A Study of State Tax

Appropriations for Capital Needs in U.S. Public Higher Education

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This study investigated the relationship of key issues related to capital and operating budget practices of state tax appropriations and policies at the state level, including new facilities construction, renovation, replacement and renewal which may exist between and among states by governance structure. Recognized "good practices" in capital planning and allocation processes and funding mechanisms recommended by experts were also examined. The statewide governance typology developed by Aims McGuinness that distinguishes between governing and coordinating boards was used to see if tighter state control in the form of consolidated governing boards might equate to higher levels of good practices.

Higher education institutions are complex organizations with many moving parts and functions; the larger the institution, the more moving parts there are. One issue has continually plagued public higher education since its beginnings: adequate funding for facilities, Institutions cannot run first class academic programs in third rate facilities.

In *Educating a New Majority: Transforming America's Educational System for Diversity*, Rendon and Hope (1996) documented the millions of new minority students coming into America's public colleges and universities. In their unpublished study, DeMonBrun and Katsinas (2009) have predicted that in 2013 there will be one million more 18-to 24-year-olds and three million new young adults ages 25 to 34 in the U.S. population than in 2009.

Previously the federal government provided major investments in public higher education facilities. President Barack Obama, in a dramatic speech to Congress on February 24, 2009, proposed that U.S. recommit itself to becoming number one again among industrialized nations in adult baccalaureate degree attainment. He stated, "we will provide the support necessary for you to complete college and meet a new goal: by 2020, America will once again have the highest proportion of college graduates in the world" (para. 1, *http://www.whitehouse.gov/the-press-office/remarks-president-barackobama-address-joint-session-congress*).

Debates occur at the institutional and state level as to whom should fund what activities and how much of higher education the public should be required to support. Capital needs for institutions vary widely; one solution that many financially pressed public flagship universities have pursued has been to consider new self-generating methods to accommodate their needs. According to the *Chronicle of Higher Education* (April 11, 2008) Indiana University of Pennsylvania (IUP) financed $270 million dollar's worth of construction for the replacement of outdated residence halls with bonds issued through its private foundation. The university maintains ownership of the land and leases the buildings from the foundation, which will revert back to university property when the debt has been satisfied.

Other examples include Texas A&M University, Ohio State University, University of Louisiana—Lafayette, Louisiana State University, and the University of Colorado at Boulder. This creative solution was done to create more room on their space-challenged campuses for expanded teaching and re-

search-related activities (*Inside Higher Education*, July 27, 2007). The challenge was best identified by William Zumeta (2001) when he said, "The public and those it employs to make policy decisions expect higher education to be efficient and accountable for its spending and its outcomes" (p. 166).

Two significant major national studies supported by APPA addressed this crucial issue: *The Decaying American Campus: A Ticking Time Bomb* (Rush & Johnson, 1989) and *A Foundation to Uphold* (Kaiser 1996). Rush and Johnson (1989) concluded, based on a survey conducted in 1988 of 700 higher educational institutions, that colleges and universities deferred four dollars of maintenance for every dollar spent. In a follow up study, Kaiser (1996) estimated that $26 billion is necessary to eliminate deferred maintenance, of which $5.7 billion is identified for urgent needs. And APPA extropolated even greater needs in *Buildings... The Gifts That Keep on Taking* (Rose, et al, 2007). Manns and Opp (2001) and Manns and Katsinas (2006) further cautioned against the consequences of not tackling these urgent needs.

The Carnegie Corporation in an Open Letter to President-Elect Obama and His Administration dated December 18, 2008, cited Rush and Johnson (1989) and Manns (2001) to emphasize that access for future students to higher education may be diminished as facilities age and new facilities are not constructed to combat the ever increasing numbers of students. There has been little sustained state level research on the funding of capital needs in public higher education.

