Policy Changes to Make a Difference

Higher Education

To formulate policy on higher education, we must get past the jumble of assertions made about the state of funding and the access to education past high school enjoyed by the citizens. We will find that, contrary to much-discussed allegations, citizens of all incomes and ethnicities are presented with the chance to attend a state college or university.

To formulate policy on higher education, we must get past the jumble of assertions made about the state of funding and the access to education past high school enjoyed by the citizens.

The State has cut total spending to higher education for the last two fiscal years. We will find that the outlook is grim for that circumstance to be reversed soon. That means that the structure of how state institutions collect revenue must fundamentally change to meet sufficient levels.

The revenue problem in this category is also exacerbated by the same problems discussed elsewhere in this report; that a recent dependency on federal direct support payments will be tested when those federal funds are curtailed.

We find that the College Opportunity Fund program should be retained because it forms an excellent base on which to build changes. It must be expanded and modified to conform to the real needs.

After a review of how state colleges and universities are operated as independent government enterprises, we conclude the situation should be extended and made permanent. We address what the real reform would entail and urge reform that does not involve changing ownership to a form of private holdings.

The term "full time equivalent" (FTE) is used throughout this section to designate a student. For example, two half-time students or one full-time student would in each case equal one FTE. The term is used ubiquitously in the state budget to mean a full-time equivalent state employee, so the two concepts must not be confused.

We urge the institutions to reform themselves by initiating audits regarding teaching productivity, and thereby lead the nation in reducing low priority publication in favor of more direct instruction. The standings of highly-rated institutions, dependent on research dollars, should not be called into question.

As elected officials grapple with the determination of the best set of priorities for citizens, they must address a fundamental understanding about higher education. Is the system primarily for society's benefit? If so, then ever higher amounts of support will be justified and students should understand that completing their educations implies they owe some return to the government. If on the other hand, furthering one's education is primarily so that an individual can improve his understanding of the world and his professional production, then subsidy can be justified only for those for whom higher education is otherwise unattainable. The general justification for college subsidies is that successful pursuit of a degree can lift an individual out of perpetual poverty. Is higher education primarily for society's benefit or the individual's benefit?

Funding Adequacy

Critics will argue that higher education is underfunded, especially in Colorado, and that the state should allocate more subsidies to higher education.[1] The argument that higher education is underfunded has been challenged in the economics literature. Barry Poulson explores this argument in a forthcoming Independence Institute publication "The Funding Crisis in Colorado's Higher Education System."

Table 1. State Expenditures for Higher Education ($ millions)					
Fiscal Year	General Fund	Other State Funds	Total State Funds	Federal Funds	Total Funds
2007	729	2,365	3,094	250	3,344
2008	846	2,311	3,157	347	3,504
2009	777	1,123	1,900	540	2,440
2010	716	1,123	1,839	282	2,121

Source: 2007-2009 actual data from the National Association of State Budget Officers (NASBO) State Expenditures Report, fall 2009; 2010 authors estimate.

Table 2. Higher Education Expenditures as a Share of Total State Expenditures (percent)		
Fiscal Year	Colorado	All States
2007	14.1	10.2
2008	13.9	10.2
2009	9.1	9.8

Source: National Association of State Budget Officers, State Expenditures Report, fall 2009.

State funding for higher education in Colorado, as well as other states, is heavily impacted by the business cycle. Spending cuts made since 2007 by necessity targeted higher education, because it is discretionary, while other components of the state budget are mandated by state and federal regulations and court orders.

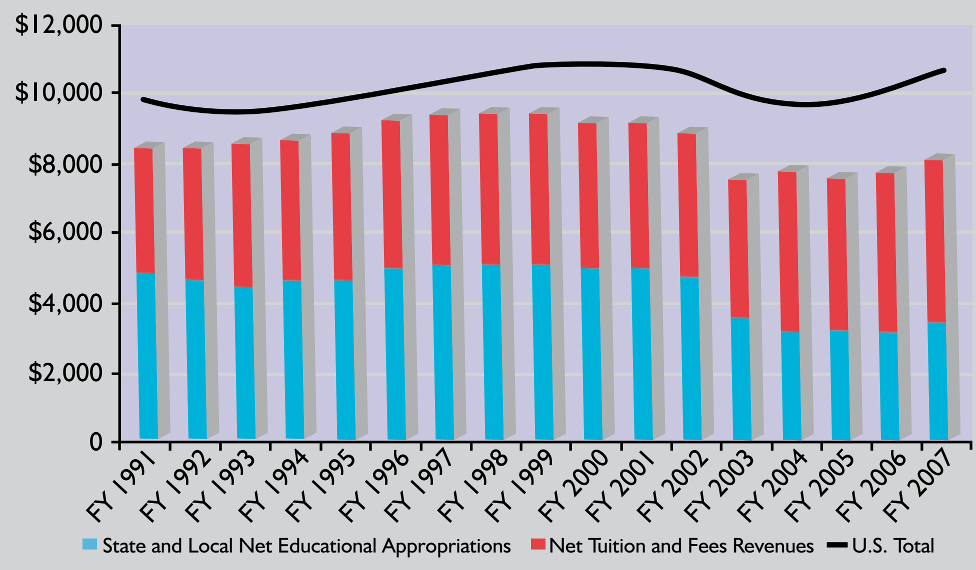
Some cuts were offset with federal funds; however, the use of one-time stimulus dollars to finance ongoing programs has created a structural deficit in higher education budgets. General Fund revenues are not projected to recover to pre-recession levels for several years.[2] When the federal stimulus money ends in FY 2011, higher education budgets will face further significant challenges.

The demand for higher education is increasing. During the recession more people continue their education, rather than enter the workforce. Also, families that might have chosen private institutions are sending their children to public colleges and universities to save money.

