looking at external environments and conducting environmental scans to begin the problem assessment process. (p. 323)

Relatedly, a number of fundamental questions must be asked and answered; for example, "What is the real problem?" "Is the fiscal problem relatively isolated or is it one that is connected to other problems?" "Where does the institution want to be in 15-25 years from now and how can this opportunity be used to get there?" Then, there is the seminal question of "Who benefits? And subsequently, "Who should pay"? These last two questions, in particular, pose debate from both economic and political perspectives.

How the problem is defined has a very powerful influence on the strategies, actions, and interventions that potentially will be most effective in terms of narrowing the gap between what is and what ought to be funded. Is the problem associated with the nature of the tax base at the state level in light of a changing economy? Or, is the problem a political and policy choice between spending on higher education or K-12 education, spending on welfare, the rising cost of crime, or Medicaid? How do we know where the problem begins and ends? Is it an interconnected problem? Interconnected problems are not only difficult to define; they also do not lend themselves easily to technical remedies or quick fixes. Fiscal problems are generally more interconnected than not (Fields, 2005). Consider the following…

> Although a recent National Conference of State Legislatures (NCSL) report noted that most states collected more tax dollars than originally expected in the first eight months of fiscal 2005—perhaps because of budget officials' conservative fiscal projections for that year following previous years of economic downturn—states faced rising costs for Medicaid and other health care programs, in addition to demands from K-12, prisons, state parks, and other sectors. Exacerbating the problem was the reality that states not only had to deal with their own budget problems, but also the budget deficit at the federal level. (p. 1)

Following are some strategies that many higher education institutions (HEIs) have taken or may take in addressing today's fiscal realities and uncertainties. These various options are presented in light of their ease of implementation and perceived institutional impact.

Increase tuition. Going back as far as the early 1980s, states have relied heavily on tuition increases to make up the differences for shortfalls in higher education funding. Tuition, which can often be increased quickly and have an immediate impact, increased steadily as a proportion of total educational revenue from approximately 30.6% in 1998 to more that 36% in 2008 (SHEEO, 2008). The rate of growth in net tuition revenue was particularly steep during periods of enrollment growth and when state and local support fell short of inflation, typical during the economic recessions of 1981, 1991, 2001, and 2007. There was an outcry on the part of many lawmakers as well as citizens, however, regarding tuition increases, and many states established tuition caps on higher education institutions. As a result, the rate of increase in net tuition slowed somewhat between 2007 (4.9%) and 2008 (3.7%). But net tuition did not decline as a percentage of total educational revenues (SHEEO, 2007, 2008).

Reduce/suspend faculty/administrative travel to conferences. Another option that can be implemented quickly and yield an immediate impact is to suspend faculty and/or administrative conference travel. This option provides for the release of potential encumbrances that can be channeled into other resource needs areas. This option, however, presents immediate gains to the institution, but losses to faculty and administrative personnel. The consequences of this decision may also carry beyond the current situation, depending upon whether this option is chosen as a one-time strategy or not. It is also noted that not all travel, particularly faculty travel, is funded by the institution, but rather may be funded by an external grant or foundation funding. Also, if suspension or reduction of faculty travel to conferences is not a one time strategy, then decision makers need to consider, minimally, implications for professional development and for faculty in terms of tenure and promotion. Should such a decision signal a changing institutional posture regarding professional development, ripple effects could also occur affecting the number and quality of future hires within the institution. There can also be ramifications regarding what the institution regards as valuable as "a problem's definition has far less to do with data and scientific analysis than with values, traditions, and internalized mental models" (Luke, 1998, p. 11).