Projected Enrollment in All Public Postsecondary Degree-Granting Educational Institutions, 2009 to 2018

Year	Public
Fall 2009	14,523[a]
Fall 2010	14,609
Fall 2011	14,744
Fall 2012	14,882
Fall 2013	15,064
Fall 2014	15,220
Fall 2015	15,347
Fall 2016	15,472
Fall 2017	15,626
Fall 2018	15,764

Notes[a]: Depicted in thousands, Table Data was extracted from U.S. Department of Education, National Center for Education Statistics, Table 3. Enrollment in educational institutions, by level and control of institution; Selected years, 1869-70 through fall 2018.

METHODOLOGY

This study investigated the relationship of issues related to capital and operating budget practices of state tax appropriations and policies at the state level which may exist between and among states, comparing 23 states with consolidated governing boards and 27 states classified as coordinating board and planning agencies for public higher education, identified by McGuinness (2010) using a methodology similar to that used by Zumeta (1996). A secondary purpose was to identify "good practices" in planning and allocation processes and funding mechanisms, as recommended for capital needs for public higher education. Another purpose was to further document if trends can be identified by comparing newly collected data FY2008 to prior surveys conducted by Manns for FY1997 and FY2003 using a revised design. Manns' FY1997 study (Manns & Opp, 2001) and Manns' FY2003 study (Manns & Katsinas, 2006) were quantitative and utilized a survey instrument as the primary data collection method along with the *Grapevine* database of public higher education operating budgets.

SURVEY RESULTS

RESEARCH QUESTIONS

The primary research question was, "With regards to public higher education capital needs and practices, what differences, if any, exist between and among states with consolidated governing boards as compared to states with coordinating governing boards/planning agencies?" The secondary research questions include the following:

1. At the state level, what were the differences, if any exist, with regards to state tax appropriations for public higher education capital needs and how has this changed, if any, from FY1997 to FY2008;
2. At the state level, what observable differences, if any existed, in terms of deferred maintenance to meet funding capital needs for public higher education, if any, from FY1997 to FY2008;
3. At the state level, to what extent were recognized "good practices" in planning and allocation process(es) and funding mechanism(s), as recommended by expert practitioners and scholars for capital needs for public higher education?

SUMMARY OF FINDINGS

Finding One: State tax appropriations for capital budgets have increased as measured by the 18 states that supplied data on capital budgets for both FY1997 and FY2008. Clearly, the kind of broad-scale investment in public higher education facilities construction, renovation, and rehabilitation to meet the

current enrollment boom did not occur at the state level.

Finding Two: No significant differences were observed when changes in state tax appropriations for capital budgets by state governance type are examined in the time period from FY1997 to FY2008. Among the 18 responding states in both FY1997 and FY2008, state tax appropriations for capital budgets by student were higher for states with governing boards then for those with coordinating boards.

Secondary Research Question Two—At the state level, what observable differences, if any exist, in terms of deferred maintenance to meet funding capital needs for public higher education, if any, from FY1997 to FY2008?

Finding Three: The deferred maintenance problem for public higher education facilities clearly worsened from FY1997 to FY2008, as measured by the DMR and FCI, with some variability observed among governing and coordinating board states. The Deferred Maintenance Ratio (DMR) more than doubled from FY1997 to FY 2008. The mean of the DMR escalated from 44% in FY1997 to 57% in FY2003 to 93% in FY2008. The Facilities Condition Index (FCI) also nearly doubled from FY1997 to FY2008. The mean of FCI escalated from 9% in FY1997 to 12% in FY2003 to 16% in FY2008.

CLEARLY, THE KIND OF BROAD-SCALE INVESTMENT IN PUBLIC HIGHER EDUCATION FACILITIES CONSTRUCTION, RENOVATION, AND REHABILITATION TO MEET THE CURRENT ENROLLMENT BOOM DID NOT OCCUR AT THE STATE LEVEL.

Secondary Research Question Three—At the state level, to what extent are recognized "good practices" used in the planning and allocation process(es) and funding mechanism(s), as recommended by expert practitioners and scholars, for capital needs for public higher education?