Colorado's legislators have allowed colleges and universities to increase tuition to offset the budget cuts in periods of recession. In periods of growth legislators have provided more generous funding for higher education.

As figure 1 shows, prior to the recession in the early part of this decade, total funding for higher education was relatively stable. From 1991 to 2002 total funding

Figure 1
State Appropriations and Tuition Revenue per FTE for Colorado Institutions



Source: SHEEOSHEF with adjustments for inflation (HECA), cost of living, and enrollment mix.

Source: Western Interstate Commission on Higher Education, (2008).

per undergraduate full time equivalent student (FTE) exceeded $8,000. This sum included both state appropriations and tuition. The availability of state funding was allowed to force tuition levels to adjust. During the earlier recession of the early 90's when state funding fell, tuition charges also increased to offset the funding shortfall. When the economy recovered and state funding to higher education could increase, tuition increases were limited. As a result, total funding per FTE plateaued.

The recession in the early 21st century brought a sharp revenue shortfall, and a sharp decrease in state funding per FTE. While tuition charges were increased, the increases did not make up for the shortfall in state funding. Total funding per FTE fell below $8,000, which was well below average funding per FTE in the nation.

In fiscal 2008 the state was able to increase total funding for higher education by increasing General Fund expenditures as well as federal funds. However, in fiscal 2009 state funding for higher education fell sharply, only partially offset by increased federal funds. Prior to 2009 higher education expenditures as a share of total state expenditures in Colorado exceeded that in other states; in 2009 the share fell below that in other states. Colorado's increased dependence on federal funding for higher education began with the College Opportunity and Affordability Act of 2007. That dependence increased dramatically with the federal stimulus money created in the American Recovery and Reinvestment Act (ARRA) in 2009. ARRA was designed to stabilize support for higher education funding by supplementing state funding for higher education. The state expects to receive $7.1 billion in federal funds from the ARRA.[3]

Higher education received $621.8 million in federal stimulus moneys that supplemented state funds. On an annual basis the federal stimulus money has boosted total funding by 25 percent, to about $800 million. When the federal stimulus money disappears in the next fiscal year, the state will ***lose $207 million annually in federal funds*** allocated to higher education. Table 3 shows the allocation of these funds by institution.

Table 3. Allocation of ARRA Funds by Institution

Institution	FY 2008-2009	FY 2009-2010	FY 2010-2011
Adams State College	$2,459,127	$7,207,904	$1,413,343
Mesa State College	$4,117,215	$11,700,892	$2,387,079
Metropolitan State College of Denver	$9,934,344	$24,765,859	$4,665,091
Western State College	$2,280,870	$6,196,492	$1,412,354
Colorado State University System	$33,271,434	$80,088,438	$19,566,800
Fort Lewis College	$3,978,508	$7,752,908	$2,843,580
University of Colorado System	$49,995,467	$119,390,747	$35,003,398
Colorado School of Mines	$4,443,761	$12,463,207	$2,845,658
University of Northern Colorado	$8,909,433	$23,222,224	$5,793,766
Community College System	$25,300,005	$69,953,805	$14,959,668
Local District Junior Colleges	$3,288,325	$8,414,708	$2,154,256
Area Vocational Schools	$2,697,018	$5,351,059	$1,649,106
TOTAL	$150,676,055	$376,508,243	$94,694,099
Source: State of Colorado, Governor's Office of State Planning and Budget (2010).			

Colorado chose to spend most of the ARRA money in FY 2008 and FY2009. Colorado's dependence on ARRA money is reflected in the changes in higher education expenditures over the past two years. Federal funding for higher education in Colorado increased 38.8 percent in FY2008, and 55.6 percent in FY 2009. As a share of total funding for higher education in Colorado the federal share increased from 7.5 percent in 2007 to 22.1 percent in 2009. No other state has become as dependent as Colorado on federal funding for higher education over this period.

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The impact of the ARRA money is captured in table 5. In FY 2009, in the absence of ARRA money total expenditures for higher education in Colorado would have fallen 11.5 percent. With ARRA money total expenditures for higher education increased 8.7 percent. The percentage point difference in funding for higher education with and without ARRA money in Colorado was 20.2 percent. The average percentage point difference for the nation as a whole was 1.9 percent. There is only one other state that comes even close to Colorado in dependence on ARRA money in that year: Arizona, at 14.2 percent.

The structural deficit in higher education budgets reflects more than the use of one-time ARRA money for ongoing programs. Federal funding has come with strings attached that have imposed an unfunded mandate on state expenditures for higher education. Included in this federal legislation impacting higher education spending are Maintenance of Effort (MOE) provisions. This provision was included in the College Opportunity Act of 2007, as well as the ARRA of 2009. Especially pernicious was the MOE provision originally incorporated in the former legislation. The penalty for a state failing to meet that provision would have been loss of the Federal Leveraging Educational Assistance Partnership money, funds that go directly to helping low-income students. The federal government coerces states into funding higher education by threatening to withhold federal funds for the neediest students in higher education.

As a condition of receiving ARRA moneys, the State must provide higher education funding at not less than 2006 levels. Governor Ritter has submitted a request for a waiver from this ARRA MOE requirement.[4] One proposal is to transfer $80 million from the K-12 budget to the higher education budget.[5]

The unfunded mandates imposed by the federal government on state spending for higher education set a dangerous precedent for several reasons. Not only do these federal mandates dictate minimum levels of state spending for higher education, they also restrict how the federal money can be used. The federal stimulus money mandates that federal funding for higher education must be used for non-instructional

Table 4. Annual Percentage Change in Higher Education Expenditures (percent)

Fiscal Year	State Funds	Federal Funds	All Funds
2007 to 2008	2.0	38.8	4.8
2008 to 2009	-39.8	55.6	-30.4

Source: National Association of State Budget Officers, State Expenditures Report, fall 2009.