Reviewing course scheduling options and patterns. Yet another approach that can be implemented easily and bring timely results is assessing whether course scheduling can be achieved more efficiently. That is, whether (a) certain time slots are underutilized, (b) sections of course enrollments can be increased or reduced, (c) programs are being adequately staffed, (d) faculty utilization is at its peak, (e) optimal scheduling structures exists (e.g., alternative time slots, weekend/accelerative programming cross-listing of courses) that increase efficiency, (f) if modifications are needed in terms of delivery mechanisms used (e.g., increased use of technology for delivery of instruction), and (g) if student needs are being met (Grizzle & Pettijohn, 2002). This is also one area where decision makers can not only be most creative but that is also most under their control. The impacts can be both immediate and long term, as students begin to increase their enrollment in accelerated-scheduled courses. Over time, these incremental changes can significantly modify the structure of and FTEs generated by a given program, or the institution as a whole.

Suspending new hires. Higher education institutions can review and alter course scheduling a great deal, however, without really reducing costs. Real savings are not realized until personnel costs are reduced. A suspension of new hires abates financial pressure with immediate results. Funds that are associated with new hires beyond salary and benefits (new computers, faculty development, supplies) become unencumbered as well. A related strategy is to reduce personnel through attrition; particularly the number of senior level administrators. Unfortunately, there can also be longer-term consequences to this category of options, especially on the academic side of the higher education enterprise. Accreditation concerns are one example, that is, should there be no hires over a period of years and program growth continues, or if an academic unit is subject to an independent accrediting process, that accreditation could be jeopardized for an excessive faculty to student ratio. Thus, repeated use of this option could be harmful in its culminating effects.

Restructuring and re-engineering. Most institutions have considered the redesign of administrative processes, but academic processes are another matter. Only recently has the academic (faculty) culture been willing to consider shifting its perspective from resource inputs to outputs or outcomes in terms of student performance, relative to how students are taught, how they learn, how faculty work, and how research is conducted.

Restructuring and reengineering both administrative processes (using technology to streamline financial operations, student services, and research administration) and academic processes (teaching and learning), however, can be a formidable task as it often can involve some of the most fundamental activities of the institution (Chaboter & Knutel, 1997).

Innovation through substitution. This strategy involves eliminating something old to do something new. Eliminating, reducing, or otherwise changing a current activity to make budgetary room for the new, however, is still a hard sell on most college campuses. Only in recent years has the possibility of reallocating resources away from ongoing activities (obsolete programs, centers, and institutes that do not carry their weight) to fund new endeavors been seriously considered (Duderstadt & Womack, 2003). It must also be recognized that in today's fiscal environment, one cannot always start by allocating existing resources to sustain ongoing activities, nor be all things to all people, and then depend on additional resources to undertake a new or innovative activity.

Increasing or modifying the use of technology represents an innovation by which institutions can realize cost savings and efficiency. A reduction of the use of paper by developing electronic means to accomplish the same task is a simple way to save money. Pursuing such an approach requires an examination of institutional processes and can reveal areas in which processes are cumbersome. Examples include the management of personnel data, reporting systems, and enrollment; increasing learning options, access, and enrollments using online courseware; and providing access to online journals, books, and databases through libraries. These strategies presume that there is a sufficient resource base available to facilitate possible increasing technology costs. One way many higher education institutions offset such costs is to assess students a separate technology fee. The revenue gained from such a fee is then distributed to the academic units, central administration, and/or the technology unit.

Entrepreneurship. A strategy closely related to the idea of innovation through substitution is entrepreneurship. The most vibrant universities of the future will be institutions with faculties who are directly engaged by the academy in the economics of education or financing public higher education (Duderstadt & Womack, 2003). Along these lines, many leaders of public universities are trying to break the cycle and reduce their dependence on state appropriations by developing alternative sources of funding through entrepreneurship. A more

diverse portfolio is seen as not only essential to building and sustaining the quality of the institution, but also as essential to providing the flexibility to ride out the inevitable downturns in state support (Layzell, 1992) or legislative politics.

Differential tuition. Differential tuition represents a recent alternative to across-the-board tuition increases. In some instances, it is assessed above the overall tuition rate increase. Using this alternative, programs that are more expensive to maintain demand more tuition (e.g., Business and Engineering programs). As opposed to the general tuition paid by students, revenues from differential tuition programs remain within the department or college in which the program is housed (Ehrenberg, 2007; Glater, 2007).

