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Higher Education Spending: The Role of Medicaid and the Business Cycle

THOMAS J. KANE AND PETER R. ORSZAG

In recent years, many public colleges and universities around the country have announced double-digit increases in tuition. The recession and the resulting squeeze on state revenues are the immediate causes. However, the short-term crisis should not be allowed to obscure a longer-term shift in state financing of higher education, which began more than a decade ago. As states have struggled to respond to other demands on their budgets—primarily due to rising state Medicaid obligations—parents and students have been asked to pay an increasingly large share of the costs in public higher education.

Public colleges and universities should not expect much respite when the current crisis recedes. In many states, the cuts imposed on higher education during the last recession in 1990-91 were not made up in the subsequent recovery. Because Medicaid expenditures are expected to grow rapidly over the coming decades, state support for higher education is likely to come under increasing pressure, even as state revenues recover. Since roughly three-quarters of all college students in the United States attend public institutions, the implications for the nation's higher education system are profound.

DOCUMENTING THE DECLINE

Tuition hikes have been the most visible sign of the deterioration of state support. Yet despite their size, the tuition increases have only partially offset the decline in state appropriations in allowing public colleges to keep up with private ones. Much less noticed, the quality of public higher education seems to have deteriorated relative to the private sector. At more and less selective institutions, the public-private gaps in various indirect measures of educational quality—expenditures per student, faculty salaries, faculty teaching loads and academic credentials for incoming students—have all widened.

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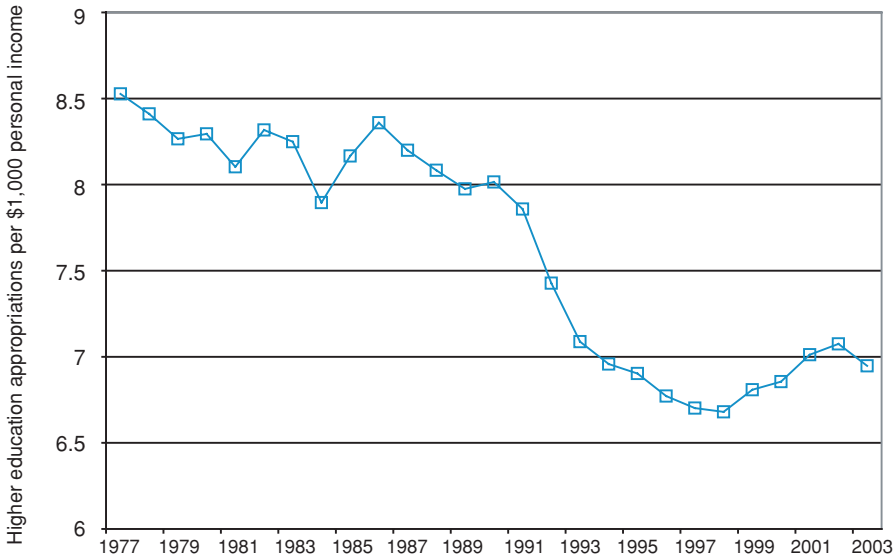
Figure 1:

STATE APPROPRIATIONS FOR HIGHER EDUCATION PER $1,000 OF PERSONAL INCOME



Source: Authors' calculations based on data from Center for Higher Education and Educational Finance and Bureau of Economic Analysis, Department of Commerce.

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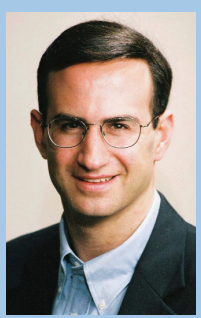

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The decline in state support for higher education over the past several decades manifests itself in several common measures. Figure 1, for example, shows state appropriations for higher education relative to personal income. Although appropriations tend to increase as state budgets swell during economic booms (such as the late 1990s) and then decline as state budgets respond to recessions, the trend is clear: state appropriations have fallen from an average of roughly $8.50 per $1,000 in personal income in 1977 to an average of about $7.00 per $1,000 in personal income in 2003. Since personal income currently amounts to more than $9 trillion, state appropriations would be about $14 billion higher—or about 20 percent higher than their actual level—if appropriations had been maintained at the same ratio to personal income as in 1977.

EXPLAINING THE TRENDS: THE ROLE OF MEDICAID

A key factor in explaining the declining trend in state appropriations for higher education is the rise in state obligations under the Medicaid program. Medicaid provides medical assistance to the low-income elderly and disabled, as well as to low-income families and pregnant women. Medicaid costs rose rapidly in the late 1980s and early 1990s, reflecting both expanded eligibility and increases in costs per enrollee.