Table 5. Percentage Change in Higher Education Spending With and Without ARRA Funds, Fiscal Year 2009 (percent)

	Without ARRA Funds	With ARRA Funds	Percentage Point Difference
Colorado	-11.5	8.7	20.2
U.S. Average	-3.4	-1.5	1.9

Source: National Association of State Budget Officers, State Expenditures Report, fall 2009.

programs. This mandate is at odds with state priorities to spend more dollars on classroom instruction, but federal priorities override state priorities.

Dependence on federal funding actually could decrease state funding for higher education in the long run. Historically, during economic growth the State has been more generous in allocating state funds to higher education. If state legislators perceive that more generous state expenditures could set a higher standard in meeting federal mandates, they may choose to be less generous to higher education in periods of prosperity.

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Finally, citizens are increasingly leery of policy direction from Washington. Both federal spending for higher education and the unfunded mandates that accompany these expenditures, fall outside the powers enumerated in the U.S. Constitution. The 10th Amendment reserves such powers to the states and the people. Citizens concerned with these constitutional issues want to reduce the federal government's influence and return powers to the State and to citizens, restoring state sovereignty and enhancing individual freedom.

There have been unsuccessful efforts to raise taxes earmarked for higher education. In 2008, the legislature considered Initiative 119, which would have earmarked severance tax revenues for higher education; but the initiative was withdrawn by the sponsor prior to hearing. Amendment 58, which also earmarked severance tax revenue for higher education, made it to the ballot box, but was rejected by the voters. Amendment 59 would have earmarked TABOR surplus revenue for higher education, and was also defeated at the ballot box. Voters passed a citizen initiative, Amendment 50, earmarking gaming tax revenue for community colleges. House Bill 09-1272 passed in the most recent session to implement Amendment 50, allocates a modest amount of gaming revenues to the community college system.[6] In August 2010 Governor Ritter proposed to make up a revenue shortfall by diverting back to the General Fund $9.4 million from a fund for higher education financed by federal mineral lease money.[7]

Solving a structural deficit requires fundamental reforms to stabilize higher education funding and to balance the state budget without federal handouts and federal unfunded mandates.

College Opportunity Fund: Already Begun

As the funding crisis in Colorado's higher education system emerged in the early part of this decade elected officials began to search for alternative ways to fund higher education.[8] In 2004 the legislature enacted the College Opportunity Fund (COF). This Fund created a voucher system to replace some direct funding to public higher education institutions. The vouchers, referred to as stipends, were set at $2,400 per year per full-time student

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to be used to offset tuition. Vouchers were to be portable among Colorado's public higher education institutions and some private institutions.[9]

Block grants in the form of direct funding contracts for specific purposes were provided to each institution reflecting their different mission statements. These included graduate-level education, specialized education services, and professional degrees. Performance contracts are negotiated between the administrations in higher education institutions and the Department of Higher Education (DHE).[10]

Because the vouchers replaced some direct funding to institutions of higher education, the share of state general funds allocated to some institutions fell below 10 percent of their total funding. This change allowed these institutions to acquire enterprise status, which made them exempt from Taxpayer's Bill of Rights (TABOR) restrictions. Most importantly, ***these institutions could raise tuition without triggering the TABOR limit on state revenue and spending.*** Thus, higher education institutions could raise tuition without requiring cuts in other state programs. The institutions with enterprise status also had greater flexibility in issuing debt. The quid pro quo of enterprise status is what motivated administrators in higher education to support the COF plan.

The state is criticized for having low levels of state funding in higher education compared to other states. When the focus shifts to outcomes however, the higher education system in Colorado compares more favorably to other states.

Some observers criticized vouchers as failing to improve access to higher education because enrollment did not increase, especially among in-state students and underrepresented populations.[11] The report also concluded that vouchers had failed to create incentives for higher education institutions to become more innovative and efficient in the delivery of education services. Much of the criticism improperly focuses on inputs into higher education system rather than outcomes. The state is criticized for having low levels of state funding in higher education compared to other states. When the focus shifts to outcomes however, the higher education system in Colorado compares more favorably to other states.

Measures of Access to Higher Education

The empirical evidence comes from the National Comparison Data compiled by the National Center for Higher Education Management Systems (NCHEMS). When comparing access information, we look at several similar western states and California. The percentage of 18-24 year olds enrolled in Colorado colleges, at 34.9 percent, is above the national average of 33.9 percent. Only California ranks above Colorado, reflecting a much lower undergraduate tuition charged by California compared to Colorado.

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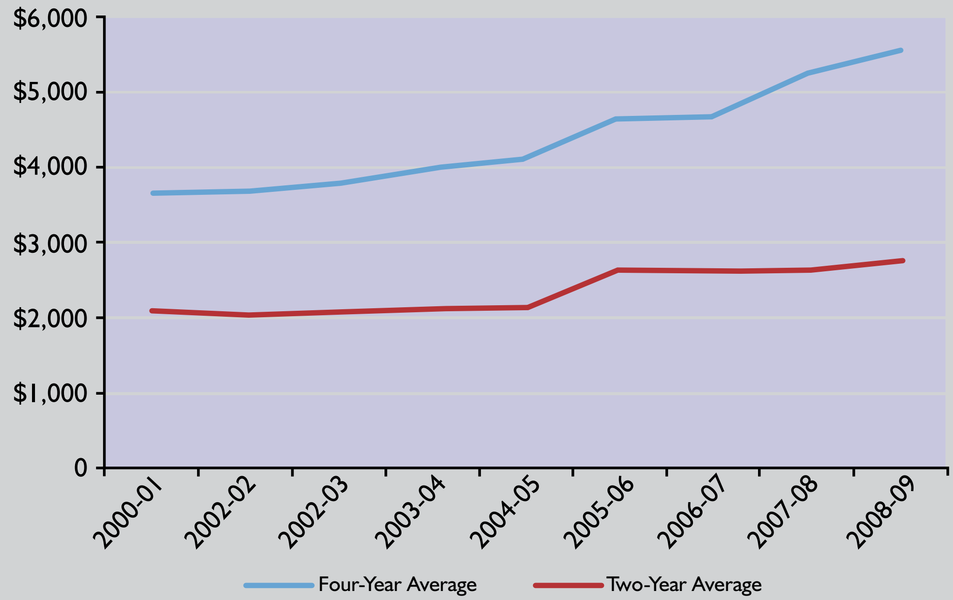
Measures of Progress and Completion of Higher Education