A related option might be tuition incentives for students who do not take classes during peak hours (i.e., those taking classes at night, during the early morning, and on Fridays). Other related options include charging higher tuition to students taking more than the normal number of semester hours in one semester (The Daily Iowan, 2003).

Long Term Versus Short Term Impact

Interestingly, with the exception of increasing tuition (IT), there appears to be an inverse relationship relative to ease of implementation as well as fiscal impact of strategies deemed immediate versus long term. That is, while suspending institutionally funded travel, reviewing course scheduling options and patterns, and suspending new hires are often easy to implement, they also tend to have less fiscal impact than restructuring and reengineering, innovation through substitution, entrepreneurship, and differential tuitions. Contrarily, restructuring and reengineering and innovation through substitution and entrepreneurship represent more long term solutions and tend to have more significant fiscal impacts.

Theoretical Perspectives and Fiscal Decision Making

Fiscal decision making is bound by both economic theory and political theory. Historically, economists have used rationales like economic human capital theory in conducting higher education finance policy research. More recently the former, however, were somewhat dismantaled in favor of economics of the public sector, including newer rationales such as "equity" and the theory of justice, or "right to an education". Today, the pendulum in the U.S. appears to be swinging back towards the economics of human capital theory and the individual

investment in education as a commodity. In prior generations, economies of scale were also, albeit elusively, used by economist in debates involving the financing of higher education. But, even today, it can be argued that economies of scale remain elusive, particularly as new technologies continue to emerge. In terms of political theory, St. John (2004) notes that…

> Given the political nature of public policy, it is crucial to use political theory in the reformulation of financial strategies, especially theory that deals with justice principles that underlie Western democracies. (p. 238)

Thus, there are liberal and conservative perspectives among policy makers in the U.S. Liberals view education as a right, while conservatives view it as a commodity. Decision making, like policy making, is a political process. And policy decisions made are impacted by who is in power.

Rather than chosing between economic theory or political theory, we suggest that "strategic" decision making be employed. Stategic decision making or "strategic analysis" is necessary as different contexts shape the choices of each college or university. The idea here is that there is no one best approach to decision making about diversifying revenue streams. Rather, a number of theoretical frameworks that can inform decision making relative to various strategic options should be considered on the part of U.S. higher education leaders and decision makers. Examples include mission and culture (Hearn, 2003), cost effectiveness (Hearn, 2003; Katz, 2002) and efficiency, social justice and equity (St. John, 2004) and implementation analysis ((Davies, 2001; Geiger, 2002; and Kirp & Roberts, 2002).

Hearn (2003) notes "any new revenue-seeking initiative should be congruent with the existing or desired institutional mission and culture" (p. 19). Further, the ultimate goal of any revenue-diversification effort should not be simply to generate new revenues, but to generate new net returns (Hearn, 2003; Katz, 2002). According to St. John (2004), the efficiency aspect of higher eeucation finance rest with the question of, "are tax dollars invested in ways that optimize [higher/tertiary] education attainment and economic returns from the taxpayer investment (p.244). The concept of social justice has to do with the nature of the basic right for an education; in this case, higher (tertiary) education. Along these lines, the question must be asked, explains St. John (2004), do selected strategic options improve the changes students will enroll and graduate from college relative to what is being done. St. John goes on to note that the

"equity" aspects of higher education rest with the question of does the combination of prices and aid provide ample opportunity for low-income students who are prepared to enroll in college.

Strategic Decision Making

Thus, although the goals of the university may be immediate (reducing the stress of fiscal uncertainty), the implications of the decisions made in terms of the approaches or options selected, must be considered. Such strategic decision making represents consideration of fundamental policy questions or critical challenges relative to the higher education institution's mandates, mission and values, product or service level and mix, clients, users or payers, cost, financing, structure, processes or management (Bryson, 2004, p. 153). Higher education decision-makers must not only be adept at discerning and determining the nature of the budgetary issues they face, but also in ensuring the appropriate response in terms of strategies identified and subsequently implemented.