The expansion in eligibility reflected three changes. First, states are required to provide Medicaid coverage to Supplemental Security Income (SSI) recipients, primarily low-income elderly and disabled persons. SSI coverage for the disabled rose rapidly in the late 1980s and early 1990s, partly because of the 1990 Supreme Court ruling in *Sullivan v. Zebley*, which broadened eligibility to the SSI program for disabled children. The number of disabled SSI beneficiaries rose from 2.4 million in 1984 to 4.7 million in 1994. Second, in the early 1990s, states were allowed and then required to expand their Medicaid programs to cover low-

income children and pregnant women. Finally, in 1988 and 1993, Congress required states to expand their Medicaid programs to cover certain low-income beneficiaries of Medicare, the federal health insurance program.

In addition to these expansions in coverage, ongoing increases in the relative cost of health care at least partially covered by Medicaid—especially the cost of long-term care for the elderly and the cost of prescription drugs—raised spending.

Econometric analysis based on variations in Medicaid and higher education spending across states and time suggests that each new dollar in state Medicaid spending crowds out higher education appropriations by about six to seven cents. To put these figures in perspective, note that real state Medicaid spending per capita increased from roughly $125 in 1988 to roughly $245 in 1998. Over the same time period, real higher education appropriations per capita declined from $185 to $175. According to our estimates, the predicted effect of the increase in Medicaid spending would be a reduction in higher education appropriations per capita of about $8. Therefore, Medicaid spending appears to explain the vast majority of the $10 decline in higher education appropriations per capita: the expansion in state spending on Medicaid between 1988 and 1998 can explain about 80 percent of the decline in state spending on higher education over the same time period.

THE BUSINESS CYCLE

Statistical analysis also underscores the importance of the business cycle, and the interaction between the business cycle and Medicaid spending. Although the stringency varies somewhat, all states except Vermont have some sort of balanced budget requirement. These requirements force state governments to undertake countercyclical fiscal policies, reducing expenditures or raising taxes during an economic downturn. Typically, states cut back programs during the downturn and then expand them during the subsequent recovery.

Higher education has historically tended to be among the most cyclical of state budget categories. As the economy entered a recession in the early 1980s, for example, appropriations declined in real terms. Then during the recovery of the mid-1980s, appropriations recovered and ultimately exceeded their pre-recession peak. (The cyclical pattern of appropriations is less apparent in figure 1 since the denominator is also declining during a recession and increasing during a recovery.)

However, something was dramatically different during the economic cycle of the 1990s. As the economy entered a recession in the early 1990s, real appropriations per capita again declined. But during the boom of the 1990s, appropriations for higher education recovered slowly and only reached pre-recession levels by 1999. Over this same time period, expenditures per student were rising, particularly at private institutions.

This pattern also manifests itself on a cross-state basis. States with larger increases in unemployment between 1979 and 1982 reduced their appropriations for higher education more than

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states with smaller increases in unemployment. During the subsequent 1980s recovery, states that had larger reductions in unemployment then boosted their higher education appropriations by more than states with smaller reductions in unemployment. Something dramatically different occurred in the 1990s, however. As the national economy went into a recession, states with larger increases in unemployment rates once again reduced their higher education appropriations by more than states with smaller increases in unemployment rates. During the recovery of the mid-1990s, however, larger declines in unemployment rates across states were not statistically associated with larger increases in higher education appropriations.

During the 1990s, state higher education appropriations did not respond to the reduction in unemployment as one would have expected based on earlier relationships. Econometric analysis of the interactions among the business cycle, higher education, and Medicaid spending suggest that the expansion in Medicaid coverage cited above played an important role. States with higher average Medicaid expenditures per capita between 1980 and 1998 reduced higher education expenditures during the 1990-1991 economic downturn by more than other states. In addition, in states with higher Medicaid spending, state appropriations for higher education became more sensitive to increases in unemployment going into the 1990-91 recession and less sensitive to declines in unemployment coming out of the 1990-91 recession, relative to other states.

The bottom line is that there is a strong negative linkage between higher education appropriations and Medicaid spending. The substantial increases in Medicaid spending during the 1980s and early 1990s appear to have played an important role in the failure of higher education appropriations to rise significantly during the 1990s boom. The projected increases in Medicaid costs over the next several decades thus raise serious questions about the future path of state appropriations for public higher education.