Colorado has made significant progress in the completion rates for higher education. Over the period 1992-2007 the number of undergraduate degrees awarded relative to the number of students enrolled increased from 14 percent to 18 percent. That ratio still falls below the national average, however, and the six-year graduation rate of bachelors students also falls below that for most states in the region.

Measures of Affordability of Higher Education

Some states place the burden of going to college on the individual by holding tuitions high. Other states rely on the taxpayer instead to provide the largest proportion of college funding. Colorado clearly falls into the first category.

Figure 2
Average Published Tuition and Fees at COF-Eligible Public Institution by Sector, 2000-01 to 2008-09



Note: Data reflect the student share of published in-state tuition after applying the COF stipend.

Source: Western Interstate Commission on Higher Education, 2008b.

Tuition revenue per student in Colorado, at $5,353, is significantly above the national average of $3,845. It is also higher than in regional states, which range from California's minimal $1,424 to Oregon's $4,664. Colorado higher education counts on tuition for 58.4 percent of its revenue, compared to the 36.2 percent for a national average.

Colorado exceeds the national average of 27.8 percent, and most other states in the region, in the percentage of family income needed to pay for college at four- year colleges and universities, at 30.3 percent. By contrast, the percentage of family income needed to pay for two-year colleges is slightly below the national average and below that in most other states in the region. However, even after financial aid, the share of family income needed to pay for college has risen substantially in Colorado over the past decade.

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As in most states, Colorado tuitions have increased rapidly in recent years (see figure 2). The COF legislation included specific language that vouchers were designed to make college more affordable to low-income students. In this regard COF has not fulfilled expectations. In the same year that COF became effective, 2005-06, institutions raised tuition significantly. Average tuition for full-time students, after deducting the value of the COF voucher, increased $507 (23.5 percent) at community colleges, and $545 (13.3 percent) at four-year institutions. Much of the benefit of COF has been captured by institutions rather than students.[12] Across the nation, public subsidies to higher education have increased very rapidly in recent years; and, recent research suggests that much of this public subsidy has been captured by professors, administrators and other stakeholders in higher education.[13] There has been a virtual explosion of recent studies critical of the rising cost and diminished quality of public higher education.[14]

With few exceptions, financial aid has not kept pace with published tuition in most states, and that is true for Colorado. As a result, net tuition has been increasing more rapidly than published tuition.

The Level of Public Support for Higher Education

Much of the criticism of Colorado's higher education system is the low level of state and local government support. Colorado ranks well below the national average, and below other states in the region in several measures of public support. In state and local public support the State provides $3,807 per FTE, which is 4.1 percent of the State budget. Compare that with the national average of $6,673 and 6.5 percent of the average state's budget. When comparing regional states, outcomes vary from Oregon's $4,948 to Nevada's $8,589 and percentage of state budget range from Oregon's 5.6 percent to Idaho's 8.3 percent.

There is an important qualification to this evidence regarding state and local funding for higher education in Colorado. The above data is based on General Fund appropriations to higher education. The money for COF vouchers and direct funding contracts for special purposes is reported separately from state appropriations to higher education. Adding that money to state appropriations to higher education, Colorado compares more favorably with other states. Further, economists measuring the efficiency of higher education have found that Colorado ranks significantly above the national average, and above other states in the region.[15]

A measure of efficiency takes a ratio of the index for graduation rates divided by an index for total higher education revenues per FTE. This measure is comprehensive because it compares graduation rates with total education resources per FTE. While higher education efficiency in Colorado is about equal to that for the nation using this measure, it is below that for three other states in the region.

Why Has the COF Plan Not Fulfilled Expectations?

Our analysis suggests that while Colorado has a relatively efficient higher education system, there is certainly room for improvement in other measures of performance. Particularly troubling is the evidence of deterioration over the past two decades in measures of access and affordability. The voucher plan has not fulfilled many of the expectations of the higher education system when the plan was enacted. The question is why the voucher plan has not been successful in fulfilling these expectations?

The WICHE report explains that vouchers were combined with service contract funding so as to protect the revenue and budgets of higher education institutions.[16] Service contract funding undermines incentive effects of the voucher plan. DHE provides estimates of enrollments that then are used to determine voucher funding each year. When these projections underestimate the use of vouchers, the state covers any shortfall from fee-for-service fund. Money is redistributed from service contract funding to voucher funding so as to leave total state funding to that institution unchanged. Thus, enrollment growth is not actually funded by the state, and institutions have no incentive to increase enrollment. There is no incentive in this funding policy to induce institutions to compete for any students, let alone in-state students or underrepresented populations.