Finding Four: That only half of the states have a long-range master plan for facilities strongly suggests that at a minimum, a clear information gap if not gap in assigned responsibilities exists, a point reinforced by the low level of broad stakeholder involvement in the capital needs assessment process. Lyman Glenny (1959) noted the lack of master planning as a major oversight in state coordination. St. John (1991) indicated that facilities' planning provides a way that states can control costs, regulate quality, and foster coordination across institutions. The number of states with long-range master plans for facilities has increased slightly from 15 of 41 states in FY1997 to 19 of 38 in FY2008. Stakeholder involvement in master planning was generally not inclusive in FY2008.

Finding Five: The majority of states do not conduct periodic facilities audits. States without regular periodic facilities audits remains almost constant from FY1997 to FY2008.

Finding Six: Information on capital funding of public higher education at the state level is limited. Since many states rely on IPEDS as the backbone of their own state data collection systems, the lack of a federal role in collecting data on facilities is problematic.

CONCLUSIONS

Conclusion One: A major information gap exists in data on facilities funding and there are high variances in the data that are available at the state level. The researchers could not identify a comprehensive national set of data on facilities funding for all 50 states. Information on capital funding of public higher education at the state level is limited.

Conclusion Two: State support for public higher education capital budgets has not increased enough to accommodate the growing need for new facilities brought on by record enrollment increases, while simultaneously addressing the escalating problem of deferred maintenance in public higher education facilities. Increased awareness of facilities issues and the need for planning, state level funding for facilities clearly has not increased at sufficient levels to accommodate the sharp rise in enrollments from FY1997 to FY2008. The existence of state master plans has increased slightly. However, just 4 of 19 states or 21 percent indicated that their master plan had inclusive stakeholder involvement in FY2008.

From FY1997 to FY2008, more states have designated a fund set-aside for facilities renewal and replacement, up from 6 of 41 responding states to 18 of 39, an increase from 15 to 50 percent. The deferred maintenance ratio (DMR) has almost doubled from a mean of 44 percent in FY1997 to a mean of 87 percent in FY2008. The Facilities Condition Index (FCI) has similar indicators of escalation from a mean of 9 percent in FY1997 to 16 percent in FY2008.

Conclusion Three: While state governance structures are stable over time, the practices and policies of capital budgeting

State Boards of Higher Education, by Governance Structure: 1997, 2002, 2010

Consolidated Governing Boards			*Coordinating/Planning Agency*		
1997 (FY1997)	2002 (FY2003)	2010 (FY2008)	1997 (FY1997)	2002 (FY2003)	2010 (FY2008)
Alaska	Alaska	Alaska	Alabama	Alabama	Alabama
Arizona	Arizona	Arizona	Arkansas	Arkansas	Arkansas
Florida		Florida	California	California	California
Georgia	Georgia	Georgia	Colorado	Colorado	Colorado
Hawaii	Hawaii	Hawaii	Connecticut	Connecticut	Connecticut
Idaho	Idaho	Idaho	Delaware	Delaware	Delaware
Iowa	Iowa	Iowa		Florida	
Kansas	Kansas	Kansas	Illinois	Illinois	Illinois
Maine	Maine	Maine	Indiana	Indiana	Indiana
Minnesota	Minnesota	Minnesota	Kentucky	Kentucky	Kentucky
Mississippi	Mississippi	Mississippi	Louisiana	Louisiana	Louisiana
Montana	Montana	Montana	Maryland	Maryland	Maryland
Nevada	Nevada	Nevada	Massachusetts	Massachusetts	Massachusetts
New Hampshire	New Hampshire	New Hampshire	Michigan	Michigan	Michigan
North Carolina	North Carolina	North Carolina	Missouri	Missouri	Missouri
North Dakota	North Dakota	North Dakota	Nebraska	Nebraska	Nebraska
Oregon	Oregon	Oregon	New Jersey	New Jersey	New Jersey
Rhode Island	Rhode Island	Rhode Island	New Mexico	New Mexico	New Mexico
South Dakota	South Dakota	South Dakota	New York	New York	New York
Utah	Utah	Utah	Ohio	Ohio	Ohio
Vermont	Vermont	Vermont	Oklahoma	Oklahoma	Oklahoma
West Virginia			Pennsylvania	Pennsylvania	Pennsylvania
Wisconsin	Wisconsin	Wisconsin	South Carolina	South Carolina	South Carolina
Wyoming	Wyoming	Wyoming	Tennessee	Tennessee	Tennessee
			Texas	Texas	Texas
			Virginia	Virginia	Virginia
			Washington	Washington	Washington
				West Virginia	West Virginia
N=24	N=22	N=23	N=26	N=28	N=27