IMPLICATIONS FOR QUALITY

Although tuition has risen sharply at public institutions, the rise in tuition revenues has only partially offset the decline in state appropriations. Fearful of the political consequences, state governors and legislators have been reluctant to allow the larger tuition increases which would be necessary to fully offset the state cuts to higher education and to allow public institutions to keep pace with private ones. As a result, educational spending per full-time equivalent student has declined at public institutions relative to private institutions: the ratio fell from about 70 percent in 1977 to about 58 percent in 1996. These differential spending trends have begun to manifest themselves in indirect measures of quality in public higher education.

A variety of data suggests that salaries at public universities have declined relative to private universities. Between 1981 and 2001, average salaries at public institutions for assistant, associate, and full professors declined 16 to 24 percent relative to private institutions. The decline occurred at both more and less selective

institutions. Much of the decline occurred during the 1980s and the recession of the early 1990s. (Although they did not make up the ground lost during the previous decade and a half, public salaries appear to have kept pace with private sector salaries during the late 1990s.) At the same time, relative student-faculty ratios and workloads have increased at public universities.

Public institutions also seem to be increasingly likely to lose talented students to private institutions. Among institutions with similar students in 1986, math and verbal SAT scores grew more rapidly at private institutions between 1986 and 2000.

Other evidence suggests a relative decline in the quality of public institutions. Faculty members at research and doctoral public universities, for example, are much more likely to believe that the quality of undergraduate education at their institutions has declined than are faculty members at private universities. In the Department of Education's 1999 survey of post-secondary faculty, nearly half of the tenured faculty at public institutions agreed or strongly agreed with the statement that the quality of undergraduate education at their institution had declined in recent years, compared to slightly more than a third of tenured faculty at private institutions.

LOOKING TO THE FUTURE

The underlying story that emerges is that state fiscal pressures, especially Medicaid, have been crowding out appropriations for higher education. The pattern from the 1990s suggests that reductions in higher education appropriations are implemented during an economic downturn and then made permanent by a failure to raise appropriations substantially during the subsequent economic recovery. Tuition increases are insufficient to offset the decline in appropriations, squeezing resources and reducing the quality of education at public universities relative to private universities.

The current economic downturn is again putting heavy pressure on state budgets: in aggregate, states have had to close a cumulative $200 billion deficit between fiscal years 2002 and 2004. In response, many states are sharply reducing appropriations for higher education. The results from the 1990s raise the concern that these reductions will become part of a permanent ratcheting down in state support for higher education, rather than a temporary adjustment to cyclical state fiscal problems. This danger is likely to become even more pronounced in the future because of further projected increases in Medicaid costs and because of demographic shifts over the next decade and beyond.

First, state budgets are likely to come under continued pressure from the Medicaid program. The Congressional Budget Office estimates that federal Medicaid costs will rise from 1.2 percent of Gross Domestic Product (GDP) today to 2.8 percent of GDP by 2030. Given the cost-sharing between the federal government and state governments inherent in the Medicaid program, this projection also implies a substantial increase in state Medicaid costs. Much of the growth in Medicaid during the late

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1980s was associated with the disabled and the elderly. In the future, much of the growth in costs is similarly likely to be associated with these groups, both because the baby boomers will swell the ranks of the elderly and because of ongoing increases in the relative cost of health care.

Second, these pressures will be exacerbated by other demographic and social shifts. As the children of the baby boomers reach college age, the number of Americans aged 18 to 24 will rise from 26.0 million in 1999 to 30.2 million in 2010—an increase of 16 percent, relative to an expected increase in the total population of 10 percent.

POLICY RESPONSES

Significant reductions in higher education appropriations, combined with political constraints on tuition increases, appear to be causing a deterioration in the quality of public higher education institutions relative to private institutions. Future spending pressures will just exacerbate the problem. So what can be done?

Any reform of the Medicaid program that slows the growth of state commitments would ease the pressure on higher education funding. However, Medicaid reform is substantively and politically complicated and significant reform does not seem likely in the near future. It seems inevitable, then, that future tuition increases will be needed, particularly if public higher education institutions are to remain competitive with private institutions. The challenge will be finding ways to minimize any negative effects on students and their families.