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WICHE found that even though the state designed performance contracts for each institution, there were no penalties or rewards for performance. There were no rewards for attracting more students, or for attracting in-state students, or for targeting underrepresented populations. There were no penalties if students failed to progress or graduate in a timely manner. The performance contracts became another bureaucratic requirement, without impacting decision making; the result was business as usual in higher education institutions. Universities also correctly anticipated that service contract combined with the voucher plan would leave their revenues and budgets unharmed. Community colleges that attracted more students did not receive the additional voucher money that was promised. Some universities that failed to attract the projected number of voucher students, nonetheless received the voucher funding for those missing students.

The amount of voucher revenue received by private higher education institutions was a little over $1 million, equal to a miniscule 0.3 percent of total voucher funds. It is not surprising voucher funding to private institutions has created little competition for public college and universities.

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A New Stipend Plan

Funds currently allocated to higher education from the General Fund, and service contract funding, would be used to fund the stipend plan. Stipends would be extended to students attending all qualified postsecondary institutions, including for-profit as well as nonprofit institutions. The stipend plan would be phased in over five years to give higher education institutions time to adjust to the new system.

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Reservations regarding state funding for higher education are not new. Half a century ago Milton Friedman challenged the rationale for government subsidies to higher education based on 'social benefits.'[17] Friedman pointed to potential negative social impacts from public subsidies to higher education. One of those impacts is certainly evident in current government subsidies to higher education, increased government regulation and intervention in higher education.

As Friedman observed, many of the presumed benefits of higher education to a democratic society are difficult to measure, and controversial.[18] To the extent that college graduates capture the benefits of higher education in higher earnings, this represents a transfer of wealth from taxpayers to college graduates.

Friedman argued that if the state does subsidize higher education the funding should be in the form of student vouchers rather than direct state funding to colleges and universities. The vouchers should be extended to students attending all higher education institutions, private and public. Friedman and others have argued, a voucher system should create a more competitive higher education system in which institutions have an incentive to deliver quality education at a low cost.

A wealth of economic analysis now supports Friedman's proposed system for higher education.[19] Some studies provide empirical support that such a system can increase efficiency and equity in higher education. Barry Poulson has reviewed empirical literature on the impact of a voucher system in an earlier study,[20] and also explored the rationale for voucher system including all qualified postsecondary institutions in Colorado.[21]

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Should Every Colorado Resident Student Be Guaranteed a Stipend?

A very difficult public policy issue will emerge. Does the State further control costs by imposing a means test so that wealthy families are not eligible for a stipend, but lower-income families are? Does the State limit the number of credit hours that stipends will cover, or can a student enroll for many hours in addition to the minimum to earn a degree? Two strong, opposing arguments present themselves:

1. Citizens already have paid the taxes used to fund stipends. To argue that some families who are eligible should receive smaller stipends in order to subsidize other students with higher stipends is an implicit tax. Stipends should be set at the same level for all students eligible for the stipends. The stipend plan should not be used to redistribute income from one Colorado family to another.

2. Our nation is at risk now due to unsustainable entitlement spending. A universal college stipend would entitle a resident to government funds merely by being a resident. To avoid creating yet another broad entitlement program, stipends should be means-tested. Experience shows entitlements tend to grow over time, and are very difficult to cut during periods of budget pressure. Therefore, the legislature will lose even more control over the budget. Finally, some people choose never to pursue a college degree; universal stipends would redistribute income from these people to other people.

For the time being, it is not necessary to resolve this debate in order to start improving Colorado's stipend system.

A New Stipend Plan for Higher Education

As this chapter has detailed, the flaw is not in stipends per se, but rather in the way in which the COF plan was designed and implemented. We propose a new stipend plan to replace the COF plan, to be implemented over a five year period. There are several provisions in the proposed stipend plan that would correct flaws in the COF plan.

Stipends Replace All Direct State Funding to Higher Education

Stipends would replace all direct funding to public higher education institutions. Funds currently allocated directly from the General Fund to these institutions would be allocated to the stipend plan. The forthcoming Independence Institute paper by Barry Poulson, "A New Stipend Plan for Higher Education in Colorado," details how to manage a five-year transition period.

The goal should be a stipend voucher system to create competition among all institutions of higher education. Students should be eligible to apply stipends toward tuition at all postsecondary institutions in the state, including public, private for-profit, and nonprofit private institutions. We then should expect improved outcomes from wider incentives as COF is fully enacted.

Stipends and the Flagship Institutions

The University of Colorado and Colorado State Systems would no longer receive direct funding from the state; their students would continue to receive funding in the form of stipends.

The flagship institutions will criticize the proposed stipends system because of the loss of direct revenue. These two institutions received $204 million in direct funding in FY 2007-08.

Under COF, direct state funding has fallen below 10 percent of the total funding for CU and CSU, enabling them to receive enterprise status. With enterprise status they have had greater flexibility in raising tuition. They have also had more flexibility in issuing debt, using certificates of participation (COPs). They have had greater freedom to design academic programs in response to market forces. These institutions can offset the loss of direct state funding by improving efficiency. While the evidence suggests they have not always taken advantage of this freedom, a stipend system will create more incentives for them to implement these reforms.

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The economics literature suggests that in a more competitive environment in which funding is provided through stipends rather than through direct funding, the flagship institutions of higher education will be the most competitive.[22] We can predict that these institutions will increase tuition more rapidly than other public institutions. Further, the tuition of the flagship institutions will tend to converge with that at private colleges and universities, which in turn will create greater calls for merit and need-based scholarships. The flagship institutions will continue to attract students even with higher tuitions, because of the higher quality of their undergraduate programs. The higher tuition revenues will enable the flagship institutions to provide better quality undergraduate education, using tuition revenues to offset the loss in direct funding.