Note: Adapted from Mcguiness: Authority of State Boards of Higher Education, 1997, p.58, Authority of State Boards of Postsecondary Education, 2002, p.3 and; Authority of State Boards and Agencies of Higher Education, 2010, (p.3).

are varied among states, and tighter state control in the form of consolidated governing boards does not necessarily equate to higher levels of good practices with regards to facilities in public higher education. Governance structures of state public higher education boards and agencies have exhibited little change over time. There were two states listed as consolidating governing boards in 1997 that changed typology according to McGuinness (2010): Florida and West Virginia. It was assumed by this researcher that states with tighter control in the form of consolidated governing boards will be more likely to adopt innovative or good practices than states identified a coordinating/planning service agencies for public higher education.

RECOMMENDATIONS

Recommendation One: Develop a national centralized database to both incorporate existing and add new statewide centralized databases for public higher institutions to enter institutional data on deferred maintenance, facilities conditions and master planning based on "good practices" as recommended by expert practitioners and scholars. Following the earlier surveys in FY1997 and FY2003, respectively, Manns and Opp (2001) and Manns and Katsinas (2006) recommended the development of databases for public higher institutions to enter institutional data on deferred maintenance, facilities conditions and master planning at the state level. A national public higher education database should be developed to include facilities planning by each state higher education board, and it should be maintained by the federal government.

Recommendation Two: Develop of a longitudinal database for capital needs of public higher education,

sponsored by the federal government. Recognizing that the development of a national database on facilities funding called for in the first recommendation will take time to fully implement, an intermediate recommendation is necessary.

Recommendation Three: Replicate this study to incorporate additional research factors. Two types of factors would add complexity and potentially provide valuable insight into capital budgeting and practices for public higher education institutions: 1) incorporation of the statutory role of McGuinness' typology of governance structures and 2) incorporation of the classification type of public higher education institutions.

A NATIONAL PUBLIC HIGHER EDUCATION DATABASE SHOULD BE DEVELOPED TO INCLUDE FACILITIES PLANNING BY EACH STATE HIGHER EDUCATION BOARD, AND IT SHOULD BE MAINTAINED BY THE FEDERAL GOVERNMENT.

While the two primary broad groups of statewide consolidated governing and statewide coordinating boards/planning agencies based on the typology of McGuinness (1997, 2002 & 2010) were used for this study, McGuinness also subdivides states by statutory roles. These include: 1) One Board for All Public Institutions, 2) Two Boards Encompassing All Public Institutions, 3) Consolidated or Aggregated Budget, 4) Budget Review and Recommendation, and 5) No Statutory Budget Role. These statutory roles are an indicator of the relative strength or weakness of statewide governance structure for the state higher education board. A replication of this study to include the classification of public higher education institutions by two-year college or four-year university could add further insight to the discussion.

Recommendation Four: Expand this study using qualitative methods. While this study was conducted using quantitative methods, a future study using qualitative methods, such as a one on one interviews, could be conducted at a statewide level.

CONCLUDING REMARKS

Absent from the recommendations is an amount of funding that the states and /or federal government should provide to address the capital needs concern, there is simply not enough data available to support that recommendation. Certainly, more is needed to address the large amounts of deferred maintenance and accommodate the growing student enrollments. While approximately $23 billion of additional funding to address deferred maintenance needs would bring the 18 states to a recommended DMR (as a percent of operating funds) based on institutional recommendations, this research can only speculate what amount would be needed to provide the safe access to public higher education for all students.

No two states are identical, and any comparisons made between states should recognize such factors as the public and private higher education structure of the state, the political structure of the state, methods used for financing public higher education, and the history of the individual state. However, states could learn innovative good practices from each other as well as longitudinal data analysis of their own state, by reviewing their overall operations.

RESOURCES

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