Higher education trust funds. In many states, substantial tuition increases occur only during recessions. Rather than gradually increasing, tuition spikes precisely when families may have a difficult time adjusting their plans. Unfortunately, it is during recessions, when work is hard to find, that policymakers should be encouraging young people to take time out of the labor force to increase their skills. States should form long-term plans for higher education spending, taking into account projected increases or decreases in the size of the college-age population, with the intention of smoothing out the bumps. For example, states could create dedicated trust funds, funded by gradual tuition increases, which could be used as a buffer in years of unanticipated budget shortfalls. The trust funds would build up during economic booms and then be drawn down during recessions. To protect them from being used for other purposes in the interim, their use might depend upon a minimum unemployment rate trigger, such as is used for extended unemployment insurance benefits.

Higher tuition coupled with increased means-tested aid. For years, researchers have been concerned that state appropriations for higher education are not well-targeted, because the benefits of subsidized tuition policies are enjoyed by middle and higher income families as well. Ironically, such targeting is sometimes worsened during recessions, as states both raise tuition and reduce financial aid. In 2000, California created an entitlement program in which students with incomes and assets below certain thresholds and grade point

averages above other thresholds were guaranteed a grant covering 100 percent of tuition and required fees at the public universities in the state (not including room and board). During the next recovery, states should consider creating a similar entitlement for needy students to receive a grant covering a minimum percentage of tuition, so that they will be protected during the next recession.

Federal matching on means-tested grant aid. To encourage states to expand means-tested grant aid, the federal government could offer matching funds to states based on their funding for such programs. (Two federal programs—the Leveraging Educational Assistance Partnership (LEAP) and Special Leveraging Educational Assistance Partnership (SLEAP) programs—already do this, but federal funding is meager). The purpose would be to encourage states to retain and expand means-tested grant aid, especially if they were raising tuition levels, by changing the marginal incentives for expansions or reductions. Interestingly, the federal government matches state spending on Medicaid. A dollar worth of medical services in a state under the Medicaid program costs the state less than a dollar. Without a sufficient federal match for higher education, it may not be surprising that Medicaid spending has been winning out over higher education.

Increased tuition for out-of-state students or for students who leave the state. Another possible response to reductions in state appropriations is to increase tuition for out-of-state students. Out-of-state students are more likely to leave the state after graduation, so that the state is less likely to capture the social benefits associated with educating them. For example, data suggest that roughly half of the students from a state who attended college in that state were still living in the state fifteen years later. By contrast, only 10 percent of out-of-state students who attended college in the state were still living in that state fifteen years later.

Differential tuition rates, however, are a relatively blunt instrument for addressing migration differentials between out-of-state and in-state students. Many in-state students do not remain in the state after graduation, and at least some out-of-state students do remain in the state. A more targeted approach would tie any subsidy to subsequent locational choices. For example, states could raise tuition and offer access to loan programs to alleviate any liquidity problems associated with the increased tuition. The loans could then be partially forgiven for students who subsequently work in the state, with the share of the loan forgiven depending on how long the student remains in the state.

Greater flexibility for states to buy more subsidized loan eligibility from the federal government. Under the federal subsidized loan programs, students can borrow at subsidized rates. The main subsidy comes in the form of government payment of interest while the student is in school. To control costs and to preserve students' incentives to find the best bargain, borrowing under the subsidized programs is subject to annual limits. For example, dependent students can currently borrow $2,625 during their first year, $3,500 during their second year and $5,500 during subsequent years under the subsi-

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dized terms. When added to room and board and living expenses, virtually every state is currently charging more than these limits for a year of college. So, when a state raises tuition, students are often paying 100 percent of the additional cost. To help cover family's liquidity problems, states could be allowed to "buy" more loan eligibility for their residents, by raising the limits that students can borrow under the subsidized loans and reimbursing the federal government for the additional costs.

CONCLUSION

The American system of financing higher education is based upon large state operating subsidies to public higher education that have traditionally been used to keep tuition low for all students, regardless of need. Over the past two decades, state budgets have come under increasing pressure in part because of greater state financial obligations to programs like Medicaid. The most visible result has been an increase in tuition. A less visible result, because such tuition increases are politically difficult to implement, has been a slow deterioration in the quality of public higher education, relative to private higher education. Since roughly three-quarters of college students are enrolled at public institutions, the implications could have substantial negative effects on the overall quality of higher education in the United States.

While reform proposals like ours exist, they are unlikely to be enacted until the problem is more broadly appreciated and understood. At the very least, a public debate on the structure of financing higher education in the United States is in order. The traditional financing approach—low public tuition is financed by state government subsidies, while modest federal means-tested aid programs fill in the gaps for low-income students—seems increasingly untenable.

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