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The flagship institutions already have adjusted tuitions to target disadvantaged students. Colorado State University recently announced that families with incomes below the poverty line would pay half tuition; and students eligible for PELL grants would pay no tuition. Expect these institutions to continue to target disadvantaged students, even without direct funding from the state.

While the flagship institutions would have five years to adapt to a full stipend system, some of their programs could adjust immediately. Because COF voucher funding is not available to fund graduate programs, the graduate programs in Medicine, Law, Engineering, and Business should immediately begin funding themselves entirely from tuition, and, of course, from donations from alumni, corporations and foundations. Students in the graduate programs capture the benefits of their graduate degree in higher lifetime earnings. Tuition charges for these graduate programs already have been adjusted to reflect their greater cost, but graduate program rates likely would increase to an amount closer to the full cost of the programs. This adjustment would not preclude graduate students from continuing to receive financial support from sources other than state funding.

At the other end of the spectrum are undergraduate programs at these institutions, such as Arts and Sciences, which depend heavily on public subsidy. Some have argued that CU and CUS shortchange undergraduate programs in order to fund expensive graduate programs and to pursue other agendas. To the extent this argument is true, it will be more difficult for the undergraduate programs to compete in a stipend system, and they will likely need more time to adjust.

Some other public higher education institutions could adapt quickly to a stipend system. The Colorado School of Mines already has received enterprise status with a great deal of autonomy from state regulations. It shares some of the characteristics of the flagship institutions, such as a reputation for quality undergraduate programs that attract students. The School of Mines also could raise tuition and continue to attract students.

The economics literature suggests the non-flagship public higher education institutions will find it more difficult to adjust to a competitive environment.[23] These institutions have been more dependent on public support. In the most recent report on COF for FY 2007-08, the total amount of direct funding was $298.8 million. Of that total, $204 million was received by the University of Colorado and Colorado State Universities, and the smaller total of $94.8 million was received by all other public higher education institutions.

The other public higher education institutions undoubtedly will protest loss of direct funding. All undergraduate programs should link revenue to stipends.

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State support has enabled other public higher education institutions to set tuition levels below that at flagship institutions, and well below tuitions levels at private institutions. Students are attracted to these other public institutions by the low cost, even when they receive an inferior quality of education. The other institutions may raise tuition, but not to the extent of flagship institutions. It is more difficult for the other public institutions to raise tuition to offset the loss of direct funding. They are more likely to expand enrollments to sustain revenues.

A stipend system may change the composition of enrollments within the public higher education system. If flagship institutions increase tuition more rapidly than other public higher education institutions, it could result in an expansion of enrollments at community colleges and other public institutions relative to enrollments at flagship institutions. Such a shift would not be a bad option from an economic standpoint, because the cost of educating students at the other public higher education institutions tends to be significantly lower than at flagship institutions.[24]

Other public higher education institutions also should have greater freedom to design academic programs in response to market forces.

Other public higher education institutions also should have greater freedom to design academic programs in response to market forces. These institutions also can offset the loss of direct state funding by improving efficiency.

The stipend plan would be extended to all Colorado students attending qualified postsecondary institutions, including private for-profit schools and private nonprofit schools. Of the $716 million transferred from the General Fund to the stipend plan a significant share of these funds likely will end up as stipend used by students attending private post-secondary institutions.

The economics literature suggests the impact of this stipend system would be to significantly reduce tuition charges at private colleges, and significantly increase tuition charges at public colleges. The most significant reduction in tuition would be at private two-year colleges. The current differential in tuition between private and public colleges and universities would decline.[25]

In a study for the Independence Institute, Poulson found that for-profit postsecondary institutions compare favorably with their public sector counterparts in terms of the performance measures cited earlier in this chapter.[26] In fact, these for-profit institutions are more successful in the progress of students and completion of degrees compared to their public sector counterparts. For-profit schools also educate postsecondary students at a lower cost.

If private for-profit postsecondary institutions are able to attract students in the current system without stipends, we would expect them to be even more competitive if their students are eligible for stipends. We would expect a significant increase in the numbers of students attending private postsecondary institutions relative to those attending public institutions.

The economics literature suggests that with this stipend plan a larger number of students would choose to enroll in inexpensive two-year colleges rather than more expensive four-year colleges. While both public and private two-year institutions would experience increased enrollments, the increased enrollment in private two-year colleges would be significantly greater.[27]

The response of low-income students to the tuition changes under a stipend system is predicted to be far greater than that for middle- and higher-income students. Thus, an important result of this stipend system would be to expand postsecondary education to a broader group of students, including low-income students.[28]

With expansion of the stipend system to all postsecondary institutions the incentive effects of stipends will lead to more efficient delivery of education services. Students will be able to make more rational choices in postsecondary education based on the quality of education relative to price. Those decisions will not be biased by the ability to capture subsidy at public institutions but not private institutions. In order to attract students all postsecondary institutions will need to enact reforms to deliver better quality education at lower cost.

Thus, an important result of this stipend system would be to expand postsecondary education to a broader group of students, including low-income students.

Building the Higher Education Trust Fund

A Higher Education Trust Fund (Trust) would be created to accumulate funds that already have been earmarked for higher education. Amendment 50 gaming proceeds for community colleges would be administered by the Trust, as directed by that Amendment.

A second current source of funding for the Trust is federal mineral lease earnings that have been earmarked for higher education. Governor Ritter has proposed that this money be diverted to fund other General Fund expenditures. Mineral lease money deposited into the Trust could only support the stipend system.

Any land, buildings, and capital equipment not claimed by a public higher education institution with enterprise status would become part of the assets administered by the Trust. The Legislature could also earmark other assets to be deposited there and charge the Trust with administering assets so as to maximize the revenues. The Trust would be allowed to buy, sell, rent or lease facilities. In this sense the role of the Higher Education Trust Fund would become parallel to the responsibilities of the Colorado State Land Board, which administers state Trust Lands to support K-12 education.