The correct identification of the budget problem, as well as option selected is crucial in determining the appropriate resolution-strategy. It must also be recognized that as various strategies are conceptualized and implemented, their impacts and outcomes for each institution may vary. Some strategies are easy to implement with short term or immediate budgetary yields. Other strategies tend to require a longer implementation span with longer time-frames for results to be realized (Bryson, 2004; Grizzle & Pettijohn, 2002). This can have significant implications for the institution itself, and its very culture may be changed subsequently over time.

Impending Budget Reductions: A Case in Point: For example, one institution in the southeastern region of the United States, when faced with over $16.6 million in budget reductions, employed strategic decision making to stimulate meaningful discussions that led to several strategic decisions including: The merger of several offices to create a centralized approach to providing quality services, activities, and programs to students. These mergers reduced budget impacts by $65,000 as a result of making shared decision to shift from direct state funding to indirect funding through auxiliary services in selected areas of the Division of Student Affairs. This approach provided a strategic planning process that reviewed philosophical frameworks, student developmental needs, and physical and financial resources. This process resulted in a shared framework among various offices on the campus, leading to shared resources that did not negatively impact student academic nor service programs.

Although more traditional approaches to budget reduction such as budget reductions in travel, office supplies, and staff through unfilled positions and attrition were considered, it was recognized early on that these approaches would only provide temporary relief to a growing phenomenon. This focus was on a long term resolution-strategy that would continue, not undermine, the quality of student academic programs and services.

On the Same Campus: In another example on this same campus, offices were physically moved into other spaces with each other in order to share staff support for a total cost savings of $60,000. In terms of budgetary impacts, both examples resulted in significant budgetary savings. In yet another instance, contracted services such as publication of the student handbook and increasing shared revenue costs from existing contracts resulted in a $55,000 cost savings. Yet another office was determined to be over staffed in terms of services it provided. Through attrition, two positions were eliminated and the remaining staff member was given greater responsibility with additional pay resulting in yet another $60,000 in savings. Through the institution's shared strategic decision making process, the staff member was also able to identify, through a non-profit organization, a full time person to assist with fulfilling the mission of the non-profit organization and university department through a joint student engagement and volunteerism initiative at no cost to the university.

Impact: Perhaps the most significant impact of the university's strategic decision-making process was a stronger collaboration between academic and student affairs; for example, several offices have created internships that were win-win for both Divisions of Academic and Student Affairs. Internships provide staffing to needed areas (at no cost) and professional experiences to student interns through their academic departments.

Implementing these strategic decisions resulted in a savings of over $12 million, that is, significant budgetary savings. And, although some of these strategic-decisions will provide only immediate financial relief, the long term result has been and continues to be honest dialogue and discussion about revenue sources beyond "increasing tuition." In the end, and as a result of these strategic exercises, this institution realized more savings than was needed; a testament of the process of strategic decision making's impact on the bottomline.

Summary and Conclusion

The uncertainty of funding for public higher education will extend well beyond the end of this first decade of the 21st century. Ongoing uncertainty regarding the financing of public higher education suggests that colleges and universities must continue to look both internally and externally for sustainable solutions and greater resource diversification. Potential solutions range from increasing tuition, suspending administrative and faculty travel, reducing personnel through attrition to entrepreneurship, and establishing disparate tuition structures. Without question, it is also wise to think in terms of both short term and long term strategies, as well as ease of implementation and perceived impact.

Effective decision making, however, is contingent upon understanding the extensiveness and interconnectedness of both problems and solutions, how quickly the need must be addressed and to what extent. U.S. public higher education institutions must look to both long term and short term strategic options in the wake of what appears to be ongoing financial uncertainty in public higher education as it navigates its way through this new century. In addition, it will be wise to always wise to plan and manage strategically, both economically and politically in order to minimize the stress that fiscal instability can bring to everyone involved. In times of fiscal uncertainty, flexibility, creativity, fairness and social justice, as well as effectiveness and efficiency are key. The resulting balance required, calls for ongoing consideration of the varying alternatives that exist, or that may come into existence for making decisions about financing higher education through diversified revenue income streams.

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