The assets in the Trust would be used to stabilize the stipend plan during periods of recession and revenue shortfall. The assets also would be used to fund the transition to a stipend-based postsecondary system in which stipends could be used at both private and public higher education institutions.

The Trust would maintain a minimum level of stipend support by adjusting yearly for inflation. The legislature should be limited to transfers from the Trust to the stipend program only in periods of revenue shortfall. The Trust would become a true budget stabilization fund earmarked for higher education.

Finally, the stipends will be available to all students attending postsecondary institutions, including private for-profit and private nonprofit postsecondary institutions. Sufficient assets should be accumulated in the Trust to finance this expansion of the stipend plan.

The legislature always should have the discretion to increase contributions to the Trust each year more than the minimum amount specified above. It also should have the discretion to increase the dollar amount of the stipend above the minimum amount.

The new system of postsecondary education will drive public institutions that have depended on direct subsidies as well as stipends to enact reforms to compete with their private counterparts.

Reforming Public Higher Education

The new system of postsecondary education will drive public institutions that have depended on direct subsidies as well as stipends to enact reforms to compete with their private counterparts. It should be up to each public institution to design these reforms; the last thing the state should do is prescribe reforms. However, a number of reforms have proven to be successful when public higher education institutions are subject to greater competition. The following is not a prescription, but rather a menu of potential reforms these institutions should consider. Some of these reforms already have been enacted in Colorado public higher education institutions, but the imperative for reform will be greater with a full stipend system.

Improve productivity

Almost all college and university teachers are hired with the explicit expectation to do more work than just give lectures. As used in this section, "teacher" is a generic term that is meant to include all tenured and tenure-track faculty at all levels. Professors, associate professors, lecturers and some instructors all fall within this definition.

If the experience on only one campus is correct, a formal change at all the state institutions of higher education would improve productivity by 15 to 20 percent and would save between $50 million and $67 million per year in faculty salaries.

If the experience on only one campus is correct, a formal change at all the state institutions of higher education would improve productivity by 15 to 20 percent and would save between $50 million and $67 million per year in faculty salaries. The steps to accomplish this change are likely to be different for each level of institution. The Board of Regents, for example, could alter the University of Colorado system, while statutory change might be necessary for state colleges.

For many decades, expectations placed upon college teachers were stable. The former rule of thumb was that professors taught 15 credit-hours per semester. Since most courses are three credit-hours, each professor taught five classes in the fall semester and five classes in the winter semester. The standard class would meet for three hours per week, so the professor would spend 15 hours in direct contact with all the students enrolled for his courses during 30 weeks of the year. But more recently, the accepted guidelines for faculty employment have been eroded. It also must be noted that there are other time expectations directly related to the classes, in holding office hours to assist students individually, to prepare and update lesson plans, to create and grade tests and to handle administrative details.

The current expectation could be summed up in this fashion: The rule of thumb for time distribution is that 40 percent goes to instruction, 30 percent for service (which is usually poorly defined or not defined at all), and 30 percent (internally-funded) research.

Research is an integral and central aspect of an academic career, and nothing in this section would suggest otherwise.

Research is an integral and central aspect of an academic career, and nothing in this section would suggest otherwise. It becomes more central to the job description, the closer a teacher moves from the community college system to the flagship research universities. An important distinction emerges while looking closer at the way research is initiated and paid for. "Internally-funded" research is part and parcel of the salary paid to have a teacher on campus. It manifests itself as staying current on developments within the individual's field of study, and writing, and in collaborating and reviewing others' works. The second type is the externally-funded research. In that circumstance, the contract brings in new funding to finance the many resources that might be required. Beyond covering materials and research assistants, it includes a salary for the teacher which is meant to fund the portion of the time the professor otherwise would be engaged in instruction and internal research. We urge the legislature and the Department of Higher Education to do nothing to interfere or impact externally-funded research performed by those faculty members. Compute the productivity measures after removing the externally funded research from the equation.

If the responses to our research requests were any indication, state colleges and universities will make it difficult to pursue this line of investigation. We could not locate any central repository of information on faculty productivity, and searching institutions' web sites proved fruitless. We tried the direct approach of asking. Only one of five provosts' offices would take or return the call. Metro State College graciously provided the exact data we sought. Yet although the information was readily available, it took some time to obtain permission from the campus administration of Metro State College for its release. The lack of responsiveness and transparency within the entire system would lead us to expect the system to resist mightily.

It is possible that Metro State is not representative of all state colleges and universities. We offer a quick analysis of this one campus and hypothesize that the results could be extended for all public higher education entities. We have created a spreadsheet, available at our web site, that permits the user to enter the productivity goal and the current number of hours taught for each level of teacher. A productivity improvement percentage is created and then is multiplied by the total salaries at that teaching level. Metro State, like other state colleges, has no research responsibilities or objectives. It sets the annual goal of 30 hours teaching. The normal maximum load might include 15 hours in the fall and spring semesters and six hours in the summer. Using data from the College:

Table 6. Faculty Productivity at Metro State College			
	Actual hours	Goal	Possible improvement
Professor	25.55	30	17%
Associate	26.81	33	23%
Assistant	26.7	33	24%
Instructor	27.28	36	32%

When the potential improvement was applied to the $29.3 million in faculty salaries, we project a savings of $6.4 million for this institution alone. The average savings is 19 percent.

Freedom to Set Tuition Rates

All postsecondary institutions should have the freedom to set their own tuitions. Economic research predicts a convergence of tuitions when all public funding is provided to students through stipends rather than allocated directly to public institutions. Tuition at public institutions will tend to rise, while that at private institutions will tend to fall.

All postsecondary institutions, including public institutions, should set tuitions to reflect supply and demand. Thus programs in business and engineering, which are more costly, should have higher tuition charges than other programs such as Arts and Sciences. The net effect will be for students to use their stipends more efficiently.

As noted earlier in this study some public institutions have adjusted tuition levels to reflect family income, and they should have the freedom to do so in a privatized system. Privatizing postsecondary education will open up more opportunities for low-income families to have access to vouchers they can use at private as well as public institutions. These students will continue to be eligible for other means-tested support, such as the PELL program.

Create Incentives for Higher Education to Provided High Quality Education at Lower Cost

Reform will create incentives for institutions to engage in entrepreneurial activities to generate other sources of revenue including research grants, private donations, and ancillary activities. Given the limited resources that likely will be available from the state for the foreseeable future, higher education institutions must look for other sources of revenue. Some of the institutions with less than 10 percent funding from the state are already well on their way toward privatization. With enterprise status these institutions should be free to aggressively pursue these other sources of revenue, without constraints or interference from the state.

1. Promote market incentives for a more efficient utilization of facilities. Public higher education institutions with enterprise status now have wide discretion to accumulate and utilize assets. In a stipend-driven higher education system they would have the power to buy, sell, rent or lease facilities just like a private institution. The expectation is that in this more competitive postsecondary system public higher education institutions would have more incentive to utilize assets efficiently.

There is ample evidence that public higher education institutions are poor managers of assets.

There is ample evidence that public higher education institutions are poor managers of assets. The University of Colorado is very inefficient in managing dormitory facilities, such as Williams Village.[29] Dormitory space often is not rented because the University does not adjust rents to reflect supply and demand for student housing in Boulder. A good solution in this case might be for the University to sell the dormitory facilities, use the funds for other investments, and allow the private sector to utilize the facilities more efficiently.

There is evidence that universities do not utilize classroom space efficiently. One study estimates that classrooms seldom operate at more than 25 percent capacity during the summer months, or vacation periods. Classroom facilities are underutilized in the early mornings, evenings and Fridays.[30]

One way for public higher education institutions to create incentives for better utilization of facilities would be to charge rent to the different units utilizing the facilities. Each unit within the university could be given a budget to rent space. The administration then could charge differential rents depending on the demand for that space at different times of the day or days of the week. It then would be up to each unit to decide to pay higher rents for peak time use of the space, or to reduce spending and use the funds for other purposes.

One way for public higher education institutions to create incentives for better utilization of facilities would be to charge rent to the different units utilizing the facilities.

2. Reform will provide incentives to reallocate resources to academic activities. Non-academic activities, such as sports, recreation, food, housing, etc., likely will be turned over to entities outside the university administration. The "yellow pages" criteria should apply: If there is a private option for these services, a high probability exists the private sector can deliver better quality service at a lower price. This understanding should result in contracting out and increased reliance on the private sector.

3. Higher education institutions should reconsider tenure. They should reexamine tenure contracts to determine if such long-term contracts are viable. If these institutions continue granting tenure, Professors should be subject to performance evaluations at all stages of their career.

Higher education institutions should reconsider tenure. They should reexamine tenure contracts to determine if such long term contracts are viable.

4. Make better use of new technologies in teaching and administration. Distance learning and computerized instruction have the potential to deliver better education at lower cost to a broader population. New technologies should be introduced in other areas, such as replacing library resources with digitized access to publications. Public colleges and universities could move to the cutting edge in utilizing these technologies.

5. Increase the ease with which students can transfer between institutions. The most critical factor will be reaching agreement on a common core curriculum of courses that can be easily transferred from one institution to another.

6. Create incentives for students to complete a degree in a timely manner. Currently, Colorado uses performance contracts to reward institutions when students complete their degree on time. The poor performance of public institutions in this regard suggests the use of these contracts has not provided much incentive to institutions. Eliminating fee-for-service contracts will preclude this option. A stipend system of higher education should create adequate incentives for institutions to pursue this objective. The stipend plan can be designed to create incentive by limiting the total number of credit hours that a student can fund from stipend. Limiting stipends to a four-year period is more controversial, but could also create the right incentives.

7. Improve the preparation of students for postsecondary education. Not every student should be preparing for a college degree. With stipends extended to all postsecondary institutions, financial support will be available to a broader group of students, including vocational programs such as business, nursing, computer science, etc. Such an extension should create more incentive for students to prepare for these careers. High schools must do a better job in counseling and preparing students for all postsecondary education.

8. In colleges and universities stipends should not be available to fund tuition costs of remedial courses.

9. High school students should have more opportunities to take an accelerated college preparation program. More opportunities should be made available to take college courses, advanced placement courses, and to receive exemptions from require courses by passing a placement exam. Students should be able to complete their high school education and make the transition to college based on their own progress, and not be tied to the standard four-year college preparation program.

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John D. Merrifield graciously reviewed the material in this section and offered his ideas for inclusion. Dr. Merrifield teaches Economics at the University of Texas in San Antonio. He is widely published on the subjects of competition in education, educational alternatives and on environmental issues, including aquifers and water storage. He authored four books on funding for education and broader public policy questions. Dr. Merrifield earned his doctorate in economics from the University of Wyoming.

Penn Pfiffner contributed the discussion of faculty productivity. See his biographical material in the authors section.

Much of the primary research of the facts and the salary figures on faculty productivity was conducted by **Jacob Zax**. He also helped to develop the productivity model. Mr. Zax is a political science major with sophomore credits at Washington University in St. Louis. He worked as an intern at the Independence Institute during the summer 2010. He is contemplating a graduate degree in business after his anticipated graduation in May 2013.

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